Lower Thames Crossing

6.3 Environmental Statement Appendices
Appendix 16.2 – Short List of Developments

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Lower Thames Crossing

6.3 Environmental Statement Appendices
Appendix 16.2 – Short List of Developments

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Table 1.1 Short list of developments

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
EN010092 Thurrock Flexible Generation Plant NSIP Thurrock Council Area	**Thurrock Power Ltd** - Flexible generation plant providing up to 600 MW of electrical generation capacity and up to 150 MW of battery storage capacity.	Within OL 960m from ARN	1a	N	Air Quality	Yes	Would contribute to background air pollutant concentrations at local receptors.	Cumulative impacts are unlikely to exceed or lead to an exceedance of the AQS objective for NO2	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	New development replaces recently demolished power station, however extensive associated construction activity would create cumulative effects for Tilbury Fort and West Tilbury Conservation Area due to proximity of both schemes during construction.	The area surrounding the fort is already industrialised and therefore during operation this would not cause a significant change.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Landscape and Visual	Yes	**Landscape:** Construction works for the Thurrock Flexible Generation Plant, including associated earth reprofiling and utilities works, would occur adjacent to and partially within the Project Order Limits. The majority of the works for the Thurrock Flexible Generation Plant would be located immediately north of the former Tilbury Power Station site to the west of the Project's northern tunnel entrance compound. There would therefore be cumulative landscape effects, however, effects would be limited, as the works would occur in an area already strongly influenced by existing development, including waste water, energy and transport infrastructure.	**Landscape:** The operational Thurrock Flexible Generation Plant would be adjacent to and partially within the Project Order Limits to the north of the former Tilbury Power Station site. There would therefore be in-combination landscape effects, however, such effects would be limited, as both developments would be in an area already strongly influenced by existing development, including waste water, energy and transport infrastructure. **Visual Amenity:** There would be in- combination visual effects due to visibility of the Thurrock Flexible Generation Plant and the operational Project road. This would include views from the eastern edge of Tilbury, Two Forts Way Coastal Path/footpath 146 and NCN	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight adverse

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							Construction	Operation		Construction	Operation
							Visual Amenity: There would be cumulative visual effects as a result of construction works for the Thurrock Flexible Generation Plant and the Project, which would be apparent in a greater proportion of some views. This would include views from the eastern edge of Tilbury, Two	Route 13, footpath 200, Fort Road, and Coopers Shaw Road. There are also likely to be glimpsed views from Tilbury Fort. However, effects would be limited, as the developments would be in the context of existing			
					Terrestrial Biodiversity	Yes	Thurrock Flexible Generation Plant ES - minor adverse effects due to disturbance of birds using the intertidal zone during construction from noise and lighting. Minor adverse from potential for runoff onto designated sites. The Project is predicting minor adverse impacts on birds in the intertidal zone and negligible adverse for runoff onto designated sites. A slight adverse cumulative effect is predicted on birds using the intertidal zone. No additional mitigation is predicted as there are already sufficient mitigation proposals to compensate for the temporary disturbance of birds, including monitoring of flocks and additional habitat creation areas.	The Thurrock Flexible ES states that minor adverse impacts from aerial emissions on designated sites are predicted. The Projects has concluded some slight adverse impacts on designated sites for nitrogen deposition. These impacts are fully mitigated by the creation of new habitat away from the Project. Therefore a slight adverse residual cumulative effect is predicted.	None - LTC has mitigated for disturbance to birds in the SPA and nitrogen deposition.	Slight adverse	Slight adverse
					Marine Biodiversity	Yes	Potential cumulative effects could arise through the loss of intertidal habitat, and effects relating to sediment release.	Limited operational pathways from LTC to interact with operational discharges from the plant.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - Yes	Geology: During construction the phase good practice would be followed; regulatory approval prior to commencement which	Geology: No cumulative effects likely during operational phase as contamination impacts would	No additional measures besides what has already	Neutral	Neutral

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							Construction	Operation		Construction	Operation
						Soils - Yes	would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice with regards to soil handling, in line with published guidance.	be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice in line with National Policy Statement for National Networks (NPSNN) and Noise Policy Statement for England (NPSE) which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	Noise levels from the operation of the proposed development would be controlled at source and mitigated in accordance with the requirements of the local authority. The traffic generated by the proposed development is likely to be negligible with no impact on the Project.	None	Slight adverse	Negligible
					Population and human health	Yes	Potential human health effects from cumulative change to air pollutant concentrations, dust, noise, vibration and visual impacts. Appropriate mitigation identified in relation to noise and vibration. Air quality impacts identified as being slight adverse and not significant.	No adverse impacts likely in relation to population and human health.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: consent for this development has been granted (16 Feb 2022). Potential cumulative effects with the Project might occur (mostly relating to overlap with geo-environmental matters discussed in ES Chapter10: Geology and Soils), due to possible remobilisation of historical and/or recent contamination during construction, especially in the East Tilbury landfill area (although EN10092 is not on East Tilbury Landfill), with a consequent associated increased risk to the principal aquifer (Chalk). However: the development's Environmental Statement Chapter 16: Geology Hydrology and Flood Risk states that dewatering would be minimised. The planning application cross-section drawings e.g. drawing RPS-SI-XX-DR-A-5012 show engine building top of stacks at 40m elevation above ground and therefore it is assumed deep piles would be required which would require a foundation risk assessment that would need to be approved by the Environment Agency and therefore suitable measures would be placed to protect the Chalk aquifer. All the cross section drawings show no basements or deep excavations which supports the assumption that there would not be substantial dewatering.	Groundwater: LTC operational drawdown at the Project North Portal would be negligible and would not impact the groundwaters beneath the development. During the operational phase, no significant cumulative effects are expected. Surface water: No significant flood risk cumulative effects are anticipated, as each project would be required under NPPF, to provide compensation for losses of floodplain storage and manage surface water runoff using suitable Sustainable drainage (SuDS) techniques, which would also provide for water quality treatment.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							.Also EN10092 construction related dewatering is expected to be minor because the development is sited on thick Alluvium deposits; also Project dewatering groundwater drawdown is expected to be insignificant with mitigation (e.g. D-walls and grout plug at Project North Portal). As such, any significant risk to controlled waters would be reduced and no significant cumulative effects are expected. Surface water: The project is located in the catchment of the West Tilbury main and the defended floodplain of the River Thames. No significant flood risk cumulative effects are anticipated, as each project would be required under NPPF, to provide compensation for any construction phase losses of floodplain storage and manage surface water runoff using suitable techniques, which would also provide for water quality treatment.				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
TR010029 M25 Junction 28 Improvements NSIP	**National Highways -** Upgrade of the existing M25 Junction 28 located at the junction between the M25 anti- clockwise and the A12 in Essex through conversion of the existing hard shoulder and improvements to the existing roundabout.	Adjacent to OL Adjacent to ARN	1c	Y	Air Quality	Yes	Included in forecast traffic data and therefore air quality modelling.	Included in forecast traffic data and therefore air quality modelling.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	Minor improvement works, mostly to mainline M25, would not cause significant residual effects to any heritage assets and there are no significant effects from the Project	Minor improvement works, mostly to mainline M25, would not cause significant residual effects to any heritage assets and there are no significant effects from the Project	No additional measures besides what has already been	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							in this area and therefore no cumulative effects.	in this area and therefore no cumulative effects.	proposed in the topic chapters.		
					Landscape and Visual	Yes	**Landscape:** The most prominent construction features of both developments would comprise gantry improvements/installation. However, construction works would take place in the context of the existing M25 corridor and would be largely contained by the cutting slopes and/or existing vegetation along the M25 corridor. There would be no vegetation removal required as part of either development. In-combination landscape effects are therefore not anticipated. **Visual Amenity:** Due to construction works being largely contained by the cutting slopes and/or existing vegetation along the M25 corridor, no in-combination visual effects are anticipated.	**Landscape and Visual Amenity:** New or improved gantries would appear similar to existing highway infrastructure along the M25 corridor. No in-combination landscape or visual effects are therefore anticipated.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Terrestrial Biodiversity	Yes	M25 Junction 28 improvements - slight adverse impact on Ingrebourne Valley SMI, moderate adverse impact of loss of open water at Ingrebourne Valley. The effect of the Project on the Ingrebourne Valley SINC is neutral and not significant. No significant cumulative effects are predicted.	M25 Junction 28 improvements - slight adverse impact on Ingrebourne Valley SMI, moderate adverse impact of loss of open water at Ingrebourne Valley. The effect of the Project on the Ingrebourne Valley SINC is neutral and not significant. No significant cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology	Geology - no cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be	No additional measures besides what has already been	Neutral	Neutral

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							Construction	Operation		Construction	Operation
							resources is expected. Soils: Minor improvement works - any soil handling should follow published guidance.	resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice in line with NPSNN and NPSE which would control construction noise impacts. However, due to proximity to the Project potential for adverse cumulative effects to occur.	Traffic from the proposed development is included in Project traffic data and therefore within the operational noise assessment.	None	Slight adverse	Negligible
					Population and human health	Yes	Human health ZoI includes communities directly/indirectly affected and therefore corresponds to air quality and noise ZOIs for assessment purposes. The cumulative effect has been included in air quality modelling and therefore within the human health assessment already. During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During	Unlikely for there to be adverse impacts in relation to population and human health.	No additional measures besides what has already been proposed in the topic chapters.	Amenity: Slight adverse Employment: Slight beneficial	Negligible

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							Construction	Operation		Construction	Operation
							construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Based on the nature of the development and the fact that no earthworks are proposed for the Project then no significant potential impact to groundwater resources is expected. Surface water: The development is located in the catchment of the Ingrebourne River and therefore is in a separate hydrological catchment to the Project and there is no potential for cumulative effects.	Groundwater: No significant works proposed for the Project with respect to deep excavations or groundwater at junction 28 (northern limit of the Project). Also junction 28 ES documentation shows no significant impacts to groundwater. Therefore, based on the nature of the development, no significant potential impact to groundwater resources is expected. Surface water: The development is located in the catchment of the Ingrebourne River and therefore is in a separate hydrological catchment to the Project and there is no potential for cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EN010090 The Kemsley Mill K4 Combined Heat and Power Generating Station NSIP	**DS Smith Paper Ltd - The Kemsley Mill K4 Combined Heat and Power Generating Station** Decommissioning of an existing gas fired Combined Heat and Power Plant and build a new gas-fired Combined Heat and Power Plant with a nominal power output of 68-73 megawatts on land at Kemsley Paper Mill.	20km east of OL 1.9km from ARN	1a	N	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

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							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

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BC080001 The London Resort NSIP	**London Resort Company Holdings** Entertainment resort comprising an entertainment street, water park, theme park, events space, sporting facilities, events and conference, creative spaces, service buildings and a staff training academy, as well as approximately 5,000 hotel rooms and substantial improvements to transport infrastructure. This will include a transport link Ebbsfleet International Station with the resort, a new direct road connection from the A2, a coach station and river bus facilities. The Development (as described in withdrawn application)includes: • - public areas outside the two Gates offering a range of retail, commercial, dining and entertainment facilities in a sequence of connected public spaces including an area identified as the Market; • - the A2(T) Highways Works comprising modified roundabouts with traffic signals at the A2(T) / A2260 Ebbsfleet junction. • - car parks with an overall volume of 10,750 spaces, split between the Kent and Essex Project Sites;	Adjacent to OL Adjacent to ARN	2	N	Air Quality	Yes	Outside of construction ARN.	May increase concentrations on roads connecting resort and A2, as well as A2. Operational receptor (LTC003) shows modelled concentrations below the NO_2 AQS objective, low likelihood for a cumulative exceedance.	No additional measures besides what has already been proposed in the topic chapters.	Unknown. Insufficient information to form judgement. Due to distance away from construction ARN impacts are unlikely.	Neutral
					Cultural Heritage	Yes	Majority of development outside ZoI and section within would not impact any of the heritage assets affected by the Project.	Majority of development outside ZoI and section within would not impact any of the heritage assets affected by the Project.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	Yes	**Note: This application has been withdrawn by the developer. The assessment below is based on the previously submitted documents and may be subject to change depending on the design illustrated within any resubmitted application.** **Landscape:** Construction works for the London Resort on the north bank of the River Thames would largely be separated from the construction of the Project by Tilbury Fort, Tilbury Sewage Treatment Works, energy infrastructure and other industrial land uses. It is therefore unlikely that there would be any notable in-combination effects on landscape character during construction. **Visual Amenity:** There is potential for in-combination visual effects on visitors to Tilbury Fort. There is also potential for in-combination visual effects as a result of the construction of taller	**Note: This application has been withdrawn by the developer. The assessment below is based on the previously submitted documents and may be subject to change depending on the design illustrated within any resubmitted application.** **Landscape:** The London Resort on the north bank of the River Thames would largely be separated from the Project by Tilbury Fort, Tilbury Sewage Treatment Works, energy infrastructure and other industrial land uses. It is therefore unlikely that there would be any notable in-combination effects on landscape character during operation. **Visual Amenity:** The proposed London Resort multi storey car park and the Project sculptural landscape mounding at Tilbury Fields are likely to be visible from the industrial area along the southern bank of the River Thames and Saxon Shore Way	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

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							Construction	Operation		Construction	Operation
	• - four hotels providing family, upmarket, luxury and themed accommodation totalling up to 3,550 suites or 'keys'. One hotel will incorporate access to an enclosed water park; • - a 'Conferention' Centre (i.e. a combined conference and convention centre) capable of hosting a wide range of entertainment, sporting, exhibition and business events; • - a e-Sports Coliseum designed to host, video and computer gaming events and exhibitions; • - a 'Back of House' area accommodating many of the necessary supporting technical and logistical operations to enable the Entertainment Resort to function, including administrative offices, a security command and crisis centre, maintenance facilities, costuming facilities, employee administration and welfare, medical facilities, offices and storage facilities, internal roads, landscaping and employee car parking; • - a visitor centre and staff training facility; • - an operations resource centre; • - a people mover and transport interchanges; • - a Resort access road of up to four lanes (i.e. up						features of London Resort and the Project, including sculptural landscape mounding at Tilbury Fields, the segment factory and concrete batching plant on the former Tilbury Power Station site, and a multi storey car park for the London Resort. There are likely to be views from the industrial area along the southern bank of the River Thames and Saxon Shore Way Long Distance Path. Construction works would be viewed in the context of Tilbury Docks and other infrastructure.	Long Distance Path. However, such in-combination views would be seen in the context of Tilbury Docks and other infrastructure. No adverse in-combination visual effects are therefore anticipated.			
					Terrestrial Biodiversity	Yes	London Resort ES states that no significant effects are predicted as a result of construction. As a result, no cumulative effects are considered likely to occur.	London Resort ES states that no significant effects are predicted as a result of operation. As a result, no cumulative effects are considered likely to occur.	None	Neutral	Neutral
					Marine Biodiversity	Yes	Proposed development highlights the following as potential impact on the Thames Estuary- Disturbance and silt mobilization resulting from dredging and jetty construction works Flood defence raising works (potential effects on: birds; invertebrates; botany; aquatic habitats)	Limited operational pathways from LTC to interact with the operational development.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

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							Construction	Operation		Construction	Operation
	to two lanes in each direction; • - local transport links, • - river transport infrastructure on both sides of the Thames, including the extension of the existing floating jetty at the Tilbury ferry terminal and a new floating jetty and a reconditioning of Bell Wharf at the Swanscombe Peninsula; • - utility compounds, plant and service infrastructure including an energy centre; • - a wastewater treatment works with associated sewerage and an outfall into the River Thames; • - flood defence and drainage works; • - habitat creation and enhancement and public access; • - security and safety provisions; • - data centres to support the Resort's requirement.				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice in line with NPSNN and NPSE which would control construction noise impacts. The nearest Project construction works would be over 4km away and would not cumulatively interact.	The Project currently predicts long-term and short-term changes in road traffic noise as negligible along the A2 in the vicinity of the development, so any adverse effects in this area would be as a result of vehicles attracted to the London Resort rather than as a result of the Project.	None	Negligible	Negligible
					Population and human health	Yes	Included as part of the human health assessment. During construction there is potential for a cumulative beneficial effect with the Project in relation to employment. There is potential for cumulative adverse construction effects on residential amenity. Potential adverse effects on human health in relation to air quality changes and changes in noise levels during construction.	Potential slight adverse effects on human health in relation to environmental changes, including noise, visual impact and other factors. Moderate beneficial effects anticipated during scheme operation in terms of potential increased accessibility for businesses and employment.	No additional measures besides what has already been proposed in the topic chapters.	Residential amenity: Slight adverse Human Health: Moderate adverse Employment: Moderate beneficial	Human Health: Slight adverse Employment: Moderate beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: This major development is located in the far western buffer area of the Project Order Limits in the southern area of the Project. Based on the large distance from the Project, no significant potential cumulative impact on groundwater resources is expected. Moreover, the	Groundwater: Based on the large distance from the Project, no significant potential cumulative impact on groundwater resources is expected. Surface water: The development is adjacent to the north bank of the River Thames, however the potential for cumulative effects is	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

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							Construction	Operation		Construction	Operation
							Environmental Statement Chapter 18 (Soils, Hydrogeology and Ground Conditions) commits to obtaining Environment Agency approval for ground investigation and providing mitigation of foundation risk assessments and groundwater control and in the Environmental Statement Chapter 17 (Water Resources and Flood Risk) states that groundwater flood risk is low. Therefore the potential cumulative impact would be not significant. Surface water: The development is adjacent to the north bank of the River Thames, however the potential for cumulative effects is limited as the ES for the development commits to a suite of measures to project the River Thames in terms of its water quality, and flood risk.	limited as the ES for the development commits to a suite of measures to project the River Thames in terms of its water quality, and flood risk.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EN010093 Riverside Energy Park NSIP	**Cory Riverside Energy** - Construction of a Riverside Energy Park comprising of an Energy Recovery Facility, an Anaerobic Digestion Facility, a Solar Photovoltaic Installation, Battery Storage and infrastructure to make a potential future district heating pipe connection possible.	8km north-west OL 1.9km from ARN	1b	N	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Unknown. Insufficient information to form judgement. Due to distance away from construction ARN impacts are unlikely.	Unknown. Insufficient information to form judgement. Due to distance away from operational ARN impacts are unlikely.
					Cultural Heritage	No					
					Landscape and visual	No					

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							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	N/a	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
TR010021 Silvertown Tunnel	**Transport for London -** Silvertown Tunnel: New twin bored road tunnel 1.4km in	20km west of OL	1a	Y	Air Quality	No	Included in forecast traffic data and therefore air quality modelling.	Included in forecast traffic data and therefore air quality modelling.	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
NSIP	length linking the areas north and south of the River Thames between Silvertown and the Greenwich Peninsula	900m from the ARN							has already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							cumulative impacts from construction traffic.				
					Population and human health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	Included as part of the human health assessment. Cumulative effects considered to be negligible as a result of findings from the noise and air quality assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Negligible
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
TR0 30004 Oikos Marine & South Side Development NSIP	Oikos Storage Limited Oikos Marine & South Side Development - Alteration to the existing Oikos port facility to extend the efficiency of the two Terminal's jetties by the installation of two additional loading arms, two new pipelines, a series of new storage tanks, road tanker loading bay and other infrastructure works within the terminal.	11km east of OL 6.2km from ARN	2	No	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EN010111 NSIP	**Bradwell B new nuclear power station** A new nuclear power station capable of generating up to 2.2GW of electricity	>30km from OL 27.4km from ARN	2	N	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	Due to the distance from the Project, and the distance from the ARN, no cumulative impacts are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
TR010060 NSIP	**A12 Chelmsford to A120 widening scheme** Widening where necessary of the A12 between Chelmsford (junction 19) and the A120 (junction 25) from two to three lanes in each direction; improve junction 19 and 25; removal of junctions 20a, 20b and 23; move junction 21, 22 and 24 to make them all movement junctions and; create two bypasses	23km from OL Adjacent to ARN	2	Y	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project,	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							then there is the potential for cumulative impacts from construction traffic.				
					Population and human health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	Included as part of the human health assessment. Cumulative effects considered to be negligible as a result of findings from the noise and air quality assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Negligible
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
National Highways - A2 Bean and Ebbsfleet Junction Improvements Scheme National Highways	**National Highways - A2 Bean and Ebbsfleet Junction Improvements Scheme** The change includes the redesign of the Bean junction north roundabout to keep the A2 eastbound off slip in its existing location. There are also some minor adjustments to positioning and orientation of the roundabout itself and the north side entry / exit roads.	0.5km west of OL Overlaps with the ARN	1a	Y	Air Quality	Yes	Included in forecast traffic data and therefore air quality modelling reported in Chapter 5 (Application Document 6.1).	Included in forecast traffic data and therefore air quality modelling reported in Chapter 5 (Application Document 6.1).	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	Majority of development outside ZoI and	Majority of development outside ZoI and section within would not impact any of the heritage assets affected by the Project.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape:** Construction activity for the A2 Bean and Ebbsfleet Junction Improvements in conjunction with construction of the Project would not result in any notable change in landscape character.	**Landscape and Visual Amenity:** There would be no notable in-combination landscape or visual effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Visual Amenity: In-combination effects on visual receptors from construction of the A2 Bean and Ebbsfleet Junction Improvements in conjunction with Project utility works would be primarily seen from the footpath/cycle path on the south-west edge of Pepper Hill, Northfleet. However, there would be no notable in-combination visual effects.				
					Terrestrial Biodiversity	Yes	There is potential for cumulative effects through habitat loss and/or mortality on the following receptors: terrestrial invertebrates, breeding birds, non- breeding birds, bats and dormouse. However, the Project has not concluded a significant effect on any of these receptors. The veteran tree removals are remote from the three associated with the Project south of the River Thames. Therefore, no cumulative effects are predicted.	There is potential for cumulative effects through habitat loss and/or mortality on the following receptors: terrestrial invertebrates, breeding birds, non- breeding birds, bats and dormouse. However, the Project has not concluded a significant effect on any of these receptors. The veteran tree removals are remote from the three associated with the Project south of the River Thames. Therefore, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology resources is expected. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. Due to proximity to the Project there is the potential for adverse cumulative effects to occur.	The traffic from the development is included in forecast traffic data and therefore within the operational noise assessment.	None	Slight adverse	Negligible
					Population and human health	Yes	Potential human health effects from cumulative change to air pollutant concentrations, dust, noise, vibration and visual impacts. Appropriate mitigation identified in relation to noise and vibration. Air quality impacts identified as being neutral. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project.	Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The proposed A2 highway improvement works are many kilometres away to the west from the proposed main works for the Project. Order Limits extend close to each other due to the Project utility works. Any construction dewatering at the LTC utility works would be subject to EA permitting regulations. Based on the nature of the	Groundwater: Based on the nature of the development, no significant potential impact to groundwater resources is expected during the operational phase. Surface water: There are no common surface water receptors, and the development is in the low risk flood zone.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							development, no significant potential impact to groundwater resources is expected. Groundwater is deep below ground in the Chalk aquifer, hence would not be impacted by the development construction. Surface water: There are no common surface water receptors, and the development is in the low risk flood zone.				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
M2 junction 5 improvements National Highways	M2 junction 5 improvements: improvements to the M2 junction 5/A249 Stockbury Roundabout.	16.5km to the south east of OL Overlaps with ARN	1a	Y	Air Quality	Yes	Included in forecast traffic data and therefore air quality modelling.	Included in forecast traffic data and therefore air quality modelling.	Included in forecast traffic data and therefore air quality modelling.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is included in forecast traffic data and therefore air quality modelling. No cumulative effects are predicted.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is included in forecast traffic data and therefore air quality modelling. No cumulative effects are predicted.	Included in forecast traffic data and therefore air quality modelling.	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Human health impacts align with air quality study area for human receptors. No cumulative effect as this proposal is included in the forecast traffic data and therefore air quality modelling. During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project.	Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Negligible
					Road drainage and Water Environment	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
A127 Warley Junction Improvements National Highways	A127 Warley Junction Improvements - Highway improvements scheme at A127/B186 Warley Street Interchange immediately east of M25 junction 29 to provide additional capacity	Within OL Adjacent to ARN	3	No	Air Quality	Yes	Highways improvement work, unlikely to cause a traffic change. Closest modelled construction receptors (LTC_Con 017 and 019), shows concentrations below the AQS objective across all construction years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Highways improvement work, unlikely to cause a traffic change. Closest modelled receptor (LTC081), which includes the Project associated traffic, shows concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	Minor improvement works to improve the junction would not cause significant residual effects to any heritage assets and there are no effects from the Project in this area and therefore no cumulative effects.	Minor improvement works to improve the junction would not cause significant residual effects to any heritage assets and there are no effects from the Project in this area and therefore no cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to provide assessment commentary, however, there are unlikely to be any notable in-combination landscape or visual effects. The A127/B186 Warley Street junction would only be used as a construction access during the Project and construction of the A127/B186 Warley Street junction improvements in conjunction with the nearby proposed Project A127 footbridge, is likely to be seen primarily from the A127 corridor.	**Landscape and Visual Amenity:** Insufficient information available to provide assessment commentary, however, there are unlikely to be any notable in-combination landscape or visual effects. The A127/B186 Warley Street junction improvement is likely to be seen in conjunction with the nearby proposed Project A127 footbridge, primarily from the A127 corridor.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Terrestrial Biodiversity	Yes	Designated sites (Cranham Brickfields LNR): Project is 1.4km from LNR, on other side of M25. The project would therefore not be likely to have any effect on the LNR, nor is there likely to be any	Designated sites (Cranham Brickfields LNR): Project is 1.4km from LNR, on other side of M25. The project would therefore not be likely to have any effect on the LNR, nor is there likely to be any	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							increase in air pollution. The project construction and operational effects are neutral and not significant. Plants and habitats, lichen and bryophytes, terrestrial invertebrates, amphibians, dormouse, water vole, otter, badger, other S41 mammals: It is likely the project would not result in significant loss of habitat. Freshwater species: it is assumed standard good practice pollution prevention methodology would be used. Birds, bats: It is likely that the project would not have a significant effect on any of these receptors. No cumulative effects predicted.	increase in air pollution. The project construction and operational effects are neutral and not significant. Plants and habitats, lichen and bryophytes, terrestrial invertebrates, amphibians, dormouse, water vole, otter, badger, other S41 mammals: It is likely the project would not result in significant loss of habitat. Freshwater species: it is assumed standard good practice pollution prevention methodology would be used. Birds, bats: It is likely that the project would not have a significant effect on any of these receptors. No cumulative effects predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology resources is expected. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology - no cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to The Project potential for adverse cumulative effect to occur.	During operation any additional traffic generated by the proposed development is likely to be negligible and not generate cumulative effects.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment. May be potential for employment opportunities, however not considered to be significant.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The site is within: 1) the SPZ3 for the Linford and Stifford public supply sources (however the Chalk aquifer source is located deep below Eocene deposits); 2) the nitrate vulnerable zone. 3) Also no potential GWDTE immediately beside proposed A127/B186. The superficial geology (Head deposits) is classed as secondary A aquifer of low vulnerability. Surface water: The development is located in the catchment of the Mardyke West Tributary and the proposed improvements essentially include carriageway widening works. *It is expected that surface water runoff from the works would be controlled and treated* and based on the nature of the development, no significant potential impact to groundwater resources or surface water receptors is expected.	Based on the nature of the development, no significant potential impact to groundwater resources or surface water receptors is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Thames Freeport Thurrock Council Area	Thames Freeport Thurrock Council has indicated that the local plan projections for this site includes the following for further development associated with the Port of Tilbury: approx. 680,000sqm employment floorspace B8 use with approx. 6,900 jobs	The Project falls within the Thames Freeport area	3	N	Air Quality	Yes	The Freeport would potentially lead to an increase in construction traffic flows in Thurrock, Barking and Havering. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The Freeport would potentially lead to an increase in traffic flows in Thurrock, Barking and Havering. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation measures cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Freeport.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Freeport.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Freeport.
					Cultural Heritage	Yes	There would be significant overlap between areas of physical impact to buried archaeology from Thames Freeport and the Project. However, the impact could only occur once, by whichever development occurs first, as once archaeology has been removed it cannot be impacted a second time. Therefore this would not cause cumulative effects. The extensive construction activity would create cumulative effects for Tilbury Fort and West Tilbury Conservation Area due to proximity of both schemes during construction.	The area surrounding Tilbury Fort is already industrialised and during operation the LTC Project would not cause significant effects. During operation there would be a moderate adverse impact to West Tilbury Conservation Area. With the limited information regarding design of the Thames Freeport currently available it is unclear how visible the development would be or how greatly it would change the character of the area within its boundary that is currently undeveloped.	No additional measures besides those already proposed in the topic chapter.	Moderate adverse	Moderate adverse
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to provide assessment commentary, however, the combined landscape and visual effects are likely to be significant given the scale of the Thames Freeport development.	**Landscape and Visual Amenity:** Insufficient information available to provide assessment commentary, however, the combined landscape and visual effects are likely to be significant given the scale of the Thames Freeport development.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Moderate adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity		There is considerable overlap between the Thames Freeport and the Project. Potential cumulative effects on water vole, reptiles, badger, terrestrial inverts and birds are considered further. Water vole and badger are a licensable ecolicla receptor, and therefore all effects have to be mitigated to ensure there is no detrimental effect on these receptors before NE will issue a licence. An effect on birds on the river Thames from construction of Thames Freeport is possible, and the Project is having a minor adverse effect on this receptor, therefore a slight adverse cumulative effect is predicted. Reptile and terrestrial invertebrate habitat will be lost as part of both projects, however it is anticipated that Thames Freeport will mitigate for these losses with habitat creation, and the Project has put in place habitat creation to mitigate for these losses. The residual effect on the nationally important terrestrial invertebrates in this area from the Project was moderate and adverse, and the cumulative effect of both of these projects is considered to be moderate adverse, as although there is a temporary effect from the habitat loss and the delay to establishment of the mitigation habitat, the integrity of the resource will be maintained.	Operation of the Thames Freeport has the potential to have a disturbance effect upon birds north of the river Thames. The Project would have a slight adverse effect on birds in this area. As such, it is considered likely that a slight adverse cumulative effect on birds in this area will occur, The Project has no operational effect on birds using the River Thames, therefore no cumulative effects on birds on the River Thames are considered likely.	No additional measures besides those already proposed in the topic chapter.	Moderate adverse	Slight adverse
					Marine Biodiversity	Yes	Currently not clear on what river interactions will result for the construction phase. If additional river vessel operating frontage is required, there could be cumulative effects related to sediment release, disturbance and increased vessel movements. However, LTC's			Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							activities and predicted effects are minimal, hence there are unlikely to be significant cumulative effects.				
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste		At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	The Freeport could potentially lead to an increase in construction traffic in Thurrock, Barking and Havering. However, no work has been undertaken into the distribution of traffic from the Freeport and so the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published. It is unlikely that the construction of any Freeport facilities would impact upon the	The Freeport would potentially lead to an increase in traffic in Thurrock, Barking and Havering. However no work has been undertaken into the distribution of traffic and therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published. However, given the scale of the Freeport there is the potential for it to generate traffic that could have a cumulative effect.	None	Negligible	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Project due to distance separation.				
					Population and human health	Yes	Noise impacts assessed as neutral, with Air Quality assessment not possible due to lack of information. During construction there is potential for a cumulative beneficial effect with the Project in relation to employment. There is potential for cumulative adverse construction effects on residential amenity and access to areas of open space. During construction there may be adverse effects on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project.	Moderate beneficial effects anticipated during scheme operation in terms of potential increased accessibility for businesses and employment.	No additional measures besides what has already been proposed in the topic chapters.	Access to services and facilities: Moderate adverse Residential amenity and access: Slight adverse Employment: Moderate beneficial	Employment: Moderate beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater - there is no available information on below ground works at the time of writing. However it is a fair assumption that should any construction dewatering be proposed it would be regulated by the Environmental Permitting Regulations (Environment Agency). Such regulation would reduce potential saline intrusion that could impact groundwater quality of the Chalk aquifer. Therefore, since the predicted groundwater drawdown caused during the construction of the North Portal of the Project would be limited in extent there would be a magnitude of cumulative impact of slight or neutral. As details become available for the proposed development, then the assessment should be reviewed. Surface water: located in part within the defended floodplain of the River Thames, the potential	Groundwater - there is no available information on below ground works at the time of writing. However, it is a fair assumption that sheet piles are not likely to go deep into the River Terrace Deposits or Chalk that underlies the thick alluvium deposits. Also whilst there would be piled foundations for heavily loaded areas these are likely to be sufficiently spaced and shallow so that the cumulative impact to groundwater levels and flows (and groundwater quality) during the operational phase would be no change. This assessment however should be reviewed when details of the development become available. Surface water: located in part within the defended floodplain of the River Thames, the potential for cumulative effects on flood risk and land drainage would be reduced by the requirements for	No additional measures besides what has already been proposed in the topic chapters.	GW: Slight (to be reviewed when details of the development become available). SW: Neutral	GW: Neutral (to be reviewed when details of the development become available). SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							for cumulative effects on flood risk and land drainage would be reduced by the requirements for development at the Freeport to provide for sustainable drainage systems (offering water quality treatment and attenuation) and floodplain compensation storage where applicable. Construction would also expect to be undertaken in accordance with an EMP.	development at the Freeport to provide for sustainable drainage systems (offering water quality treatment and attenuation) and floodplain compensation storage where applicable.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
A127/A130 Fairglen Interchange improvements Essex County Council Area	A127/A130 Fairglen Interchange improvements Improvements to the existing interchange including: • A new 'Southend Link Road' • Widened slip roads on most of the arms of the Fairglen Roundabout • Additional and/or longer slip lanes on both A127 on-slip roads • Improvements at the Rayleigh Spur Roundabout, including new traffic lights at two arms of the junction and an additional lane on the roundabout itself	12km from OL Overlaps with ARN	1b	Y	Air Quality	Yes	Included in forecast traffic data and therefore air quality modelling.	Included in forecast traffic data and therefore air quality modelling. Closest operational receptors LTC062 and LTC353 show modelled concentrations well below the AQS objective and thus indicate that cumulative impacts are unlikely to lead to exceedances of the AQS objective. No cumulative effects are predicted on designated sites.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. The s is included in forecast traffic data and therefore air quality modelling. No cumulative effects are predicted on designated sites.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. The s is included in forecast traffic data and therefore air quality modelling. Closest operational receptors LTC062 and LTC353 show modelled concentrations well below the AQS objective. No cumulative effects are predicted on designated sites.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Human health impacts align with air quality study area for human receptors. No cumulative effect as this proposal is included in the forecast traffic data and therefore air quality modelling. Air quality effect is assessed as neutral. No additional visual impact identified in relation to landscape. Noise impacts assessed as slight adverse but not significant. During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.				
					Road drainage and Water Environment	No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
N/A Environment Agency	**Thames Estuary 2100** - the long-term strategy for managing tidal flood risk in the Thames Estuary. Phase 1 would take place between 2019 and 2035 and would involve: • maintaining and proving current flood risk assets including walls, gates, embankments and pumps. • protect land needed for future improvements to flood defences • monitor how the estuary is changing.	Within OL Adjacent to ARN	3	No	Air Quality	Yes	The development has the potential to lead to increases in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development is unlikely to generate additional operational traffic flows that could lead to cumulative impacts.	Mitigation measures cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Estuary development.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Estuary.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Thames Estuary.
					Cultural Heritage	Yes	Phase 1 is likely to protect heritage assets adjacent to the Thames estuary, but current level of available detail means it is impossible to be certain. It may have negative effects on historic landscape features such as remains of intertidal marsh. Based on current information there may be impacts to views across the river from the coastal forts, but the project would not affect these views and therefore	Phase 1 is likely to protect heritage assets adjacent to the Thames estuary, but current level of available detail means it is impossible to be certain. It may have negative effects on historic landscape features such as remains of intertidal marsh. Based on current information there may be impacts to views across the river from the coastal forts, but the project would not affect these views and therefore	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							there would be no cumulative effects.	there would be no cumulative effects.			
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however, given the broad scale of the Thames Estuary 2100 Plan, the combined landscape and visual effects could be significant (either beneficial or adverse).	**Landscape and Visual Amenity:** Insufficient information available to assess, however, given the broad scale of the Thames Estuary 2100 Plan, the combined landscape and visual effects could be significant (either beneficial or adverse).	N/A	N/A	N/A
					Terrestrial Biodiversity	Yes	There is potential for cumulative effects as a result of works within intertidal areas especially temporary disturbance effects on birds during construction. Given the timescale for both projects, construction phases could coincide. LTC has concluded temporary minor adverse impact which will result in an effect which is slight adverse and not significant based on the distance of construction work and the mitigation put in place. There therefore may be a temporary slight adverse cumulative effect, as there is sufficient mitigation put in place by LTC, and the background disturbance present on the River Thames.	No operational effects on terrestrial biodiversity are considered likely.	None - LTC has mitigated for disturbance to birds in the SPA.	Slight adverse	None
					Marine Biodiversity	Yes	Potential cumulative effects could arise through works to flood defence at Coal House Point, but magnitude of LTC works suggests this would not be an issue.	LTC has minimal operational effect pathway to the river, hence no significant pathways for cumulative effects during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase.	No additional measures besides what has already been	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Unlikely to affect best and most versatile land.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts.	Flood defence measures are very unlikely to generate additional traffic that could cause a cumulative effect.	None	Negligible	Negligible
					Population and human health	Yes	Human health impacts align with air quality study area for human receptors. Noise impacts assessed as neutral. During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to	Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							residential amenity and access to areas of open space.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: During the construction phase of TE2100 potential cumulative effects could occur, both in relation to groundwater resources quality and quantity, as a result of flood defence works that would affect the superficial and deep aquifers. However it is assumed the construction of the flood defence would be designed in consultation with the EA to avoid creation of a barrier to groundwater flow in the Chalk aquifer and the River Terrace Deposits aquifer. Surface water: It is expected that the design of the infrastructure would have been subjected to detailed assessments with regard to managing flood risk and water quality during its construction.	Groundwater: During the operational phase, potential cumulative effects could occur, both in relation to groundwater resources quality and quantity, as a result of flood defences that would affect the superficial and deep aquifers. It is assumed that the flood defence would be designed in consultation with the EA to avoid creation of a permanent barrier effect to groundwater in the Chalk aquifer and the River Terrace Deposits aquifer. Surface water: It is expected that the design of the infrastructure would have been subjected to detailed assessments with regard to managing flood risk, and the project may deliver cumulative beneficial effects during its operation.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW: Neutral SW: Moderate beneficial
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01534/FUL Thurrock Council Area	Land at Far East of Stanhope Industrial Park Wharf Road Stanford Le Hope Essex. The installation of 25 gas engine generators, a gas house, DNO building for transformers and associated vehicular access roads for a gas-fired electricity generation facility with	1.7km from OL 1.2km from ARN	1c	No	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	associated infrastructures and 4m fencing around the compound.				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Project Preliminary Ecological Appraisal confirms no effect on these receptors. The Project has concluded that the construction and operational effects on the Thames Estuary and Marshes SPA and Ramsar and Mucking Flats and Marshes SSSI are not significant, therefore no cumulative impacts are predicted.	Project Preliminary Ecological Appraisal confirms no effect on these receptors. The Project has concluded that the construction and operational effects on the Thames Estuary and Marshes SPA and Ramsar and Mucking Flats and Marshes SSSI are not significant, therefore no cumulative impacts are predicted.	None	Neutral	Neutral
					Marine Biodiversity	Yes	No relevant pathways for cumulative effects.	No relevant pathways for cumulative effects during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Unlikely to affect best and most versatile land.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.		Neutral	Neutral
					Materials assets and Waste	No	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Based on the nature of the development and the large distance from the Project Order Limits, no significant potential cumulative impacts to groundwater resources are expected.	Groundwater: Based on the nature of the development and the large distance from the Project Order Limits, no significant potential cumulative impacts to groundwater resources are expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00186/SCO Thurrock Council Area	**Kings Farm Parkers Farm Road Orsett Essex RM16 3HX.** Request for an Environmental Impact Assessment+D181 (EIA) Scoping Opinion: Proposed application for outline planning permission with all matters reserved apart from access for a mixed use development comprising 750 no. residential dwellings, medical facility, retail and commercial units together with ancillary development.	0.75km from OL Adjacent to ARN	2	N	Air Quality	No	Closest receptors LTC037 and LTC311 show modelled concentrations well below the AQS objective, therefore it is unlikely that there would be cumulative exceedances.	Closest receptors LTC037 and LTC311 show modelled concentrations well below the AQS objective, therefore it is unlikely that there would be cumulative exceedances.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Scoping report only and no time scales provided - Potential cumulative effects on the Thames Estuary SPA and Ramsar with regards to wintering birds through temporary disturbance and habitat loss. This is unlikely sue to the distance from the SPA and Ramsar, and the limited value of the habitats present. LTC has	No operational effects on terrestrial biodiversity are considered likely.	None - LTC has mitigated for disturbance to birds in the SPA.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							concluded there will be a slight adverse impact on birds associated within the SPA and Ramsar within the vicinity of this project. The distance from the Kings Farm Parkers site to the SPA would mean there was no cumulative impacts on terrestrial biodiversity predicted.				
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: no cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project, of which Orsett is one. Effects during construction may depend on timescale for the	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements. During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.		chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the large distance of the proposed development from the Project Order Limits (also large distance to the Project road alignment and utilities), and the fact that the proposed development is north of the Eocene boundary (so there would be no hydraulic connection with LTC), no significant potential impact on groundwater resources is expected.	Groundwater: Based on the large distance of the development to the Project no significant potential impact on groundwater resources is expected. The proposed development is north of the Eocene boundary so there would be no hydraulic connection with LTC.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01662/FUL Thurrock Council Area	**Langdon Hills Golf and Country Club, Lower Dunton Road Bulphan Essex** Hybrid application for the redevelopment of Langdon Hills Golf and Country Club. Detailed approval sought for:	2.5km from OL Adjacent to ARN	1c	No	Air Quality	Yes	Outside of construction ARN.	Closest receptor LTC327 shows concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	a new golf academy (with driving range, tuition space and function space for 150 guests) a redesigned club house (with wellness mindfulness centre, reception space, restaurant space, bar space, function space (for 250 guests), shop, storage space, gym, swimming pool and spa, changing rooms, office space; kitchens and food preparation areas and other ancillary space). The creation of a new health led community to include, 85 no. bungalows for the over 55s (Use Class C2) 36 no. apartments for the over 55s (use Class C2) 42 no. extra care apartments and a 64 bed care home (Use Class C2), and 4 no. key worker apartments. Demolition of existing buildings (clubhouse, hotel and green keepers building) and supporting infrastructure to include, a reconfigured main car park, a new car park for the golf academy, new vehicular access from Lower Dunton Road, landscaping, new bowling green, new walkways, a new bus stop to serve Langdon Hills Golf Club St Lukes Hospice, erection of a security gatehouse and surveillance. Outline approval sought for, a new quick play golf course, up to 12 no. apartments (Use Class C3) and a new redesigned green keepers				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The Langdon Hills Gold club development concluded no significant ecolicla effects on designated sites. Therefore it is considered unlikely that there will be a cumulative effect.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	building.				Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: There is no aquifer near ground surface as the proposed development geology comprises London Clay Formation (non productive strata with respect to water resources) and there are no British Geological Survey mapped superficial deposits. The principal aquifer, the Chalk aquifer is expected to be deep below the clay. Therefore considering the type of development and the clay covered protection of the principal aquifer (Chalk), no significant potential impacts on groundwater resources are expected.	Groundwater: Based on the type of development and the absence of an aquifer near ground surface, there are no significant potential impacts on groundwater resources.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/01812/FUL Thurrock Council Area	**Gothards Field Rear Of The George And Dragon East Tilbury Road Linford** Detailed planning application for the construction of 230 affordable dwellings with associated parking, access, landscaping, open space and infrastructure.	170m from OL 420m from ARN	1c	N	Air Quality	No	Closest receptor LTC410 shows concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Closest receptor LTC410 shows concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and	The Project would have no significant effects in this area and	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							therefore no cumulative effects are possible.	therefore no cumulative effects are possible.	been proposed in the topic chapters.		
					Landscape and Visual	Yes	**Landscape**: Although this development lies just outside of the landscape and visual ZoI, construction activity for the new residential development in conjunction with construction of the Project would result in a combined but very localised effect on existing landscape character. **Visual Amenity:** Construction of the new residential development would be primarily seen in views from the east of the existing East Tilbury settlement. The main in-combination effects on visual receptors from construction of the residential development in conjunction with the Project would be seen from the Linford recreation ground adjoining East Tilbury Road.	**Landscape:** New residential development would be seen in the context of the existing urban area of East Tilbury and would not notably change the wider landscape character. There would not therefore be any notable in-combination landscape effects. **Visual Amenity:** The new residential development would be primarily seen in views from the east of the existing settlement. The main in-combination effects on visual receptors would be seen from the adjoining Linford recreation ground adjoining East Tilbury Road. However, the residential development would be viewed in the context of other buildings in East Tilbury.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Terrestrial Biodiversity	Yes	Gothards Field Project recorded no significant impacts on any ecological features. As such, no cumulative effects are predicted in combination with the Project.	Gothards Field Project recorded no significant impacts on any ecological features. As such, no cumulative effects are predicted in combination with the Project.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.				
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: This residential development has already been determined to potentially have significant cumulative impacts in-combination with other significant developments in the area (see Decision letter 16/01475/SCR from Thurrock Civic Offices dated 21/11/2016) - notably, the Project is not among the above-mentioned significant developments. This proposed	Groundwater: Based on the type of development (residential) and the large distance of the proposed development from the Project alignment (1.7km), there are no significant impacts on groundwater resources. Any potential for cumulative effects on underlying groundwater bodies that support abstraction for potable water supply would be prevented by the mitigation	Mitigation is required at the proposed development to overcome potentially high groundwater levels and it is assumed that this would be a matter for	GW: Slight adverse SW: Slight adverse	GW: Slight adverse SW: Slight adverse

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							Construction	Operation		Construction	Operation
							development, either standalone or in combination with others, might have significant potential impacts on the quality and quantity of groundwater resources, mainly based on its proposed location. This is because the proposed development is located within the Linford public water supply well SPZ2 (Chalk aquifer) and extends just inside the eastern boundary of the SPZ1. In addition the proposed development is located in a low lying area (including an area less than 5mAOD) near which the Linford public water supply well (currently not connected to supply) is pumped by Northumbrian Water to avoid artesian conditions at the well. The ground level at the well is estimated to be approximately 5mAOD so artesian conditions would be expected beneath at least part of the proposed development. Planning application documents (Oct '21) show there will be some piled foundations (total depth not stated) but of small proportion of total site area, so unlikely to create a barrier effect in the deep Chalk aquifer. However the site sites on River Terrace Gravel deposits and whilst most foundations would be strip foundations there could be a barrier effect in these deposits especially if groundwater levels were in hydraulic connection with the Gobions Sewer water course if the latter were in flood conditions. Should the development create any unsealed pathways to the Chalk aquifer then there would be a risk of creating a local pathway for artesian water to rise to ground surface at the proposed	implemented by each of the developments. Surface water: The development drains to an unnamed watercourse that discharges to the River Thames. Given this location, in a discrete hydrological catchment, there is no potential for cumulative effects on surface water water quality, drainage and flood risk.	the Environment Agency as statutory consultee for the planning application. There would be no significant impacts to groundwater levels from the Project to the proposed development. No additional mitigation measures are required for the Project besides what has already been proposed in the topic chapters.		

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							development and/or impacting groundwater flows in the Linford area. This could cause sudden groundwater rise if the Linford well pumping was temporarily stopped. There is unlikely to be groundwater related impacts to the proposed development from the Project (no Project works are planned that would extend into the Chalk aquifer). However the proposed housing development has the potential to change superficial aquifer groundwater flows and create local pathways to Chalk aquifer artesian water that could change groundwater levels in vicinity of the Project. In addition, during construction of the proposed development, should there be piling works that disturb the Chalk aquifer there would be the potential to cause suspended solids to move to the Linford well and disrupt pumping due to damage to the pumps (water supply would be used for the Project TBM water supply). Surface water: The development is located adjacent to and is likely to drain to the Gobions Sewer. Potential for cumulative effects on the quality of this watercourse would expect to be avoided through implementation of a CEMP. The planning application documents (Oct '21) show a proposed lined attenuation pond and the design of this appears to be critically dependent on water level assumptions. If the assumptions made do not hold there would be potential for the pond to fail, increasing flow into the Gobions Sewer and potentially raising water levels and increasing flood risk locally. The				

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							Construction	Operation		Construction	Operation
							Project also proposes to discharge attenuated runoff to Gobions Sewer further upstream, so there is potential for cumulative effects on the flow regime of the watercourse (and flood risk).				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
16/00412/OUT Thurrock Council Area	Star Industrial Estate Linford Road Chadwell St Mary Essex Up to 203 dwellings.	250m from OL 230m from ARN	1b	N	Air Quality	No	Closest receptor LTC239 shows concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Closest receptor LTC239 shows concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The Star industrial estate development will have no impact on ecology. As such, no cumulative effects are predicted in combination with the Project.	The Star industrial estate development will have no impact on ecology. As such, no cumulative effects are predicted in combination with the Project.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase.	No additional measures besides what has already been proposed in	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: no cumulative effects likely during operational phase; impacts assessed at construction phase.	the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Based on the type of development (residential) and the large distance of the proposed development from the Project alignment (1.7km), there are no significant impacts on	Groundwater: Based on the type of development (residential) and the large distance of the proposed development from the Project alignment (1.7km), there are no significant impacts on	No additional measures besides what has already been proposed in	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							groundwater resources. Any potential for cumulative effects on underlying groundwater bodies that support abstraction for potable water supply would be prevented by the mitigation implemented by each of the developments. Surface water: The development drains to an unnamed watercourse that discharges to the River Thames. Given this location, in a discrete hydrological catchment, there is no potential for cumulative effects on surface water water quality, drainage and flood risk.	groundwater resources. Any potential for cumulative effects on underlying groundwater bodies that support abstraction for potable water supply would be prevented by the mitigation implemented by each of the developments. Surface water: The development drains to an unnamed watercourse that discharges to the River Thames. Given this location, in a discrete hydrological catchment, there is no potential for cumulative effects on surface water water quality, drainage and flood risk.	the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/01671/FUL Thurrock Council Area	**Northlake, Lakeside Basin** Hybrid planning application for the demolition of existing buildings and structures; site preparation works; up to 2,500 dwellings [Use Class C3] and supporting infrastructure. Outline approval (with all matters reserved) sought for: up to 2,158 dwellings comprising a mix of 1, 2, 3-bedroom units (Use Class C3); a serviced plot for a new primary / nursery school up to 2,300 sq.m; a health centre up to 1,000 sq.m (Use Class D1); community pavilion of up to 500 sq.m (Use Class D1); convenience retail store up to 400 sq.m (Use Class A1); public art together with associated vehicle parking, open space, landscape and	2km from OL Adjacent to ARN	1c	Yes	Air Quality	Yes	Nearby construction receptors (LTC 138 and LTC139_H) show concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Included in forecast traffic data and therefore air quality modelling. The Project reduces pollutant concentrations in this area; therefore, overall effect neutral.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	Yes	Neither developments are predicting an impact on designated sites. LTC has concluded temporary and permanent impacts which will result in an effect which is neutral. The hybrid planning application has predicted positive potential	Neither developments are predicting an impact on designated sites. LTC has concluded temporary and permanent impacts which will result in an effect which is neutral. The hybrid planning application has predicted positive potential	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	public realm provision, ecological mitigation, highways, pedestrian and vehicular access routes, and other associated engineering, utilities and infrastructure works. Creation of a new additional vehicle access. Detailed approval sought for: 342 dwellings (Use Class C3) comprising a mix of 1, 2, 3-bedroom units; linear park; a lido facility with changing room facilities up to 340 sq.m (Use Class D1) and ancillary café up to 100 sq.m (Use Class A3); 3km of mountain bike routes and a pump track, a pedestrian / cycle link tunnel from Lakeside Shopping Centre underneath the A1306, and vehicular access from the A1306 and MSA roundabout (bus / emergency).						effects. Therefore no cumulative effects are predicted.	effects. Therefore no cumulative effects are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							accessibility as a result of increased construction traffic movements.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: This major development is located in a far area of the ZoI of the Project (4km to the east of the Project road alignment); based on proposed development type and large distance to the Project, no significant risks to the groundwater environment are expected.	Groundwater: This major development is located in a far area of the ZoI of the Project; based on the ground profile and deep groundwater, no significant risks to the principal Chalk aquifer are expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00051/CV Thurrock Council Area	**Land adjacent Tilbury Power Station, Fort Road Tilbury Essex** Application for the variation of conditions no 9 (Timescales) [to Extend time period for completion from 31.12.2019 to 31.12.2032] and no 11 (Plans) [To alter phasing of restoration] of planning permission ref 17/00412/FUL (Continued re-profiling of the site to 9 metres AOD using inert reclamation material imported by river, in place of Pulverised Fuel Ash from the adjacent now redundant Power Station)	Within OL Adjacent to ARN	1c	N	Air Quality	No	The closest construction receptor (LTC_CON_025) measures concentrations well below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	There are no relevant human receptors in close proximity to this development due to the ARN being too far away	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The majority of the land uses proposed would have limited impact in the context of the land raising that has already occurred and affected both buried archaeology and the settings of Coalhouse and Tilbury Forts. Potential for cumulative effects during construction to the settings of surrounding heritage assets.	The majority of the land uses proposed would have limited impact in the context of the land raising that has already occurred and affected both buried archaeology and the settings of Coalhouse and Tilbury Forts.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Landscape and visual	Yes	**Landscape:** The proposed re-profiling of the site and subsequent restoration works in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity:** The main cumulative effects on visual	**Landscape and Visual Amenity:** The re- profiling of the site and subsequent restoration works are likely to be complete by the start of Project operation. It is therefore unlikely there would be any in-combination landscape or visual effects with the Project.	No additional measures proposed.	Moderate adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							receptors from the proposed re-profiling of the site and subsequent restoration works in conjunction with the construction of the Project, are likely to be primarily seen from the local PRoW network and Two Forts Way, the edges of Tilbury and East Tilbury, Fort Road and Coopers Shaw Road.				
					Terrestrial Biodiversity	Yes	There is potential for cumulative effects due to LTC removing some areas of mitigation land proposed for this development. The Project has already put in place additional mitigation measures to compensate for this Therefore no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	The Project has already put in place additional mitigation measures to compensate for this	Neutral	Neutral
					Marine Biodiversity	Yes	Potential cumulative effects could arise through combined marine vessel traffic, however, LTC levels are so low that will likely be no discernible change.	Potential cumulative effects could arise through combined marine vessel traffic, however, LTC levels are so low that will likely be no discernible change.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: Based on the nature of the development, operational phase should not have cumulative effect Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	proposed in the topic chapters.		
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and human health	Yes	Potential human health effects from cumulative change to air pollutant concentrations, dust, noise, vibration and visual impacts. Appropriate mitigation identified in relation to noise and vibration. Potential impacts on amenity of open space for users of Coalhouse and Tilbury Forts.	Potential impacts on amenity of open space for users of Coalhouse and Tilbury Forts.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Based on the type of material (inert), this proposal is unlikely to have a significant impact on groundwater resources (groundwater levels and flows). It is noted that the planning application is to change the fill material type (inert) rather than propose new filling so no change would be expected with respect to groundwater resources. Surface water: Based on the nature of the proposal that is the subject of a planning application, no new potential for cumulative effects on the surface water environment are anticipated.	Groundwater: Based on the type of material (inert), this proposal is unlikely to have a significant impact on groundwater resources (groundwater levels and flows), other than a possible limited local negative effect on aquifer recharge. Surface water: Based on the nature of the proposal that is the subject of a planning application, no new potential for cumulative effects on the surface water environment are anticipated.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/00077/FUL Thurrock Council Area	**Land Adjacent Fen Farm Judds Farm And Part Of Bulphan Fen Harrow Lane Bulphan Essex** Solar Farm for the generation of renewable energy and battery energy storage. Area covering 143 hectares. Installation of renewable led energy generating station comprising ground- mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, inverter/transformer stations, site accesses, grid connection cable, internal access tracks, security measures, access gates, other ancillary infrastructure, landscaping and biodiversity enhancements.	Adjacent to OL 360m from ARN	1b	N	Air Quality	No	The closest receptors (LTC037 and LTC311) measures concentrations well below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptors (LTC037 and LTC311) measures concentrations well below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be no significant effects to designated heritage assets in this area resulting from LTC and therefore no cumulative effects. However, there would be cumulative effects due to increased impacts to buried archaeology from all three developments and increased change to the nature of the historic landscape in the area, resulting in moderate adverse effects.	The operational effects of both projects would result in moderate adverse effects to the historic landscape due to large scale change in land use and character.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Moderate adverse
					Landscape and Visual	Yes	**Landscape**: Construction activity for the solar farm in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: The main cumulative effects on visual receptors from construction of the solar farm in conjunction with construction of the Project, would primarily be seen from the local Public Right of Way (PRoW) network, including views from the Mardyke Way, scattered residential properties, and from parts of Fen Lane, Harrow Road and Top Meadow Golf Course. **Combined assessment with other solar farms:** There would be significant in-combination	**Landscape**: The solar farm would result in a combined change in local landscape character in conjunction with the Project. **Visual Amenity**: The solar farm would primarily be seen in conjunction with the Project from the local PRoW network, including views from the Mardyke Way, scattered residential properties, and from Fen Lane, Harrow Road and Top Meadow Golf Course. **Combined assessment with other solar farms:** There would be significant in-combination landscape and visual effects due to the presence of Bulphan solar farm, with Medebridge solar farm, Ockendon solar farm and the Project, including on views from	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Moderate adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							landscape and visual effects during the construction of the Bulphan solar farm, with Medebridge solar farm, Ockendon solar farm and the Project, including on views from the local PRoW network, scattered residential properties, Fen Lane and Top Meadow Golf Course.	the local PRoW network, scattered residential properties, Fen Lane and Top Meadow Golf Course.			
					Terrestrial Biodiversity	Yes	The Solar Farm would have no significant effects in this area, therefore no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and human health	Yes	Having regard to the type of development, there is not considered to be any cumulative effect with the Project from the perspective of population and human health – no receptor pathway has been identified.	Having regard to the type of development, there is not considered to be any cumulative effect with the Project from the perspective of population and human health – no receptor pathway has been identified.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: This development is located >350m to the north-east and upgradient of the Project main alignment in the area of the Mardyke and tributaries. The Thurrock Council Grant of Full Planning Permission (January 2021) confirms that the construction of the development would require approval of the construction environmental management plan (CEMP) by the local planning authority prior to construction and therefore no construction methods that could cause a significant impact from the development would be allowed. In addition the development type is mostly above ground surface (ground-mounted photovoltaic solar arrays) and given this type of development and the fact that it is above the Eocene margin (i.e. the principal Chalk aquifer is overlain by thick clays) then there would be. no significant cumulative effects. Surface water: No significant effects on surface water receptors are anticipated either as construction effects would be managed via the CEMP.	Groundwater: based on the location north of the Eocene margin and proposed development type (solar farm), there would be no significant cumulative impact. Surface water: With regard to surface water receptors (tributaries of the Mardyke and the land drainage regime), given the development type, and subject to a suitable operational drainage design, no significant cumulative effects are anticipated.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
18/01660/REM 14/01321/OUT Thurrock Council Area	**Land Adjacent Railway Line The Manorway And West Of Victoria Road Stanford Le Hope Essex** Application for the approval of reserved matters (access, appearance, landscaping, layout and scale) following outline approval ref. 14/01321/OUT (Outline application with all matters reserved apart from access for the residential development of up to 153 dwellings.)	1.5km east from OL Adjacent to ARN	1a	N	Air Quality	Yes	Outside of construction ARN.	The receptor point (LTC419_F) representing this development shows a small increase in modelled concentrations, however as they are still below the AQS objective, cumulative impacts are unlikely.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The Land adjacent Railway line project would have no significant effects in this area, therefore no cumulative effects are predicted. are predicted.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: The proposed development is 3.2km to the east of Project road construction and 2.3km to the east of the nearest Project below ground utilities corridor. Therefore due to the large distance between the proposed development and the Project the nature of the proposed development (mostly residential) there would be no cumulative effect to the groundwater environment. In addition, it is noted that the EA has examined the supporting documents for this application and was able to discharge all the conditions; as such, this is considered to be sufficient to address any concern in relation to potential cumulative effects with the Project.	Groundwater: The proposed development is 3.2km to the east of Project road construction and 2.3km to the east of the nearest Project below ground utilities corridor. Therefore due to the large distance between the proposed development and the Project and the nature of the proposed development (mostly residential) there would be no cumulative effect to the groundwater environment.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
19/01058/OUT Thurrock Council Area	**Land Part Of Little Thurrock Marshes Thurrock Park Way Tilbury Essex** 161 new dwellings with vehicular access from Churchill Road; construction of 7,650 sq.m of flexible employment floorspace with vehicular access from Thurrock Park Way; provision of open space including landscaping and drainage measures; new pedestrian / cycle links; and associated parking and access.	1km from OL 0.75km south-west of ARN	1b	N	Air Quality	No	The closest receptor LTC731 shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor LTC731 shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Ecological mitigation strategy, Phase 1 report and species survey reports assessed for Land part of Little Thurrock Marshes project. No significant effects are predicted on the receptors within the ZoI. As such, no cumulative effects are predicted.	Ecological mitigation strategy, Phase 1 report and species survey reports assessed for Land part of Little Thurrock Marshes project. No significant effects are predicted on the receptors within the ZoI. As such, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Impact on agricultural land, some of which has the potential to be best and most versatile land.				
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	Impacts during operation may be beneficial where new pedestrian/cycle links potentially link up with those proposed as part of the Project.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Slight beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Given that the proposed development is close to the River Thames and is 3.8km to the west of the Project road alignment, there would be no significant cumulative impact. Surface water: The proposed development drains to an unnamed watercourse that discharges to the River Thames, this is a discrete hydrological catchment therefore there would	Groundwater: Given that the proposed development is close to the River Thames and is 3.8km to the west of the Project road alignment, there would be no significant cumulative impact. Surface water: The proposed development drains to an unnamed watercourse that discharges to the River Thames, this is a discrete hydrological catchment therefore there would	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							be no cumulative impact on the surface water environment.	be no cumulative impact on the surface water environment.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/00887/FUL Thurrock Council Area	**Land To East Of Euclid Way And South Of West Thurrock Way West Thurrock Essex** Redevelopment of the site to provide 256 dwellings (an uplift of 242 dwellings when combined with 17/00548/REM Approval of reserved matters (layout, scale, appearance and landscaping) for Phase 1 of the outline part of application ref. 13/01231/FUL comprising the construction of 214 residential dwellings, new public open space, car parking and associated infrastructure works) and associated provision of open space, landscaping, car parking and infrastructure works	3km from OL 408m from ARN	1a	Y	Air Quality	No	The closest receptor (LTC289_H) shows a maximum change 0.1 with concentrations remaining above the AQS objective.	The closest receptor (LTC289_H) shows modelled concentrations above the AQS objective, but the project leads to a decrease in those concentrations. As this development is included in the traffic model it can be assumed that with LTC the reductions in pollutant concentrations will be present with both LTC and this development.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN, no cumulative impacts are predicted.	Due to the distance from the OL and the ARN, no cumulative impacts are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	been proposed in the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: The proposed development is 5.8km to the west of the Project road alignment and therefore the large distance means that there would be no cumulative impact.	Groundwater: The proposed development is 5.8km to the west of the Project road alignment and therefore the large distance means that there would be no cumulative impact.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
MC/16/0600 MC/09/0417 Medway Council Area	**Land Between Roman Way And Knight Road East Of The Medway Valley Railway Line (Temple Waterfront) Strood Rochester Kent** Application for approval of Reserved Matters, including layout, landscaping, scale, appearance and access for 210 new dwellings of Phase 1A of Outline Permission (MC/09/0417) - Outline application for planning permission providing up to 620 units; up to 10,300 sqm of employment floorspace ; up to 1,800 sqm of retail floorspace; up to 200 sqm community facilities; strategic landscaping, improvements to open space, parking and related infrastructure including works in relation to site preparation, flood defence and land raising.	2.5km from OL 700m from ARN	1a	Y	Air Quality	No	Outside of construction ARN.	Traffic induced by development included in the Project traffic datasets and therefore air quality modelling. No receptors modelled in Order Limits.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Planning was approved in June 2017 with no conditions relating to ecology. It is considered unlikely that there will be cumulative effects on ecological features.	Planning was approved in June 2017 with no conditions relating to ecology. It is considered unlikely that there will be cumulative effects on ecological features.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements. No impacts anticipated during scheme operation.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: This development is located in the far south-eastern part of the ZoI of the Project. Based on the type of development and its proximity to the Project, no significant cumulative effect with the Project are expected.	Groundwater: This development is located in the far south-eastern part of the ZoI of the Project. Based on the type of development and its proximity to the Project, no significant cumulative effect with the Project are expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20141214 **20180041** Gravesham Borough Council Area	**Land at Coldharbour** 400 new homes and associated infrastructure including provision of open space, with access off Coldharbour Road	120m from OL Adjacent to ARN	1a	Y	Air Quality	Yes	The closest construction receptor (LTC589) shows modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Receptors within the Order Limits have been modelled in project DCO2 V2. Receptor ID: LTC411_F imperceptible change in pollutant	No additional measures besides what has already been proposed in the topic	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
								concentration expected at this receptor as a result of the Project.	chapters.		
					Cultural Heritage	Yes	No effects associated with the Project would take place in this area, therefore there would be no cumulative effect.	No effects associated with the Project would take place in this area, therefore there would be no cumulative effect.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The committee report concludes the site is of low nature conservation value and that there would be no harm to protected species in addition Natural England are satisfied that the proposal will mitigate against the potential effects of the development on designated sites and that the proposal should not result in a likely significant effect. No cumulative effects are anticipated.	The committee report concludes the site is of low nature conservation value and that there would be no harm to protected species in addition Natural England are satisfied that the proposal will mitigate against the potential effects of the development on designated sites and that the proposal should not result in a likely significant effect. No cumulative effects are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for cumulative effects to occur from construction traffic.	The predicted traffic from the proposed development is included within the project traffic model and so any cumulative effects would be evident. The operational road traffic noise assessment for the Project indicates negligible changes in road traffic noise level across this application site.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	Potential beneficial effects associated with provision of alternative areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Slight beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the development type, no significant cumulative effect is expected. Nature of development has a low impact on surface/groundwater receptors; changes to surface water runoff regime/flood risk would be managed to prevent cumulative effects.	Groundwater: Based on the development type, no significant cumulative effect is expected. Nature of development has a low impact on surface/groundwater receptors; changes to surface water runoff regime/flood risk would be managed to prevent cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EDC/17/0038 EDC/19/0049 Gravesham Borough Council area	**Northfleet Embankment East** 598 residential dwellings, retail space, provision of open space and associated infrastructure. Variation to application EDC/17/0038	1.6km from OL 600m from ARN	1a	Y	Air Quality	No	Outside Zone of Influence. Traffic induced by development included in the Project traffic datasets and therefore air quality modelling.	Outside Zone of Influence. Traffic induced by development included in the Project traffic datasets and therefore air quality modelling.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No (OL, stat sites)	No documentation was identified from this site. However, the site is located outside of the ZoI for all fauna species. It falls with the statutory designated sites ZOI for the Thames Estuary and Marshes SPA and Ramsar site. It is anticipated that any works will be mitigated for and that cumulative effects are not anticipated.	No documentation was identified from this site. However, the site is located outside of the ZoI for all fauna species. It falls with the statutory designated sites ZOI for the Thames Estuary and Marshes SPA and Ramsar site. It is anticipated that any works will be mitigated for and that cumulative effects are not anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	been proposed in the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: site located adjacent to River Thames, in Northfleet , far from the main alignment of the Project. Therefore any impacts would be local to the development. Nature of development is not expected to have significant impacts on groundwater unless extensive basements were proposed.	Groundwater: site located adjacent to River Thames, in Northfleet , far from the Project main alignment. Therefore any impacts would be local to the development. Nature of development is not expected to have significant impacts on groundwater unless extensive basements were proposed.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EDC/17/0022 and EDC/18/0191	**Northfleet Embankment East (Employment Site) Crete Hall Road Northfleet**	2km from OL	1b	Y	Air Quality	Yes	Outside Zone of Influence. Traffic induced by development included	Outside Zone of Influence. Traffic induced by development included	No additional measures besides what has	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Gravesham Borough Council Area	Outline application with all matters reserved except access for development of brownfield land to provide up to 21,500m^2 (231,000ft2) of employment floorspace, and associated site vehicular access. Application for minor material amendment to Reserved Matters approval reference EDC/17/0122 (relating to the development of a manufacturing facility for the production of modular housing with ancillary two-storey office block and associated access/parking pursuant to outline planning permission EDC/17/0123.	530m from ARN					in the Project traffic datasets and therefore air quality modelling.	in the Project traffic datasets and therefore air quality modelling.	already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Northfleet Embankment East project concluded no significant effects on ecological features. Therefore no cumulative effects are predicted.	Northfleet Embankment East project concluded no significant effects on ecological features. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: This major development might have some cumulative effect with the Project. However: 1) based on the ground profile in this area, the Chalk principal aquifer is fairly protected by the upper low permeability formations, and 2) the EA would address any concerns about groundwater resources they might have by means of standard planning conditions, which should normally be sufficient to address any potential cumulative effect with the Project as well.	Groundwater: any potential for cumulative effects on groundwater will be addressed by standard planning conditions from the EA.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00402/FUL	**Brentwood Enterprise Park** Hybrid application seeking outline planning permission for M25 to B186	Within OL and the ARN	1c	Y	Air Quality	Yes	The are 4 receptors near the proposed development site. With the traffic associated with this development included in the	The are 4 receptors near the proposed development site. With the traffic associated with this development included in the	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Brentwood Borough Council Area	link Road (Phase 2) and detailed planning permission for demolition of existing buildings and structures; ground works to enable creation of development plots; highways works including construction of new A127 overbridge, access from B186, site roads and construction of M25 J29 to B186 link road (Phase 1); erection of buildings for Class B8 (storage & Distribution) and/or Class B2 (general Industrial) use, with ancillary office space (within Class E); landscaping; infrastructure and enabling works including diversion of public rights of way | Land South Of A127 East Of M25 Junction 29 Codham Hall Codham Hall Lane Great Warley Essex						traffic model, all receptors show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	traffic model, all receptors show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	Yes	None. While these proposals may impact upon the value of LB152 and LB157, the Project would not have any effect on these assets. Archaeological remains within this site have been previously removed by archaeological excavation.	None. While these proposals may impact upon the value of LB152 and LB157, the Project would not have any effect on these assets. Archaeological remains within this site have been previously removed by archaeological excavation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape**: Construction activity for Brentwood Enterprise Park in conjunction with construction of the Project would result in a combined effect on local landscape character. However, such effects would be limited, as construction activity would occur in an area already strongly influenced by a combination of the M25 corridor and industrial and commercial development to the north and south of the A127 corridor. **Visual Amenity:** The main in-combination effects on visual receptors from construction of Brentwood Enterprise Park in conjunction with the Project, would primarily be seen from scattered residential properties along B186 Warley Street, the local PRoW network, the Upminster to Basildon railway line, and from Warley Street. However, effects would be limited, as construction activity would occur in an area already strongly influenced by a combination of the M25 corridor and industrial and commercial	**Landscape and Visual Amenity:** In the opening year of the Project, parts of the M25 corridor and M25 junction 29 would be more apparent due to vegetation loss. This would result in some in-combination landscape and visual effects, including on scattered residential properties along Warley Street, the local PRoW network, the Upminster to Basildon railway line, and from Warley Street. However, on establishment of Project mitigation planting, the M25 corridor and M25 junction 29 would appear similar to existing, therefore no notable in-combination landscape or visual effects would be likely.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							development to the north and south of the A127 corridor.				
					Terrestrial Biodiversity	Yes	Brentwood Enterprise Park concluded moderate adverse effects on the locally important breeding bird resource. The Project concluded a minor adverse impact on the breeding bird assemblage north of the River Thames in the construction phase. Due to the low level of the importance of the breeding bird resource within the Brentwood Enterprise Park, no cumulative effects are predicted.	Brentwood Enterprise Park concluded moderate adverse effects on the locally important breeding bird resource. The Project concluded a minor adverse impact on the breeding bird assemblage north of the River Thames in the operational phase. Due to the low level of the importance of the breeding bird resource within the Brentwood Enterprise Park, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for cumulative effects from construction traffic.	The predicted traffic from the proposed development is included within the project traffic model and so any cumulative effects would be evident. The operational road traffic noise assessment for the Project indicates negligible changes in road traffic noise level across this application site.	None	Slight adverse	Negligible
					Population and human health	Yes	Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to amenity and accessibility as a result of increased construction traffic movements.	Moderate beneficial effects anticipated during scheme operation in terms of potential increased accessibility for businesses and employment.	No additional measures besides what has already been proposed in the topic chapters.	Residential amenity and access: Slight adverse	Employment: Moderate beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The site is within a SPZ3 (merged SPZ3 of the Linford and Stifford public supply sources)- both locations abstract from the Chalk aquifer and based on the development location there would be no impact as the Chalk is located deep below clay deposits. The superficial geology (Head deposits) is classed as secondary A aquifer of low vulnerability. A Site of Importance for Nature Conservation, Franks Wood and Cranham Brickfields SINC, is located 200m to the west of the development, on the other (west) side of the M25- the site is potentially a GWDTE (groundwater dependent terrestrial ecosystem). However this SINC is hydraulically upgradient of the proposed development and low ground (at	Groundwater: As discussed for the construction phase, based on the general setting of the site (north of the Eocene boundary) and the nature of the development, no significant cumulative potential impact to groundwater resources is expected during operation. Additionally, based on the Environmental Statement for the development, it is assumed that the on site watercourse is of low value and therefore should there be a cumulative significance (due to changes to baseflow) that is slight adverse due to the changes to the base flow then the cumulative impact would not be significant. Should assessed groundwater level information for the development site become	No additional measures besides what has already been proposed in the topic chapters.	GW: Slight adverse SW: Slight adverse	GW: Slight adverse. SW: Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Hobbs Hole LWS) lies between the SINC and the proposed development so it is unlikely that the proposed development would affect the Franks Wood and Cranham Brickfields SINC. On the edge of the proposed development is the local wildlife site (Hobbs Hole LWS) and Appendix 14.5: Hydrogeological Risk Assessment (Application Document 6.3) does not identify this as a GWDTE. It is noted that Hobbs Hole LWS includes watercourses that flow through it and that much of the LWS comprises an area of lower ground (<20 m AOD) compared to the surrounding area (up to >30mAOD) (although it is noted there maybe areas of made ground) and the geology at the LWS comprises mostly Alluvium whilst the surrounding (higher) land natural geology at outcrop comprises Head Deposits. This topography and geology suggest the potential for perched water in the superficial deposits to provide baseflow to the watercourses that flow through the LWS although the source of each watercourse starts outside of the LWS showing that baseflow local to the LWS may not be the primary water source. On the northern boundary of the proposed development and immediately north east of M25 junction 29 is Codham Hall LWS and this is not identified as a GWDTE in Appendix 14.5. The proposed development entails a mixed-use commercial and supporting amenity. Also there would be cut and fill earthworks. The Environmental Statement Volume 4 Appendix 4: Phase 1 Geo-Environmental Study (February	available it would be prudent to review it. Surface water: Potential for cumulative effects on the water quality and flow regime of the watercourse during operation is considered to be limited, this is because each development would be required to sustainably manage its runoff in terms of its quality and quantity.			

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							2022) states that there is a low to moderate potential risk to the un-named on-site surface water course due to potential change to overland runoff and groundwater base flow due to the proposed development. Environmental Statement Volume 4, Appendix G: Flood Risk Assessment and Drainage Strategy, (February 2022) states that there is no record of groundwater level for the development site as onsite ground investigation is yet to be completed. However, Environmental Statement Volume 4, Appendix H: Preliminary Ecological Appraisal (February 2022), states that the waterbodies on site are of poor condition and are only of site importance. It is anticipated that any planning permission would require that the development should not cause significant impact on groundwater levels off site including at the nearby LWSs and SINCs , during construction. However, it is noted that due to the current lack of interpreted groundwater level data on the development site the importance of baseflow from perched groundwater in the superficial deposits cannot be known nor impacts relating to the potential baseflow to the water courses during construction can be assessed. There is potential that the cumulative impact of the local, limited earthworks of the Project and the larger scale earthworks at the proposed development could have a slight adverse impact to the watercourses at Hobbs Hole LWS. The slight adverse impact assessment is based on the above information that suggests that the watercourses are of low				

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							Construction	Operation		Construction	Operation
							value in terms of ecological value and are not part of a GWDTE at the LWS. Therefore, based on the general setting of the proposed development site and the nearby Project (north of the Eocene boundary) the cumulative impact would be not significant. Should assessed groundwater level information for the development site become available it would be prudent to review it. Surface water: The development is adjacent to and drains to a tributary of the Mardyke West tributary, which would also receive discharges from the Project. It is in FZ1. Potential for cumulative effects on the water quality and flow regime of the watercourse is considered to be limited, this is because each development would be required to sustainably manage its runoff (in terms of quality and quality) during construction.				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/01525/OUT Brentwood Borough Council Area	**Entire Land East Of A128 South Of A127 Tilbury Road West Horndon Essex** also known as Dunton Hills, Brentwood Outline application with all matters reserved apart from Access, for: the construction of a Garden Community which includes up to 3,700 dwellings, 3 care homes, 5 gypsy/travellers pitches, secondary and primary schools, children's nurseries	4km from OL Adjacent to ARN	1c	Y	Air Quality	Yes	Two construction receptors (LTC019 and LTC314) are located on the proposed development boundary and show modelled concentrations well below the AQS objective is all modelled years. Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	Two receptors (LTC019 and LTC314) are located on the proposed development boundary and show modelled concentrations well below the AQS objective. Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

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							Construction	Operation		Construction	Operation
	and creches. Employment hub, village centre and neighbourhood hubs, mobility hub, community sports hub, football, hub, cricket ground, green and blue infrastructure, sustainable drainage system, accesses to A128 Tilbury Road, footpath and cycle link to the A127 and other associated infrastructure and works including noise barrier, demolition of structures and undergrounding of the overhead lines.				Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may	Beneficial impacts anticipated during scheme operation as a result of provision of employment	No additional measures besides what has already been	Slight adverse	Slight beneficial

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	opportunities and access to community facilities.	proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the approx. 4 km distance from the Project alignment and ground profile in this area, the potential impact from this development is likely to be minor, and easily managed by means of the EA standard planning conditions. This would also minimise any cumulative effects with the Project.	Groundwater: Based on the ground profile in this area, the potential impact from this development is likely to be minor, and easily managed by means of the EA standard planning conditions. This would also minimise any cumulative effects with the Project.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
112D & 112E Brentwood Borough Council Area	Employment site: Childerditch Industrial Estate 3.52ha	1.2km from OL 600m from ARN	3	N	Air Quality	Yes	The closest receptor LTC081 (600m south) shows modelled concentrations well below the AQS objective in all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor LTC081 (600m south) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	For this project there is a site allocation plan only, no air quality or ecological information available. However, the site is an existing industrial area, therefore no significant terrestrial ecological impacts are likely. Therefore, no	For this project there is a site allocation plan only, no air quality or ecological information available. However, the site is an existing industrial area, therefore no significant terrestrial ecological impacts are likely. Therefore, no cumulative effects are anticipated.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							cumulative effects are anticipated.				
					Marine Biodiversity	No	The Project did not screen in Thorndon Park SSSI as no significant air quality effects were predicted by air quality modelling. The Project would have a slight adverse not significant effect on freshwater species during construction, and neutral effects during operation. For bats, there would be a minor adverse not significant effect on habitat fragmentation and disturbance from construction, with neutral impacts during operation. Therefore, no cumulative effects are anticipated.				
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and human health	Yes	Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to amenity and accessibility as a result of increased construction traffic movements.	Moderate beneficial effects anticipated during scheme operation in terms of potential increased accessibility for businesses and employment.	No additional measures besides what has already been proposed in the topic chapters.	Residential amenity and access: Slight adverse	Employment: Moderate beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the large distance to the Project and the site setting, any cumulative effect with the Project is unlikely.	Groundwater: Based on the large distance to the Project and the site setting, any cumulative effect with the Project is unlikely.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
111 Brentwood Borough Council Area	Employment site: Upminster Trading Park 2.6ha	Adjacent to OL 400m from ARN	3	N	Air Quality	No	The closest receptor to the proposed development (LTC_Con_017) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No representative operational receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be no effects in this area as a result of the Project, therefore there would be no cumulative effects.	There would be no effects in this area as a result of the Project, therefore there would be no cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape**: Given that the Upminster Trading Park is currently in commercial/industrial use, construction activity would not result in any notable change to existing landscape character. **Visual Amenity**: The main in-combination views of construction	**Landscape**: Given that the Upminster Trading Park is currently in commercial/industrial use, new development would not result in any notable change to existing landscape character. **Visual Amenity**: New development within Upminster	No additional measures proposed.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							within Upminster Trading Park in conjunction with the Project would be seen from the local PRoW network and adjoining B186 Warley Street. However, given the views of the existing Upminster Trading Park, there are not likely to be any notable in- combination visual effects.	Trading Park would be unlikely to appear discernibly different from the existing development from the local PRoW network and adjoining B186 Warley Street and therefore there are not likely to be notable in-combination visual effects.			
					Terrestrial Biodiversity	Yes	No ecological information available, however the site is an existing industrial area, therefore no significant terrestrial ecological impacts are likely. As such, no cumulative effects are predicted.	No ecological information available, however the site is an existing industrial area, therefore no significant terrestrial ecological impacts are likely. As such, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: No specific development details available, however assume that during construction phase, the NPPF and best practice would be followed which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology - no cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts and there should be no cumulative effects.	The proposed development is unlikely to generate levels of road traffic to cause cumulative effects.	None	Slight adverse	Negligible
					Population and human health	Yes	Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to amenity and accessibility as a result of increased construction traffic movements.	Moderate beneficial effects anticipated during scheme operation in terms of potential increased accessibility for businesses and employment.	No additional measures besides what has already been proposed in the topic chapters.	Residential amenity and access: Slight adverse	Employment: Moderate beneficial
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Site is located on undeferential secondary superficial aquifer overlying London Clay Formation (unproductive strata) and is north of the valley feature formed by a Mardyke tributary and distant from the proposed A122/M25 junction cutting. The trading park is not expected to have any significant excavations and would be expected to manage surface water runoff in terms of both its quality and quantity. Therefore, based on the proximity of the project and based on the assumption of application of construction good practice, no significant potential impact on groundwater resources or surface water receptors is expected.	Based on the distance of the project, and the assumption of application of sustainable drainage, no significant potential impact on groundwater resources or surface water receptors is expected no significant potential impact on groundwater resources or surface water receptors is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20150155	**Springhead Park - Countryside Properties (UK) Ltd and Ebbsfleet**	200m from OL	1a	Y	Air Quality	Yes	Three modelled receptors have been included around the proposed development (LTC200, LTC397 and LTC591). All of	Six modelled receptors are in close proximity to the proposed development site (LTC200,	No additional measures besides what has already	Neutral	Slight beneficial

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Gravesham Borough Council Area	**Investment (GP) Ltd** The development of land at Ebbsfleet for mixed use up to 789,550m^2 gross floorspace comprising employment, residential, hotel and leisure uses, supporting retail and community facilities and provision of car parking, open space, roads and infrastructure	100m from ARN					which show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	LTC362, LTC397, LTC590, LT591 and LTC794). With the Project associated traffic, all six show concentrations well below the AQS objective and show a decrease with the scheme. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	Yes	None, no significant effects have been identified in this area as a result of the Project, therefore there would be no cumulative effect.	None, no significant effects have been identified in this area as a result of the Project, therefore there would be no cumulative effect.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Limited information obtained from the Ecological Mitigation and Management Plan and Combined Ecological and Arboricultural Survey Report. Appropriate pollution prevention mitigation recommended would prevent impacts to freshwater species. No impacts to bats other than direct loss of suitable roosting features on the site (which are intended to be retained) appear to not have been considered. No impacts on other receptors are predicted. The Project concluded a neutral construction on freshwater species, and a slight adverse significant effect of habitat fragmentation on bats during construction. Therefore, no cumulative effects are predicted.	Limited information obtained from the Ecological Mitigation and Management Plan and Combined Ecological and Arboricultural Survey Report. Appropriate pollution prevention mitigation recommended would prevent impacts to freshwater species. No impacts to bats other than direct loss of suitable roosting features on the site (which are intended to be retained) appear to not have been considered. No impacts on other receptors are predicted. The Project concluded a neutral construction on freshwater species, and a slight adverse significant effect of habitat fragmentation on bats during construction. Therefore, no cumulative effects are predicted.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is potential for cumulative effects to occur.	The traffic model includes the expected traffic from the proposed development, and this is therefore taken into consideration when predicting impacts at existing sensitive receptors. The noise-sensitive receptors within the proposed development are predicted to experience negligible changes in road traffic noise.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project.	No cumulative effects anticipated during scheme operation given air quality and noise assessments.	No additional measures besides what has already	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.		been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater and surface water: This proposed large development is approx. 4.5 km west of the A122/A2 junction and therefore little Project change is proposed close to the proposed development with the exception of a new utility route. Following the re-consultation, the Gravesham Borough Council Land Contamination team's recommendations remained unchanged; these entail typical contaminated land conditions. Overall, no cumulative effect is expected on the Project.	Groundwater and surface water: Based on the distance of the site, and the lack of commons surface water receptors no significant cumulative effect is expected on groundwaters or surface water receptors.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20090238/ EDC/16/0004 Gravesham Borough Council Area	**Northfleet Embankment West - Lafarage Cement UK PLC (LCUK)**: Outline application for a mixed development and comprising up to 532 homes, related car parking and landscaping, 46,000m^2 employment floorspace, related car parking, servicing and landscaping, retail and leisure space	1.3km from OL Overlaps with ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	Two modelled receptors are in close proximity to the proposed development site (LTC300 and LTC301). With the Project associated traffic, both show concentrations well below the AQS objective and show a decrease with the scheme. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	No effects associated with the Project would take place in this area, therefore there would be no cumulative effect.	No effects associated with the Project would take place in this area, therefore there would be no cumulative effect.	No additional measures besides what has already been	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									proposed in the topic chapters.		
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Northfleet Embankment West concluded no significant impacts on ecological features. Therefore, no cumulative effects are predicted.	Northfleet Embankment West concluded no significant impacts on ecological features. Therefore, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	Yes	No relevant pathways for cumulative effects.	No relevant pathways for cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No cumulative effects anticipated during scheme operation given air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: This site is approximately 2km north-west of the far west boundary of the Order Limits, and approximately 4.7km north-west from the proposed Project route (the current Watling Street). Based on the distance from the Project and the close proximity of the River Thames, no cumulative effect is expected.	Groundwater: no significant cumulative effect is expected on groundwaters.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/01273/FUL Thurrock Council Area	**Thames Park School Chadwell Road Grays Essex** Development of a new 6 form entry (FE) secondary school with associated sports facilities, access, parking, drainage and	Adjacent to OL Adjacent to ARN	1b	N	Air Quality	Yes	Receptor LTC560_F shows concentrations well below the AQS objective for all construction years, but with some small increases. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Receptor LTC560_F shows a small increase in concentrations, but they are well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	landscaping. Area covering 7.20 hectares.				Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** There would be no notable in-combination landscape or visual effects, with only a glimpsed passing view of construction activity for Thames Park School in conjunction with installation of a Project gantry, from Wood View overbridge crossing the A1089 Dock Approach Road.	**Landscape and Visual Amenity:** As the new gantry would not appear out of character with the A1089 Dock Approach Road corridor, there would be no notable in-combination landscape or visual effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Terrestrial Biodiversity		The site is predominantly intensive arable in nature, with the PEA stating that the site fits well within the existing arable field pattern and through the design has avoided or minimised any ecological impacts. Taking into account the ecological mitigation and enhancement measures outlined within this report, it is considered that the effects to the ecology and nature conservation of the site and its local environs will be negligible. Therefore no cumulative effects are predicted.	The site is predominantly intensive arable in nature, with the PEA stating that the site fits well within the existing arable field pattern and through the design has avoided or minimised any ecological impacts. Taking into account the ecological mitigation and enhancement measures outlined within this report, it is considered that the effects to the ecology and nature conservation of the site and its local environs will be negligible. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction the phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.				
					Materials assets and Waste		At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No	The construction of the new development would follow best practice. There is the potential for cumulative effects from construction traffic if construction phases overlap.	The Project is predicting slight adverse and beneficial effects along Chadwell Road, which are not significant. It is unlikely that the proposed development would generate sufficient traffic to cause a cumulative effect.	None	Slight adverse	Slight adverse
					Population and Human Health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No cumulative effects anticipated during scheme operation given air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage	Groundwater - Yes	Groundwater: Based on the distance (1.5km to the SW) between the site and LTC alignment and the development	Based on the distance (1.5km to the SW) between the site and LTC alignment and development, no significant cumulative effect is	No additional measures besides what has already	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - Yes	type, no significant cumulative effect is expected on groundwaters. Surface water: The development is located in a discrete hydrological catchment of an unnamed watercourse that discharges to the River Thames. On this basis there would be no significant cumulative effects on surface water receptors.	expected on groundwaters. Surface water: The development is located in a discrete hydrological catchment of an unnamed watercourse that discharges to the River Thames. On this basis there would be no significant cumulative effects on surface water receptors.	been proposed in the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/01709/FUL Thurrock Council Area	**Land To Rear Of Bannatynes Sports Centre Howard Road Chafford Hundred Grays Essex** Redevelopment to provide up to 344 residential units in buildings ranging 5 to 10 storeys in height with associated landscaping and highway works Area covering 1.07 hectares	1.4km from OL 67m from ARN	1c	N	Air Quality	Yes	The closest construction receptor (LTC138) shows modelled concentrations well below the AQS objective, with a small decrease. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Receptor LTC421_F shows modelled concentrations well below the AQS objective with a small decrease associated with the proposed development. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Slight beneficial
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Limited amount of ecological information available. Given the small area of the site, and the existing industrial nature of the site, no cumulative effects are predicted.	Limited amount of ecological information available. Given the small area of the site, and the existing industrial nature of the site, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No	Soils: Construction works should follow best practice in relation to	Soils: No cumulative effects on best and most versatile land are	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Soils - Yes	soil handling and reinstatement where applicable.	likely during the operational phase.	has already been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No cumulative effects anticipated during scheme operation given air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: This development is located in the far western area of the zone of influence. Thurrock Civic Offices has already granted full planning permission subject to several conditions. Matters related to potential negative effects to groundwater resources and contamination are dealt with by means of EA standard planning conditions which would address any significant concern	Groundwater: This development is located in the far western area of the zone of influence. Thurrock Civic Offices has already granted full planning permission subject to several conditions. Matters related to potential negative effects to groundwater resources and contamination are dealt with by means of EA standard planning conditions which would address any significant concern	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							related to impact on groundwaters. Any potential for cumulative effects on groundwater would be prevented by the mitigation implemented by each of the developments.	related to impact on groundwaters. Any potential for cumulative effects on groundwater would be prevented by the mitigation implemented by each of the developments.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/01777/FUL Thurrock Council Area	**Former Culver Centre And Land To Rear Daiglen Drive South Ockendon Essex** Development of 173 residential dwellings, comprising a mix of one and two bedroom apartments and two and three bedroom houses alongside the re-provision of Public Open Space with associated landscaping and public realm, private and communal amenity space, car and cycle parking provision and access improvements. Area covering 4.53 Hectares	1.9km from OL 1.1km from ARN	1c	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The former Culver Centre proposed project is considered to have a positive impact on site biodiversity. As such no cumulative effects are predicted.	The former Culver Centre proposed project is considered to have a positive impact on site biodiversity. As such no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	Yes	No relevant pathways for cumulative effects.	No relevant pathways for cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No cumulative effects anticipated during scheme operation given air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	GW: based on the large distance to the development and the nature of the development (moderately small housing development) the cumulative impact would be not significant.	GW: based on the large distance to the development and the nature of the development (moderately small housing development) the cumulative impact would be not significant.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
20/00971/FUL Thurrock Council Area	**Land At Fobbing Marshes Wharf Road Fobbing Essex** Remediation and restoration creating a series of water control structures, with associated works, to create a dynamic wetland habitat 20 Hectares	5.2km from OL 1.1km from ARN	1b	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	Yes	Development within ZoI due to tidal excursion. Works to create wetland within Fobbing marshes will have limited interaction with the Thames. Replacement of water control structures within the marshes. Water quality effects are predicted to minimal and quickly dispersed. Cumulative effects predicted to be not significant.	No relevant pathways for cumulative effects.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	Yes	During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Slight adverse
					Road drainage and Water Environment	Groundwater - No Surface water - No	Groundwater: Based on the distance of the development site (>8km east of the route alignment) and proposed surface water control structures for wetland habitat creation, no significant cumulative effect is expected on groundwater.	Groundwater: Based on the distance of the development site (>8km east of the route alignment) and proposed surface water control structures for wetland habitat creation, no significant cumulative effect is expected on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00563/FUL Thurrock Council Area	**Land Adjacent and East Of M25 and North Of Stifford Road Aveley Essex** Remediation and restoration, with associated works, of former landfill site to create a new public open space including community woodland Area covering 5.50 hectares.	2.8km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Unable to quantify impact due to no nearby receptor points. However with the project traffic numbers are likely to decrease on this road.	Unable to quantify impact due to no nearby receptor points. However with the project traffic numbers are likely to decrease on this road.	No additional measures besides what has already been proposed in the topic chapters.	Not Quantifiable	Not Quantifiable
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. Unable to quantify AQ impact due to no nearby receptor points. However with the project traffic numbers are likely to decrease on this road. As such no cumulative effects are predicted on any designated sites along the ARN.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. Unable to quantify AQ impact due to no nearby receptor points. However with the project traffic numbers are likely to decrease on this road. As such no cumulative effects are predicted on any designated sites along the ARN.	None	Not Quantifiable	Not Quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Construction works associated with the re-development of a former landfill site could potentially impact groundwater quality in the aquifer beneath if landfill leachate migration is enhanced. However, based on the distance of the site (>5km west of the A13 Junction), no significant cumulative effect on groundwater is expected.	Groundwater: during the operation phase, based on the distance of the site (>5km west of the A13 Junction), no significant cumulative effect on groundwater is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00360/FUL Thurrock Council Area	**730 London Road West Thurrock Essex RM20 3NL** Change of use from an industrial unit (Use Class B2) to a 20MW embedded Short Term Operating Reserve (STOR) generating facility (Sui Generis) together with internal and external alterations to the existing units with the erection of two 18m chimney stacks, auxiliary equipment including	4km from OL 100m from ARN	1b	N	Air Quality	Yes	The nearest receptor (LTC289_H) shows modelled concentrations above the AQS objective but there are small decreases in concentrations associated with the proposed development. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The nearest receptor (LTC108_H) shows modelled concentrations below the AQS objective and a small decrease in concentration associated with the proposed development. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	DNO, reactors, exhaust pipework, 8 coolers, gas kiosk, louvres, car parking, 3m high fencing and associated works (resubmission of 18/01231/FUL) Area covering 0.23 hectares or 2300 sq.m				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The nearest receptor (LTC289_H) shows modelled concentrations above the AQS objective but there are small decreases in concentrations associated with the proposed development. Therefore no cumulative effects on designated sites are anticipated.	The nearest receptor (LTC289_H) shows modelled concentrations above the AQS objective but there are small decreases in concentrations associated with the proposed development. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	During construction there may be a cumulative effect with the Project in relation to employment and also to construction effects on residential amenity. During construction there may be impacts on accessibility to	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							services and facilities as a result of the scheme being developed during the same timescale as the Project. Potential impacts may also be experienced in relation to residential amenity and access to areas of open space.		chapters.		
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/01404/OUT 19/00892/SCR 19/01862/FUL 19/01646/SCR 19/01804/FUL 20/00226/FUL 20/00359/FUL 20/00903/SCR 20/01532/SCO 20/00395/SCR Thurrock Council Area	**Thames Enterprise Park The Manorway Coryton Essex** Various applications related to Thames Enterprise Park including change of use of land to Open Storage (use class B8) and associated vehicle parking, access, landscaping and drainage Includes improvements to Sorrells roundabout and A13 Stanford-le-Hope junction (included as transport scheme in traffic model)	6km from OL 3km from ARN	1c	Y	Air Quality	No	Outside of construction ARN but the development traffic is included in the LTC traffic data set, therefore cumulative impacts from this development are included in modelled receptor results.	Outside of operational ARN but the development traffic is included in the LTC traffic data set, therefore cumulative impacts from this development are included in modelled receptor results.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	During construction there may be impacts on accessibility to services and facilities should the scheme be developed during the same timescale as the Project.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00290/FUL Thurrock Council Area	**Purfleet Truck Wash Fiddlers Reach Hedley Avenue West Thurrock Essex RM20 4XB** Truck Stop (sui generis)	2.5km from OL	1b	N	Air Quality	Yes	Outside of construction ARN.	The closest receptor (LTC009) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	comprising 207 HGV Parking Spaces, 2no. HGV fuelling facilities, 4no. HGV wash facilities, restaurant and wash facilities for HGV drivers, and associated office facilities	198m from ARN						exceedances of the AQS objective.	the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC009) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	No impacts anticipated during scheme operation given air quality and noise assessments.	No cumulative effects anticipated during scheme operation in line	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
								with air quality and noise assessments.	been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the distance of the development site (7km west of the north portal), no significant cumulative effect on groundwater.	Groundwater: based on the distance of the development site (7km west of the north portal), no significant cumulative effect on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00623/FUL Thurrock Council Area	**Waterworks High Road Fobbing Essex SS17 9JW** Demolition of all existing buildings and structures and redevelopment of the site to provide 178 dwellings and associated access, parking, public open space, landscaping and drainage infrastructure	>3km from OL Adjacent to ARN	1b	N	Air Quality	Yes	The closest receptors (LTC033 and LTC644) shows modelled concentrations well below the AQS objective across all years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptors (LTC033 and LTC644) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptors (LTC033 and LTC644) shows modelled concentrations well below the AQS objective across all years. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptors (LTC033 and LTC644) shows modelled concentrations well below the AQS objective across all years. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater – No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/01668/OUT	**Purfleet Regeneration Scheme** Application for outline planning permission, with all matters reserved for	5km from OL	1b	Y	Air Quality	Yes	Outside the construction ARN	The closest receptor (LTC287) shows modelled concentrations well below the AQS objective and thus indicates that cumulative	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Thurrock Council Area	subsequent approval, except for means of access, for mixed-use redevelopment involving the demolition of existing buildings and other structures, site preparation works, and the development of up to 2,850 dwelling houses (Use Class C3) comprising a mix of 1, 2, 3 and 4 bedroom units including affordable housing, up to 11,000 sq.m (f/s) of business uses (Use Class B1), up to 8,880 sq.m (f/s) of shops (Use Class A1), up to 5,220 sq.m (f/s) of restaurants and cafes (Use Class A3), up to 900 sq.m (f/s) drinking establishments (Use Class A4), up to 20,000 sq.m (f/s) of hotel accommodation (Use Class C1), up to 18,300 sq.m (f/s) of non-residential institutions uses, comprising a primary school, secondary school and sixth form, medical and community uses (Use Class D1), up to 6,200 sq.m (f/s) of assembly and leisure uses (Use Class D2), up to 135,000 sq.m (f/s together with external backlot production space) film and television production space including ancillary workshops, offices and post production facilities and ancillary infrastructure, together with ancillary car park, provision of temporary railway station facilities, up to 1,600 sq.m (f/s) of upgraded railway station facilities and local waste and power facilities (Sui Generis), all together with associated	Adjacent to ARN						impacts are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC287) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	vehicle parking, open space, landscape and public realm provision, ecological mitigation, highways, pedestrian and vehicular access routes, and other associated engineering, utilities and infrastructure works including but not limited to, rebuilding, repairing, replacing and upgrading of river wall and flood defence wall and associated works of repair and reinstatement of the former Yara Purfleet Terminal jetty and the former Cory's Wharf jetty to facilitate the river wall and flood defence works, the provision of four grade separated railway crossings including a new bridge as part of the re-profiling and realignment of London Road.						cumulative impacts from construction traffic.				
					Population and Human Health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00271/FUL Thurrock Council Area	**Land Adj A13 A1306 And Purfleet Road Aveley** Proposed new Distribution Centre consisting of - Erection of Warehouse and Distribution building (B8 Use Class), with ancillary Offices, Technical Service Block, Tote Wash, Vehicle Maintenance Building; Vehicle Inspection Hut, Gatehouse; creation of new access point from Purfleet Road and 'left-in' access from London Road; cycle, motorcycle, car, van and HGV parking (including construction of multi-storey car parking facility); fuel refill; hardstanding and circulation areas; sprinkler tanks; pump house; vehicle wash; and all	5km from OL Adjacent to ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC286) shows modelled concentrations well below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC286) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	other ancillary and enabling works including landscaping, drainage, engineering, ground stability works and boundary treatment.				Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/01180/SCO Thurrock Council Area	**Expansion Site Vopak Terminal London B V Ltd Oliver Road West Thurrock.** Request for an Environmental Impact Assessment (EIA) Scoping Opinion: Proposed hybrid planning application comprising detailed application for site access road and ecological buffer zone and outline planning application for warehouse and light industrial development (Use Class B8, B2 and associated B1) of up to 31,000 sq.m floorspace with associated access, parking and landscaping.	4.3km from OL 800m from ARN	2	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00592/OUT Thurrock Council Area	The Springhouse, Springhouse Road Corringham	3.5km from OL 125m from ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC342) shows modelled concentrations well below the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC342) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
A13 East facing access Thurrock Council Area	Information provided by Thurrock Council - Currently two scheme options developed through DfT Outline Business Case for funding consideration. The delivery of this scheme will enable local and strategic network issues to be addressed and managed more effectively while	1.5km from OL Adjacent to ARN	3	N	Air Quality	Yes	There are 18 construction receptors within the proposed development area, with all but one showing concentrations well below the AQS objective. The only exception is LTC289_H which is located near the M25 JC31. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	There are 53 operational receptors within the proposed development area, with all but one showing concentrations well below the AQS objective. The only exception is LTC289_H which is located near the M25 JC31. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	supporting growth and investment.				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Limited amount of ecological information available. 2 options recommended, with potential to impact ancient woodland at Brickbarn Woods. No AQ points associated with designated sites are predicted to be above the AQS objective. The Project will have a neutral effect on Brickbarn Wood, so no cumulative effects are predicted.	Limited amount of ecological information available. 2 options recommended, with potential to impact ancient woodland at Brickbarn Woods. No AQ points associated with designated sites are predicted to be above the AQS objective. The Project will have a neutral effect on Brickbarn Wood, so no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: The A13 east facing access option 6b includes new highway that would cross the Stifford public water supply SPZ1. The option 1a also includes new highway in the same SPZ1. The Stifford abstraction is from the Chalk aquifer and no groundwater drawdown or water quality changes due to the LTC Project are anticipated in the area of option 6b or 1a. Therefore any groundwater drawdown effects here would be from the A13 east facing access construction works only. Available information for the A13 east facing access options are dated Feb 2020 are only outline being a small scale plan view layout in the document provided.	Groundwater: The layout of the proposed A13 east facing access options 6b and 1a appear much smaller than the LTC Project. There is no detail about below ground works and whilst cumulative effects seem unlikely due to the large distance between the A13 east facing access options 6b and 1a and the Project's main alignment (>3.5km), further review is required when details become available about the former.	No additional measures beyond what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
A1014/A13 junction upgrade Thurrock Council Area	**A1014/A13 junction upgrade** Proposed improvement linked to Thames Enterprise Park Proposals in development by Thurrock Council for enhancement of junction to respond to increase in traffic	1.3km from OL Adjacent to ARN	3	Y	Air Quality	Yes	Outside construction ARN.	The closest receptors LTC233 and LTC419_F show concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No information is currently available. It is assumed that an improvement to a road junction will have limited impact on ecological features, and with suitable mitigation no significant impacts are likely. No cumulative impacts are predicted.	No information is currently available. It is assumed that an improvement to a road junction will have limited impact on ecological features, and with suitable mitigation no significant impacts are likely. No cumulative impacts are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste		At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	Included as part of the human health assessment. Potential cumulative effects on human health in relation to changes in noise levels during construction.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: The proposed road junction upgrade would be at Stanford le-Hope and therefore would be>2.5km east of the Project. Details are unknown at this time. It is likely that no cumulative impacts would occur.	Groundwater: The proposed road junction upgrade would be at Stanford le-Hope and therefore would be>2.5km east of the Project. Details are unknown at this time. It is likely that no cumulative impacts would occur.	None	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
A1089 (Asda) roundabout enhancements. Thurrock Council Area	**A1089 (Asda) roundabout enhancements.** Proposals in development by Thurrock linked to Tilbury Link Road proposals. Infrastructure improvements required to address capacity issues at this location.	0.3km from OL Adjacent to ARN	3	N	Air Quality	Yes	The closest receptor LTC731 shows modelled concentrations well below the AQS objective for all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor LTC731 shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	Limited information on the proposal does not allow for review of specific receptors. However, the Project is not having significant effects to heritage assets in this area. No cumulative impacts are predicted	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No information is currently available. It is assumed that an improvement to local infrastructure will have limited impact on ecological features,	No information is currently available. It is assumed that an improvement to local infrastructure will have limited impact on ecological features, and	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and with suitable mitigation no significant impacts are likely. No cumulative impacts are predicted.	with suitable mitigation no significant impacts are likely. No cumulative impacts are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: The proposed junction upgrade is in Tilbury and is >5km from the main alignment of the Project. Therefore, due to the distance there would be no cumulative impact.	Groundwater: The proposed junction upgrade is in Tilbury and is >5km from the main alignment of the Project. Therefore, due to the distance there would be no cumulative impact.	None	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
London Distribution Park 2, Tilbury Thurrock Council Area	**London Distribution Park 2, Tilbury** Approx. 120,000sqm floorspace of employment use B8, potentially 1560 jobs	Exact locations are unknown Within 3km of OL Within 400m of ARN	3	Y	Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However, no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However, no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the	Beneficial effects anticipated during scheme operation as there	No additional measures besides what	Negligible	Slight beneficial

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Air Quality and Noise assessment.	may be improvements in accessibility and employment.	has already been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: No information is available at this time. However, the proposed 120000sqm floorspace of employment uses is shown as at Tilbury. Therefore, given the large distance of >3km west of the main alignment of the Project and the nature of the development there would be no cumulative impact.	Groundwater: No information is available at this time. However, the proposed 120000sqm floorspace of employment uses is shown as at Tilbury. Therefore, given the large distance of >3km west of the main alignment of the Project and the nature of the development there would be no cumulative impact.	None	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Aveley Thurrock Council Area	Potential delivery for 2700 homes by 2041; and Potential delivery of approx. 167,766sqm of B2/B8 employment uses with approx. 2,090 jobs.	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of Aveley it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Population and Human Health	No	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of Aveley it is unlikely that the construction of	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location of the Proposed Development it is considered	None	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							the Proposed Development or construction traffic would cause a cumulative effect.	unlikely there would be cumulative effects from the traffic it may generate.			
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Aveley is to the west of the M25, north of the River Thames and therefore is >5km distance for the main alignment of the Project. Therefore there would be no cumulative impact.	Groundwater: Aveley is to the west of the M25, north of the River Thames and therefore is >5km distance for the main alignment of the Project. Therefore there would be no cumulative impact.	None	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Lakeside Thurrock Council Area	Potential delivery for 3800 homes by 2041 or 1200 homes and approx. 116,130sqm of employment floorspace, B8 use with approx. 1,660 jobs. Development could extend beyond plan period (beyond 2041)	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would	Geology: No cumulative effects likely during operational phase as contamination impacts would be	No additional measures besides what has already	Geology: Neutral Soils: Very	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	been proposed in the topic chapters.	large adverse (subject to knowing exact location)	
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							traffic would cause a cumulative effect.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater and surface water: Lakeside is >5km to the west of the main alignment of the Project. Therefore there would be no cumulative impact	Groundwater and surface water: Lakeside is >5km to the west of the main alignment of the Project. Therefore there would be no cumulative impact	None	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
South Ockendon Thurrock Council Area	Potential delivery for 9,800 homes by 2041. Development could extend beyond plan period (beyond 2041) Potential delivery of 33,965sqm floorspace of B1/B2/B8 employment uses with approx. 440 jobs.	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	Yes	Insufficient information available to assess, however given the number of homes proposed and land allocated for employment use, the combined impact on both below ground and above ground cultural heritage assets, effects could be significant (likely adverse).	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the proposed development it is considered there could be some cumulative effects on cultural heritage receptors.	N/A	N/A	N/A
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed and land allocated for employment use, the combined landscape and visual effects could be significant (likely adverse).	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed and land allocated for employment use, the combined landscape and visual effects could be significant (likely adverse).	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some	None	Negligible	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							traffic would cause a cumulative effect.	cumulative effects from the traffic it may generate.			
					Population and Human Health	No	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: There is no location information available at this time although the proposed development would be at South Ockendon and therefore could be <900m or >2.5km distance from the main alignment of the Project, depending on the exact location. The nature of the development would not be expected to cause significant cumulative impacts but details of location, below ground works and drainage should be obtained in order to conduct the cumulative impact assessment. Surface water: The proposed development is located in the Mardyke catchment. If within the surface water zone of influence, significant cumulative effects on land drainage and flood risk, or water quality are not anticipated, on the basis that the proposed development would be expected to manage its runoff in terms of quantity and quality, both during construction and operation.	Groundwater: There is no location information available at this time although the proposed development would be at South Ockendon and therefore could be <900m or >2.5km distance from the main alignment of the Project, depending on the exact location. The nature of the development would not be expected to cause significant cumulative impacts but details of location, below ground works and drainage should be obtained in order to conduct the cumulative impact assessment. Surface water: As for construction.	Any necessary mitigation cannot be established without further information in the location of the development , below ground works and drainage.	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Slight adverse	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Slight adverse
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
West Horndon Thurrock Council Area	Potential delivery for 7,000 homes by 2041.	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	no					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	proposed in the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	No	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - likely no	Groundwater and surface water: West Horndon is greater than 3km from the main alignment of the Project and is north of the Eocene margin. Subject to confirmation of exact location of the development, which is not available at this time, the cumulative impact would be not significant.	Groundwater and surface water: West Horndon is greater than 3km from the main alignment of the Project and is north of the Eocene margin. Subject to confirmation of exact location of the development, which is not available at this time, the cumulative impact would be not significant.	None	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
North Grays Thurrock Council Area	Potential delivery for 925 homes by 2041.	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	Yes	Insufficient information available to assess, however due to the number of homes proposed and location the combined effects are unlikely to be significant.	Insufficient information available to assess, however due to the number of homes proposed and location the combined effects are unlikely to be significant.	N/A	N/A	N/A
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however due to the number of homes proposed in proximity to extensive residential properties in north Grays, the combined landscape and visual effects are unlikely to be significant.	**Landscape and Visual Amenity:** Insufficient information available to assess, however due to the number of homes proposed in proximity to extensive residential properties in north Grays, the combined landscape and visual effects are unlikely to be significant.	N/A	N/A	N/A
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology – Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	No	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - likely no	Groundwater and surface water: Details including the exact location in North Grays is not available at this time. However Grays is approximately 3km from the main alignment of the Project and therefore due to the nature of the proposed development (925 homes) and the large distance, there would be no cumulative impact.	Groundwater and surface water: Details including the exact location in North Grays is not available at this time. However Grays is approximately 3km from the main alignment of the Project and therefore due to the nature of the proposed development (925 homes) and the large distance, there would be no cumulative impact.	None	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Chadwell St Mary Thurrock Council Area	Potential delivery for 5,400 homes by 2041. Development could extend beyond plan period (beyond 2041)	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	Yes	Insufficient information available to assess, however given the number of homes proposed, the combined cultural heritage effects could be significant (likely adverse).	Likely significant effects would not occur during the operational phase of the project	N/A	N/A	N/A
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed, the combined landscape and visual effects could be significant (likely adverse).	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed, the combined landscape and visual effects could be significant (likely adverse).	N/A	N/A	N/A
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		chapters.		
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Details of the proposed development at Chadwell St Mary at this time and depending on where is the location, the development could be less than a few hundred metres or greater than 1.5km away from the main alignment of the Project. The Chadwell St Mary area is within the merged SPZ3 (total catchment area) of the public water supply well at Linford and Stifford. Proposals at the development for drainage and proportion of hard landscaping and building footprints would be important in assessing whether there could be a cumulative impact to rainfall recharge to the underlying Chalk aquifer that is the source for the Linford and	Groundwater: Details of the proposed development at Chadwell St Mary at this time and depending on where is the location, the development could be less than a few hundred metres or greater than 1.5km away from the main alignment of the Project. The Chadwell St Mary area is within the merged SPZ3 (total catchment area) of the public water supply well at Linford and Stifford. Proposals at the development for drainage and proportion of hard landscaping and building footprints would be important in assessing whether there could be a cumulative impact to rainfall recharge to the underlying Chalk aquifer that is the source for the Linford and Stifford public water	Any necessary mitigation cannot be established without further information in the location of the development , below ground works and drainage.	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Slight Adverse	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Stifford public water supply. Further information is required. Surface water: The proposed development would be located in the West Tilbury Main catchment. If situated within the 500m surface water zone of influence, the potential for cumulative effects on land drainage and flood risk, as well as water quality	supply. Further information is required. Surface water: As for construction.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
East Tilbury Thurrock Council Area	Potential delivery for 3,775 homes by 2041. Development could extend beyond plan period (beyond 2041)	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	Yes	Insufficient information available to assess, however given the number of homes proposed, the combined cultural heritage effects could be significant (likely adverse).	Likely significant effects would not occur during the operational phase of the project	N/A	N/A	N/A
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed, the combined landscape and visual effects could be significant (likely adverse).	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the number of homes proposed, the combined landscape and visual effects could be significant (likely adverse).	N/A	N/A	N/A
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is	None	Negligible	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							construction of the Proposed Development or construction traffic would cause a cumulative effect.	considered there could be some cumulative effects from the traffic it may generate.			
					Road drainage and Water Environment	Groundwater - Yes Surface water -Yes	Groundwater: Details of the proposed development at East Tilbury are not available at this time and depending on where is the location, the development could be less than 100m or greater than 1.5km away from the main alignment of the Project. The development is likely to be within the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Should the development be on the north side of East Tilbury it could be within the SPZ2 of the Linford public water supply well. Proposals at the development for drainage and proportion of hard landscaping and building footprints would be important in assessing whether there could be a cumulative impact to rainfall recharge to the underlying Chalk aquifer that is the source for the Linford and Stifford public water supply. In addition, depending on the development location there could be a cumulative impact on the groundwater flow in the gravel superficial deposits that feeds the irrigation reservoir at Low Street. Further information is required. Surface water: The development would be located in the catchment of the Gobions Sewer, with the potential for cumulative effects on the water quality attributes of this watercourse if it receives discharges. However, good practice measures would be expected to reduce the potential for these effects.	Groundwater: Details of the proposed development at East Tilbury are not available at this time and depending on where is the location, the development could be less than 100m or greater than 1.5km away from the main alignment of the Project. The development is likely to be within the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Should the development be on the north side of East Tilbury it could be within the SPZ2 of the Linford public water supply well. Proposals at the development for drainage and proportion of hard landscaping and building footprints would be important in assessing whether there could be a cumulative impact to rainfall recharge to the underlying Chalk aquifer that is the source for the Linford and Stifford public water supply. In addition, depending on the development location there could be a cumulative impact on the groundwater flow in the gravel superficial deposits that feeds the irrigation reservoir at Low Street. Further information is required. Surface water: Operational runoff from the proposed development has the potential to effect the flow regime of Gobions Sewer, however the development would be expected to manage its surface water runoff in accordance with NPPF and LLFA requirements, which would reduce cumulative effects, such	Any necessary mitigation cannot be established without further information in the location of the development , below ground works and drainage.	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Slight adverse	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
								that no significant cumulative effects are likely.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Stanford-le-Hope Thurrock Council Area	Potential delivery for 2,250 homes by 2041.	Exact locations are unknown Development may fall within 3km from OL and within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Impact on agricultural land, some of which has the potential to be best and most versatile land.				
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Details of the proposed development at Stanford-le-Hope are not available at this time and depending on where is the location, the development could be >2km away from the main alignment of the Project. The development is likely to be within	Groundwater: Details of the proposed development at Stanford-le-Hope are not available at this time and depending on where is the location, the development could be >2km away from the main alignment of the Project. The development is likely to be within	Any necessary mitigation cannot be established without further information in the location of	GW: Cumulative impacts cannot be established without further information on the location of the development,	GW: Cumulative impacts cannot be established without further information on the location of the

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Given the uncertainty of location and the relatively large development (2250 homes) further information is required. This development is likely to be outside of the 500m surface water zone of influence.	the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Given the uncertainty of location and the relatively large development (2250 homes) further information is required. This development is likely to be outside of the 500m surface water zone of influence.	the development , below ground works and drainage.	below ground works and drainage. SW: Neutral	development, below ground works and drainage. SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Corringham and Fobbing Thurrock Council Area	Potential delivery for 5,650 homes by 2041. Development could extend beyond plan period (beyond 2041).	Exact locations are unknown Development unlikely to fall within 3km from OL. Development may fall within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.			
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage	Groundwater - Yes	Groundwater: Corringham and Fobbing are east of Stanford-le-Hope and therefore the developments would be	Groundwater: Corringham and Fobbing are east of Stanford-le-Hope and therefore the developments would be	None	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No	approximately 8 km from the main alignment of the Project, Due to the large distance there would be cumulative impact.	approximately 8 km from the main alignment of the Project, Due to the large distance there would be cumulative impact.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Horndon Thurrock Council Area	Potential delivery for 925 homes by 2041.	Exact locations are unknown Development unlikely to fall within 3km from OL. Development may fall within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Impact on agricultural land, some of which has the potential to be best and most versatile land.				
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Information about the proposed development is limited at the time of writing and it is assumed that the place name refers to Horndon on the Hill which is near Stanford-le-Hope. Depending on the development location it could be 2km distance or more from the proposed A13	As stated for the reasons explained for the construction phase it is likely that the cumulative effect would be not significant, but location and development details are required, and the assessment should be reviewed when the awaited information is available.	Any necessary mitigation cannot be established without further information in the location of	GW: Cumulative impacts cannot be established without further information on the location of the development,	GW: Cumulative impacts cannot be established without further information on the location of the

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and slip roads works of the Project and over 3km distance from the Project main alignment. The proposed development may also be north of the Eocene margin and if so, would not be underlain by productive strata (i.e. no aquifer). Given that the development would be residential homes which would be subject to planning consent of which the Environment Agency would be a statutory consultee and therefore would require planning conditions or environment permitting on matters that could negatively impact groundwater then it is likely that the cumulative effect would not be significant. To be reviewed when location and other development details become available.		the development, below ground works and drainage.	below ground works and drainage	development, below ground works and drainage
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Orsett and Baker Street Thurrock Council Area	Potential delivery for 1,400 homes by 2041.	Exact locations are unknown Development unlikely to fall within 3km from OL. Development may fall within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	Yes	Insufficient information available to assess, however given the number of homes proposed in proximity to known heritage receptors, the combined cultural heritage effects could be significant (likely adverse).	Insufficient information available to assess, however it is not anticipated that significant effects would occur during operation.	N/A	N/A	N/A
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the	**Landscape and Visual Amenity:** Insufficient information available to assess, however given the	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							number of homes proposed in proximity to these villages, the combined landscape and visual effects could be significant (likely adverse).	number of homes proposed in proximity to these villages, the combined landscape and visual effects could be significant (likely adverse).			
					Terrestrial Biodiversity	Yes	**Plate A.2 Insufficient information available to reach conclusions.**	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater – Yes Surface water - Yes	Groundwater: Details of the proposed development at Orsett and Baker Street are not available at this time and depending on where is the location, the development could be less than 100m or greater 0.5km away from the main alignment of the Project. The development would be within the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Further information is required. Surface water: The development is located in the Mardyke catchment, however, is in the low risk flood zone (FZ1), therefore has no potential for cumulative effects on fluvial flood risk. During construction drainage from the site would be expected to be managed in accordance with good practice, avoiding cumulative effects on water quality and surface water flood risk.	Groundwater: Details of the proposed development at Orsett and Baker Street are not available at this time and depending on where is the location, the development could be less than 100m or greater 0.5km away from the main alignment of the Project. The development would be within the merged SPZ3 (total catchment area) of the public water supply wells at Linford and Stifford. Further information is required. Surface water: The development is located in the Mardyke catchment, however, is in the low risk flood zone (FZ1), therefore has no potential for cumulative effects on fluvial flood risk. Drainage from the proposed development would be expected to be managed in accordance with local and national flood risk planning policy requirements, avoiding cumulative effects.	Any necessary mitigation cannot be established without further information in the location of the development , below ground works and drainage.	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Neutral	GW: Cumulative impacts cannot be established without further information on the location of the development, below ground works and drainage. SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Bulphan Thurrock Council Area	Potential delivery for 2,650 homes by 2041.	Exact locations are unknown Development unlikely to fall within 3km from OL. Development may fall within 400m from ARN	3	N	Air Quality	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse (subject to knowing exact location)	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.	No information available on proposed development, therefore it is not possible to draw any conclusions.
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater – Yes Surface water - likely no	Surface and Groundwater: Details including the exact location are not available at this time. However Bulphan is located over 2km to the northeast of the nearest point of the main alignment of the Project. Bulphan is also north of the Eocene Margin so that the principal aquifer, the Chalk aquifer, is overlain by thick clayey deposits. Therefore given the nature of the development (housing), large	Surface and Groundwater: Details including the exact location are not available at this time. However Bulphan is located over 2km to the north-east of the nearest point of the main alignment of the Project. Bulphan is also north of the Eocene Margin so that the principal aquifer, the Chalk aquifer, is overlain by thick clayey deposits. Therefore given the nature of the development (housing), large	None	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							distance and ground conditions there would be no cumulative impact on surface or groundwater	distance and ground conditions there would be no cumulative impact on surface or groundwater			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Fiddlers Reach Grays Thurrock Council Area	Approx. 38,482sqm of employment floorspace, B2/B8. with approx. 510 jobs.	3.6km from OL 290m from ARN	3	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Neutral	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Population and Human Health	Yes	No information is available on proposed development; therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and potential size of the Proposed Development it is considered there could be some cumulative effects from the traffic it may generate.	None	Negligible	Slight adverse
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Fiddlers Reach is over 3km from the Project main alignment and is close to the River Thames. Therefore there would be no cumulative impact.	Groundwater: Fiddlers Reach is over 3km from the Project main alignment and is close to the River Thames. Therefore there would be no cumulative impact.	None	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
MC/21/0302 Medway Council Area	**Land South Of Berwick Way, East Of Frindsbury Hill And North And West Of Parsonage Lane (known As Manor Farm) Frindsbury Rochester Medway** Hybrid application seeking: Full planning permission for the construction of a new three-storey secondary school with sixth form and sports block with vehicular and pedestrian access from Frindsbury Hill, together with associated car parking and drop off area, multi-use games area, sports pitches, landscaping and other associated works. - Full planning permission for the part conversion and extension of Grade I Listed Manor Farm Barn and change of use to a wedding venue and conference facility, including conversion and extension of former cattle byres to provide overnight accommodation, construction of single storey detached building for management facilities and construction of a new building to provide additional tourist accommodation with vehicular and pedestrian access from Berwick Way, car parking, landscaping and other associated works. - Outline permission (with Frindsbury Hill access-detailed as part of the full planning permission for the school element) to be considered in detail and all other matters reserved for future consideration for the	2.8km from OL 1km from ARN	1c	N	Air Quality	Yes	Outside of construction ARN.	The closest receptor (LTC636) shows modelled concentrations below the AQS objective and thus indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	construction of up to 181 residential dwellings, together with Parsonage Lane access, parking, landscaping and associated works. Area covering all together 11,054.5 sq.m.				Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the distance of the development site (3km to the east of the LTC/M2 slip roads) and groundwater here is very deep in the Chalk), there would be no significant cumulative effects on groundwater.	Groundwater: Based on the distance of the development site (3km to the east of the LTC/M2 slip roads) and groundwater here is very deep in the Chalk), there would be no significant cumulative effects on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
05/00308/OUT Dartford Borough Council Area	**Northfleet West Sub Station/ Ebbsfleet Green** Redevelopment of site comprising a mixed use of up to 950 dwellings & non-residential floorspace for: shopping, food & drink, hotel use; community, health, education & cultural uses; assembly & leisure facilities & associated works to provide the development	Within 3km from OL 74m from ARN	1a	Y	Air Quality	Yes	Three modelled receptors have been included around the proposed development (LTC200, LTC397 and LTC591). All of which show modelled concentrations well below the AQS objective.	Six modelled receptors are in close proximity to the proposed development site (LTC200, LTC362, LTC397, LTC590, LT591 and LTC794). With the Project associated traffic, all six show concentrations well below the AQS objective and show a decrease with the scheme.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. Three modelled receptors have been included around the proposed development (LTC200, LTC397 and LTC591). All of	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. Six modelled receptors are in close proximity to the proposed development site (LTC200, LTC362, LTC397, LTC590, LT591 and	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							which show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	LTC794). With the Project associated traffic, all six show concentrations well below the AQS objective and show a decrease with the scheme. Therefore no cumulative effects on designated sites are anticipated.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the	No cumulative effects anticipated during scheme operation in line	No additional measures besides what has already	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Air Quality and Noise assessment.	with air quality and noise assessments.	been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Based on the proximity of the site (>5km west of the south portal) and the nature of the development, no significant cumulative impact on groundwater is expected.	Groundwater: Based on the proximity of the site (>5km west of the south portal) and the nature of the development, no significant cumulative impact on groundwater is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
12/01451/EQVAR Dartford Borough Council Area	**Eastern Quarry (Whitecliff)** A mixed use development of up to 6250 dwellings & in addition up to 231,000 square metres of built floorspace (in total) for: business premises (B1 (a), (b) and (c)) education community & social facilities (D1 & D2) (schools, libraries, health centres, places of worship, sports leisure centres, community centres, care facilities for the young, old and/or infirm); hotels (C1); theatre (D2); supporting retail (A1, A2, A3, A4 & A5) & leisure (D2) facilities; miscellaneous sui generis uses, ancillary & support facilities. Such development to include; groundworks to provide revi ground contours and development platforms; vehicle parking; laying out open space (including parks, play spaces, playing fields, allotments, lakes and water	Within 3km from OL Adjacent ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	11 modelled receptors are in close proximity to the proposed development site. With the Project associated traffic all show concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	11 modelled receptors are in close proximity to the proposed development site. With the Project associated traffic all show concentrations below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	features, community woodland & formal and informal open space); landscaping; works to create ecological & nature reserves & refuge areas; provision and/or upgrade of services and related service media and apparatus; drainage works (including ground & surface water attenuation & control measures and replacement and/or refurbishment of existing discharges pipe through Craylands Gorge); pedestrian cyclist & vehicular ways, highways and public transport facilities (including new and improved links between the site & existing public highways (including Alkerden Lane, B255, A2 Watling Street & Southfleet Road), bridges & causeways, dual use & segregated facilities for public transport systems & cross site pedestrian, cyclist & vehicular routes); facilities for mooring, launching & landing water craft; & miscellaneous ancillary & associated engineering & other operations.				Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Proposed development is large and may include creation of surface water features and would include drainage works incl. infiltration to ground. However, based on the distance of the site (>5km west of	Groundwater: Proposed development is large and may include creation of surface water features and would include drainage works incl. infiltration to ground. However, based on the distance of the site (>5km west of	No additional measures besides what has already been proposed in the topic	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							the south portal) and the nature of the development, no significant cumulative impact on groundwater is expected.	the south portal) and the nature of the development, no significant cumulative impact on groundwater is expected.	chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20210270 Gravesham Borough Council Area	**Albion Waterside Canal Basin Gravesend Kent DA12 2RN** Hybrid planning application comprising: Part A - Full planning application for demolition of existing buildings and structures, construction of a mixed use development comprising C3 and C2 Residential Uses and commercial floorspace (Use Class E), a new river wall, works to Swing Bridge, highway junction improvements at Milton Road and Ordnance Road, associated new public open spaces and public realm improvements, car and cycle parking, landscaping, infrastructure and earthworks and ancillary works; and Part B - Outline planning application with all matters reserved (apart from access) for demolition of all existing buildings and structures and the construction of a mixed use development comprising C3 Uses and commercial floorspace (Use Class E) with associated vehicular access, car parking, landscaping, associated infrastructure and earthworks and ancillary works. (The proposed development would consist of up to 1,500	450m from OL 320m from ARN	1c	Yes	Air Quality	Yes	Outside construction ARN.	The closest receptor to the development (LTC803) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be a slight adverse impact to the Thames and Medway canal if it survives within the site area. However, it might have already been removed with previous construction on the site. The impacts to the canal by the project are limited and in a different geographic location so the impacts would be small and incremental.	During operation the setting of the site would not be affected by the project and there would be no cumulative effects and a neutral effect.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Neutral
					Landscape and Visual	Yes	Landscape: Construction activity for the Albion Waterside Canal Basin in conjunction with construction of the Project would result in a cumulative effect on the marine character of the Thames Estuary, including high-rise building at Albion Waterside Canal Basin and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks.	**Landscape and Visual Amenity**: Given the existing urban context and the distance between the Albion Waterside Canal Basin and the sculptural landscape mounding at Tilbury Fields comprising the most prominent Project feature along the River Thames, there would not be any notable cumulative landscape or visual effects.	No additional measures proposed.	Moderate adverse	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	homes and up to 4,500sqm (GIA) of commercial floorspace). DEPARTURE: Application does not fully accord with the provisions of the Development Plan (Core Strategy Policy CS04).						Visual Amenity: The main cumulative effects on visual receptors from construction of Albion Waterside Canal Basin in conjunction with the Project, would primarily be seen from Tilbury Fort, elevated areas of Gravesend such as at Windmill Hill, the River Thames frontage, Saxon Shore Way Long Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.				
					Terrestrial Biodiversity	Yes	The Albion Waterside project has concluded that there is no potential for significant effects on ecological receptors. Therefore no cumulative effects are predicted.	The Albion Waterside project has concluded that there is no potential for significant effects on ecological receptors. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		chapters.		
					Noise and Vibration	Yes	The construction of the proposed development would be expected to follow best practice. If the construction period overlaps with that of the Project, then there is the potential for cumulative effects from construction traffic.	The traffic generated by the proposed development has been included within the traffic model of the Project, so any potential cumulative effects have been identified.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: based on the development type,(development of Gravesend Canal Basin area with dwellings and commercial) no significant cumulative effect on groundwater is expected. Surface water: No significant effects on surface water receptors (the River Thames) are anticipated given the development controls that would be in place.	Groundwater: based on the development type at Gravesend Canal Basin area, no significant cumulative effect on groundwater is expected. Surface water: No significant effects on surface water receptors (the River Thames) are anticipated given the development controls that would be in place.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20200343 Gravesham Borough	**The Charter (formerly known as Land At Market Square And Horn Yard Car Parks New Swan Yard Gravesend)** Erection of	1.5km from OL	1a	No, although previous application	Air Quality	Yes	The closest construction receptors (LTC_Con_042 and LTC_Con_043) show modelled concentrations well below the AQS objective. This indicates that	Outside operational ARN.	No additional measures besides what has already been	Neutral	Neutral

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							Construction	Operation		Construction	Operation
Council Area	242no. residential units for Build to Rent (C3 Use Class), within three blocks ranging from 3 to 10 storeys, together with multi-storey car park as well as access, pedestrian links, landscaping, highway and other associated works.	2.3km from ARN		from 2008 is included			cumulative impacts are unlikely to lead to exceedances of the AQS objective.		proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	Yes	**Landscape**: Although this development lies outside of the Project landscape and visual ZoI, construction activity for The Charter in conjunction with construction of the Project would result in a cumulative effect on the marine character of the Thames Estuary, including high-rise building at The Charter and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks. **Visual Amenity:** The main cumulative effects on visual receptors from construction of The Charter in conjunction with the Project, would primarily be seen from Tilbury Fort, the River Thames frontage, elevated areas of Gravesend such as at Windmill Hill, Saxon Shore Way Long Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.	**Landscape and Visual Amenity**: Given the existing urban context and the distance between The Charter and the sculptural landscape mounding at Tilbury Fields comprising the most prominent Project feature along the River Thames, there would not be any notable cumulative landscape or visual effects.	No additional measures proposed.	Moderate adverse	Slight adverse
					Terrestrial Biodiversity	Yes	The Charter project has concluded that there is no potential for significant effects on	The Charter project has concluded that there is no potential for significant effects on ecological	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							ecological receptors. Therefore no cumulative effects are predicted.	receptors. Therefore no cumulative effects are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology – No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the distance of the site (4km west of the route alignment) and the development type (residential multi-storeys), no significant cumulative impact on groundwater is expected.	Groundwater: based on the distance of the site (4km west of the route alignment) and the development type (residential multi-storeys), no significant cumulative impact on groundwater is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20210816 | EDC/21/0114 Gravesham Borough Council Area	**Blue Lake Thames Way Northfleet Kent** Request for Scoping Opinion pursuant to Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 in respect of partial infilling of Blue Lake, formation of development platforms and vegetation clearance. | Blue Lake Thames Way Northfleet Gravesend The restoration of Blue Lake will require the importation of up to 1.5million m3 of inert material, which will potentially be transported from the Lower Thames Crossing, neighbouring projects and/or other donor projects, to facilitate the restoration of Blue Lake and the creation of the development platforms.	1km from OL Adjacent to ARN	2	N	Air Quality	Yes	Outside construction ARN.	The closest receptors (LTC601 and LTC722) show concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	EIA scoping only. Blue Lake Thames Way project will have a likely significant effect from the loss of habitat on Ebbsfleet Marshes LWS. In addition a number of impacts on protected species are possible, although with a full mitigation strategy the effects are unlikely to be significant. The Project is having no significant effect on Ebbsfleet Marshes. With the mitigation strategy likely to be put in place for the impact on protected species, no cumulative effects are predicted.	EIA scoping only. Blue Lake Thames Way project will have a likely significant effect from the loss of habitat on Ebbsfleet Marshes LWS. In addition a number of impacts on protected species are possible, although with a full mitigation strategy the effects are unlikely to be significant. The Project is having no significant effect on Ebbsfleet Marshes. With the mitigation strategy likely to be put in place for the impact on protected species, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	There is the potential for LTC construction traffic to be part of this proposed development. This could generate impacts from the Project in the area of the proposed development.	The operation of the proposed development is not likely to generate high levels of road traffic.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the large distance of the site (>5km west of the Project's main alignment) no significant cumulative effect on groundwater is expected. It is noted that the LPA Scoping Opinion noted that the Blue Lake project should include an assessment of groundwater resources including two abstractions that are on the same site.	Groundwater: based on the large distance of the site (>5km west of the Project's main alignment) no significant cumulative effect on groundwater is expected.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/01111/FUL Brentwood Borough Council Area	**Car Park Opp Central Office Ford Motor Co Ltd Eagle Way Great Warley Essex** Redevelopment of the site to provide 133 residential dwellings (use class C3) with ancillary parking, open space and other associated development [detailed application] and 0.6ha of land for a care home (use class C2) including details of access only (matters of appearance, landscaping, layout and scale reserved)	2km from OL 2km from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Limited ecological information available. Given the distance from the OL, the small nature of the site, and the site being located on an existing industrial park, no cumulative effects are predicted.	Limited ecological information available. Given the distance from the OL, the small nature of the site, and the site being located on an existing industrial park, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		chapters.		
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the development location (north of the Eocene boundary and north of the Junction 29 of the M25), no significant cumulative impact on groundwater.	Groundwater: based on the development location (north of the Eocene boundary and north of the Junction 29 of the M25), no significant cumulative impact on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00782/EIASO Brentwood Borough Council Area	**Horndon Industrial Park Station Road West Horndon Essex** Environmental Impact Assessment - Screening Opinion - Redevelopment of the site to include a mixed-use, residential led scheme including the provision of up to 750 new residential units (comprising a mixture of houses and apartments) with approximately 2700m^2 of retail/A1/A2/A3/A4/A5/D1/D2 and B class employment within existing buildings (Clocktower House and Systems House) that will be retained and refurbished	1.6km from OL 150m from ARN	2	Yes	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	The closest receptors (LTCC 363, LTC364 and LTC798) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	The EIA screening report concluded that it is unlikely for any significant effects on	The EIA screening report concluded that it is unlikely for any significant effects on	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							ecological receptors. As such no cumulative effects are predicted.	ecological receptors. As such no cumulative effects are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the development location (north of the Eocene boundary) and type, there will be no significant cumulative impact on groundwater.	Groundwater: based on the development location (north of the Eocene boundary) and type, there will be no significant cumulative impact on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/05000/HYB Sevenoaks Borough Council Area	**DSTL Fort Halstead Crow Drive Halstead Sevenoaks KENT TN14 7BU** Hybrid application comprising, in outline: development of business space (use classes B1a/b/c) of up to 27,773 sqm GEA; works within the X enclave relating to energetic testing operations, including fencing, access, car parking; development of up to 635 residential dwellings; development of a mixed use village centre (use classes A1/A3/A4/A5/B1a/D1/D2); land safeguarded for a primary school; change of use of Fort Area and bunkers to Historic Interpretation Centre (use class D1) with workshop space and; associated landscaping, works and infrastructure. In detail: demolition of existing buildings; change of use and works including extension and associated alterations to buildings Q13 and Q14 including landscaping and public realm, and primary and secondary accesses to	19km from OL 200m from ARN	1c	Yes	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	the site.				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EDC/21/0046 (KCC/DA/0028/2021) Dartford Borough Council Area	**Off Watling Street, Eastern Quarry, Swanscombe, Dartford, Kent** Temporary consent (5 years) for the operation of a construction and recycling facility for concrete and road/base plannings and ancillary plant storage areas, reception weighbridge office and parking	>3km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC575) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC575) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	The ZoI for the assessment of effects on human health includes communities that are directly or indirectly affected by the Project. Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No inter-project effects anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00296/FUL Dartford Borough Council Area	**Land At Victory Way Crossways Business Park Dartford Kent DA2 6DT** Use of site as a mixed 'B' Class industrial Sui Generis, erection of a detached building to provide vehicle workshop, office space, welfare facilities, car park and access	>3km from OL 93 m from ARN	1b	N	Air Quality	Yes	The closest modelled receptor (LTC112_H) shows modelled concentrations well below the AQS objective across all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest modelled receptor (LTC112_H) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest modelled receptor (LTC112_H) shows modelled concentrations well below the AQS objective across all modelled years. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest modelled receptor (LTC112_H) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01515/FUL Dartford Borough Council Area	**Littlebrook Power Station Rennie Drive Dartford Kent DA1 5PT** Redevelopment of site to provide Class B8 (storage and distribution) uses and ancillary B1 uses with associated access, servicing, parking, landscaping, works to flood defence and riverside enhancements	>3km from OL >3km from OL 584m from ARN	1b	Yes	Air Quality	No	Outside construction ARN, however development traffic is included in LTC traffic data set and therefore this development has been included in the receptors results of the air quality assessment.	Outside operational ARN, however development traffic is included in LTC traffic data set and therefore this development has been included in the receptors results of the air quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No cumulative effects anticipated during scheme operation in line with air quality and noise assessments.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P0883.20 London Borough of Havering Area	**Havering College Of Further And Higher Education Tring Gardens Romford RM3 9ES** Demolition of existing buildings and redevelopment of the site to provide **120 residential dwellings** comprising 78 houses and 42 flats (1bed x 12, 2bed x 53, 3bed x 55) with associated car parking, landscaping, open space, play space and infrastructure. Area covering **3.80 Hectares**	2.3km from OL 1km from ARN	1b	Y	Air Quality	No	Outside construction ARN, however development traffic is included in LTC traffic data set and therefore this development has been included in the receptors results of the air quality assessment.	Outside operational ARN, however development traffic is included in LTC traffic data set and therefore this development has been included in the receptors results of the air quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from air quality or noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: based on the development location (north of the Eocene boundary) and type, there will be no significant cumulative impact on groundwater.	Groundwater: based on the development location (north of the Eocene boundary) and type, there will be no significant cumulative impact on groundwater.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P1242.17 London Borough of Havering Area	**Countryside - Beam Park Former Ford Assembly Plant Site New Road (A1306)** Cross boundary hybrid planning application for the redevelopment of the site to	7km from OL 150m from ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	include 2,900 homes (50% affordable); two primary schools and nursery (Use Class D1); railway station; supporting uses including retail, healthcare, multi faith worship space, leisure, community uses and management space (Use Classes A1, A2, A3, A4, B1, D1 and D2); energy centres; open space with localised flood lighting; public realm with hard and soft landscaping; children's play space; flood compensation areas; car and cycle parking; highway works and site preparation/ enabling works				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P0751.19 London Borough of Havering Area	**Napier House and New Plymouth House** Demolition of existing buildings and redevelopment of site comprising a number of buildings ranging between 3- 10 storeys, providing 197 residential dwellings (Class C3), public and private open space, formation of new accesses and alterations to existing accesses, associated car and cycle parking and associated works. (Note: development is also included as part of Rainham and Beam Park SDA)	6km from OL 200m from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	There are four receptors close to the proposed development site, all of which show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	There are four receptors close to the proposed development site, all of which show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P1865.19 London Borough of Havering Area	**Medina Farm** Extraction of minerals and reclamation material and importation of inert Materials assets and Waste, ancillary plant and buildings with restoration back to agriculture	250m from OL 250m from ARN	1b	N	Air Quality	Yes	The closest receptor (LTC193) shows concentrations well below the AQS objective in all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC193) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Landscape and Visual	Yes	**Landscape**: Extraction works at Medina Farm in conjunction with construction of the Project would result in a combined effect on local landscape character, although in a landscape previously modified by extraction works. **Visual Amenity**: The main in-combination effects on visual receptors from extraction works at Medina Farm in conjunction with construction of the Project, would primarily be seen from residential properties along Dennises Lane, the local PRoW network and Dennises Lane.	**Landscape and Visual Amenity**: During operation, the areas used for extraction works at Medina Farm would have been restored to agricultural use, with ground levels not appearing notably different to existing. No in-combination landscape and visual effects are therefore anticipated in conjunction with the Project.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Terrestrial Biodiversity	Yes	Medina farm has concluded that it is unlikely to significantly effect any ecological receptors. A mitigation strategy and the restoration of the site would likely suitably mitigate for any impacts. As such no cumulative effects are predicted.	Medina farm has concluded that it is unlikely to significantly effect any ecological receptors. A mitigation strategy and the restoration of the site would likely suitably mitigate for any impacts. As such no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Assume extraction / restoration undertaken under appropriate permits / good practice. Inert material to reclaim land so risk of contamination low. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The site is located immediately south of Dennises Lane and south of Stubbers Adventure Centre (SINC). Nearest part of mineral extraction (no detailed plans available on council portal) is 900m from LTC/M25 cutting. The available supporting statement document has not included SINC sites in the impact assessment. During the mineral extraction phase, the Medina Farm site will require dewatering as the water table is located close to the ground surface. To extract the sand and	Should mineral extraction occur during operation of LTC then the comments about potential groundwater drawdown from the mineral extraction apply but proposed seepage control at the LTC/M25 junction cutting would mean the extent of groundwater drawdown from the Project would be further reduced from the Project compared to the construction phase of the Project and therefore mineral extraction drawdown effects would be likely to dominate. Mineral extraction would be for 1-2 years. After	No additional measures besides what has already been proposed in the topic chapters.	GW: Slight adverse SW: Slight adverse	GW: Slight adverse SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							gravels, the water table will be lowered via the method of 'picture framing' (dewatering only the area of site being worked at one time). An initial Google search has not found details of this method. The development supporting statement says only a small amount) of water will be pumped as needed and discharged to local ditches in accordance with the EA permit for the site. Supporting statement says mineral extraction is expected to take 1-2 years with reclamation of the mineral area taking a further 1-2 years with overlap of the two activities expected to be 12-18 months. Infilling of new pit would be by imported inert waste described as clay, sandy clays, chalk, soils etc. Without further information it should assumed that there is a risk of groundwater drawdown extending beyond the mineral extraction site and to the area of local SINCs, the Manor Farm irrigation reservoir (although said to be lined) and beneath re-routed ditches. Also the proposed infilling of the gravel pit would create ground of lower hydraulic conductivity and therefore alter groundwater flow directions and levels). Based on the proximity of the mineral extraction site (<150m from Stubbers Adventure Centre but nearest lakes expected to be lined and underlain by London Clay Formation) (700m distance from Belhus Lakes, Belhus Wood Country Park LWS), (<300m from the Manor Farm irrigation reservoir expected to be lined and underlain by London Clay Formation) <1km from the LTC/M25 junction cutting and <1.5km from the Hall Farm moat ponds/ spring), the development	restoration the planning application site would have modified ground (reduced hydraulic conductivity) and would be returned to agricultural use. The filling of the pit would affect the local groundwater regime and therefore would have a slight adverse cumulative effect on the Essex Gravels waterbody. However, the cumulative effect to surrounding potential groundwater dependent water features (since there are existing gravel pits and landfill in the surrounding area and the moderately large distance to unlined water features) is likely to be neutral. Surface water: Effects on surface water receptors are considered to be neutral.			

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							dewatering alongside LTC construction could have a temporary slight (adverse) cumulative effect to surrounding potential groundwater dependent water features (medium value) and the Essex Gravel aquifer (medium value). However, the application is UNDECIDED and the detail and commitment for a low groundwater abstraction method is uncertain (until shown as a planning condition).[Development details checked on 6/9/22 and the application is still shown as undecided, so no change]. Surface water: Effects on surface water quality would be prevented by EA discharge consent limits, and the site is in FZ1 (low risk) therefore potential for cumulative effects on flood risk and land drainage are limited.				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P1125.20 London Borough of Havering Area	**Rainham Recreation Ground** Erection of a single storey building to provide a new leisure centre comprising: swimming pool, gym, fitness/dance studios and associated changing facilities; together with alterations to the existing layout of the remaining park area, including relocation of existing play and outdoor gym equipment.	5.5km from OL 100m from ARN	1c	N	Air Quality	Yes	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Unknown. Insufficient information to from judgement, due to no representative receptors.	Unknown. Insufficient information to from judgement, due to no representative receptors.
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	No representative receptors for effects of Air Quality on designated sites.	None	Unknown. Insufficient information to from judgement, due to no representative receptors.	Unknown. Insufficient information to from judgement, due to no representative receptors.
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
P1039.19 London Borough of Havering Area	**90 New Road Rainham** Sitewide groundworks and construction of 717 residential units (Use Class C3), 1,000sqm (flexible retail/commercial floorspace (within Use Classes A1/A2/A3/A4), the creation of new publicly accessible open spaces and pedestrian routes together with associated access, servicing, car parking, cycle parking and landscaping	7km from OL 400m from ARN	1c	N	Air Quality	No	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Unknown. Insufficient information to from judgement, due to no representative receptors.	Unknown. Insufficient information to from judgement, due to no representative receptors.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	No representative receptors for effects of Air Quality on designated sites.	None	Unknown. Insufficient information to from judgement, due to no representative receptors.	Unknown. Insufficient information to from judgement, due to no representative receptors.
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01919/FUL London Borough of Newham Area	**Part Former Showcase Cinema Car Park Jenkins Lane East Ham London** Redevelopment of the site for new build self-storage accommodation comprising 9657sqm and associated landscaping, car parking, new access and cycle parking (The application is a Departure from the Development Plan)	13km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC673_F) shows modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC673_F) shows modelled concentrations below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/02111/FUL London Borough of Barking and Dagenham Area	**Merrielands Development Site** Erection of one x 5-7 storey building and one x 6-10 storey building to provide 325 residential units (2 x studio flats, 81 x one bed flats, 240 x two bed flats	>3km from OL 200m from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	and 2 x 3 bed flats), 1514m^2 (GIA) of commercial floorspace (Use Class A1/A3) together with new hard and soft landscaping, children's playspace, car parking and access arrangements and other associated works.				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/01808/OUTALL London Borough of Barking and Dagenham Area	**Former Stamping Plant** Formal Application Description: Outline planning application (all matters reserved) for the demolition of existing buildings and structures, the erection of buildings comprising residential homes and non-residential floorspace, including: flexible industrial workspace; flexible employment, retail, community and leisure uses; a school, and associated infrastructure; new streets, open spaces, landscaping and public realm; car, motorcycle and bicycle parking spaces and servicing, utilities and other works incidental to the proposed development. Further explanation (not forming part of the formal description of development set out above): Outline planning application (all matters reserved) for the demolition of existing buildings and structures and the redevelopment of the site to include the erection of buildings (ranging in heights from 1 to 19 storeys) to provide up to 3502 residential homes (Use Class C3), a secondary school, up to 4400sqm of flexible non-residential floorspace (Use Classes E and/or F1(f) and/or Sui Generis), up to 5000sqm of	8.5km from OL 200m from ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	flexible industrial floorspace (Use Classes E(g) and/or B8 and/or B2) and associated infrastructure; new streets, open spaces, landscaping and public realm; car, motorcycle and bicycle parking spaces and servicing, utilities and other works incidental to the proposed development. This application is an EIA development and is accompanied by an Environmental Statement.						minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/00023/FULL London Borough of Barking and Dagenham Area	Plot 2, Segro Park Change of use of the entire site from Class B8 (storage and distribution) to flexible Class B2 (general industrial), Class B8 (storage and distribution) and Use Class E(g)(iii) (light industrial).	>3km from OL 300m from ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC672_F) shows concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/02749/OAEA Tonbridge and Malling Borough Council Area	**Land South Of Barming Station And East Of Hermitage Lane** Outline Application: erection of up to 330 dwellings (including 40% affordable homes), together with associated open space, play areas, and landscaping (including details of access).	3.4km from OL 400m from ARN	1b	N	Air Quality	No	Outside construction ARN.	The closest receptor (LTC675_F) shows modelled concentrations well below the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC675_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00376/OAEA Tonbridge and Malling Borough Council Area	**Land South West Of London Road And West Of Castor Park** Outline Application: permission for a residential scheme of up to 106 units, associated access and infrastructure.	4km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC623) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC623) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/01595/OAEA Tonbridge and Malling Borough Council Area	**Land South Of London Road And East Of Hermitage Lane Aylesford Kent** Outline Application: The erection of up to 840 dwellings (including affordable homes) with public open space, landscaping, sustainable drainage systems, land for a Primary School, doctors	4.2km from OL Adjacent to ARN	1b	Yes	Air Quality		The closest construction receptor (LTC043) shows modelled concentrations well below the AQS objective for all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective	The closest receptors (LTC043 and LTC674_F) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	surgery and for junction improvements at Hermitage Lane/A20 junction, and a link road between Poppy Fields roundabout and Hermitage Lane. Vehicular accesses into the site from Poppy Fields Roundabout and Hermitage Lane. All matters reserved with the exception of means of acces				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest construction receptor (LTC043) shows modelled concentrations well below the AQS objective for all modelled years. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptors (LTC043 and LTC674_F) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01419/FL MC/19/1556 MC/21/2502 Tonbridge and Malling Borough Council Area	**Innovation Park Medway Rochester Airport** Preparation of Local Development Order and companying Environmental Statement in support of the creation of a mixed-use business park, featuring c101,000sqm of predominantly high tech and innovation oriented B1/B2 commercial uses.	3km from OL 200m from ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC218) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN; therefore no cumulative effects are predicted.	The closest receptor (LTC218) shows modelled concentrations well below the AQS objective. Therefore, no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01839/EASC Tonbridge and Malling Borough Council Area	**South Aylesford Retail Park Quarry Wood Industrial Estate Aylesford** Request for Screening Opinion under the Town and Country Planning (Environmental Impact Assessment) Regulations 2011: Removal of vegetation, erection of a deck over the balancing pond and extension of the park through the provision of new Class A1 retail units (up to 4,877sqm including provision of a new acoustic fence, a new access from Lake Road, car parking, servicing facilities, removal or trees, alterations to the public highway and pedestrian walk over and associated works.	>3km from OL Adjacent to ARN	2	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC329) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC329) shows modelled concentrations well below the AQS objective. Therefore, no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project, then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Effects during construction may depend on timescale for the proposal coming forward, as impacts may be experienced in relation to residential amenity and accessibility as a result of increased construction traffic movements.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/03513/FL	**Land West Of Hermitage Lane And East Of Units 4A 4B And 4C Mills Road**	4.6km from OL	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC675_F) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Tonbridge and Malling Borough Council Area	**Quarry Wood Industrial Estate Aylesford** Hybrid Planning Application: The demolition of all existing buildings and structures and redevelopment to provide a new Centenary Village. Full planning permission for the redevelopment of the site to provide 24 Assisted Living Apartments, 40 Dwellings, Community Hub, Access Roads, Landscaping and Parking (Phase 2). Outline planning permission for up to 35 Dwellings (all matters reserved) (Phase 3).	Adjacent to ARN						are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC675_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
TM/20/841 (KCC/TM/0073/2020) Tonbridge and Malling Borough Council Area	**Wrotham Quarry, Trottiscliffe Road, Addington, Kent ME19 5DL** The proposed buttressing of existing quarry slopes with indigenous inert material; the importation, storage and use of additional material to supplement the buttressing works; the continued use of a raised stocking area; and the provision of a revised restoration concept.	8.9km from OL Adjacent to ARN	1b	N	Air Quality	yes	The closest construction receptor (LTC205) shows modelled concentrations well below the AQS objective in all modelled years. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptors (LTC205 and LTC827) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptors	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							construction receptor (LTC205) shows modelled concentrations well below the AQS objective in all modelled years.	(LTC205 and LTC827) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
17/02655/FL Tonbridge and Malling Borough Council Area	**Land West Of Rochester Road Rochester** Hybrid planning application: (A) Full planning application for the creation of a new vehicular access to Rochester Road, the erection of buildings with up to 2,226spm of floor space for storage, distribution use and wholesale trade distribution (Class B8) and/or use for general industry (Class B2) including layout of internal road and hardstanding with the installation of services (Phase 1). (B) Outline planning application with all matters except access reserved, for the erection of buildings with up to 2,021spm of floor space for use with storage, distribution, wholesale trade distribution (Class B8), general industry (Class B2) and/or offices (Class B1) including the change of use of up to 1,470spm of open land to storage and distribution (Class B8) and the layout of internal roads and hardstanding with the installation of services (Phase 2.	2.8km from OL Adjacent to ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	Development is likely to cause increases of NO_2 at closest receptors LTC218 on Rochester road, however these are below 36ug/m3.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral as with the project cumulative increase the concentration does not exceed the AQS objective.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	Development is likely to cause increases of NO_2 at closest receptors LTC218 on Rochester road, however these are below 36ug/m3. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	proposed in the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/501029/FULL Maidstone Borough Council Area	**Rootes Maidstone Len House Mill Street Maidstone Kent ME15 6YD** Rootes Maidstone Restoration of Len House and associated new build works to provide a mixed-use development comprising: (i) Retention with	4.8km from OL 170m from ARN	1b	Y	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	alterations and change of use of Len House to provide 3,612 sqm (GIA) flexible commercial floorspace within the following uses - retail, financial and professional, café or restaurant, drinking establishment, offices, clinic or health centre, crèche or day nursery, gymnasium or indoor recreational purposes uses (within classes A1/A2/A3/A4/A5/B1a/D1/D2 of the Town & Country Planning uses Classes.										
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit	Predicted traffic from the proposed development has been included within the traffic model and so	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	cumulative effects have been considered.			
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MA/19/503387 (KCC/MA/0107/2019) Maidstone Borough Council Area	**The Maplesden Noakes School, Buckland Road, Maidstone, Kent ME16 0TJ** Full planning application for the proposed 2 form of entry expansion involving: a) the erection of a new freestanding three-storey teaching block; b) single-storey extension of existing dining area; c) provision of additional 22 car parking spaces; and d) associated landscaping works.	4.3km from OL 424m from ARN	1a	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/502432/FULL	**Springfield Mill** Full planning application for demolition of existing	3.6km from OL	1a	N	Air Quality	Yes	Outside construction ARN.	The closest receptors (LTC676_F and LTC677_F) show modelled concentrations well below the AQS objective. This indicates that	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Maidstone Borough Council Area	buildings, and development of 295 residential units (use class C3), including 218 x 1-2 bed apartments and 77 x 2-4 bed houses, including associated car parking, public realm and landscaping works, Grade II Listed Rag Room to be preserved and re-used for community (D1), office (B1) or residential (C3) use.	Adjacent to ARN						cumulative impacts are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptors (LTC676_F and LTC677_F) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
16/507471/FULL Maidstone Borough Council Area	**Land Adj Royal Engineers Road** Full planning application for the development of 310 residential units, in two buildings ranging between 8 and 18 storeys, including 177sqm of A1/D1/D2 floorspace, associated car parking, public realm and landscaping works.	3.6km from OL Adjacent to ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptors (LTC676_F and LTC677_F) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptors (LTC676_F and LTC677_F) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/503914/EIOUT Swale District Area	Highsted Park Land South And East Of Sittingbourne Outline application with all matters reserved for the phased development of up to 578.65 hectares of land comprising: up to 8,000 residential dwellings including sheltered/extra	11.6km from OL Adjacent to ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC079) shows modelled well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	care accommodation (Use Class C2 and Use Class C3), - up to 170,000 sq. m/34 hectares of commercial, business and service/employment floorspace (Use Class B2, Use Class B8 and Use Class E), and including up to 2,800 sq. m of hotel (Use Class C1) floorspace - mixed use local centre and neighbourhood facilities including commercial, business and employment floorspace (Use Class E), non-residential institutions (Use Class F1) and local community uses (Use Class F2) floorspace, and Public Houses (Sui Generis) - learning institutions including primary and secondary schools (Use Class F1(a)) - open space, green infrastructure, woodland, and community and sports provision (Use Class F2(c)) - highways and infrastructure works including the provision of a new motorway junction to the M2.				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC079) shows modelled well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
	A Sustainable Movement Corridor (inc. a Sittingbourne Southern Relief Road)', and new vehicular access points to the existing network - associated groundworks, engineering, utilities, and demolition works.				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/503707/HYBRID Swale District Area	**Kent Science Park Shimmin Road Sittingbourne** Hybrid planning application consisting of - Outline planning permission (with all matters reserved except access) for commercial development, accesses and roads, parking, associated services, infrastructure, earthworks and landscaping - Full planning permission for the erection of a manufacturing facility, associated parking, services, infrastructure, landscaping and earthworks.	12.6km from OL 450m from ARN	1a	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
17/505711/HYBRID Swale District Area	**Land At Wises Lane Borden** Hybrid planning application with outline planning permission (all matters reserved except for access) sought for up to 595 dwellings including affordable housing; a two-form entry primary school with associated outdoor space and vehicle parking; local facilities comprising a Class A1 retail store of up to 480 sq. m GIA and up to 560sqm GIA of "flexible use" floorspace that can be used for one or more of the following uses - A1 (retail), A2 (financial and professional services), A3 (restaurants and cafes), D1 (non-residential institutions); a rugby clubhouse / community building of up to 375 sq. m GIA, three standard RFU sports pitches and associated vehicle parking; a link road between Borden Lane and Chestnut Street / A249; allotments; and formal and informal open space incorporating SuDS, new planting / landscaping and ecological enhancement works. Full planning permission is sought for the erection of 80 dwellings including affordable housing, open space, associated access / roads, vehicle parking, associated services, infrastructure, landscaping and associated SuDS. For clarity - the total number of	10.8km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC678_F) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	dwellings proposed across the site is up to 675.										
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC678_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
15/504264/OUT Swale District Area	**Land At Perry Court London Road Faversham** Outline application (with all matters reserved other than access into the site) for a mixed use development comprising: up to 310 dwellings; 11,875sqm of B1a floorspace; 3,800sqm of B1b floorspace; 2,850sqm of B1c floorspace; a hotel (use class C1)(up to 3,250sqm) of up to 100 bedrooms including an ancillary restaurant; a care home (use class C2)(up to of 3,800sqm) of up to 60 rooms including all associated ancillary floorspace; a local convenience store (use class A1) of 200sqm; 3 gypsy pitches: internal accesses; associated landscaping and open space; areas of play; a noise attenuation bund north of the M2; vehicular and pedestrian accesses from Ashford Road and Brogdale Road; and all other associated infrastructure.	23.5km from OL Adjacent to ARN	1a	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC679_F) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC679_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
16/508602/OUT Swale District Area	**Land At Preston Fields Salters Lane Faversham** Outline application for erection of up to 250 dwellings with all matters reserved except for access	24.2km from OL 250m from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC140) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC140) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/500257/EIFUL Swale District Area	**Land Adj To Quinton Farm House Quinton Road Sittingbourne** Proposed development of 155 dwellings together with associated new access road, car parking, linear park with acoustic barrier to the A249, dedicated LEAP, allotments, areas of surface water drainage attenuation and ecological enhancement, and new planting, including	12.7km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC680_F) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	an area planted in the style of an orchard.				Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC680_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
18/502372/EIOUT Swale District Area	**Land At Great Grovehurst Farm Grovehurst Road Sittingbourne** Outline application for the development of up to 115 dwellings and all necessary supporting infrastructure including emergency access, roads, footpath and cycle links, open space, play areas and landscaping, parking, drainage and all utilities and surface infrastructure works. All detailed matters are reserved for subsequent approval except (a) mitigation of impacts on Great Crested Newts; (b) vehicular access to Grovehurst Road and (c) extraction of brickearth.	14.1km from OL 100m from ARN	1a	N	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/502190/EIHYB Swale District Area	Land North Quinton Road Sittingbourne - Phase 1 North - Erection of 91 dwellings accessed from Grovehurst Road, public open and amenity space (including an equipped children's play area) together with associated landscaping and ecological enhancement works, acoustic barrier to the A249, internal access roads, footpaths, cycleways and parking, drainage (including infiltration basins and tanked permeable paving), utilities and service infrastructure works. Full Planning Application - Phase 1 South - Erection of 257 dwellings (including 35 affordable dwellings) accessed from Quinton Road, public open and amenity space, together with associated landscaping and ecological enhancement works, internal access roads, footpaths, cycleways and	12.9km from OL Adjacent to ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC680_F) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC680_F) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	parking, drainage (including infiltration swales, ring soakaways, and permeable paving), utilities and service infrastructure works. Outline Planning Application- for up to 852 new dwellings (including 10% affordable housing), a site of approximately 10 ha for a secondary and primary school, a mixed use local centre, including land for provision of a convenience store, public open and amenity space (including equipped children's play areas),										
	together with associated landscaping and ecological enhancement works, acoustic barrier to the A249, internal access roads, footpaths, cycleways and parking, drainage (including a foul water pumping station and sustainable drainage systems), utilities and service				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
15/0716/O Royal Borough of Greenwich Area	**Land at East Parkside, Pilot Walk, Chandlers Avenue and River Way, Lower Riverside, Greenwich Peninsula** Outline planning permission with all matters reserved for the demolition of buildings and mixed use redevelopment comprising Class C3 (dwellings) use up to 12,678 residential dwellings (or up to 1,171,909 sq.m) and up to 220 serviced apartments (or up to 20,306 sq.m); Class A1-A5 use (food and non-food retail, restaurants, bars and cafes) up to 23,475sq.m; Class B1(a)(b)(c) (business) up to 59,744sqm; Class C1 (hotel) up to 35,999sqm for up to 500 rooms; Class D1 (education facilities) up to 37,900sqm; Class D1 (health care facilities) up to 1,462sqm; Class D1/D2 (visitor attraction) up to 19,526sqm; sui generis use for film and media studios up to 38,693sqm; residential and non- residential car parking as well as a minimum of 2000 AEG parking spaces (for the O2); cycle parking; associated community facilities; public realm and open space; hard and soft landscaping; a new transport hub and associated facilities; works to the river wall; a ferry jetty terminal; a 5 km running track traversing the entire site (P5K running	19.6km from OL Adjacent to ARN	1a	N	Air Quality	Yes	Outside construction ARN.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral, as base year modelled concentrations are already above the AQS objective and the project is not leading to a new exceedance of the AQS objective.

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	track); highway and transport works, including amendments to the Thames Footpath and Cycle path; and, associated ancillary works.										
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3. These impacts are fully mitigated by the creation of new habitat away from the Project. Therefore a negligible adverse cumulative impact is predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/1730/O Royal Borough of Greenwich Area	MORDEN WHARF LOCATED OFF TUNNEL AVENUE, GREENWICH Hybrid planning application comprising outline planning permission with all matters reserved (43,475 sqm site area) and full planning permission (12,992 sqm site area). Outline permission is for the demolition of existing on-site buildings and structures (except the Southern Warehouse) and phased mixed-use redevelopment comprising: up to 1,500 residential dwellings; up to 17,311 (sqm GIA) of commercial floorspace (Class A1/A2/A3/A4/B1/B1c/ B2/B8/D1/D2); and associated car and cycle parking, public realm and open space, hard and soft landscaping, highway and transport works, and associated ancillary works.	19.8km from OL Adjacent to ARN	1c	N	Air Quality	Yes	Outside construction ARN.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral, as base year modelled concentrations are already above the AQS objective and the project is not leading to a new exceedance of the AQS objective.
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	Full planning permission is for the change of use of part of the Southern Warehouse from Class B1c/B2/B8 to B1c/B2/B8/A3/A4; refurbishment (including mezzanines) and external alterations to part of the Southern Warehouse; change of use of the Jetty to public realm and installation on the Jetty of Gloriana Boathouse (use class D1/D2); access; landscaping and public realm works including new river wall and upgraded Thames Path.				Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3. These impacts are fully mitigated by the creation of new habitat away from the Project. Therefore no cumulative impact is predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
19/0939/F Royal Borough of Greenwich Area	**1 BOORD STREET, GREENWICH** Construction of a building of up to 18- storeys (plus basement level and rooftop plan enclosure), to provide a 300 bed hotel with ancillary A1/A2/A3/B1/D2 provision, associated access, car and cycle parking, servicing and delivery areas, following the demolition of existing buildings.	>3km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Not enough information on the construction assessment at this stage to determine if this will have an effect on increases in concentrations.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral, as base year modelled concentrations are already above the AQS objective and the project is not leading to a new exceedance of the AQS objective.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Not enough information on the construction assessment at this stage to determine if this will have an effect on increases in concentrations, therefore no information on whether this will impact designated sites.	Development is likely to cause increases of NO_2 at closest receptors LTC682_F, LTC681_F and LTC260_H on the A102, that are currently above 40ug/m3. These impacts are fully mitigated by the creation of new habitat away from the Project. Therefore no cumulative impact is predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	proposed in the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/2233/F Royal Borough of Greenwich Area	**Leigh Academy, (Former Blackheath Bluecoats School), Old Dover Road, Blackheath** Demolition of existing school and redevelopment of the site for a new 11-18 co-educational school, associated facilities, landscaping, parking and infrastructure.	17.6km from OL 250m from ARN	1a	N	Air Quality	Yes	Construction phase of development not likely to cause increases concentrations of NO_2 or dust at closest receptors on A102. Construction traffic using Old Dover Road.	Predicted impacts from development all predicted to be negligible, therefore development not likely to cause increases of NO_2.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	Construction phase of development not likely to cause increases concentrations of NO_2 or dust at closest receptors on A102. Construction traffic using Old Dover Road. Therefore no cumulative effects on designated sites are anticipated.	Predicted impacts from development all predicted to be negligible, therefore development not likely to cause increases of NO_2. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage	Groundwater - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/03721/FUL London Borough of Enfield Area	**1 Mollison Avenue Enfield** Change of use from warehouse/light industrial (Use Class B1(c)/B8) to uses including film studio (Use Class B1) and warehouse/light industrial (Use Class B1(c)/B8), together with associated elevational alterations, services and 2 outbuildings.	>3km from OL 50m from ARN	1a	N	Air Quality	Yes	Construction phase of development not likely to cause increases concentrations of NO_2 or dust at closest receptors on Arlington Crescent.	Development not likely to cause increases of NO_2 at closest receptors on Arlington Crescent.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Construction phase of development not likely to cause increases concentrations of NO_2 or dust at closest receptors on Arlington Crescent. Therefore no cumulative effects on designated sites are anticipated.	Development not likely to cause increase	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EPF/1494/18 Epping Forest Area	North Weald Park Former North Weald Golf Course Rayley Lane North Weald Bassett Essex CM16 6AR Hybrid planning application with outline planning permission (all matters reserved except for points of access) sought for up to 555 dwellings, including affordable housing; a 70-bed retirement accommodation (Class C3) and a 70-bed extra care/nursing care accommodation (Class C2); a two-form entry primary school with associated outdoor space and vehicle parking; a Class D1 medical facilities; a local centre	15km from OL 1.3 km from ARN	1c	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	comprising a Class A1 retail space of up to 450 sq. m, Class A3/A4 space up to 390 sqm, Class B1 space of up to 200 sqm, a community centre a sports hub with associated open-air sports pitches, a sports pavilion of up to 1440 sq. m; a scouts hut facility; B1 office space of up to 5,200 sq. m (this figure does not include the B1 space in the local centre); and formal and informal open space incorporating SuDS, a new Country Park to provide on site and off site. Suitable Alternative Natural Green Space (SANG) capacity, a Park and Ride facility; new planting/landscaping and ecological enhancement works; points of access including new roundabout on the A414.				Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
	Of the total 555 dwellings, full planning permission is sought for the erection of 116 dwellings including affordable housing (40%), a community centre of 435 sqm, open space, associated access off Rayley Lane and internal Suitable Alternative Natural Green Space (SANG) capacity, a Park and Ride facility; new planting/landscaping and ecological enhancement works; points of access including new roundabout on the A414. Of the total 555 dwellings, full planning permission is sought for the erection of 116 dwellings including affordable housing				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	(40%), a community centre of 435 sqm, open space, associated access off Rayley Lane and internal circulation roads, vehicle parking, associated services, infrastructure, landscaping and associated SuDS.				Road drainage and Water Environment	Groundwater - No Surface water – No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
ESS/31/18/ROC Rochford District Area	**Land at Dollymans Farm, Doublegate Lane, Rawreth, Wickford, SS11 8UD** Importation of inert material, installation and use of a plant for the recycling of such material (including separate silt press) and the final disposal of inert residues on the land to establish a revised landform, together with the formation of a new access	14km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest operational receptors (LTC062 and LTC353) show concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P1701.17 P1239.17 P1229.17 P1241.17 P0947.17 P0751.19 P0938.20 P0890.20 P1022.20 London Borough of Havering Area	Rainham and Beam Park SDA Major growth and regeneration area including: • - 3,000 new high quality homes • - new local centre adjoining Beam Park Station providing between 3,500 and 4,000 sqm of floor space through the provision of retail and commercial units • - improvements to public transport services including Beam Park Station on the Essex Thameside Line Includes individual applications, as referenced P1701.17 - Former Rainham Library offices at 21	>3km from OL Adjacent to ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest operational receptors (LTC273 and LTC279) show concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	Broadway and land to the rear of 29 Broadway RM13 9YW					Soils – No					
	The demolition of existing buildings and the construction of 57 homes comprising a mix of 22 houses and 35 apartments with associated access roads, parking, hard surfacing, landscaping, boundary treatments, refuse stores, an electrical substation and means of access to and from Broadway. P1239.17 - 143 New Road Rainham RM13 8ES Outline planning application for the demolition of all buildings and redevelopment of the site for residential use providing up to 35 units with ancillary car parking, landscaping and access P1229.17 - 89 - 101 New Road Rainham RM13 8ES Outline planning application for the demolition of all buildings and redevelopment of the site for residential use providing up to 62 units with ancillary car parking, landscaping and access P1241.17 - 35 - 43 New Road & Autopro Centre Walden Avenue Rainham RM13 8DR Outline Planning application for the demolition of all				Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	buildings and redevelopment of the site for residential use providing up to 62 units with ancillary car parking, landscaping and access										
	P0947.17 - 49-87 New Road Rainham RM13 8ET Outline planning application for the demolition of all buildings and redevelopment of the site for residential use providing up to 259 units with ancillary car parking, landscaping and access P0751.19 - Napier House and New Plymouth House Dunedin Road Rainham RM13 8LD Demolition of existing buildings and redevelopment of site comprising a number of buildings ranging between 3-10 storeys, providing 197 residential dwellings (Class C3), public and private open space, formation of new accesses and alterations to existing accesses, associated car and cycle parking and associated works. (Note: development in included in shortlist as separate development as falls within search criteria for inclusion) P0938.20 - 21 New Road Rainham RM13 8DJ Outline planning application for the demolition of all buildings and redevelopment				Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	of the site for residential use, with ancillary car parking, landscaping and access										
	P0890.20 - 195-205 New Road and 1-9 Cherry Tree Lane Rainham RM13 8SJ Outline planning application for the demolition of all buildings and redevelopment of the site for residential use providing up to 77 units with ancillary car parking, access and landscaping P1022.20 - Former RTS Motors Site 84-86 New Road Rainham RM13 8BD Demolition of existing buildings, groundworks and construction of a 10 storey building providing 54 new residential units (Use Class C3) with associated 345sqm of flexible retail/commercial floorspace (within Use Classes A1/A2/A3/A4/B1/D1/D2), the creation of bus loop and new pedestrian routes together with associated access, servicing, cycle parking and landscaping (amended description and amended red line site plan).				Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00315/OUT Brentwood Borough Council Area	**Land South Of East Horndon Hall Tilbury Road West Horndon** Outline planning application (with all matters reserved) for the	3.8km from OL Adjacent to ARN	1b	Y	Air Quality	Yes	The closest receptor (LTC023) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC023) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	redevelopment of the site comprising demolition of all buildings; construction of new buildings providing 35,000 sqm of Class B1b, B1c, B2 and B8 floor space and 250 sqm of Class A3 floor space, together with associated vehicle parking, loading, cycle parking and infrastructure. Includes A128/ Old Tilbury Road junction improvement (included as transport scheme in traffic model).				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC023) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC023) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/19/0287 Medway Council Area	**Land At Town Road Cliffe Woods Rochester Medway ME3 8JL** Outline planning permission with some matters reserved (appearance landscaping layout and scale) for up to 225 residential dwellings including up to 25% affordable housing, introduction of structural planting and landscaping, informal public open space and children's play area, surface water flood mitigation and attenuation, vehicular access point from Town Road and associated ancillary works.	3.2km from OL 2.5km from ARN	1c	Y	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No	Groundwater: based on the development location (>5km from Project route) and type, there will be no significant cumulative impact on groundwater.	Groundwater: based on the development location (>5km from Project route) and type, there will be no significant cumulative impact on groundwater.	No additional measures besides what has already been proposed in	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/17/2333 Medway Council Area	**Rochester Riverside Rochester ME1 1NH** Hybrid planning application seeking outline permission for the erection of up to 1,400 no. dwellings including a primary school and nursery (D1 use), up to 1,200sqm of commercial floorspace (A1/A2/A3/A4/B1/D1 and D2 uses) together with a pedestrian footbridge, parking, open space and landscaping. Full permission for phase 1, 2 and 3 of the development consisting of the erection of 489 no. dwellings (of the 1,400 no. total), the provision of a hotel (use Class C1), 885sqm of commercial floorspace (A1/A2/A3/A4/B1/D1 and D2 uses) along with site access/spine road, parking, open space and landscaping.	3.4km from OL 1.5km from ARN	1a	Y	Air Quality	No	Outside construction ARN.	Traffic induced by development included in the Project traffic datasets and therefore air quality modelling. No representative receptors.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	Traffic induced by development included in the Project traffic datasets and therefore air quality modelling. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils – No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/00996/FUL Brentwood Borough Council Area	**Grant House Prospect Way Hutton Brentwood Essex CM13 1XD** Demolition of 2.No industrial office units and construction of 4.No industrial units (Flexible B2/B8 Use) and associated access and highway works.	7.2km from OL 450m from ARN	1c	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00043/FUL		5.7km from OL	1c	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC251) shows modelled concentrations well below the AQS objective. This	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Dartford Borough Council Area	**Land South Of Crossways Boulevard And North Of St Marys Road Stone Kent** Demolition of existing buildings and the erection of 258 flats (Use Class C3) with associated parking, cycle storage, landscaping and amenity space.	Adjacent to ARN						indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	has already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC251) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							cumulative impacts from construction traffic.				
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/502497/EIASCO Swale District Area	**Land At Bobbing Sittingbourne Kent ME9 8QL** Scoping Opinion for Proposed development of approximately 2,500 dwellings, a new primary school, c.9ha of commercial floor space, c.4ha of community uses and c.1ha of local retail provision on land at Bobbing, Sittingbourne, Kent.	11km from OL Adjacent to ARN	2	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC355_H) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC355_H) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EN10108 NSIP	**Extension to Allington Integrated Waste Management Facility.** Extension of an existing energy generating station to process circa 910,000tpa of	3.4km from OL Adjacent to ARN	2	N	Air Quality	Yes	The closest receptor (LTC188) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC188) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	residual non-hazardous waste in total, with a total gross electrical generating capacity of circa 72.5MW.				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC188) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC188) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EN010128 NSIP	**Cory Decarbonisation Project** Construction and operation of carbon capture plant, storage and marine export terminal.	8.4km from OL 1.7km from ARN	3	N	Air Quality	No	Outside of construction ARN.	The proposed development has the potential to lead to cumulative impacts if it coincides with the opening year of LTC, however AQ impacts of the proposal are undetermined at this stage. Given the distance between the proposed development the LTC ARN, cumulative impacts are unlikely to be significant.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Project is not yet registered with the Planning Inspectorate NSIP	**East Anglia Green Energy Enablement** A new high voltage network reinforcement between Norwich, Bramford and Tilbury.	Within OL Adjacent to ARN	3	N	Air Quality	Yes	The project has potential to lead to increases in construction traffic during the construction phase, however as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	The project has some potential to lead to increases in traffic during the operational phase, however as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	Mitigation measures cannot be established without further information on the distribution of traffic flows and air quality impacts from the East Anglia Green Development.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the East Anglia Green project.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the East Anglia Green project.
					Cultural Heritage	Yes	The site would impact buried archaeology of low - high value between Brentwood Road and Tilbury substation, resulting in moderate adverse cumulative effects with the Project, and affecting a greater proportion of	Moderate adverse effects during operation would comprise cumulative changes to the settings of heritage assets from overhead lines in combination with the Project and the existing and realigned overhead lines already	No additional measures besides those already proposed in	Moderate adverse	Moderate adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							the archaeology in this specific area. Additionally, there would be cumulative effects to West Tilbury Conservation Area, and associated listed buildings, and the scheduled causewayed enclosure and Anglo-Saxon cemetery 500m ENE of Heath Place, from additional modern infrastructure further altering their settings. There is also potential for cumulative effects to East Tilbury Conservation Area during construction.	present connecting to Tilbury substation.	the topic chapter.		
					Landscape and Visual	Yes	**Landscape**: Construction activity for the potential 400kV overhead line connection to Tilbury substation in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: Cumulative effects on visual receptors from construction of the new 400kV overhead line in conjunction with the construction of the Project would be widely visible from the surrounding landscape and would be prominent in close-range views.	**Landscape**: A new 400kV overhead line connection to Tilbury substation in conjunction with the operational Project road, including embankments, highway infrastructure, moving vehicles and sculptural landscape mounding at Tilbury Fields, would result in a cumulative effect on local landscape character. **Visual Amenity**: New 400kV overhead line would be widely visible from the surrounding landscape in conjunction with the operational Project road and would be prominent in close-range views.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Moderate adverse
					Terrestrial Biodiversity	Yes	Limited ecological information available. East Anglia Green project would involve the construction of a new electricity pylon route. Construction works are temporary, and the majority of the habitats affected are likely to be retained or reinstated. The most likely impact pathway is on birds, however the inland route has been selected to avoid impacts on coastal areas which are key for foraging birds. The Project is predicting a minor adverse level of impact on birds.	Limited ecological information available. East Anglia Green project would involve the construction of a new electricity pylon route. Construction works are temporary, and the majority of the habitats affected are likely to be retained or reinstated. The most likely impact pathway is on birds, however the inland route has been selected to avoid impacts on coastal areas which are key for forging birds. The Project is predicting a slight adverse level of impact on birds	None - East Anglia project are likely to implement mitigation to reduce the effects on birds	Slight adverse - depending on outcome of East Anglia Green assessment of impacts on birds	Slight adverse - depending on outcome of East Anglia Green assessment of impacts on birds

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Until a full assessment of the construction phase of East Anglia Green project, particularly around Tilbury, there is potential for a slight adverse cumulative effect on birds.	due to disturbance and direct mortality. Until a full assessment of the operation phase of East Anglian Green project, there is potential for a slight adverse cumulative effect on birds.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project	The traffic generated by the proposed development is likely to be minimal and not lead to any cumulative effects.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							then there is the potential for cumulative impacts during construction.				
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Surface and Groundwater: East Anglia Green Energy Enablement (GREEN) Project Corridor and Preliminary Routeing and Siting Study Report, April 2022, Figure 7.4 – The EAC to Tilbury Graduated Swathe, shows a proposed new route that crosses or is close to the Project main alignment north of the Thames. No details are available at this stage where exactly the corridor would be and where it would comprise overhead lines or buried cables. Should construction of the new East Anglia Green Energy Enablement (GREEN) Project Corridor coincide with construction of the Project (including utilities) then a review of potential cumulative impacts would be required. It is noted that in the scoping report drainage and the water environment were scoped out. Also note that source protection zones do not appear to be mentioned in the list of attributes to avoid in the routeing and scoping report. Due to the above the cumulative impact cannot be assessed at this stage.	Surface and Groundwater: East Anglia Green Energy Enablement (GREEN) Project Corridor and Preliminary Routeing and Siting Study Report, April 2022, Figure 7.4 – The EAC to Tilbury Graduated Swathe, shows a proposed new route that crosses or is close to the Project main alignment north of the Thames. No details are available at this stage where exactly the corridor would be and where it would comprise overhead lines or buried cables. Should construction of the new East Anglia Green Energy Enablement (GREEN) Project Corridor coincide with construction of the Project (including utilities) then a review of potential cumulative impacts would be required. It is noted that in the scoping report drainage and the water environment were scoped out. Also note that source protection zones do not appear to be mentioned in the list of attributes to avoid in the routeing and scoping report. Due to the above the cumulative impact cannot be assessed at this stage.		Cumulative effects cannot be assessed at this stage.	Cumulative effects cannot be assessed at this stage.
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
Tilbury Link Road National Highways	**Tilbury Link Road** Possible future connecting road onto the A122 Lower Thames Crossing close to Tilbury, that would provide improved connectivity to the area.	Within OL Within OL Adjacent to ARN	3	No	Air Quality	Yes	The construction phase has the potential for cumulative impacts if it coincides with the construction of LTC.	The traffic generated by the proposed development could increase traffic on the Project and generate cumulative effects.	Mitigation measures cannot be established without further information on the distribution of traffic flows and air quality impacts from the development.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Tilbury Link Road project.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts from the Tilbury Link Road project.
					Cultural Heritage	Yes	There would be significant overlap between areas of physical impact to buried archaeology from Tilbury Link Road and the Project. However, the impact could only occur once, by whichever development occurs first, as once archaeology has been removed it cannot be impacted a second time. Therefore this would not cause cumulative effects. The extensive construction activity would create cumulative effects for Tilbury Fort and West Tilbury Conservation Area due to proximity of both schemes during construction.	The area surrounding Tilbury Fort is already industrialised and during operation the Project would not cause significant effects. The Project would cause a moderate adverse impact to West Tilbury Conservation Area. With the level of design information it is unclear how visible the Tilbury Link Road would be, however, it would introduce further modern infrastructure into the setting of Tilbury Fort and West Tilbury Conservation Area, potentially resulting in a moderate adverse effect.	No additional measures besides those already proposed in the topic chapter.	Moderate adverse	Moderate adverse
					Landscape and Visual	Yes	**Landscape**: Construction activity for the Tilbury Link Road in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: The main cumulative effects on visual receptors from construction of the Tilbury Link Road in conjunction with the construction of the Project, are likely to be primarily	**Landscape**: Tilbury Link Road would result in a combined change in local landscape character in conjunction with the operational Project road. **Visual Amenity**: Tilbury Link Road would primarily be seen in conjunction with the operational Project road from the local PRoW network to the south including Walton Common open access land, Fort Road and potentially	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Moderate adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							seen from the local PRoW network to the south including Walton Common open access land, Fort Road and potentially from parts of the Tilbury urban edge.	from parts of the Tilbury urban edge.			
					Terrestrial Biodiversity	Yes	No ecological information available. Cumulative effects are possible on a number of ecological receptors due to construction of the link road, particularly; designated sites, reptiles, invertebrates, birds, badgers, non- designated sites and water voles. Suitable mitigation should reduce the impact of this construction, so it is unlikely that any cumulative effect would be significant.	No ecological information available. Cumulative effects are possible on a number of ecological receptors due to operation of the link road, particularly; designated sites, reptiles, invertebrates, birds, badgers, non-designated sites and water voles. Suitable mitigation should reduce the impact of this construction, so it is unlikely that any cumulative effect would be significant.	None - Tilbury Link road project are likely to implement mitigation to reduce the effects on ecological receptors	Slight adverse - depending on outcome of Tilbury Link road assessment of impacts	Slight adverse - depending on outcome of Tilbury Link road assessment of impacts
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts during construction.	The traffic generated by the proposed development could increase traffic on the Project and generate cumulative effects.	None	Slight adverse	Slight adverse
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	The Tilbury Link Road is not yet designed but would be expected to be mostly at grade and underlain by thick clayey alluvium that overlies the principal aquifer, the Chalk aquifer. The road would be expected to be drained using suitable SuDS techniques and be designed to be safe from and have no third party impact on flood risk. Possible ground improvement methods are not known at this stage but given the small extent of groundwater drawdown that would be caused by the Project and the negligible change that would be caused by Project deep soil mixing beneath haul roads, the assessment of cumulative effects is that there would be no	The Tilbury Link Road is not yet designed but would be expected to be mostly at grade and underlain by thick clayey alluvium that overlies the principal aquifer, the Chalk aquifer. The road would be expected to be drained using suitable SuDS techniques and be designed to be safe from and have no third party impact on flood risk. Possible ground improvement methods are not known at this stage but given the small extent of groundwater drawdown that would be caused by the Project and the negligible change that would be caused by Project deep soil mixing beneath haul roads, the assessment of cumulative effects is that there would be no	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							significant impact due to the Tilbury link road to groundwater flows and levels, nor on surface water quality and flood risk.	significant impact due to the Tilbury link road to groundwater flows and levels, nor on surface water quality and flood risk.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/01307/FUL Thurrock Council Area	**Land Adjacent Tilbury Power Station Fort Road Tilbury Essex** The recovery of Pulverised Fuel Ash from Area C1 and C2 of Ash Fields using the temporary load out area and access to Station Road (Permitted under consent 18/00458/FUL) and the access via the Power Station Complex (when available).	Within OL Adjacent to ARN	1c	N	Air Quality	Yes	The closest receptor (LTC_Con_025) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There is very limited potential for impact in the context of the land raising that has already occurred and affected both buried archaeology and the settings of Coalhouse and Tilbury Forts. Potential for cumulative effects during construction to the settings of surrounding heritage assets.	Once this developed has occurred there would be no significant change to the settings of any heritage assets and therefore no potential for cumulative effects with LTC.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Neutral
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** The PFA removal works would largely be complete by the start of Project construction. There could be combined landscape and visual effects in localised areas where PFA removal works continue outside of the Project Order Limits.	**Landscape and Visual Amenity:** The PFA removal works would be complete by the start of Project operation. It is therefore unlikely there would be any in- combination landscape or visual effects with the Project.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral
					Terrestrial Biodiversity	Yes	The effects of this development have been considered as part of the ecological assessment. No significant cumulative effects are predicted.	The effects of this development have been considered as part of the ecological assessment. No significant cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Assume work would be undertaken under appropriate permits / protocols - no cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts during construction.	The traffic generated by the proposed development is likely to be minimal and not lead to any cumulative effects.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: based on the proposal for PFA recovery (made ground) and site access, the assessment is that there would be no significant cumulative impact to groundwater levels and flows. Safeguards to surface water quality would be expected to be in place, therefore no cumulative effects are anticipated.	Groundwater: based on the proposal for PFA recovery (made ground) and site access, the assessment is that there would be no cumulative impacts to groundwater levels and flows. Safeguards to surface water quality would be expected to be in place, therefore no cumulative effects are anticipated.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
15/00234/FUL Thurrock Council Area	**Land Off And Adjacent To School Manor Road Grays** Proposed development of 87 dwellings consisting of apartments, terraced, semi-detached and detached houses with amenity space and access road.	1.5km from OL 700m from ARN	1c	N	Air Quality	No	The closest receptor (LTC731) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC731) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	Yes	The PEA reported that an undetermined effect is possible on the nationally important Hangmans Wood SSSI. A number of other undetermined effects were possible, however these were on ecological receptors of local value only, so are unlikely to cause a significant effect. The Project is having a neutral impact on Hangmans Wood SSSI, therefore no cumulative effects are predicted.	The PEA reported that an undetermined effect is possible on the nationally important Hangmans Wood SSSI. A number of other undetermined effects were possible, however these were on ecological receptors of local value only, so are unlikely to cause a significant effect. The Project is having a neutral impact on Hangmans Wood SSSI, therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow good practice in relation to	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already	Soils: Very large adverse	Soil: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.		been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the proposed development (mostly residential) and the large distance from the Project (>4km to the west of the Project main alignment) there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the proposed development (mostly residential) and the large distance from the Project (>4km to the west of the Project main alignment) there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
14/00368/LDOPND 14/00937/LDOPND 14/00441/LDOPND	**London Gateway Logistics Park** Development of London Gateway Logistics Park plots 1020, 1050, 1060,	3km from OL 350 from ARN	1a	Y	Air Quality	No	Outside construction ARN, however as the development is included in the LTC traffic dataset any potential cumulative impacts have been assessed.	Outside operational ARN, however as the development is included in the LTC traffic dataset any potential cumulative impacts have been assessed.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
15/00395/LDOPND 15/00665/LDOPND 15/00393/LDOPND 15/00931/LDOPND 15/01019/LDOPND 17/01553/LDOPND 17/01554/LDOPND 18/00076/LDOPND 18/00820/LDOPND 18/01687/LDOPND 19/00306/LDOPND 19/00308/LDOPND 19/01596/LDOPND 20/00167/LDOPND 20/00742/LDOPND 20/00864/LDOPND 21/00530/LDOPND 21/00976/FUL 21/00386/SCR 22/00131/LDOPND Thurrock Council Area	1070, 1080, 3010, 3040, 4010 & 4020a, 4030.								the topic chapters.		
					Cultural Heritage	No					
					Landscape and visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the	Potential human health impact in relation to air quality changes and	No additional measures besides what	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							basis of the assessment from the Air Quality and Noise assessment.	changes in noise levels during operation.	has already been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - No Surface water - No	Groundwater: Given the large distance from the Project (>7km to the east of the Project main alignment) there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the large distance from the Project (>7km to the east of the Project main alignment) there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00827/FUL Thurrock Council Area	**Former Ford Motor Company Arisdale Avenue South Ockendon Essex RM15 5JT** The erection of 92 units, comprising 86 No. 1 and 2 bed apartments, 2 No. 3 bed dwellings and 4 No. 2 bed dwellings along with associated infrastructure, works and landscaping. (Partial revisions to phase 4 of approval 18/00308/REM Dated 12th June 2018) Area covering 1.31 hectares.	250m from OL 1km from ARN	1a	N	Air Quality	No	The closest receptor points (LTC_Con_015 and LTC_Con_058) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Limited ecological information available. Consultees note no issues with landscape design on ecological receptors. The small area of the site and the industrial nature of the existing site means that no cumulative effects are predicted.	Limited ecological information available. Consultees note no issues with landscape design on ecological receptors. The small area of the site and the industrial nature of the existing site means that no cumulative effects are predicted.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the proposed development type (mostly residential) and distance (1.8km SSW of the Project main alignment)there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the proposed development type (mostly residential) and distance (1.8km SSW of the Project main alignment)there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/00271/FUL 20/01579/CONDC Thurrock Council Area	**Land Adj A13 A1306 And Purfleet Road Aveley** Proposed new Distribution Centre consisting of - Erection of Warehouse and Distribution building (B8 Use Class), with ancillary Offices, Technical Service Block, Tote Wash, Vehicle Maintenance Building; Vehicle Inspection Hut, Gatehouse; creation of new access point from Purfleet Road and 'left-in' access from London Road; cycle, motorcycle, car, van and HGV parking (including construction of multi-storey car parking facility); fuel refill; hardstanding and circulation areas; sprinkler tanks; pump house; vehicle wash; and all other ancillary and enabling works including landscaping, drainage, engineering, ground stability works and boundary treatment.	5km from OL Adjacent to ARN	1a	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor point (LTC286) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor point (LTC286) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No			No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/00592/OUT Thurrock Council Area	**The Springhouse, Springhouse Road Corringham** Outline application for the construction of 4no. blocks of residential dwellings (95 units) with associated access roads and parking, one block to include at ground floor level. Erection of new sports and social club (D2) with	3.5km from OL 125m from ARN	1c	N	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	associated facilities including bowls pavilion, bowling green and petanque terrain and associated facilities including parking. Formation of two vehicular access points following the removal of existing vehicular access points. Demolition of existing sports club, all associated buildings and removal of hardstanding. To include determination of the matter of access, layout and scale (matters relating to appearance and landscaping reserved).				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/01855/SCO Thurrock Council Area	**Land Adjacent Watts Wood Including Mardyke Farm Ship Lane And Broomhill Arterial Road Purfleet-on-Thames Essex** Request for a Scoping Opinion pursuant to Part 4(15) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017: Proposed development for up to 50,000 sq.m (GEA) of warehouse space and ancillary uses including office space, on-site parking of up to 580 spaces, service yards, proposed vehicular access to the east of the site from Ship Lane, associated infrastructure works, landscape buffer and drainage works at Mardyke Farm, located to the west of Junction 31 of the M25, Purfleet, Essex, RM19 1YX.	3.6km from OL 110m from ARN	1c	N	Air Quality	Yes	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/02159/FUL Thurrock Council Area	**Medebridge Solar Farm** Installation of renewable energy generating station comprising ground- mounted photovoltaic solar arrays together with substation, inverter/transformer stations, site accesses, grid connection cables, internal access tracks, security measures, access gates, other ancillary infrastructure and landscape and biodiversity enhancements | Land Off Fen Lane And Medebridge Road South Ockendon Essex	Within the OL Adjacent to ARN	1b	N	Air Quality	Yes	The closest receptor (LTC199) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC199) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be no significant effects to designated heritage assets in this area resulting from the Project and therefore no cumulative effects. However, there would be cumulative effects due to increased impacts to buried archaeology from both developments and increased change to the nature of the historic landscape in the area, resulting in moderate adverse effects.	The operational effects of both projects would result in moderate adverse effects to the historic landscape due to large scale change in land use and character.	No additional measures besides those already proposed in the topic chapter.	Moderate adverse	Moderate adverse
					Landscape and Visual	Yes	**Landscape**: Construction activity for the solar farm in conjunction with construction of the Project would result in a cumulative effect on local landscape character.	**Landscape**: The solar farm would result in a combined change in local landscape character in conjunction with the Project. **Visual Amenity**: The solar farm would primarily be seen in	No additional measures besides what has already been proposed in	Moderate adverse	Moderate adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Visual Amenity: The main cumulative effects on visual receptors from construction of the solar farm in conjunction with construction of the Project, would primarily be seen from the local PRoW network and from the adjoining Top Meadow Golf Course. **Combined assessment with other solar farms:** There would be significant in-combination landscape and visual effects during the construction of the Medebridge solar farm, with Bulphan solar farm, Ockendon solar farm and the Project, including on views from the local PRoW network, scattered residential properties, Fen Lane and Top Meadow Golf Course.	conjunction with the Project from the local PRoW network and from the adjoining Top Meadow Golf Course. **Combined assessment with other solar farms:** There would be significant cumulative landscape and visual effects due to the presence of Medebridge solar farm, with Ockendon solar farm, Bulphan solar farm and the Project, including on views from the local PRoW network, scattered residential properties, Fen Lane and Top Meadow Golf Course.	the topic chapters.		
					Terrestrial Biodiversity	Yes	Medebridge Solar Farm reported no likely significant effects from the construction of the project. As such no cumulative effects are predicted.	Medebridge Solar Farm reported no likely significant effects from the operation of the project. As such no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology resources is expected. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect	During the operational phase, any scheme undertaken in the area would have a cumulative effect	No additional measures besides what	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	with the Project in terms of material demand and offsite waste management capacity.	has already been proposed in the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts during construction.	The traffic generated by the proposed development is likely to be minimal and not lead to any cumulative effects.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Given the proposed development type (solar panels) there would be no significant cumulative impact to groundwater levels and flows and changes to the land drainage regime would be limited.	Given the proposed development type (solar panels) there would be no significant cumulative impact to groundwater levels and flows and changes to the land drainage regime would be limited.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00430/SCR	**Tevva Motors, London Distribution Park Request**	0.6km from OL		Y	Air Quality	Yes	The closest receptor (LTC731) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts	The closest receptor (LTC731) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Thurrock Council Area	**for Environmental Impact Assessment (EIA)** Screening Opinion: Proposed retrospective change of use from Use Class B8 (storage and distribution) to Use Class E(g)(iii) (Light Industrial) / B8 (storage and distribution), installation of two new exterior doors, provision of an additional 50 car parking spaces and a demountable office space (Use Class E(g)(i)). | Unit 1 London Distribution Park Windrush Road Tilbury Essex RM18 7AN.	Adjacent to ARN					are unlikely to lead to exceedances of the AQS objective.	are unlikely to lead to exceedances of the AQS objective.	been proposed in the topic chapters.		
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	EIA screening anticipated that there would be no significant effects on biodiversity. As such no cumulative effects are predicted.	EIA screening anticipated that there would be no significant effects on biodiversity. As such no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology resources is expected. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the proposed development type (change of use to light industrial) there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the proposed development type (change of use to light industrial) there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/21/1296 Medway Council Area	**Gibraltar Farm Ham Lane Hempstead Gillingham Medway ME7 3JJ** Outline Application (with all matters reserved except	1.4km from OL	1c	Y	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	access) for the erection of up to 450 market and affordable dwellings, nursery and supporting retail space up to 85sqm, with provision of main access to Ham Lane; estate roads; cycle and pedestrian routes; residential and community open space and landscaping; new junction for Lidsing Road/Hempstead Road and realignment and widening of Lidsing Road. Off site related highway works to Westfield Sole Road, Shawstead Road, Hempstead Road, Chapel Lane, Hempstead Valley Drive, Hoath Way roundabout, Hoath Way and M2 Junction 4 - Re-submission of MC/19/0336.	960m from ARN							the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Gibraltar Farm project's ecological assessment concluded that there were no likely significant effect on ecological receptors. Therefore no cumulative effects are predicted.	Gibraltar Farm project's ecological assessment concluded that there were no likely significant effect on ecological receptors. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							cumulative impacts from construction traffic.				
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of >9km south east of the Project main alignment there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of >9km south east of the Project main alignment there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Hoo Development Framework Medway Council Area	**Chattenden** Potential to deliver new homes, a strategic green corridor, small-scale retail, a relocated and expanded primary school, new footpaths and cycle routes.	2.7km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside of construction ARN. If the development construction coincides with LTC, then there could be potential for cumulative effects. However as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	Outside of operational ARN. If the development opening year coincides with the opening of LTC then there could be the potential for accumulative impacts. However as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the proposed development type (housing, primary school) and distance of >5km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the proposed development type (housing, primary school) and distance of >5km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/16/0600 MC/09/0417 Medway Council Area	**Temple Waterfront Between Knight Road and Roman Way Strood Land Between Roman Way And Knight Road East Of The Medway Valley Railway Line (Temple Waterfront) Strood Rochester Kent** Application for approval of Reserved Matters, including layout, landscaping, scale, appearance and access for 210 new dwellings of Phase 1A of Outline Permission (MC/09/0417) - Outline application for planning permission providing up to 620 residential units; up to 10,300 sqm of employment floorspace ; up to 1,800 sqm of retail floorspace; up to 200 sqm community facilities; strategic landscaping, improvements to open space, parking and related infrastructure including works in relation to site preparation, flood defence and land raising.	2.5km east from OL 280m from ARN	1a	Y	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	Traffic induced by development included in the Project traffic datasets and therefore air quality modelling. No representative receptors.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the proposed development type (residential and commercial and distance of approximately 3km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the proposed development type (residential and commercial and distance of approximately 3km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/21/0436 Medway Council Area	**Hoo Highway Improvements** Request for a scoping opinion for highway improvements over 6 phases: - Phase 1 includes a new junction controlled by traffic signals to link the A289 with Islingham Farm	2.6km from OL Overlaps with ARN	2	Y	Air Quality	Yes	Outside construction ARN.	The closest receptors (LTC145 and LTC637) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	Road, plus improvements to Higham Road and Woodfield Way. - Phase 2 includes a new relief road, connecting Upchat roundabout to the A228. A new spur link road and roundabout will also be introduced to ease congestion. - Phase 3 entails improvements to the existing Bell's Lane roundabout to accommodate traffic growth. - Phase 4 shows the measures to be implemented at Ropers Lane roundabout to accommodate the new rail station. - Phase 5 consists of improvements to Four Elms roundabout. - Phase 6 involves upgrading the existing A289 Wulfere Way and Sans Pareil roundabout to ease network congestion. Hoo Peninsula Medway. additional info linked in column M				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptors (LTC145 and LTC637) show modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							cumulative impacts from construction traffic.				
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of >3.5km to the east of the Project main alignment and the proposed highway improvements at Hoo, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of >3.5km to the east of the Project main alignment and the proposed highway improvements at Hoo, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
N/A Medway Council Area	**Future Hoo Environmental and infrastructure improvements on the Hoo Peninsula via the Housing Infrastructure Fund.** Strategic Environmental Management Scheme (SEMS) to deliver largescale new publicly accessible (where appropriate) open spaces, covering 300 hectares (740 acres) of community parkland, woodland and nature reserves, managed for both wildlife and for public access Investment in a new train station and reinstated	2.2km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside of construction ARN. If the proposed development coincides with the construction year of LTC, there is potential for cumulative impacts. However as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	Outside of operational ARN. If the proposed development coincides with the opening year of LTC, there is potential for cumulative impacts. However as no work has been undertaken into the distribution of traffic and air quality impacts, the magnitude and distribution of any potential cumulative impact cannot be quantified until further planning documents have been published.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	passenger service on the Grain branch line Upgrade of the existing road network with the provision of new infrastructure including slip roads, junctions and interchanges on the A228 and A289 and wider highway improvements, as well as a new relief road to access the peninsula via Woodfield Way (included as separate development - MC/21/0436).				Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste		At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of >7km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of >7km to the east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
E08 Brentwood Borough Council Area	**Land Adjacent to A12 and Slip Road, Ingatestone** Potential to deliver 200 dwelling Delivery Forecast 2023/24- 2026/27	10km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside of construction ARN.	There are six receptors in close proximity to the proposed development, all of which show concentrations well below the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	There are six receptors in close proximity to the proposed development, all of which show concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
R16 Brentwood Borough Council Area	**Land off Doddinghurst Road, Pilgrims Hatch and Brentwood** Potential to deliver 200 dwelling Delivery Forecast 2023/24- 2026/27.	3.2km from OL 3.2km from ARN	3	Y	Air Quality	No	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
R14 Brentwood Borough Council Area	**William Hunter Way car park, Brentwood** Potential to deliver 300 dwelling Delivery Forecast 2023/24- 2030/31.	3km from OL 3.6km from ARN	3	Y	Air Quality	Yes	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of 2.8km to the east of the Project main alignment, and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of 2.8km to the east of the Project main alignment, and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
R03 Brentwood Borough Council Area	**Land north of Shenfield** Potential to deliver 825 dwellings. Delivery Forecast 2023/24-2030/31	5.6km from OL Adjacent to ARN	3	Y	Air Quality	Yes	Outside of construction ARN.	The closest receptor (LTC605) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No impacts anticipated during scheme operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage	Groundwater - Yes	Groundwater: Given the distance of 4.8km to the north east of the Project main alignment, the type of	Groundwater: Given the distance of 4.8km to the north east of the Project main alignment, the type of	No additional measures besides what	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No	development (housing) and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	development (housing), and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	has already been proposed in the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
R04 Brentwood Borough Council Area	**Ford Headquarters and Council Depot, Warley-Southern Site** Potential to deliver 475 dwelling Delivery Forecast 2024/25- 2032/33	1.3km from OL 2.2km from ARN	3	Y	Air Quality	No	Outside of construction ARN.	Outside of operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Due to the small nature of the site, the distance from the OL, and the existing industrial nature, no cumulative effects are predicted.	No ecological information available. Due to the small nature of the site, the distance from the OL, and the existing industrial nature, no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 2km to the east of the Project main alignment, the type of development (housing) and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 2km to the east of the Project main alignment, the type of development (housing) and that the proposed development is north of the Eocene boundary, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
E10 Brentwood Borough Council Area	**Codham Hall Farm** 9.6 ha of employment land (principally use classes B1, B2, B8 and any associated employment generating sui generis uses); and b. 8.0 ha of land to provide for landscaping, amenity, access and ancillary uses to support the sustainability of the site.	Adjacent to OL Adjacent to ARN	3	N	Air Quality	Yes	The closest receptor (LTC081) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC081) shows concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape**: Construction activity for employment buildings at Codham Hall Farm in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: The main cumulative effects on visual receptors from construction of employment buildings at Codham Hall Farm in conjunction with construction of the Project, would primarily be seen from the local PRoW network, in the context of existing employment development.	**Landscape**: The employment buildings at Codham Hall Farm would result in a combined change in local landscape character in conjunction with the Project. **Visual Amenity**: The employment buildings at Codham Hall Farm would primarily be seen in conjunction with the Project from the local PRoW network, in the context of existing employment development.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight adverse
					Terrestrial Biodiversity	Yes	No ecological information available. Planning states that the development will be required to provide appropriate habitat mitigation, creation, and appropriate buffers to the Local Wildlife Site (Codham Hall Wood). LTC is having a moderate adverse impact on Codham Hall Wood from the loss of an area of ancient woodland. With implementation of a suitable mitigation strategy for	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Codham Hall Farm, no cumulative effect is predicted.				
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and human health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The proposed development is near M25 junction 29, however given that the proposed development is north of the Eocene boundary and mostly lies directly on top of London Clay Formation, there would be no significant cumulative impacts to groundwater flows and levels. Surface water - the land is in the headwaters of the Mardyke catchment. Cumulative effects on land drainage and water quality would expected to be prevented through implementation of a CEMP.	Groundwater: The proposed development is near M25 junction 29, however given that the proposed development is north of the Eocene boundary and mostly lies directly on top of London Clay Formation, there would be no significant cumulative impacts to groundwater flows and levels. Surface water - the land is in the headwaters of the Mardyke catchment. Cumulative effects on land drainage and water quality would expected to be prevented through implementation of a SUDS drainage scheme.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
17/01815/OUT Brentwood Borough Council Area	**Former Ingatestone Garden Centre Roman Road Ingatestone Essex CM4 9AU** Outline application to demolish and re- develop site to provide up to 110 residential units with associated open space with access from Roman Road (Appearance, Landscaping, Layout and Scale reserved matters).	>6km from 3km buffer 24.2 meters from ARN	1c	Y	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC756) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC756) shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
21/01747/FUL Brentwood Borough Council Area	**57-59 Brook Street Brentwood Essex CM14 5NB** Demolition of existing showroom and workshop buildings. Construction of new showroom, workshop and distribution building, including associated alteration to access, car parking and landscaping.	680m from OL 580m from ARN	1b	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. The demolition of an existing building and redevelopment for a new showroom is unlikely to significantly affect any ecological receptors. Therefore no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: due to the proposed activity (demolition) and the site location which is north of the Eocene margine, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: due to the proposed activity (demolition) and the site location which is north of the Eocene margine, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00587/FUL Brentwood Borough Council Area	**Land Opposite Upminster Trading Park Warley Street Great Warley Essex** Application seeking full planning permission for engineering works on land situated to the south of Brentwood Enterprise Park, west of the B186 (Warley Street), north of the railway line and east of the M25 Motorway. Works to comprise the stripping and storage of topsoil, the movement, spreading and compacting of earthworks material from the adjacent Brentwood Enterprise Park development, and the respreading and levelling of the stored topsoil.	Within OL Adjacent to ARN	1c	N	Air Quality	Yes	The closest receptors (LTC293) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptors (LTC293) show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be a small amount of cumulative impacts to buried archaeology from this development and the Project, due to the increased area of impact from the combined developments.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Neutral
					Landscape and Visual	Yes	**Landscape**: Earthworks activity for Land Opposite Upminster Trading Park in conjunction with construction of the Project would result in a cumulative effect on landscape character.	**Landscape and Visual Amenity**: During operation, the areas used for the spreading of material south of Brentwood Enterprise Site would have been restored to agricultural use, with ground levels not appearing notably different to	No additional measures besides what has already been proposed in	Moderate adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Visual Amenity: The main cumulative effects on visual receptors from earthworks south of the proposed Brentwood Enterprise Site in conjunction with construction of the Project, would primarily be seen from scattered residential properties along Warley Street, the local PRoW network, the Upminster to Basildon railway line, and Warley Street.	existing. No cumulative landscape and visual effects are therefore anticipated in conjunction with the Project.	the topic chapters.		
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the Land Opposite Upminster Trading Park site consists of areas of intensive agriculture, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	been proposed in the topic chapters.		
					Noise and Vibration	No					
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The nearest part of the proposed development is adjacent to the east of the Project main alignment (of which the nearest section is on embankment), borders Hobbs Hole Local Wildlife Site (LWS) and is approximately 500m south of Codham Hall LWS and 350m east of Franks Wood and Cranham Brickfields SINC, and borders an ordinary watercourse. The site is located on superficial aquifers which are likely to be of variable permeability but may locally contribute baseflow. The development includes earthworks (filling) and changes to the existing stream layout. There is potential for alteration of shallow groundwater flows. It is assumed that the regulator (Environment Agency) would require that the proposed development would not cause detrimental draining of the areas for nature conservation and	It is assumed that the regulator (Environment Agency) would require that the proposed development would not cause detrimental draining of the areas for nature conservation and therefore, as a consequence, whilst there is potential for localised slight adverse cumulative impact on shallow groundwater flows, this would not be significant. Surface water: There is an ordinary water course at site boundary and the development is in the Mardyke western tributary catchment. The development has been subject to a Flood Risk Assessment that secures suitable mitigation measures, such that there would be no cumulative effects on flood risk or land drainage.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral SW: Slight Adverse	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							therefore whilst there is potential for localised slight adverse cumulative impact on shallow groundwater flows, this would not be significant.				
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00512/OUT Sevenoaks Area	**Sevenoaks Quarry Bat And Ball Road Sevenoaks Kent TN14 5SR** An outline planning application for: up to 800 residential dwellings (Class C3), up to 150 residential institutional units (Class C2), business, retail, leisure and sports uses (Class E); new primary school (Class F1); community uses (Class F2), re-use of former Oast House and existing barn off Childsbridge Lane, green open spaces including parks, play spaces, ecological areas and woodlands; vehicular accesses from Bat and Ball Road, Childsbridge Lane and Farm Road; associated infrastructure, groundworks and demolition; with all matters reserved.	1.7km from OL 440m from ARN	1c	Y	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No significant effects predicted. As such no cumulative effects are predicted.	No significant effects predicted. As such no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	the topic chapters.		
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and human health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 20km to the south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 20km to the south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00476/SCREEN Dartford Borough Council Area	**Land Off Foxhounds Lane Southfleet Kent** Request for screening opinion for formation of 300MW battery energy	1.1km from OL 50m from ARN	1c	N	Air Quality	Yes	The closest receptors (LTC397 and LTC592) show modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptors (LTC397 and LTC592) show modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	storage system and associated infrastructure.								the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the land of Foxhounds Lane site consists of areas of intensive agriculture, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and human health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the type of development (battery energy storage) and distance of >5km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the type of development (battery energy storage) and distance of >5km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
P1904.18 London Borough of Havering Area	**Freightmaster Estate Coldharbour Lane Rainham RM13 9BJ** Outline planning application for the demolition of all existing buildings (13.21 Hectares) and redevelopment to provide up to 43,000sqm (GIA) of commercial floor space for Use Classes B1/B2/B8, enhancements to strategic landscaping fronting the Thames foot/cycle path and associated landscaping.	6km from OL 1km from ARN	1b	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20/02111/FULL London Borough of Barking and Dagenham Area	**Wellbeck Wharf, 8 River Road, Barking, IG11 0JE** Change of use of the entire site from Class B8 (storage and distribution) to flexible Class B2 (general industrial), Class B8 (storage and distribution) and Use Class E(g)(iii) (light industrial).	>3km from OL 150m from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC782) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	No operational effects on terrestrial biodiversity are considered likely.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00416/FULL	**Former Car Park North, Ford Motor Company**	8.8km from OL	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC672_F) shows modelled concentrations below the AQS Objective. This	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
London Borough of Barking and Dagenham Area	Full planning application for the Construction of three buildings to deliver new homes and a new primary school, together with associated landscaping, public realm, play space, new access roads, car and cycle parking and other associated and ancillary works. Full Planning application for the Construction of three buildings ranging in maximum part heights per building of 11, 15 and 17 storeys to deliver 337 residential units and a new two form entry primary school, together with associated landscaping, public realm, play space, new access roads, car and cycle parking and other associated and ancillary works.	30m from ARN						indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	has already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC672_F) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00262/FULL London Borough of Barking and Dagenham Area	**Tesco Stores Highbridge Road, Barking** Demolition of the existing Tesco store and car park, and construction of new residential homes together with a replacement Tesco store and petrol filling station, flexible commercial/community floorspace (Use Class E/F2b), ancillary management and resident facilities, pedestrian and cycle footbridge, works to the River Roding wall, public realm enhancements including hard and soft landscaping and associated access, servicing, car and cycle parking, and refuse and recycling stores. Further explanation (not forming part of the formal description of development set out above): Proposed Development comprises: Erection of buildings between 5-29 storeys in height, to provide 1,758 residential units, a new Tesco store of 5,660 sqm (GIA), petrol filling station of 83 sqm (GIA) and 663 sqm (GIA) of flexible commercial/community floorspace (Use Class E/F2b). This application is an	13.8km from OL 800m from the ARN	1c	N	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	EIA development and is accompanied by an Environmental Statement.						and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
TM/20/842 (KCC/TM/0076/2020) Tonbridge and Malling Borough Council Area	**Wrotham Quarry, Addington, West Malling, Kent ME19 5DL** Planning Application to vary Condition 2 of Planning Permission TM/17/2091 to allow for an extension of the end date for restoration until July 2027 and for the approval of details pursuant to conditions (3), (5) and (44) to reflect changes to approved restoration and aftercare scheme and the location of the raised stocking area in the application to buttress existing quarry slopes (submitted simultaneously)	9.2km from OL 150m from ARN	1b	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC805) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC805) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/02866/FL Tonbridge and Malling Borough Council Area	**Land East Of Little Preston Yard And North Of M20 Coldharbour Lane Aylesford Kent** Construction of five buildings to provide six units for industrial processes (Use Class E(g)(iii)); industrial	3.1km from OL Adjacent to ARN	1c	N	Air Quality	Yes	The closest receptor (LTC043) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC043) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	(Use Class B2); and/or storage and distribution (Use Class B8)) purposes, with ancillary offices and associated landscaping, car parking, servicing and access arrangements				Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC043) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	Due to the distance from the site only AQ cumulative impacts are considered for terrestrial biodiversity. The closest receptor (LTC043) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00113/OAEA Tonbridge and Malling Borough Council Area	**Development Site Bushey Wood Phase 1 Bull Lane Eccles Aylesford Kent** Residential development of up to 950 dwellings, provision of a mixed-use local centre (including Class E, F and C3 with potential for retirement homes) provision of land to accommodate a new primary school, replacement sports pitches with changing facilities; associated green infrastructure including landscaping, public open space, allotments, sustainable urban drainage systems, biodiversity enhancements; new accesses from Bull Lane; new access and road/cycleway/footpath link to New Court Road.	1.5km from OL 760m from ARN	1c	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those already proposed in the topic chapter.	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape and Visual Amenity:** Construction activity for Bushey Wood, Phase 1 in conjunction with Project planting works on the nitrogen deposition compensation site near Burham would not result in any combined landscape or visual effects.	**Landscape:** Once planting has established on the Burham nitrogen deposition compensation site, there would be a combined change in local landscape character in conjunction with the Bushey Wood, Phase 1 housing development. **Visual Amenity:** The Bushey Wood, Phase 1 housing development would primarily be seen in conjunction with the Project planting within the Burham nitrogen deposition compensation site from the local PRoW network, including the North Downs Way, and the panoramic viewpoint at Bluebell Hill picnic site.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 10km south of the Project main alignment, there would be no significant cumulative	Groundwater: Given the distance of approximately 10km south of the Project main alignment, there would be no significant cumulative	No additional measures besides what has already been proposed in	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							impact to groundwater levels and flows.	impact to groundwater levels and flows.	the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00485/CNA Tonbridge and Malling Borough Council Area	**Land At Bunyards Beaver Road Allington Aylesford Kent** Outline planning application for the development of up to 435 dwellings, including 40% affordable homes, with associated landscaping, parking, open space, play areas, etc. Realignment of Beaver Road and the construction of a new vehicular access off of Beaver Road and construction of a new vehicular access onto Godwin Road, and all other associated development works (Access only detailed matter with all other matters reserved).	4.3km from OL 450m from ARN	1c	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/500693/ENVSCR Maidstone Borough Council Area	**Land At Vigo Lane Borden Kent ME9 8BE** EIA Screening opinion- Proposed Solar Farm.	9.4km from OL Adjacent to the ARN	2	N	Air Quality	No	Outside construction ARN.	The closest receptor (LTC105) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC105) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/503974/HYBRID	**Land East Of Iwade Iwade**	14km from OL	1c	N	Air Quality	Yes	No representative receptor of the proposed development site and	No representative receptor of the proposed development site and	No additional measures	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Swale District Area	Hybrid application comprising of - Outline application (all matter reserved except for access) for up to 466 dwellings and a community hall. Full planning application for access from Grovehurst Road and The Street and for a country park.	Country park adjacent to ARN Development 200m from ARN					therefore cumulative impacts at the site cannot be quantified.	therefore cumulative impacts at the site cannot be quantified.	besides what has already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
SA52 London Borough of Enfield Area	**Site allocation SA52 Land West of Rammey Marsh Mollison Avenue** Preferred option for spatial industrial growth- Redevelopment should provide at least 70,200 sq. m of new employment floorspace (light industrial, general industrial, storage and distribution, and related sui generis) floorspace.	21km from OL Adjacent to ARN	3	N	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
SA55	**Site allocation SA55 Land to the North West of Innova Park, EN3 7XY**	21km from OL	3	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
London Borough of Enfield Area	Preferred option for spatial industrial growth.	300m from ARN							proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Site allocation NWB.E4 Epping Forest Area	**North Weald Airfield** Masterplan Area 40,000sqm of B1/B2/B8 class use (business use/ general industrial/storage and warehousing).	14km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC190) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC190) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Site allocation WAL.E8 Epping Forest Area	**WAL.E8** Land north of A121 Employment site B1c/B2/B8 use	18.4km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC167) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC167) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Site allocation EPP.R1 EPP.R2 Epping Forest Area	**South Epping Masterplan Area** Residential units Junction 27 M25 - next to Epping golf course Development proposals in relation to sites EPP.R1 and EPP.R2 must comply with a Strategic Masterplan for the South Epping Area which has been formally endorsed by the Council. EPP.R11 - Land South of Epping, West – Approximately 450 homes EPP.R2 Land South of Epping, East – Approximately 500 homes The Strategic Masterplan should make provision for: (i) a minimum of 950 homes; (ii) a new neighbourhood centre to include community facilities, employment and retail use; (iii) a new primary school and early years childcare provision (which could be accommodated through the relocation of Ivy Chimneys Primary School); (iv) appropriate provision of health facilities, exploring the potential for a new health hub to include an integrated GP surgery, pharmacy and	13.5km from OL Adjacent to ARN	3	N	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	any other necessary health services; (v) new road access and internal road layout to support a bus corridor; (vi) a new vehicular, pedestrian and cycling bridge over the railway line; (vii) car clubs/car sharing or pooling arrangements, visitor parking and blue badge holders; (viii) minimising the impact upon the setting of the Grade II listed Gardners Farm and Grade II listed Farm Buildings; (ix) minimising the impact upon the BAP Priority Habitat within the site and nearby Local Wildlife Site; (x) incorporation of an appropriate buffer to protect the amenity of future residents with regards to noise and air quality from the M25 and an appropriate buffer from the High Voltage Transmission Cables and land impacted by the BPA Oil Pipeline constraints; (xi) careful design to avoid or reduce impacts on the ancient woodland which may include providing a buffer zone of semi-natural habitat between built development and the Ancient Woodland; (xii) the continued protection of those trees benefitting from a Tree Preservation Order; (xiii) the strengthening and/or creation of new Green Belt						schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	boundaries to the east and west of the site; (xiv) the integration, retention and improvements to the existing watercourse and Public Rights of Way, including the retention of the existing pedestrian footbridge over the M25, and enhanced linkages to Epping station; (xv) adequate levels of high quality public open space , including the replacement of Brook Road Informal Recreation Ground; and (xvi) contribute towards air quality monitoring within the Epping Forest. L. The Masterplan and subsequent applications should be considered and informed by the Quality Review Panel.										
Site allocation SP 5.3 Chelmsford Council Area	**Strategic Housing Site East of Harlow** A Strategic Housing Site for 2,600 dwellings and associated infrastructure is allocated on land to the east of Harlow. The site forms part of one of the new Garden Communities in the Harlow and Gilston Garden Town.	19km from OL Adjacent to ARN	3	N	Air Quality	Yes	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated	None	Not quantifiable	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							sites, therefore cumulative impact cannot be quantified.	sites, therefore cumulative impact cannot be quantified.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
A229 Blue Bell Hill Junction Improvement Kent County Council Area	**A229 Blue Bell Hill Junction Improvement** Improvements to section of dual carriageway which runs between Junction 6 of the M20 in Maidstone and Junction 3 of the M2 at Blue Bell Hill village. Improvements required to improve journey time reliability, reduce delays and improve road safety. Currently at options assessment stage.	150m from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC627) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those	Neutral	Neutral
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC627) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: Based on the nature of the development and the fact that limited earthworks are proposed for the Project then no significant potential impact to geology resources is expected. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as no significant earthworks proposed and if encountered contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of	No additional measures besides what has already been	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	material demand and offsite waste management capacity.	proposed in the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater and surface water: The A229 Blue Bell Hill road improvements would be 6.5km from the Project main alignment and therefore due to the large distance the cumulative impact would be not significant. The nearest Project Order Limits are associated with the nitrogen deposition compensation areas but due to the proposed planting at the compensation areas and the distance of greater than 2km to the proposed A229 road improvements that don't include large scale cuttings then there would no cumulative impact.	Groundwater and surface water: the A229 Blue Bell Hill road improvements would be 6.5km from the Project main alignment and therefore due to the large distance the cumulative impact would be not significant. The nearest Project Order Limits are associated with the nitrogen deposition compensation areas but due to the proposed planting at the compensation areas and the distance of greater than 2km to the proposed A229 road improvements that don't include large scale cuttings then there would no cumulative impact.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/01022/OUT		14.3km from OL	1b	N	Air Quality	Yes	Outside construction ARN	The closest receptors (LTC353 and LTC787) shows modelled concentrations below the AQS	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Rochford District Area	**Michelin Farm, Arterial Road, Rayleigh, Essex, SS6 7NG** Hybrid planning application: full planning application for erection of buildings for use within Classes B1(c), B2 and B8 with access and servicing arrangements, car parking, landscaping, drainage features and associated highway works (Phase 1); outline planning application for up to 33,500 square metres of employment uses (Classes B1(c), B2 and B8) including means of access with all other matters reserved (Phase 2).	Adjacent to ARN						Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	has already been proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptors (LTC353 and LTC787) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Site Allocation plan Park Plaza Area Broxborne District Area	**Park Plaza Area** 140ha area of land split into 6 parcels - a range of potential development options have been created and the Park Plaza North Development Brief (a draft SPD) was drafted in March 2022 - however no formal planning application has been submitted.	23km from OL Adjacent to ARN	3	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC528) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC528) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
07/22/0287/F Broxborne District Area	**Theobalds Park Farm Great Cambridge Road Goff'S Oak Broxbourne Hertfordshire EN8 8EU** Redevelopment to create a new film and media studio complex including ground and enabling works partial demolition and demolition of existing structures works and change of use to existing listed buildings construction of stages workshops backlot and ancillary studio facilities	23.4km from OL Adjacent to ARN	1c	N	Air Quality	Yes	Outside construction ARN.	The closest receptors (LTC123, LTC406 and LTC528) show concentrations below the AQS objective. Cumulative impacts are unlikely to lead exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	and services (including offices staff amenity facilities mobility hubs and waste/recycling facilities associated with the principle use as a film and media studio complex) associated green space and other green infrastructure and associated works including soft and hard landscaping drainage utilities new vehicular access and associated works at A10 and Lieutenant Ellis Way junctions and other enabling works.				Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
UTT/21/3180/SO Uttlesford District Area	**Land North Of Stansted** Request for Scoping opinion for proposed development of a logistics hub comprising of approximately 195,100m^2 (2.1 million square feet((ft2)(Gross Internal Area (GIA)) of floorspace which shall comprise of Class B8 (storage or distribution) Class B2 (general industrial) and Class E (commercial business and service)((the Proposed Development).	3km from OL 1km from ARN	2	N	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.		Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
CA/22/00608 related to CA/15/01479/OUT Canterbury District Area	**21 Miles Way Thanington Without Kent CT1 3ZE** Non-material amendment to planning permission CA/15/01479/OUT for comprehensive mixed use development comprising: up to 750 residential units, in a mix of sizes, types and tenures; up to 4,000 m^2 (gross internal floorspace) of Class B1 floorspace; up to 1,000 m^2 (gross internal floorspace) of Class A1 to A5 uses; Primary School; up to 5,000 m^2 (gross internal area) of residential institutions, including a building for the Pilgrims Hospices with up to 30 beds and a 60 bed Nursing Home (Class C2); up to 2,000 m^2 (gross internal area of Community and Leisure	36.7km from OL Adjacent to ARN	1a	N	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC705) shows modelled concentrations below the AQS Objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC705) shows modelled concentrations below the AQS Objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	Uses (Classes D1 and D2); Provision of local recycling facilities; Provision of areas of formal and informal open space; Installation of utilities infrastructure to serve the development, including flood attenuation works, surface water attenuation, water supply, waste water facilities, gas supply, electricity supply (including substations), telecommunications infrastructure and renewable energy; Transport infrastructure, including an extended westbound slip road on the A2, accesses onto the Cockering Road plus a network of internal roads, footpaths and cycle routes; New planting and landscaping, both within the Proposed Development and on its boundaries as well as ecological enhancement works; and associated groundworks. All matters except for access are reserved; to allow door to car port.				Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
CA/21/02719	**Land North Of Cockering Road Thanington Without Kent**	36km from OL	1a	N	Air Quality	Yes	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been	Neutral	Not quantifiable

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
Canterbury District Area	Application for the approval for access, appearance, layout and scale of phase 1 incorporating 60 dwellings of a mixed use development comprising up to 400 dwellings in a mix of sizes, types and tenures including affordable housing, up to 3,716 sqm of commercial space (use class B1), a community building or leisure centre (Use classes D1-D2) of up to 200 sqm, new highway infrastructure including spine road with accesses onto Milton Manor Road and Cockering Road and a network of internal roads, footpaths and cycle route, provision of no less than 18 hectares of open space, associated landscaping, utilities infrastructure, sustainable drainage system and earthworks. All matters reserved. pursuant to outline planning permission CA/17/00519/OUT	200m from ARN							proposed in the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	No representative receptor for impacts on Air Quality at designated sites.	None	Neutral	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality assessment.	No additional measures besides what has already been	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Hole Farm Community Woodland Brentwood Borough Council Area	**Future application for Community Woodland at Hole Farm.** Application to be made by Forestry England in partnership with National Highways - which is the landowner. Application is for buildings, car park and other infrastructure as part of the proposed development. Tree planting etc. also forms part of mitigation/ compensation for the DCO and would not be subject to the TCPA Application and so has not been included in the cumulative effects assessment.	Within OL Adjacent to ARN	3	N	Air Quality	Yes	Outside construction ARN.	The proposed development has the potential to lead to an increase in operational traffic flows. If the project opening coincides with LTC then there is the potential for cumulative impacts, however due to the development's nature (carpark) it is unlikely that cumulative impacts will be significant.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	The Project would have no significant effects in this area and therefore no cumulative effects are possible.	No additional measures besides those	Neutral	Neutral
					Landscape and Visual	Yes	**Landscape**: No notable in-combination landscape effects are anticipated from construction of the buildings, car park and other infrastructure at Hole Farm Community Woodland in conjunction with Project construction activity along the existing M25 corridor or Project planting works within the Hole Farm nitrogen deposition compensation site. **Visual Amenity**: The main in-combination effects on visual receptors from construction of the buildings, car park and other infrastructure at Hole Farm Community Woodland in	**Landscape and Visual Amenity**: The buildings, car park and other infrastructure at Hole Farm Community Woodland, seen in the context of features such as the existing M25 corridor and industrial units at Codham Hall Farm, are unlikely to result in a notable combined change in landscape character or views in conjunction with the Project.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							conjunction with Project construction and planting, would primarily be seen from the local PRoW network, scattered residential properties along Beredens Lane, Hole Farm, Codham Hall Lane and Beredens Lane.				
					Terrestrial Biodiversity	Yes	The construction of the new visitor centre, parking and other infrastructure would be on existing low value arable land. As such, no cumulative effect on terrestrial biodiversity are considered likely.	The operation of the new visitor centre, parking and other infrastructure is not considered likely to have an effect on terrestrial biodiversity. Therefore no cumulative effect on terrestrial biodiversity are considered likely.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soils: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Given the site proposal of a community woodland including new ponds) and minimal earthworks proposed on the nearest Project main alignment comprising the M25 north of junction 29, there would be no cumulative impact on groundwater levels and flows. Surface water: Given the nature of the proposals, there is potential for a slight beneficial cumulative effect on the surface water environment.	Groundwater: Given the site proposal of community woodland including new ponds) and minimal earthworks proposed on the nearest Project main alignment comprising the M25 north of junction 29, there would be no cumulative impact on groundwater levels and flows. Surface water: Given the nature of the proposals, there is potential for a slight beneficial cumulative effect on the surface water environment.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral SW: Slight Beneficial	GW: Neutral SW: Slight Beneficial
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00473/REM Chelmsford Council Area	**Beaulieu Park Station** New railway station including:	24km from OL	1b	No	Air Quality	Yes	Outside construction ARN.	Adjacent to ARN but no representative LTC receptors. The project has potential to lead to traffic increases during the operational phase and the ES chapter shows the modelled	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	Three platforms with a central loop line and new tracks to enable stopping services to call at the station while allowing fast trains to pass through unimpeded. Parking for over 700 cars Pick up and drop off area A bus interchange.	Adjacent to ARN						concentrations are well below the AQS objective and therefore it is unlikely that cumulative effects would lead to an exceedance of the AQS objective with LTC.	the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
EDC/21/0102 Gravesham Borough Council Area	**Land Adj To Northfleet Harbour Grove Road Northfleet Gravesend Kent** Outline planning application (with all matters reserved) for residential-led mixed-use development comprising demolition of existing buildings and structures and provision of residential (Class C3), flexible commercial use (Class E), non-residential institutions (Class F.1), community use (Class F2, E), hard and soft landscaping, public open spaces, car parking, pedestrian and vehicular access and other associated infrastructure works.	2.3km from OL 100m from ARN	1c	No	Air Quality	Yes	Outside construction ARN.	The closest receptor (LTC301), which is located ~250m south of the proposed development shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC301), which is located ~250m south of the proposed development shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	Yes	Unlikely to be pathways for effects as land based activities.	No relevant pathways for cumulative effects during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	
					Geology and Soils	Geology - No	Soils: Construction works should follow best practice in relation to	Soils: No cumulative effects on best and most versatile land are	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Soils - Yes	soil handling and reinstatement where applicable.	likely during the operational phase.	has already been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of >5km west of the Project main alignment and the location of the proposed development at the edge of the River Thames, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of >5km west of the Project main alignment and the location of the proposed development at the edge of the River Thames, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
DA/21/01005/FUL Dartford Borough Council Area	**Site Of Littlebrook Power Station Rennie Drive Dartford Kent DA1 5PT** Redevelopment of the site to provide a single storage and	7.5km from OL	1b	Yes	Air Quality		Outside construction ARN.	No representative receptor. However the traffic from the proposed development has been included in the LTC air quality model and thus concentrations at other receptors in the area will	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	distribution (Use Class B8) unit with ancillary offices (use class E(g)(i)) within Phase 3; Class E(g)(iii)(industrial processes)/B2 (general industrial)/B8 (storage and distribution) uses and ancillary offices (use class E(g)(i)) within Phase 4; and associated access, drainage infrastructure, servicing, parking, landscaping, works to flood defence and riverside enhancements.	600m from ARN						account for traffic from this development.	the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	No representative receptor. However the traffic from the proposed development has been included in the LTC air quality model and thus concentrations at other receptors in the area will account for traffic from this development. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	Yes	Potential for cumulative effects related to sediment release for flood defence works, although likely to be minor.	No relevant pathways for cumulative effects during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
22/00035/EDCCON Dartford Borough Council Area	**Ebbsfleet Central Ebbsfleet Valley Kent** Consultation on request for a Scoping Opinion pursuant to Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) in respect of a mixed-use development comprising demolition of the existing car parking, structures, and station forecourt, and provision of residential (Use Class C3); flexible commercial, business and service uses (Use Class E) to allow provision of retail, offices, restaurants/cafes, nurseries, and healthcare facilities; flexible learning and non-residential institutions (Class F1); flexible local community uses (Class F2); hotel use (Class C1); residential institutions (Class C2); and Sui Generis uses to allow provision of co-	1km from OL 100m from ARN	2	No	Air Quality	Yes	Outside construction ARN.	There are a number of receptors surrounding the Ebbsfleet Garden City. All of which show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Only EIA scoping, limited ecological information available. Given the distance from the OL, and with the appropriate mitigation during construction, it is considered unlikely that there will be any cumulative effects.	Only EIA scoping, limited ecological information available. Given the distance from the OL, and with the appropriate mitigation during construction, it is considered unlikely that there will be any cumulative effects.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No	Soils: Construction works should follow best practice in relation to	Soils: No cumulative effects on best and most versatile land are	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	living and student accommodation, public houses/drinking establishments, and theatres/cinema, and associated works including hard and soft landscaping, a River Park, car parking, pedestrian, cycle and vehicular access, and other ancillary infrastructure within Ebbsfleet Development Corporation.					Soils - Yes	soil handling and reinstatement where applicable.	likely during the operational phase.	has already been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 6km west of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 6km west of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20211540 Gravesham Borough Council Area	**Lord Street Car Park, Lord Street, Gravesend, Kent.** Change of use from existing car park. Erection of 4 to 7 storey buildings and a 13	1.5km from OL	1c	No	Air Quality	No	The closest receptors, LTC_CON_042 and LTC_CON_043 show modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to	Outside operational ARN.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	storey tower to provide 152 flats, 3377.46 sqm of commercial space, including office, retail, and workshops, with ancillary car parking, open space and access from Eden Place.	1km from ARN					lead to exceedances of the AQS objective.		the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	PEA found limited ecological features of only local value. Considering this is a redevelopment of an existing car park, it is considered unlikely that there will be any cumulative effects.	PEA found limited ecological features of only local value. Considering this is a redevelopment of an existing car park, it is considered unlikely that there will be any cumulative effects.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3km west of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3km west of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
18/01640/OUT Dartford Borough Council Area	**Blackshole Farm** Outline application for demolition of existing buildings and hard standing and redevelopment of the site to provide: a building comprising a care home (Use Class C2) comprising up to 5,469sqm of ground to second floor space and a 20 bed hospital ward (Use Class C2) with associated parking; a multi-storey car park comprising up to 12,181sqm of floor space; and associated works, with all matters except for access reserved for later determination.	5km from OL Adjacent to ARN	1c	No	Air Quality	Yes	Outside construction ARN.	The closest receptor LTC572 shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor LTC572 shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
19/01814/OA Tonbridge and Malling Borough Council Area	**Land West Of Winterfield Lane** Outline Application: Erection of up to 250 new homes (40% affordable), new community building, provision of a new country park and other areas of public open spaces, areas of play, upgrade of existing footpaths, together with new vehicular access onto	5km from OL Adjacent to ARN	1b	Yes	Air Quality	Yes	Outside construction ARN.	No representative receptor, however, the traffic from the proposed development is included in the LTC air quality model and therefore concentrations at close by receptors will take into account this developments traffic flows. The closest receptor LTC714 shows concentrations well below the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	London Road and associated parking and landscaping Includes improvements to A20 London Road/ Ashton Way/ Castle way junction (included as a transport scheme in traffic model).				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	No representative receptor, however, the traffic from the proposed development is included in the LTC air quality model and therefore concentrations at close by receptors will take into account this developments traffic flows. The closest receptor LTC714 shows concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
21/02719/OAEA Tonbridge and Malling Borough Council Area	**Development Site At Broadwater Farm, Ashton Way West Malling. Kent.** Outline Application: erection of up to 900 homes, land for a medical centre, primary and secondary school, associated open space and green infrastructure.	6km from OL 600m from ARN	1c	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/20/1867 Medway Council Area	**Land North Of Commissioners Road, Strood, Rochester, Kent. ME2 4EQ** Application for approval of reserved matters being appearance, layout and scale pursuant to planning permission MC/16/4268 - for the construction of 123no. dwellings including earthworks to create	2.8km from OL 700m from ARN	1b	No	Air Quality	No	Outside construction ARN.	The closest receptor (LTC697) which is located 900m west of the proposed development, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
	development levels, new internal access roads, car parking, drainage and associated landscaping and infrastructure in accordance with Conditions 1, 6, 7, 22 and 28 of Outline planning permission MC/16/4268 (Outline planning application with all matters reserved except means of access from Commissioners Road for up to 130 residential dwellings).				Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. This is outside of construction ARN, therefore no cumulative effects are predicted.	The closest receptor (LTC697) which is located 900m west of the proposed development, shows modelled concentrations well below the AQS objective. Therefore no cumulative effects on designated sites are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3.5km east of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3.5km east of the Project main alignment , there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
MC/21/2292 Medway Council Area	**BAE Marconi Avionics, Marconi Way, Rochester, Medway. ME1 2XX.** Outline application with some matters reserved (Appearance and Landscaping) for the redevelopment of the land associated with BAE Systems to include the provision of a new factory building, PPS building, 2 no. office buildings and a deep storage building, with ancillary car parking areas, alongside associated highways and access works, heat pump / chiller plant, pump house, sprinkler tanks and gate houses following demolition of the existing buildings bar Faraday building and Falcon building which will remain (outline application with matters of access, scale and layout applied for).	3.6km from OL 300m from ARN	1b	No	Air Quality	No	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	Not quantifiable	Not quantifiable	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	Due to the distance from the OL, no biodiversity effects except AQ effects are considered. No representative receptor for Air Quality impacts on designated sites, therefore cumulative impact cannot be quantified.	None	Not quantifiable	Not quantifiable
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.		the topic chapters.		
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20190504 Gravesham Borough Council Area	**Former Gravesend And North Kent Hospital (M Block)** Conversion of existing building with an 11 storey side extension and a single storey roof extension, the construction of a new residential building ranging from 3-6 storeys to provide 115 residential units consisting of 47 one bed units, 59 two bed units and 9 three bed units, together with associated parking for 69 cars, 6 motorcycles and 212 cycles, amenity space, private gymnasium and waste and a B1, D1 and D2 flexi use space.	1.9km from OL 1.5km from ARN	1b	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	PEA found limited value for ecological features. No significant effects are likely. Therefore no cumulative effects are anticipated.	PEA found limited value for ecological features. No significant effects are likely. Therefore no cumulative effects are anticipated.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage	Groundwater - Yes	Groundwater: Given the distance of >3km west of the Project main	Groundwater: Given the distance of >3km west of the Project main	No additional measures	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No	alignment , and <100m from the River Thames, there would be no significant cumulative impact to groundwater levels and flows.	alignment , and <100m from the River Thames, there would be no significant cumulative impact to groundwater levels and flows.	besides what has already been proposed in the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
20160046 Gravesham Borough Council Area	**Clifton Slipways** Erection of two buildings to provide a total of 133no. dwellings with associated vehicle parking, highway works and landscaping, comprising erection of a thirteen storey building on the north side of West Street to provide 54no. dwellings and one ground floor B1(a) unit and a second building ranging in height from four storeys to nine storeys on the south side of West Street to provide 79no. dwellings; and the restoration and adaptation of the existing two-level pier structure to provide public and private amenity space to include erection of a glazed pavilion. | Clifton Slipways (including West Street Pier And Land To The North And South Of West Street) West Street Gravesend Kent.	2km from OL 1.5km from ARN	1b	Yes	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	Yes	**Landscape**: Although this development lies outside of the Project landscape and visual ZoI, construction activity for Clifton Slipways in conjunction with	**Landscape and Visual Amenity:** Given the existing urban context and the distance between Clifton Slipways and the sculptural landscape mounding at Tilbury	No additional measures besides what has already been	Moderate adverse	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							construction of the Project would result in a cumulative effect on the marine character of the Thames Estuary, including high-rise building at Clifton Slipways and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks. **Visual Amenity:** The main cumulative effects on visual receptors from construction of Clifton Slipways in conjunction with the Project, would primarily be seen from Tilbury Fort, the River Thames frontage, elevated areas of Gravesend such as at Windmill Hill, Saxon Shore Way Long Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.	Fields comprising the most prominent Project feature along the River Thames, there would not be any notable cumulative landscape or visual effects.	proposed in the topic chapters.		
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the Clifton Slipways site consists of a building and hardstanding redevelopment, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the Clifton Slipways site consists of a building and hardstanding redevelopment, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	Yes	Potential sediment/pollution/ disturbance effects related to works to piers- likely to be minor.	No relevant pathways for cumulative effects during operation.	No additional measures besides what has already been proposed in	Neutral	

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									the topic chapters.		
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction of the proposed development there would be controls in place to limit noise. If this construction period overlaps with that of the Project then there is the potential for cumulative impacts from construction traffic.	Predicted traffic from the proposed development has been included within the traffic model and so cumulative effects have been considered.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage	Groundwater - Yes	Groundwater: Given the distance of >3km west of the Project main alignment , and <150m from the	Groundwater: Given the distance of >3km west of the Project main alignment , and <150m from the	No additional measures besides what	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No	River Thames, there would be no significant cumulative impact to groundwater levels and flows.	River Thames, there would be no significant cumulative impact to groundwater levels and flows.	has already been proposed in the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
St George's Gravesham Borough Council Area	**St George's** Previously Heritage Quarter West in Local Plan Extension to St George's shopping Centre northwards and would accommodate around 10,500 sq. m gross retail floorspace. Planning application not yet submitted.	Estimated as location plan not known 1.7km from OL Estimated as location plan not known 1.4km from ARN	3	Yes - as Heritage Quarter	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	Yes	**Note: Due to the nature of the development, it is assumed at least some of the constructed buildings would be of multiple storeys.** **Landscape**: Although this development lies outside of the Project landscape and visual ZoI, construction activity for St George's in conjunction with construction of the Project would result in a combined effect on the marine character of the Thames Estuary, including high-rise building at St George's and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity	**Note: Due to the nature of the development, it is assumed at least some of the constructed buildings would be of multiple storeys.** **Landscape and Visual Amenity:** As the constructed buildings at the St George's development would be set back from the edge of the River Thames and would be in the context of other buildings of multiple storeys, the development is likely to blend into the urban area of Gravesend. No in-combination landscape and visual effects are therefore anticipated in conjunction with the Project.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks. **Visual Amenity:** The main in-combination effects on visual receptors from construction of St George's in conjunction with the Project, would primarily be seen from Tilbury Fort, the River Thames frontage, elevated areas of Gravesend such as at Windmill Hill, Saxon Shore Way Long Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.				
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB05 Gravesham Borough Council Area	Site allocation Land Adjacent to Higham Station 0.9ha commercial use.	1.5km from OL 1.7km from ARN	3	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Therefore no cumulative effects are predicted.	Therefore no cumulative effects are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3.5km east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3.5km east of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
GB07 Gravesham Borough Council Area	Site allocation Former Tollgate Hotel, Gravesend 1ha commercial use.	Adjacent to OL Adjacent to ARN	3	No	Air Quality	Yes	Site representative receptor LTC589 shows modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Site representative receptor LTC589 shows modelled concentrations below the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	There would be a slight adverse impact to potential Roman remains associated with the A2 Watling Street within the area of proposed commercial use allocation. However, it might have already been removed with previous construction on the site. The impacts Roman activity in the vicinity of the project are limited and in a different geographic location so the impacts would be small and incremental.	During operation the setting of the allocation site would not be effected by the project and there would be a neutral effect.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Neutral
					Landscape and Visual	Yes	**Landscape**: Construction activity for employment buildings at the former Tollgate Hotel in conjunction with construction of the Project would result in a combined effect on local landscape character. **Visual Amenity**: The main in-combination effects on visual receptors from construction of the employment buildings at the former Tollgate Hotel in conjunction with construction of the Project, would primarily be seen from residential properties along the southern edge of Gravesend, Tollgate Services, Wrotham Road and The Wealdway Long Distance Path.	**Landscape and Visual Amenity**: Following construction, the A2 corridor in this location would not appear notably different to existing. No in- combination landscape and visual effects are therefore anticipated in conjunction with the employment buildings at the former Tollgate Hotel.	No additional measures besides what has already been proposed in the topic chapters.	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase. Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							adverse cumulative effect to occur.				
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Given the distance of approximately 2.4km north west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows. Surface water - given the lack of common hydrological receptors in the vicinity, there would be no significant cumulative impact.	Groundwater: Given the distance of approximately 2.4km north west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows. Surface water - given the lack of common hydrological receptors in the vicinity, there would be no significant cumulative impact.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB36 Gravesham Borough Council Area	Site Allocation Land West of Norwood Lane, Meopham (Churchways, Meopham). 150 dwellings.	2.7km from OL 700m from ARN	3	No	Air Quality	No	Outside construction ARN	The closest receptor LTC245, which is 300m south west of the proposed development site, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3.3km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3.3km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
GB117 Gravesham Borough Council Area	Site Allocation Land West of Wrotham Road (Site B), Hook Green, Meopham. 120 dwellings.	3.6km from OL Adjacent to ARN	3	No	Air Quality	Yes	Outside construction ARN.	The closest receptor LTC245, which is 300m north east of the proposed development site, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology – No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB134 Gravesham Borough Council Area	Site Allocation Wickes Site, Stuart Road, Gravesend 365 dwellings.	2km from OL 1.1km from ARN	3	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	Yes	**Note: Due to the volume of residences stated, it is assumed constructed buildings would be of multiple storeys.** **Landscape**: Although this development lies outside of the	**Note: Due to the volume of residences stated, it is assumed constructed buildings would be of multiple storeys.** **Landscape and Visual Amenity:** As the constructed high-rise	No additional measures besides what has already been proposed in	Slight adverse	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Project landscape and visual ZoI, construction activity for the Wickes site in conjunction with construction of the Project would result in a combined effect on the marine character of the Thames Estuary, including high-rise building at the Wickes site and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks. **Visual Amenity:** The main in-combination effects on visual receptors from construction of the Wickes site in conjunction with the Project, would primarily be seen from Tilbury Fort, the River Thames frontage, Saxon Shore Way Long Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.	buildings at the Wickes site would be set back from the edge of the River Thames and would be in the context of other high-rise buildings, the development is likely to blend into the urban area of Gravesend. No in-combination landscape and visual effects are therefore anticipated in conjunction with the Project.	the topic chapters.		
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No	Soils: Construction works should follow best practice in relation to	Soils: No cumulative effects on best and most versatile land are	No additional measures besides what	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
						Soils - Yes	soil handling and reinstatement where applicable.	likely during the operational phase.	has already been proposed in the topic chapters.		
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB135 Gravesham Borough Council Area	Site Allocation Civic Centre, Windmill Street, Gravesend. 140 dwellings.	1.6km from OL	3	No	Air Quality	No	The closest receptors (LTC_CON_042 and LTC_CON_043), which are located 125m east of the proposed development site, show modelled concentrations below	Outside operational ARN.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
		800km from ARN					the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.		the topic chapters.		
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	No					
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB136 Gravesham Borough Council Area	Site Allocation Parrock Street Car Park, Parrock Street, Gravesend. 290 dwellings.	1.5km from OL 600m from ARN	3	No	Air Quality	No	The closest receptors (LTC_CON_042 and LTC_CON_043), which are located 150m north of the proposed development site, show modelled concentrations below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage	Groundwater - Yes	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there	Groundwater: Given the distance of approximately 3km west of the Project main alignment, there	No additional measures besides what	GW: Neutral	GW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No	would be no significant cumulative impact to groundwater levels and flows.	would be no significant cumulative impact to groundwater levels and flows.	has already been proposed in the topic chapters.		
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GB138 Gravesham Borough Council Area	Site Allocation Land at Milton Place/Ordnance Road, Gravesend. 100 dwellings.	1km from OL 600m from ARN	3	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 2.4km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 2.4km west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
GBS-D Gravesham Borough Council Area	Site Allocation Land to the south of Green Lane and east of Wrotham Road, Hook Green, Meopham. 350 dwellings.	3km from OL 400m from ARN	3	No	Air Quality	No	Outside construction ARN.	The closest receptor LTC245, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology – No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							adverse cumulative effect to occur.				
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 3.4km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 3.4km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-E Gravesham Borough Council Area	Site Allocation Land north of Camer Road, Hook Green, Meopham. 20 dwellings	2.8km from OL 500m from ARN	3	No	Air Quality	No	Outside construction ARN.	Outside operational ARN.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at Construction Phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 2.7km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 2.7km south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
GBS-G Gravesham Borough Council Area	Site Allocation Land North of Melliker Lane, Hook Green, Meopham. 160 dwellings.	3.4km from OL 70m from ARN	3	No	Air Quality	Yes	Outside construction ARN.	The closest receptor LTC584, which is 200m north of the proposed development site shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology – No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater – No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-H Gravesham Borough Council Area	Site Allocation Land between Melliker Lane and Longfield Road, Hook Green. 180 dwellings.	3.4km from OL 180m from ARN	3	No	Air Quality	Yes	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Noise assessment.	No additional measures besides what has already been proposed in	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
									the topic chapters.		
					Road drainage and Water Environment	Groundwater – No Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-K Gravesham Borough Council Area	Site Allocation Land to the north, east and west of Three Crutches. 1,385 dwellings.	Adjacent to OL Adjacent to ARN	3	No	Air Quality	Yes	Site representative receptor LTC054, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	Site representative receptor LTC054, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	During construction the setting of the GII CRUTCHES GATE COTTAGE AND FARMHOUSE would be impacted temporarily. Its proximity to the allocation site suggests that the impact will be experienced from construction again.	there is unlikely to be any cumulative impact during operation		Slight adverse	Neutral
					Landscape and Visual	Yes	**Landscape**: Construction activity for the housing to the north, east and west of Three Crutches in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: The main cumulative effects on visual receptors from construction of the housing in conjunction with construction of the Project, would primarily be seen from residential properties on Old Watling Street in Strood.	**Landscape**: The housing to the north, east and west of Three Crutches would result in a combined change in local landscape character in conjunction with the Project. **Visual Amenity**: The housing to the north, east and west of Three Crutches would primarily be seen in conjunction with the Project from residential properties on Old Watling Street in Strood.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Landscape: Moderate adverse Visual: Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During the construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow good practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase. Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Geology: Neutral Soils: Very large adverse	Geology: Neutral Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best	During operation any additional traffic generated by the proposed	None	Slight adverse	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							practice which would control construction noise impacts. However due to proximity to The Project potential for adverse cumulative effect to occur.	development is likely to be negligible and not generate cumulative effects.			
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: the northern edge of the proposed development is just within the merged SPZ2 and bordering the merged SPZ1 of the adjacent public water supply wells within the Chalk aquifer of which the site would lie directly on chalk strata (fracture flow dominant allowing potentially fast flow) and groundwater levels would be approximately 40m deep. Should the development include infiltration basins or other forms of soakaways there is a potential of cumulative effects on groundwater quality at the control points of the SPZ1 boundary and generally in the groundwater local to the public water supply. Assuming that the regulator (Environment Agency), would act to reduce potential polluting waters entering the ground, the cumulative impact would not be significant. Similar safeguards would be assumed to be put in place to safe guard the surface water environment and to prevent any land drainage or flood risk effects.	Assuming that the regulator (Environment Agency), would act to reduce potential polluting waters entering the ground, the cumulative impact would not be significant. Similar safeguards would be assumed to be put in place to safe guard the surface water environment and to prevent any land drainage or flood risk effects.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability	No significant cumulative effects on GHG emissions or vulnerability	No	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							to climate change during construction have been identified.	to climate change during operation have been identified.			
GBS-L Gravesham Borough Council Area	Site Allocation Rose Farm, Downs Road, Istead Rise. 165 dwellings.	1.5km from OL 500m from ARN	3	No	Air Quality	No	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Not quantifiable
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable. Impact on agricultural land, some of which has the potential to be best and most versatile land.	Soils: No cumulative effects likely during operational phase; impacts assessed at construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Soils: Very large adverse	Soil: Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.				
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	No					
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the distance of approximately 2.5km west south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	Groundwater: Given the distance of approximately 2.5km west south west of the Project main alignment, there would be no significant cumulative impact to groundwater levels and flows.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-P Gravesham Borough Council Area	Site Allocation Land to the east and south of Lomer Farm, Wrotham Road. 115 dwellings.	4.1km from OL 390m from ARN	3	No	Air Quality	No	Outside construction ARN.	No representative receptor of the proposed development site and therefore cumulative impacts at the site cannot be quantified.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	No					
					Landscape and Visual	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Terrestrial Biodiversity	No	Due to the distance from the OL and the ARN no cumulative effects are predicted.	Due to the distance from the OL and the ARN no cumulative effects are predicted.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No					
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage	Groundwater – No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					and Water Environment	Surface water - No					
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-R Gravesham Borough Council Area	Site Allocation Cascades Leisure Centre, Thong Lane, Shorne. 170 dwellings.	Within OL 270m from ARN	3	No	Air Quality	No	The closest receptor (LTC_CON_013) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	The closest receptor (LTC247) shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Cultural Heritage	Yes	The former Gravesend airfield may survive below ground and extend within the allocation site. However, the existing Cascades leisure Centre may have already removed remains of the former airfield.	There is likely to be a change to the setting of the remains of the airfield with the redevelopment of the Cascades site. this combined with the proposed earthworks and road in the vicinity will cause a cumulative impact.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Slight adverse
					Landscape and Visual	Yes	**Landscape**: Construction activity for the Cascades Leisure Centre housing site in conjunction with construction of the Project would result in a cumulative effect on local landscape character. **Visual Amenity**: The main cumulative effects on visual receptors from construction of housing in conjunction with construction of the Project, would primarily be seen from residential properties along Thong Lane in Riverview Park, the local PRoW network, Thong Lane and the sports fields on Thong Lane.	**Landscape**: The housing east of Thong Lane would result in a combined change in local landscape character in conjunction with the Project. **Visual Amenity**: The housing east of Thong Lane would primarily be seen in conjunction with the Project from residential properties along Thong Lane in Riverview Park, the local PRoW network, Thong Lane and the sports fields on Thong Lane.	No additional measures besides what has already been proposed in the topic chapters.	Large adverse	Slight adverse
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely.	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Therefore no cumulative effects are predicted.	Therefore no cumulative effects are predicted.			
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to the Project there is the potential for adverse cumulative effect to occur.	The operation of proposed development should not give rise to high levels of road traffic, and therefore cumulative impacts would be unlikely.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the	Potential human health impact in relation to air quality changes and	No additional measures besides what has already	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							basis of the assessment from the Air Quality and Noise assessment.	changes in noise levels during operation.	been proposed in the topic chapters.		
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: The Cascade Leisure Centre location is >250m distance from the Project main alignment (which is in deep cutting in this section) and also includes a proposed cascade of Project infiltration basins. Should the development include infiltration basins or other forms of soakaways there is a potential of cumulative effects on groundwater quality, downgradient of groundwater flow (northwards). Assuming that the regulator (Environment Agency), would act to reduce potential polluting waters entering the ground, the cumulative impact would not be significant. Surface water: There are no surface water receptors located in the vicinity of the proposed development and the land is in the low risk flood zone. Cumulative impact on surface water and flood risk would not be significant.	Groundwater: Assuming that the regulator (Environment Agency), would act to reduce potential polluting waters entering the ground, the cumulative impact would not be significant. Surface water: There are no surface water receptors located in the vicinity of the proposed development and the land is in the low risk flood zone. Cumulative impact on surface water and flood risk would not be significant.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
GBS-UA Gravesham Borough Council Area	Site Allocation Canal Road/Norfolk Road Gravesend 1,460 dwellings and commercial Developable area 6.07ha.	Adjacent to OL 180m from ARN	3	No	Air Quality	Yes	Outside construction ARN.	The closest receptor LTC803, shows modelled concentrations well below the AQS objective. This indicates that cumulative impacts are unlikely to lead to exceedances of the AQS objective.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	Yes	There would be a slight adverse impact to the Thames and Medway canal if it survives within the area of proposed commercial use allocation. However, it might have already been removed with previous construction on the site. The impacts to the canal by the project are limited and in a different geographic location so the impacts would be small and incremental.	During operation the setting of the allocation site would not be effected by the project and there would be a neutral effect.	No additional measures besides those already proposed in the topic chapter.	Slight adverse	Neutral
					Landscape and Visual	Yes	**Note: Due to the volume of residences stated, it is assumed constructed buildings would be of multiple storeys.** **Landscape**: Although this development lies outside of the Project landscape and visual ZoI, construction activity for the Canal Road/Norfolk Road site in conjunction with construction of the Project would result in a cumulative effect on the marine character of the Thames Estuary, including high-rise building at the Canal Road/Norfolk Road site and the Project segment factory and concrete batching plant on the former Tilbury Power Station site and sculptural landscape mounding at Tilbury Fields. However, construction activity would take place in the context of industrial buildings and infrastructure to the north and south of the River Thames and Tilbury Docks. **Visual Amenity:** The main cumulative effects on visual receptors from construction of the Canal Road/Norfolk Road site in conjunction with the Project, would primarily be seen from Tilbury Fort, the River Thames frontage, Saxon Shore Way Long	**Note: Due to the volume of residences stated, it is assumed constructed buildings would be of multiple storeys.** **Landscape and Visual Amenity**: Given the existing urban context and the distance between the Canal Road/Norfolk Road site and the sculptural landscape mounding at Tilbury Fields comprising the most prominent Project feature along the River Thames, there would not be any notable cumulative landscape or visual effects.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight adverse

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							Distance Path and Two Forts Way. Construction works would be viewed in the context of industrial buildings and infrastructure along the River Thames and Tilbury Docks.				
					Terrestrial Biodiversity	Yes	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	No ecological information available. Considering the size of the site and the urban nature of the site, it is considered unlikely that any significant effects on ecological receptors are likely. Therefore no cumulative effects are predicted.	None	Neutral	Neutral
					Marine Biodiversity	No					
					Geology and Soils	Geology - Yes Soils - Yes	Geology: During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated. Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during construction phase Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Noise and Vibration	Yes	During the construction phase, both projects would follow best practice which would control construction noise impacts. However due to proximity to The Project potential for adverse cumulative effect to occur.	During operation any additional traffic generated by the proposed development is likely to be negligible and not generate cumulative effects.	None	Slight adverse	Negligible
					Population and Human Health	Yes	Unlikely to be any significant adverse effects from this on the basis of the assessment from the Air Quality and Noise assessment.	Potential human health impact in relation to air quality changes and changes in noise levels during operation.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater and surface water: Given the distance of approximately 1.5km west of the Project main alignment, and >250m from the River Thames, there would be no significant cumulative impact.	Groundwater and surface water: Given the distance of approximately 1.5km west of the Project main alignment, and >250m from the River Thames, there would be no significant cumulative impact .	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Southfields Thurrock Council Area	Potential delivery for 1,450 homes by 2041.	Exact locations are unknown Development may fall within 3km from OL Exact locations are unknown Development may fall within 400m from ARN	3		Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Cultural Heritage	Yes	Insufficient information available to assess, however given the number of homes proposed the combined impact on both below ground and above ground cultural heritage assets, effects could be significant (likely adverse).	Likely significant effects would not occur during the operational phase of the Project	N/A	N/A	N/A
					Landscape and Visual	Insufficient info on location to scope in/out.					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No	Geology - During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the	None	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.			
					Population and Human Health	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Southfields is located close to Orsett Cock on the A13 and therefore approx. 500m distance south east of A13 improvements and 1km- 2km distance north and west of the Project main alignment. Assuming a mostly residential development (no major excavations that would require deep groundwater pumping), the cumulative impact would not be significant. Surface water: The land is in the catchment of the Gobions Sewer and the residential development would be expected to be drained using suitable SuDS techniques so as to have no impact on water quality, flood risk or the land drainage regime, cumulatively in the catchment.	Groundwater: The proposed housing development is within the catchment zone (SPZ3) of the Linford public water supply well (not currently supplying the mains). Land in the Southfields area is part of a wider area south of the A13 that particularly contributes recharge to the Chalk aquifer (hydraulically effective rainfall) that feeds the Linford public water supply well and Orsett Golf Course spray irrigation well. It is assumed that the Environment Agency planning conditions for the proposed development would include appropriate SUDS requirements (to include soakaways) and this would be beneficial for charge to the aquifers but given the likely distance of >1km to Project road cuttings would not cause groundwater flooding at the Project road. Further information on the location of the proposed development is needed but based on the above assumptions the cumulative impact to groundwater	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
								levels and flows would not be significant. Surface water: The land is in the catchment of the Gobions Sewer and the residential development would be expected to be drained using suitable SuDS techniques so as to have no impact on water quality, flood risk or the land drainage regime, cumulatively in the catchment.			
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
North Stifford Thurrock Council Area	Potential delivery for 275 homes by 2041	Exact locations are unknown Development may fall within 3km from OL Exact locations are unknown Development may fall within 400m from ARN	3		Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	Insufficient info on location to scope in/ out.					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No	Geology - During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Neutral	Neutral
					Population and Human Health	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative	None	Neutral	Neutral

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							traffic would cause a cumulative effect.	effects from the traffic it may generate.			
					Road drainage and Water Environment	Groundwater - Yes Surface water - Yes	Groundwater: Given the type and expected small size of the proposed development (275 homes) and based on the anticipated large distance (>2km) from the Project main alignment , the cumulative impact would not be significant. Surface water: The land is in the lower catchment of the Mardyke and given the small scale of the development and the requirement for management of drainage, water quality and flood risk in accordance with the NPPF, there .would be no cumulative effects on this surface water receptor.	Groundwater: Given the type and expected small size of the proposed development (275 homes) and based on the anticipated large distance (>2km) from the Project main alignment , the cumulative impact would not be significant. Surface water: The land is in the lower catchment of the Mardyke and given the small scale of the development and the requirement for management of drainage, water quality and flood risk in accordance with the NPPF, there .would be no cumulative effects on this surface water receptor.	No additional measures besides what has already been proposed in the topic chapters.	GW and SW: Neutral	GW and SW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Grays Town Centre Thurrock Council Area	Potential delivery for 1,000 homes by 2041.	Exact locations are unknown Development may fall within 3km from OL Exact locations are unknown Development may fall within 400m from ARN	3		Air Quality	Yes	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - No	Geology - During construction phase good practice would be followed; regulatory approval prior to commencement which would mitigate impacts from historic contamination at the site and reduce the risk of works causing contamination. No cumulative effects anticipated.	Geology: No cumulative effects likely during operational phase as contamination impacts would be resolved during the construction phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Population and Human Health	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the large distance of the proposed development (expected to be >2.5km to the south west of the Project main alignment) and the proposed development being down groundwater gradient of the Project, the cumulative impact would not be significant.	Groundwater: Given the large distance of the proposed development (expected to be >2.5km to the south west of the Project main alignment) and the proposed development being down groundwater gradient of the Project, the cumulative impact would not be significant.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A
Titan Works, Grays Thurrock Council Area	Approx. 39,561sqm of employment floorspace, B2, B8 and E.g.(iii) with approx. 648 jobs.	Approx. 2.3km from OL Approx. 250m from ARN	3		Air Quality	No	The development could potentially lead to an increase in construction traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	The development could potentially lead to an increase in operational traffic flows. However no work has been undertaken into the distribution of traffic or air quality effects, therefore the potential magnitude and distribution of cumulative impacts cannot be quantified until further planning documents have been published.	Mitigation cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.	Cumulative impacts cannot be established without further information on the distribution of traffic flows and air quality impacts.
					Cultural Heritage	No					
					Landscape and Visual	No					
					Terrestrial Biodiversity	Yes	Insufficient information available to reach conclusions.	Insufficient information available to reach conclusions.	N/A	N/A	N/A

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
					Marine Biodiversity	No					
					Geology and Soils	Geology - No Soils - Yes	Soils: Construction works should follow best practice in relation to soil handling and reinstatement where applicable.	Soils: No cumulative effects on best and most versatile land are likely during the operational phase.	No additional measures besides what has already been proposed in the topic chapters.	Neutral	Neutral
					Materials assets and Waste	Yes	At construction phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity. Most significant cumulative effect is likely to be a reduction to landfill capacity. It is acknowledged that schemes under both the TCPA and NSIP would have to demonstrate the minimisation of waste and following the waste hierarchy.	During the operational phase, any scheme undertaken in the area would have a cumulative effect with the Project in terms of material demand and offsite waste management capacity.	No additional measures besides what has already been proposed in the topic chapters.	Moderate adverse	Slight
					Noise and Vibration	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction traffic would cause a cumulative effect.	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible
					Population and Human Health	Yes	No information is available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the general location of the Proposed Development it is unlikely that the construction of the Proposed Development or construction	No information available on proposed development, therefore it is not possible to draw any firm conclusions. However, given the location and size of the Proposed Development it is considered unlikely there would be cumulative effects from the traffic it may generate.	None	Negligible	Negligible

Application Reference / Type / Local Authority	Name and Summary of the development	Distance from OL and ARN	Tier	Development included in Traffic Model (Y/N)	Topic	Within Zone of Influence? (Yes/No)	Assessment of cumulative effect with the Project		Mitigation	Residual Cumulative Effect	
							Construction	Operation		Construction	Operation
							traffic would cause a cumulative effect.				
					Road drainage and Water Environment	Groundwater - Yes Surface water - No	Groundwater: Given the large distance of the proposed development (expected to be >2.5km to the south west of the Project main alignment) and the proposed development being down groundwater gradient of the Project, the cumulative impact would not be significant.	Groundwater: Given the large distance of the proposed development (expected to be >2.5km to the south west of the Project main alignment) and the proposed development being down groundwater gradient of the Project, the cumulative impact would not be significant.	No additional measures besides what has already been proposed in the topic chapters.	GW: Neutral	GW: Neutral
					Climate	Yes	No significant cumulative effects on GHG emissions or vulnerability to climate change during construction have been identified.	No significant cumulative effects on GHG emissions or vulnerability to climate change during operation have been identified.	No	N/A	N/A

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