A66 Northern Trans-Pennine Project
TR010062

3.4 Environmental Statement Appendix 15.2 Cumulative Assessment

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Planning Act 2008

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A66 Northern Trans-Pennine Project Development Consent Order 202x

3.4 ENVIRONMENTAL STATEMENT APPENDIX 15.2 CUMULATIVE ASSESSMENT

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15.2 Cumulative Assessment

15.2.1 Introduction

15.2.1.1 The following tables in section 1.2: Cumulative assessment of 'other developments' presents the developments and allocations taken forward from the longlist (ES Appendix 15.1: Consideration of cumulative effects (Application Document 3.4)) to stage 2 (identify shortlist of 'Other Development') and then finally stage 3/4, which details the information gathering and assessment of effects stages. The process of assessment is described in Chapter 15: Cumulative Assessment, section 15.3 (Application Document 3.2), as set out by PINS *Advice Note 17* (Planning Inspectorate, 2018)[1]:

[1] Planning Inspectorate (2018) Advice note nine: Rochdale Envelope, Version 3

15.2.2 Cumulative assessment of 'other developments'

Stage 2 identify shortlist of 'Other Development'

Table 1: Stage 2 identify shortlist of 'Other Development'

Application Reference	Applicant for 'other development' and brief description	Distance from Order Limits (m)	Status	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?
DM/16/03310/FPA	Applicant: Individual Proposal: 162 dwellings with associated highways, external works and new access roads. New car park and road link to HMYOI Deerbolt.	1807	Approved subject to S106	Potential overlap in construction dates - construction dates unavailable, search on google maps shows development is yet to be completed). Overlap in operational dates.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.
DM/20/03070/OUT	Applicant: Banks Property Ltd Proposal: Residential development of up to 100 units (outline with all matters reserved apart from access) Environmental Assessment was deemed not to be necessary, however, included due to scale of the development.	2760	Approved subject to S106	According to planning documents construction was to commence in 2021, it has not yet been confirmed if construction has commenced. Potential overlap in construction dates.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.

Application Reference	Applicant for 'other development' and brief description	Distance from Order Limits (m)	Status	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?
NY/2019/0109/FUL	Applicant: Individual Proposal: 2.7 ha extension to Gatherley Moor Quarry for the extraction of 50,000 tonnes of block sandstone over a period of 20 years. No EIA - but scoped in due to scale	2129 (Site area crosses in to 2km search area)	Granted	Overlap in operational temporal scope	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.
20/00067/DIS	Applicant Name: Scotch Corner Richmond LLP Proposal: Scotch Corner Designer Village Discharge of Condition 17 Attached to Planning Permission 19/00164/FULL - Full Planning Permission for Erection of Management Suite, WC Block, Service Enclosure and Sub-Stations, Event Space and Relocated Coach Parking	195	Application Permitted	Due to be operational from Autumn 2023. Overlap in operational temporal scope.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.

Application Reference	Applicant for 'other development' and brief description	Distance from Order Limits (m)	Status	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?
20/00585/FULL	Applicant: Ravensworth Nurseries Ltd Proposal: Change of Use of Land for the Siting of 40 No Holiday Caravans/Lodges, a Solar Farm, Associated Infrastructure and Amenity Facilities including a Maintenance Building and Extension of Existing Stone Building to Form a Site Reception and Office	471	Application Permitted	Permission granted January 2022. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.
14/0405	Applicant: Persimmon Homes Proposal: Erection of 229 new build homes, including 30% affordable homes to include 9 no. 2 bed homes, 106 no. 3 bed homes and 114 no. 4 bed homes. (REVISED NOTIFICATION)	1646	Full Approval	Permission granted in 2017. Development has not yet commenced. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.
19/0272	Applicant: Individual Proposal: Proposed residential development of land for 26 no. Units.	Adjacent to A66	Full Approval	Permission granted January 2022. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction programs and proximity to the Project may give rise to cumulative effects related to all disciplines.

Application Reference	Applicant for 'other development' and brief description	Distance from Order Limits (m)	Status	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?
19/0426	Applicant: Story Homes Proposal: Residential development of 149 dwellings.	91	Full Approval	Permission granted in 2020. Development has not yet commenced. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const) population and human health effects and cumulative construction traffic, noise and air quality effects.
20/0013	Applicant: Heyford Developments Ltd Proposal: Request for screening opinion for 100 dwellings at Station Road, Appleby.	2	Screening Opinion Issued	Screening opinion provided in 2020. Planning application not yet submitted. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction programmes which may give rise to cumulative (op & const)population and human health effects and cumulative construction traffic, noise and air quality effects.
20/0094	Applicant: Catlin Estates Limited Proposal: River restoration of 400M of channel. Including 2 New Channels, 3 Chutes and In Channel features to include Riffles and Bars.	1604	Full Approval	Potential overlap in construction and operational temporal scope.	Yes - Potential overlap in construction and operation which may give rise to cumulative effects related to road drainage and water environment.

Application Reference	Applicant for 'other development' and brief description	Distance from Order Limits (m)	Status	Overlap in temporal scope?	Scale and nature of development likely to have a significant effect?
20/0312	Applicant: Heyford Developments Ltd Proposal: Outline planning application for up to 100 dwellings with approval sought for access.	2	Outline Approval	Permission granted in 2020. Development has not yet commenced. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction and operation which may give rise to cumulative construction traffic, noise, air quality effects and (op & const) population and human health, landscape, ecological effects. Site is located adjacent to A66.
E3	Eden County Council LDP Housing Allocation E3 Carleton East 9.7ha and 261 housing units	90	Allocated	Permission for planning app 19/0426 granted in 2020. Development has not yet commenced.	Associated application on allocated site: 19/0426 - see above CCC/78
E4	Eden County Council LDP Housing Allocation E4 Land at Carleton Hall Farm 4.7ha and 86 housing units Associated application: 19/0840 Applicant: BDW Trading Ltd (t/a Barratt Homes Manchester)-Mr J Stewart-Milne Proposal: Residential development of 105 dwellings and associated infrastructure.	0	Allocated	Currently in planning permission process. Potential overlap in construction and operational temporal scope.	Yes - potential overlap in construction and operation which may give rise to cumulative construction traffic, noise and air quality effects and (op & const) population and human health, landscape, and ecological effects. Site is located adjacent to A66.

Stage 3/4 information gathering and assessment of effects

15.2.2.1 The following table sets out the Stage 3/4 assessment of shortlisted 'other developments'.

Materials and Waste

15.2.2.2 For the materials and waste assessment, the estimated materials availability and waste capacity data used in Chapter 11: Material Assets and Waste are based on future regional demand and so the assessment is considered to be inherently cumulative. No separate cumulative assessment has therefore been undertaken.

Climate

15.2.2.3 Climate impacts (that is those as a consequence of global heating) are observable at a national and global scale. Assessment of significance is based on whether a project's Greenhouse Gas (GHG) emissions cumulatively represent a considerable contribution to the global atmosphere. The net GHG effect of the proposed development has been assessed and reported within the context of baseline local and regional GHG emissions, as well as future carbon budgets. The approach to climate assessment within the DMRB LA 114 Climate methodology is inherently cumulative through the inclusion of the project and other locally committed development within the traffic model on which the GHG emissions calculations is based, and through the consideration of the project against the UK carbon budgets, which consider and report on the carbon contributions across all sectors. No separate cumulative assessment has therefore been undertaken.

Air quality

15.2.2.4 Cumulative effects of the resultant traffic changes from the operational scheme and other cumulative developments are incorporated into the assessment in Chapter 5: Air quality and are therefore not assessed further.

Noise and vibration

15.2.2.5 Cumulative effects of the resultant traffic changes from the operational scheme and other cumulative developments are incorporated into the assessment in ES Chapter 12: Noise and vibration and are therefore not assessed further.

Table 2: Stage 3/4 assessment of shortlisted 'other developments

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
DM/16/03310/FPA	Air Quality - No impact - the permitted development is outside the ZoI Biodiversity - The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. The development site is relatively small in extent and is not located in close proximity to the Project (approx 2km). There are no functionally linked habitats or potential impact pathways identified between the development site and the Project. Furthermore, supporting material to the development (DM/16/03310/FPA) concluded that the mitigation measures and site enhancement measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently it is considered cumulative effects on biodiversity as a result of the development DM/16/03310/FPA are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact - the permitted development is outside the ZoI Geology & Soils - No impact - the permitted development is outside the ZoI Landscape & Visual - No significant cumulative effects Noise & Vibration - No impact - the permitted development is outside the ZoI. The development is included in the traffic model provided for the operational noise assessment. Population & Human Health - The nature of the development is not one that would require a workforce which is comparable to that of the Project during construction or operation. Similarly there is a significant distance between the Project and the development. As such it is not anticipated that the development would give rise to cumulative population effects. Road Drainage and Water Environment - No impact - the permitted development is outside the ZoI	No further mitigation measures required.	There are no residual effects for construction and operation.
DM/20/03070/OUT	Air Quality, Biodiversity, Cultural Heritage, Geology & Soils, Noise & Vibration, Population & Human Health, Road Drainage and Water Environment - No impact - the permitted development is outside the ZoI Landscape & Visual - Noise & Vibration - The development is included in the traffic model provided for the operational noise assessment.	No further mitigation measures required.	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
NY/2019/0109/FUL	Air Quality, Biodiversity, Cultural Heritage, Geology & Soils, Noise & Vibration, Population & Human Health, Road Drainage and Water Environment - No impact - the permitted development is outside the ZoI Landscape & Visual - No significant cumulative effects	No further mitigation measures required.	There are no residual effects for construction and operation.
20/00067/DIS	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - No sensitive ecological receptors have been identified in relation to the proposal 20/00067/DIS. Consequently it is considered cumulative effects on biodiversity as a result of the development 20/00067/DIS are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact on common non-designated assets. No impact on LBs in Middleton Tyas Conservation Area. Geology and Soils - Negligible adverse effect. Landscape and Visual - No significant cumulative effects Noise and Vibration - The construction of the Project does not result in significant effects at the receptors nearby the development site. As such, construction cumulative effect at nearby receptors is unlikely to result in a significant effect. The Project is unlikely to results in operational noise significant effects at the development site and nearby receptors. The development is not included in the traffic model as it is unlikely to considerably impact the traffic flows of the nearby road network. However, the application reference 19/00395 FUL has been included. Population and Human Health - The Scotch Corner Designer Outlet Village is due to be opened in 2023. The construction of the site will not overlap with the construction timings of the A1(M) Junction 53 Scotch Corner scheme, as such no significant cumulative construction effects are likely. There will be minor beneficial impacts due to improved safety and reliability of journey times which will result in moderate significant effects upon the Scotch Corner Designer Outlet Village. The site has a very high sensitivity. Large significant effects are not anticipated as the works are unlikely to increase the	Air Quality - Construction phase effects can be mitigated through the implementation of industry 'best practice' measures for all developments. This would include measures to limit the generation of dust and PM10, development of a Construction Environmental Management Plan (CEMP) and Traffic Management Plan (TMP) for the proposed development. The EMP (Application Document 2.7) sets out the measures to be implemented for the Project. Communication between the construction contractors for the committed developments and the Project will be required to ensure on-site activities are coordinated and potential cumulative effects avoided, where possible. Vehicle timings and routes for traffic arriving and egressing from the site should be planned to limit congestion. Construction vehicles should be routed away from the centre of Penrith and any receptor	There are no further residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	number of visitors to the site beyond that which would be visiting irrespective of the works. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.	locations where the Project is predicted to result in a significant effect. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impacts. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments No further mitigation measures required.	
20/00585/FULL	Air Quality - the permitted development is over 200m from the boundary of Scheme 09, thus in-combination construction dust impacts are not anticipated. Construction traffic could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - The development site is relatively small in extent and is not located within the Project footprint or the immediate surrounding area (approx 500m). There are no functionally linked habitats or potential impact pathways identified between the development site and the Project. Furthermore, supporting material for the development (20/00585/FULL) concluded that the mitigation measures and site enhancement measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently, it is considered cumulative effects on biodiversity as a result of the development 20/00585/FULL are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact on common non-designated assets. Potential cumulative impact on setting of numerous LBs in Ravensworth village	AQ - See mitigation defined in 20/00067/DIS. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments No further mitigation measures required.	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	elevating current effect from neutral. Geology & Soils - No impact - the permitted development is outside the ZoI Landscape & Visual - No significant cumulative effects Noise & Vibration - No impact - the permitted development is outside the ZoI. The development is included in the traffic model provided for the operational noise assessment. Population & Human Health - The nature of the development is not one that would require a workforce which is comparable to that of the Project during construction. Similarly, the development is significantly distanced from the scheme whereby direct effects from land take or demolition are not likely. Therefore, no significant cumulative effects are anticipated during construction. During operation the Project will provide minor beneficial impacts improve journey time reliability and safety, which would serve to improve traffic conditions in the local area. It is not considered that the cumulative effects during operation would be significant. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and located downgradient of the Project. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.		
14/0405	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - The development site is relatively small in extent and is not located in close proximity to the Project (approx 1600m). There are no functionally linked habitats or potential impact pathways identified between the development site and the Project. Furthermore, supporting material to the development (14/0405) concluded that the mitigation measure set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently it is considered cumulative effects on biodiversity as a result of	Air Quality - See mitigation defined in 20/00067/DIS.	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	the development 14/0405 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact - the permitted development is outside the ZoI Geology and Soils - No impact - the permitted development is outside the ZoI Landscape and Visual - No significant cumulative effects Noise and Vibration - The development site is located relatively far from the construction site of the Project (more than 2km away). As such, construction cumulative effects at nearby receptors are very unlikely to result in significant effects. The development site does not fall within the noise study area defined in line with DMRB LA 111 guidelines. The development site is very unlikely to be subject to adverse noise impacts as a result of the operation of the Project and therefore effects are assessed as not significant. As such, the cumulative effect is also unlikely to results in a significant effect. The development is included in the operational traffic model. Population and Human Health - The nature of the development is not one that would require a workforce which is comparable to that of the Project during construction or operation. Similarly, there is a significant distance between the Project and the development. As such it is not anticipated that the development would give rise to cumulative population effects. Road Drainage and Water Environment - Outside of ZoI		
19/0272	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - The development site is relatively small in extent and is not located within the Project footprint. Supporting material to the development (19/0272) concluded that the mitigation measures set out would ensure any significant ecological impacts would be avoided or mitigated. Potential adverse impacts on the River Eden SAC as a result of the development were also considered to be negligible. Consequently, it is considered cumulative effects on biodiversity as a result of the development 19/0272 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity.	Air Quality- See mitigation defined in 20/00067/DIS. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impacts. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	Cultural Heritage - Archaeology on site already mitigated as a result of earlier scheme. No effect. Geology and Soils - Negligible adverse effect. Landscape and Visual - No significant cumulative effects Noise and Vibration - The construction of the Project has the potential to give rise to potential noise impacts at the development site and nearby receptors. With the implementation of an appropriate Noise and Vibration Management Plan and an Environmental Management Plan, it is expected that noise impacts arising from construction will be minimised and hence the cumulative effect is unlikely to result in a significant effect. The Project is predicted to give rise to negligible and beneficial impacts at the receptors nearby the development site (alongside Priest Lane and Cross Street). The northernmost area of the development site may be subject to minor impacts in the short and long-term, however the noise levels are well below the SOAEL and therefore effects are assessed as not significant. As such, the cumulative effect is unlikely to result in a significant effect. The development is included in the operational traffic model. Population and Human Health - The application has approximately 0.17ha (15%) of the total 1.1ha site located within the Order Limits. This represents a negligible impact which when combined with the high sensitivity results in a permanent slight adverse effect, which is not significant during construction. The land take will not compromise the overall viability of the development . During operation no significant effects are anticipated upon the population receptors. There will be a minor adverse non-significant effect due to a discernible change in amenity due to the potential disturbance as a result of the Project. This is assuming the worst case. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and is adjacent to the Project. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.	No further mitigation measures required.	
19/0426	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic	Air Quality - See mitigation defined in 20/00067/DIS. Cultural Heritage - No	There are no residual effects for

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - Supporting material to the development EDC/HA3 concluded that the mitigation measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently, it is considered cumulative effects on biodiversity as a result of the development EDC/HA3 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact on non-designated resources. Potential cumulative impact on setting of four LBs Cross Keys PH (02-0008), Candia (01-0144), Former Frenchfield Farmhouse (02-0017) and Former outbuildings and cattleshed at rear of Frenchfield Farm (02-0027). Potential cumulative impact on setting of LBs elevating current effect from Neutral Geology and Soils - No significant cumulative effects Landscape and Visual - No significant cumulative effects Noise and Vibration - The construction of the Project has the potential to give rise to potential noise impacts at the development site and nearby receptors. With the implementation of an appropriate Noise and Vibration Management Plan and an Environmental Management Plan, it is expected that noise impacts arising from construction will be minimised and hence the cumulative effect is unlikely to result in a significant effect. The Project is predicted to give rise to minor and negligible impacts at the development site and receptors nearby. The predicted noise levels are well below the SOAEL and therefore effects are assessed as not significant. As such, the cumulative effect is unlikely to results in a significant effect. The development is included in the operational traffic model. Population and Human Health - The allocation is approximately 9.69ha in size and is located 85m to the north-east of the A66. The M6 Junction 40 to Kemplay Bank scheme will not require any land from the allocated site. Similarly The nature of the development is not one that would require a workforce which is comparable to that of the Project during construction. As such no significant cumulative effects are anticipated. During operation no significant effects are anticipated upon the population receptors. There will be a minor adverse non-significant effect due to a discernible change in amenity due to the potential disturbance as a result of the Project. This is assuming the worst case.	mitigation proposed for impacts setting to Listed Buildings. Impacts on setting of LBs from cumulative development secured through TCPA. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impact. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments No further mitigation measures required.	construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and is located upgradient with limited hydraulic connectivity between the Project and the proposed planning application. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.		
20/0013	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - The Screening Opinion provided in 2020 concluded that there are no significant impacts on biodiversity as a result of the development are anticipated. Consequently it is considered cumulative effects on biodiversity as a result of the development 20/0013 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact on non-designated resources. Potential cumulative impact on setting of LBs at Appleby Station(0405_887, 0405_88 and 0405_89) . Potential cumulative impact on setting of LBs Potential cumulative impact on setting of LBs elevating current effect from Neutral. Geology and Soils - outside of the ZoI. Landscape and Visual - No significant cumulative effects Noise and Vibration - The development site is located relatively far from the construction site of the Project (more than 600m away). As such, construction cumulative effects at nearby receptors are very unlikely to result in significant effects. The Project results in negligible operational noise impacts at the development site and nearby receptors in the short and long-term. As such, cumulative effect is unlikely to result in a significant effect. The development is included in the traffic model provided for the operational noise assessment. Population and Human Health - The development is located within the centre of Appleby-in-Westmorland approximately 800m to the east of the Temple Sowerby to Appleby Scheme. The nature of the development is not one that	Air Quality - See mitigation defined in 20/00067/DIS. Cultural Heritage - No mitigation proposed for impacts setting to LBs. Impacts on setting of LBs from cumulative development secured through TCPA. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impact. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	would require a workforce which is comparable to that of the Project during construction or operation. Similarly there is a significant distance between the Project and the development. As such it is not anticipated that the development would give rise to cumulative population effects. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and is adjacent to the existing A66. There is limited hydraulic connectivity between the Project and the proposed planning application. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.		
20/0094	Air Quality, Noise and Vibration, Population and Human Health, Road Drainage and Water Environment - No impact - the permitted development is outside the ZoI Biodiversity - The proposed restoration project is not located in close proximity to the Project (approx 1.6km). The supporting material to the proposed restoration has not identified significant adverse impacts on ecological receptors as the result of the works. Furthermore, ecological receptors would be positively impacted as a result of the restoration works. Consequently it is considered cumulative effects on biodiversity as a result of the development 20/0094 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact - the permitted development is outside the ZoI Geology and Soils - No impact - the permitted development is outside the ZoI Landscape and Visual - No significant cumulative effects Materials and Waste - No assessment - Chapter 11 Materials & Waste is inherently cumulative.	Air Quality - See mitigation defined in 20/00067/DIS. No further mitigation measures required.	There are no residual effects for construction and operation.
20/0312	Air Quality, Noise and Vibration, Road Drainage and Water Environment - No impact - the permitted development is outside the ZoI Biodiversity - Supporting material to the development 20/0312 concluded that the mitigation measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently, it is considered cumulative effects on biodiversity as a result of the development 20/0312 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity.	Air Quality - See mitigation defined in 20/00067/DIS. Cultural Heritage - No mitigation proposed for impacts setting to Listed Buildings. Impacts on setting of LBs from cumulative development secured through	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	Cultural Heritage - No impact on non-designated resources. Potential cumulative impact on setting of LBs at Appleby Station(0405_887, 0405_88 and 0405_89) which could alter the effect from neutral to a negligible/slight adverse cumulative effect. Geology and Soils - outside of the ZoI. Landscape and Visual - No significant cumulative effects Population and Human Health - The development is located within the centre of Appleby-in-Westmorland approximately 800m to the east of the Temple Sowerby to Appleby Scheme. The nature of the development is not one that would require a workforce which is comparable to that of the Project during construction or operation. Similarly there is a significant distance between the Project and the development. As such it is not anticipated that the development would give rise to cumulative population effects. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and is adjacent to the existing A66. There is limited hydraulic connectivity between the Project and the proposed planning application. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.	TCPA. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impact. Road drainage and water environment - best practice construction mitigation should be implemented and maintained by both developments No further mitigation measures required.	
E3	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - Supporting material to the development EDC/HA3 concluded that the mitigation measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently, it is considered cumulative effects on biodiversity as a result of the development EDC/HA3 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - No impact on non-designated resources. Potential cumulative impact on setting of four LBs Cross Keys PH (02-0008), Candia (01-0144), Former Frenchfield Farmhouse (02-0017) and Former	Air Quality - See mitigation defined in 20/00067/DIS. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impacts. Cultural Heritage - No mitigation proposed for impacts setting to LBs. Impacts on setting of LBs from	There are no residual effects for construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	outbuildings and cattleshed at rear of Frenchfield Farm (02-0027). Potential cumulative impact on setting of LBs elevating current effect from Neutral Geology and Soils - Negligible adverse effect. Landscape and Visual - No significant cumulative effects Noise and Vibration - The construction of the Project has the potential to give rise to potential noise impacts at the development site and nearby receptors. With the implementation of an appropriate Noise and Vibration Management Plan and an Environmental Management Plan, it is expected that noise impacts arising from construction will be minimised and hence the cumulative effect is unlikely to result in a significant effect. The Project is predicted to give rise to minor and negligible impacts at the development site and receptors nearby. The predicted noise levels are well below the SOAEL and therefore effects are assessed as not significant. As such, the cumulative effect is unlikely to results in a significant effect. The development is included in the operational traffic model. Population and Human Health - The allocation is approximately 9.69ha in size and is located 85m to the north-east of the A66. The M6 Junction 40 to Kemplay Bank scheme will not require any land from the allocated site. Similarly, the nature of the development is not one that would require a workforce which is comparable to that of the Project during construction. As such no significant cumulative effects are anticipated. During operation no significant effects are anticipated upon the population receptors. There will be a minor adverse non-significant effect due to a discernible change in amenity due to the potential disturbance as a result of the Project. This is assuming the worst case. Road Drainage and Water Environment - The proposed planning application is within the study area for the Project and is located upgradient with limited hydraulic connectivity between the Project and the proposed planning application. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.	cumulative development secured through TCPA.	
E4	Air Quality - Impacts due to construction traffic, as well as dust and PM10 generated by construction activities, could lead to significant adverse effects if adequate mitigation is not implemented. The impact of operational traffic	Air Quality - See mitigation defined in 20/00067/DIS. Cultural Heritage - No	There are no residual effects for

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	associated with the permitted development has been accounted for in the Project's opening year (DM and DS) traffic data. Biodiversity - Supporting material to the development EDC/HA1 concluded that the mitigation measures set out would ensure any significant ecological impacts would be avoided or mitigated. Consequently it is considered cumulative effects on biodiversity as a result of the development EDC/HA1 are not anticipated and there would be no change to the significant effects reported in the ES Chapter 6 Biodiversity. Cultural Heritage - Potential for archaeological remains within Order Limits to extend into housing development site Impact on the resource would increase in scale. Potential cumulative impact on setting of Carleton Hall Farmhouse (LB) (02-0009) elevating current effect from Neutral. Geology and Soils - Negligible adverse effect. Landscape and Visual - No significant cumulative effects Noise and Vibration - The construction of the Project has the potential to give rise to potential noise impacts at the development site and nearby receptors. With the implementation of an appropriate Noise and Vibration Management Plan and an Environmental Management Plan, it is expected that noise impacts arising from construction will be minimised and hence the cumulative effect is unlikely to result in a significant effect. The Project is predicted to give rise to minor and negligible impacts at the development site and receptors nearby. For the areas of the development site which are closest to the A66, noise levels may exceed the SOAELand impacts may result in significant effects. However, the magnitude of impact will decrease as the site moves further away from the A66. The development is included in the operational traffic model. Population and Human Health - The Land at Carleton Hall Farm will experience land take of 0.03ha which equates to 0.6% of the total size. This represents a negligible impact which when combined with the high sensitivity results in a permanent slight adverse effect, which is not significant during construction. The land take will not compromise the overall viability of the Housing Allocation. During operation no significant effects are anticipated upon the population receptors. There will be a minor adverse non-significant effect due to a discernible change in amenity due to the potential disturbance as a result of the Project. This is assuming the worst case. Road Drainage and Water Environment - The proposed planning application	mitigation proposed for archaeology within Order Limits . Any remains beyond the Order Limits would be mitigated through TCPA condition. No mitigation proposed for impacts setting to LB. Impacts on setting of LB from cumulative development secured through TCPA. Geology and Soils - Measures contained within the EMPs of each development, with regards to geology and soil, should prevent any cumulative impacts. Noise and Vibration - Mitigation at the development site may be required to be developed to protect future receptors. Mitigation may be in the form of orientation: to locate sensitive receptors away from the A66 and use non-sensitive spaces as an acoustic buffer. Mitigation may also be in the form of acoustic barriers, although consideration to the topography of the site need to be given. With mitigation implemented, residual cumulative effect is likely to be eliminated. Road drainage and water environment - best practice	construction and operation.

Application Reference	Assessment of cumulative effect	Proposed mitigation including any apportionment	Residual cumulative effect
	is within the study area for the Project and is adjacent to the existing A66. With the construction mitigation proposed as part of the Project and best practice construction mitigation implemented and maintained by both developments, no adverse impacts would be anticipated for water environment receptors (surface water and groundwater) as a result of the proposed planning application.	construction mitigation should be implemented and maintained by both developments No further mitigation measures required.	