

A38 Derby Junctions

TR010022

Volume 6

**6.3 Environmental Statement
Appendices**

**Appendix 15.4: Cumulative Effects
Assessment**

Regulation 5(2)(a)

Planning Act 2008

Infrastructure Planning (Applications: Prescribed
Forms and Procedure) Regulations 2009

April 2019

Infrastructure Planning

Planning Act 2008

**The Infrastructure Planning
(Applications: Prescribed Forms
and Procedure) Regulations 2009**

A38 Derby Junctions
Development Consent Order 202[]

**6.3 Environmental Statement Appendices
Appendix 15.4: Cumulative Effects Assessment**

Regulation Number	Regulation 5(2)(a)
Planning Inspectorate Scheme Reference	TR010022
Application Document Reference	6.3
Author	A38 Derby Junctions Project Team, Highways England

Version	Date	Status of Version
1	April 2019	DCO Application

ID	Application Reference	Shortened name	Brief project description	Approx. distance from Scheme	Within Zol	Assessment of cumulative effect with Scheme	Proposed mitigation applicable to Scheme including any apportionment	Residual cumulative effect	Timescale
6	Various applications at Mackworth College: 11/12/01333 06/13/00707 10/13/0122003/14/00307 03/15/00367 03/15/00440 09/16/01084	Mackworth College site development	Residential development (up to 221 dwellings) community facilities and access and open space - approval of reserved matters of layout, scale, appearance and landscaping.	<100m	Falls within the Zol for all topics	<p>This development is located within 100m of the Scheme boundary (i.e. Mackworth Park), although the distance between the development and the main Scheme construction works at Kingsway junction is approximately 400m. Whilst this development did not require a statutory EIA, a number of environmental surveys and assessments were submitted with the planning application (e.g. landscape management plan and landscape plans, wetland design and outfall details, tree survey plan and schedule, ecological appraisal (reptile, bat surveys), travel plan and transport assessment, flood risk assessment). The development works are ongoing, but there remains a risk that the works would still be taking place at the same time as the Scheme construction works. The potential for cumulative effects (construction and operational phase) are considered below.</p> <p>Air quality: Given that the development works are located approximately 400m from the main construction activities associated with the Scheme at Kingsway junction, and with appropriate site management of the works at the Mackworth College site and within the Scheme site, it is considered that there is minimal risk of cumulative air quality/dust impacts during the construction phase. With regard to potential operational phase cumulative traffic air quality effects, refer to para. 15.3.27.</p> <p>Cultural heritage: The development would not impact upon the same cultural heritage assets as the Scheme, and thus significant cumulative heritage effects would be avoided during Scheme construction and operation.</p> <p>Landscape/visual: The Mackworth College site is located near to Mackworth Park and has the potential to generate cumulative landscape and visual effects if the various construction works coincide with Scheme construction - such effects would result from an accumulation of construction activity within a limited area which would give rise to a small increase in the perception of construction activity within the Local Character Area (LCA) and at local visual receptors, albeit in the short term. The cumulative effect is considered to be slight adverse due to the localised nature and short duration of the potential impact (and the sensitivity of the receptors) and the degree of separation between the sites. There would be no long-term cumulative landscape or visual impacts with provision of the Scheme landscape design and the landscaping to be provided at the development site (and managed in accordance with the Landscape Management Plan).</p> <p>Biodiversity: Mickleover Railway Cutting LWS runs parallel to the southern boundary of the development site, whilst, the Mickleover School Meadows LWS adjoins the south-east corner of the site. Ecological surveys undertaken for the development, plus definition of ecological mitigation measures (includes retention of trees, landscaping using indigenous plants, implementation of landscape and ecological management plan (LEMP), habitat creation and maintaining a 10m buffer from adjacent LWSs). Given the low biodiversity value of the existing Mackworth College development site (with much of the site already cleared) and the mitigation measures proposed as part of the Mackworth College development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation.</p> <p>Noise and vibration: The Scheme is not predicted to have adverse construction phase noise effects upon sensitive receptors in the vicinity of the Mackworth College development. Assuming that good site practices during the development construction phase would be adhered to, such works would not impact upon the same receptors that would be affected by Scheme construction noise. As such, significant cumulative construction noise effects would be avoided. With regard to potential operational phase cumulative traffic noise effects, refer to para. 15.3.27.</p> <p>Geology and soils: A ground investigation for the Mackworth College development did not identify the presence of potential soil or groundwater contamination requiring remediation or management. Thus, the development is not anticipated to affect geology and soils beyond the development boundary. Given the appropriate management of land contamination risks (by both the Scheme and the Mackworth College development), cumulative effects would be avoided during Scheme construction. No cumulative effects upon soils are anticipated during Scheme operation given the degree of separation between the sites and appropriate site management practices.</p> <p>Material assets and waste: The Mackworth College development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.</p> <p>People and communities: The development would not impact upon the sections of footpaths or cycleways that would be affected by the Scheme, nor would there be any effects upon private properties, community facilities, development land, or driver views. With regard to public open space, the Mackworth College development includes the provision of additional public open space in the centre of the site around existing trees and toward the site's southern boundary. It is thus considered that significant cumulative effects upon people and the community would be avoided during both Scheme construction and operation.</p> <p>Road drainage and water environment: Assuming that good practice construction methods would be applied during the development of the Mackworth College site, and the application of the water protection measures during Scheme construction, cumulative water resources effects (upon Bramble Brook and tributaries) would be avoided during the Scheme construction phase. Given the provision of an appropriate surface water drainage system as part of the Mackworth College development (which incorporates sustainable drainage systems), and given the surface water design measures as included in the Scheme design, cumulative effects upon water resources and flooding risks are not anticipated during Scheme operation.</p>	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	No more than slight adverse cumulative effects during the Scheme construction phase (landscape and visual).	Short-term
7	-	Land at Onslow Road, Mickleover	Derby City Local Plan Allocation AC22. Up to 200 dwellings. Full application expected mid-2019.	700m	Falls within the Zol for: cultural heritage, landscape/visual, biodiversity, noise and vibration, material assets and waste, road drainage and water environment	<p>This development is located approximately 700m from the Scheme boundary at Kingsway junction. Whilst a planning application for this development has not yet been received, there remains the potential that future planning approval could mean that the site construction works would be ongoing at the same time as Scheme construction. Given that a planning application has not been submitted, there is very little information available upon which to assess the potential for cumulative effects.</p> <p>The Onslow Road development is outside of the Zol for air quality, geology and soils, people and communities. Nevertheless, a review of the potential interactions between the Scheme and this development across these technical disciplines was undertaken and confirmed that significant cumulative effects would be avoided given the scale of the development, the characteristics of the development site, and the degree of separation from the Scheme. The risks of cumulative effects associated with these disciplines would be further reduced through the implementation of applicable construction phase mitigation measures by both the development and the Scheme.</p> <p>The potential for cumulative effects (construction and operational phase) associated with cultural heritage, landscape/visual, biodiversity, noise and vibration, material assets and waste, road drainage and water environment are considered below.</p> <p>Cultural heritage: The Onslow Road development would not impact upon the same cultural heritage assets as the Scheme, and thus significant cumulative heritage effects would be avoided during Scheme construction and operation.</p> <p>Landscape/visual: The Onslow Road site is located near to Mackworth Park and has the potential to generate cumulative landscape and visual effects if the various construction works coincide with Scheme construction - such effects would result from an accumulation of construction activity within a limited area which would give rise to a small increase in the perception of construction activity within the Local Character Area (LCA) and visual receptors, albeit in the short term. The effect is considered to be slight adverse due to the localised nature and short duration of the potential impact (and the sensitivity of the receptors) and the degree of separation between the sites. There would be no long term cumulative landscape and visual impacts with provision of the Scheme landscape design and the landscaping that would be provided at the development site.</p> <p>Biodiversity: The Onslow site is located adjacent to the Mickleover Meadows LNR and comprises a number of fields and field boundaries, with Bramble Brook flowing through the site. No development details are available, nor any data regarding the site ecological conditions or the development ecological mitigation approach. The Scheme has been assessed as having a neutral effect upon Mickleover Meadows LNR, indicating that the Scheme biodiversity effects do not extend to the Onslow site. Given the anticipated low biodiversity value of the existing Onslow development site and the mitigation measures that the development is likely to require, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation.</p> <p>Noise and vibration: The Scheme is not predicted to have adverse effect upon noise sensitive receptors in the vicinity of the Onslow Road development site. Assuming that good site practices during the development construction phase would be adhered to, such works would not impact upon the same receptors that would be affected by Scheme construction noise. As such, significant cumulative construction noise effects would be avoided. With regard to potential operational phase cumulative traffic noise effects, refer to para. 15.3.27.</p> <p>Material assets and waste: The Onslow Road development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.</p> <p>Road drainage and water environment: Assuming that good practice construction methods would be applied during the development of the Onslow Road site, and the application of the water protection measures during Scheme construction, cumulative water resources effects (upon Bramble Brook which runs through the development site) would be avoided during the construction phase. Given the provision of an appropriate surface water drainage system as part of the Onslow Road development, and given the surface water design measures as included in the Scheme design, cumulative effects upon water resources and flooding risks are not anticipated during Scheme operation.</p>	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	No more than slight adverse cumulative effects during the Scheme construction phase (landscape and visual)	Short-term
8	10/15/01314	Land at Rough Heanor Farm, Mickleover	Re-model junction (A516/A38 on and off slip), demolish outbuildings and erect 80 dwellings, a restaurant and a coffee shop with drive-through facilities. The development planning application was refused in September 2018.	<100m	Falls within the Zol for all topics	<p>This development is located within 100m of the Scheme boundary, with the closest works being those associated with signage alterations within the existing highway verges. The distance between the development and the main construction works at Kingsway junction would be approximately 250m. The planning application for this development has been refused, although there remains a risk that the development gains approval follow appeal. Whilst this development did not require a statutory EIA, a number of environmental surveys/assessments were submitted with the planning application, including: air quality, arboricultural, landscape and visual, transport, noise, flood risk, ecological habitats and protected species. The potential for cumulative effects (construction and operational phase) are considered below.</p> <p>Air quality: The air quality assessment submitted with the development planning application indicates that construction phase air impacts would be of negligible significance with appropriate mitigation. Thus the development works would not be able to generate any construction phase cumulative air quality effects in association with the Scheme. With regard to potential operational phase cumulative air quality traffic effects, refer to para. 15.3.27.</p> <p>Cultural heritage: The Rough Heanor Farm development would not impact upon the same cultural heritage assets as the Scheme. Thus significant cumulative heritage effects would be avoided during Scheme construction and operation.</p> <p>Landscape/visual: The landscape and visual assessment included with the planning application found that Rough Heanor Farm development would not impact upon the character of the landscape in the vicinity of the site and the wider countryside, whilst in terms of visual amenity, the development would have little to no impact on local views, although the development could have a potential significant impact to the residents of a few apartments in Greyfriar's Place. Given the degree of physical separation and intervening vegetation between the Scheme and this development, cumulative visual impacts upon apartments in Greyfriar's Place would be avoided. In addition, the scale of the development in combination with the Scheme would not result in cumulative effects upon the prevailing landscape during Scheme construction or operation.</p> <p>Biodiversity: Ecological surveys of the development site have been undertaken. The development would include a mitigation strategy under a European Protected Species Mitigation Licence (EPSML), the existing open culvert and associated woodland would be protected, discharges of contaminants into the watercourse would be prevented, birds would be protected during the breeding season, whilst the development is reported to have the potential to contribute and enhance local flora and fauna biodiversity. Given the ecological mitigation measures proposed for the Land at Heanor Farm development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation.</p> <p>Noise and vibration: The Scheme is not predicted to have adverse effect upon noise sensitive receptors in the vicinity of the Rough Heanor Farm development. Assuming that good site practices would be adhered to should this development progress, such works would not impact upon the same receptors that would be affected by Scheme construction noise. As such, significant cumulative construction noise effects would be avoided. With regard to operational traffic noise, the assessment included with the planning application indicates that the Rough Heanor Farm development would have a negligible noise impact for existing properties. As such, significant cumulative operational phase traffic noise effects would be avoided.</p> <p>Geology and soils: Ground investigation works at the Rough Heanor Farm development site have encountered Made Ground. In order to mitigate potential impacts, it was recommended that a 600mm thick layer of topsoil/soil forming materials be provided in proposed private garden areas and that a 450mm thick layer of topsoil/soil forming materials be provided in proposed all areas of proposed managed soft landscaping. With appropriate management, the Rough Heanor Farm development is not anticipated to affect geology and soils beyond the development boundary, such that cumulative effects would be avoided during the Scheme construction phase. No cumulative effects upon soils are anticipated during Scheme operation given the degree of separation between the sites and with appropriate management practices.</p> <p>Material assets and waste: The Rough Heanor Farm development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.</p> <p>People and communities: The development would not impact upon any footpaths or cycleways that would be affected by the Scheme, nor would there be any effects upon public open space, private properties, community facilities, development land, or driver views. Thus the Rough Heanor Farm development would not generate any significant cumulative effects in combination with the Scheme upon people and the community during Scheme construction and operation.</p> <p>Road drainage and water environment: A tributary of Bramble Brook flows through the Rough Heanor Farm development site, whilst Bramble Brook itself is located about 100m to the north of the site (upstream of the Scheme). A water impact assessment for the development was not prepared, although the planning application included a Flood Risk Assessment (FRA) - the FRA indicated that subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk, whilst the development would not increase flood risk to the wider catchment area as a result of suitable management of surface water runoff discharging from the site. With the presumed application of good site practices to control potential construction phase impacts and with the implementation of the proposed drainage strategy, the development would avoid adverse effects upon the Bramble Brook tributary (both in terms of quality and quantity). Thus cumulative effects upon this watercourse would be avoided during Scheme construction and operation.</p>	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	None	Not applicable
21	Various applications for Kingsway Hospital site Phase 1: 03/11/00284 11/17/01469 Various applications for Kingsway Hospital Site Phase 2: 07/08/01081 11/16/01428	Kingsway Hospital Site Development - Phase 1 Kingsway Hospital Site Development - Phase 2	Major mixed use development; 580 Dwellings, erection of offices, retail units, business units and associated infrastructure (roads, footpaths, open space and allotments). Vary condition 12 planning permission DER/07/08/01081 to allow the number of dwellings to be occupied before the completion of highway works to increase from 200 to 250 units. Erection of 71 dwelling houses, 39 apartments and formation of associated car parking, cycle parking, bin stores and public open space (Phase 2 of previously approved Outline planning permission Code No. DER/07/08/01081) to vary the approved boundary treatments. Development of Green Wedge between the development and A38 will be ongoing through to completion by 2023 - such works entail creation of allotments, football pitch, multi-use games area (MUGA), new attenuation pond, extension of existing attenuation pond, toddler and junior play area and associated infrastructure and landscaping.	<100m	Falls within the Zol for all topics	<p>The site is undergoing sequential residential development - construction of the new properties are anticipated to be complete by the start of Scheme construction works, although works associated with the Green Wedge between the development and A38 are expected to be ongoing through to completion by 2023. Such works entail creation of allotments, football pitch, multi-use games area (MUGA), new attenuation pond, extension of existing attenuation pond, toddler and junior play area and associated infrastructure and landscape planting. As such, these works would be located within 100m of the Scheme boundary, and thus within the Zol for all topics. The potential for cumulative effects (construction and operational phase) are considered below.</p> <p>Air quality: Implementation of the construction phase dust and air quality mitigation measures that would be applied during the Scheme construction phase would minimise the risks of cumulative impacts during construction. The contractor undertaking the works within the Green Wedge would also be expected to implement best practice construction methods. Thus whilst significant cumulative air quality/dust effects would be avoided, there would be a risk of short-term slight adverse dust effects where works activities coincide. With regard to potential operational phase cumulative air quality traffic effects, refer to para. 15.3.27.</p> <p>Cultural heritage: The development would not impact upon the same cultural heritage assets as the Scheme, and thus significant cumulative heritage effects would be avoided during Scheme construction and operation.</p> <p>Landscape/visual: The Kingsway hospital site is located adjacent to the Scheme works at Kingsway junction. As such, there is the potential for cumulative landscape and visual effects as a result of the accumulation of construction activity within a limited area which would give rise to an increase in the perception of construction activity within the Local Character Area (LCA), albeit in the short term. The effect is considered to be slight due to the localised nature and short duration of the potential impact (and the sensitivity of the receptor). There would be no long term cumulative impact upon the LCA with provision of the Scheme landscape design and the landscaping to be provided within the Kingsway hospital development site. Development of the Green Wedge plus the works to create the flood storage areas within the Kingsway hospital site by the Scheme have the potential to generate a long-term cumulative landscape benefit.</p> <p>Biodiversity: The A38 Roundabout LWS is located within the area of proposed signal works, whilst historic (disused) badger setts are known to be located within the Kingsway Hospital site. Semi-improved grassland of terrestrial invertebrate interest have been identified within the Kingsway Hospital site. Bramble Brook has with potential for foraging and commuting otter. The proposed Green Wedge development has the potential to result in loss of habitats, potential impact on notable and protected flora and fauna species (particularly badger and terrestrial invertebrates). The Green Wedge development would entail the creation of allotments, football pitch, MUGA, new attenuation pond, extension of existing attenuation pond, toddler and junior play area and associated infrastructure and landscape planting. Such works have the potential to deliver biodiversity benefits, including creation of suitable habitat for terrestrial invertebrates, badger, bats, and birds. Given that best practice construction methods would be applied during the Green Wedge construction works, and the application of the water protection measures during Scheme construction, significant cumulative biodiversity effects would be avoided during the construction phase. Given the nature of the development proposals and the adoption of standard ecological mitigation measures, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation.</p> <p>Noise and vibration: Scheme construction is not predicted to have an adverse effect upon noise sensitive receptors in the Kingsway hospital site (hospital buildings used by patients, hospital residential and new residential). Assuming that standard best practice construction phase noise mitigation measures are adhered to (both by the Scheme contractors and the Kingsway Hospital site developers), the risks of adverse construction noise cumulative effects would be minimised. With regard to potential operational phase cumulative traffic noise effects, refer to para. 15.3.27.</p> <p>Geology and soils: The Green Wedge developments are targeted in areas that are currently undeveloped with no suspected contamination issues. The development works are not anticipated to affect geology and soils beyond the Kingsway hospital site development boundary. Given the appropriate management of land contamination risks, cumulative effects would be avoided during the construction phase. No cumulative effects upon soils are anticipated during Scheme operation given the degree of separation between the sites and appropriate site management practices.</p> <p>Material assets and waste: The Kingsway hospital site development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.</p> <p>People and communities: The development would not impact upon the sections of footpaths or cycleways that would be affected by the Scheme, nor would there be any effects upon private properties, community facilities, development land, or driver views. With regard to public open space, the Green Wedge development would provide additional areas of open space for local residents. It is thus considered that significant cumulative effects upon people and the community would be avoided. Development of the Green Wedge plus the works to create the flood storage areas by the Scheme (including a new footpath with occasional seating around the perimeter of the flood storage areas adjacent to Bramble Brook) have the potential to generate a long-term cumulative benefit to local residents.</p> <p>Road drainage and water environment: Given that best practice construction methods would be applied during the Green Wedge construction works, and the application of the water protection measures during Scheme construction, significant cumulative water resources effects would be avoided during the construction phase. However, given the proximity of both developments undertaking works close to Bramble Brook at the same time, there remains a risk of no more than slight adverse effects on water quality. Given the provision of an appropriate surface</p>	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP. However, the Scheme construction contractor should liaise with the Kingsway hospital site developer during the construction phase in order to minimise the risks of cumulative effects. This includes coordinating works to avoid works taking place at Bramble Brook by both developments at the same time.	No more than slight adverse cumulative effects during the Scheme construction phase (air quality, landscape and visual, noise and water resources)	Short-term
23	6/16/00820	Kingsway House	Kingsway House: Single storey extensions to office building (five offices and store) and infilling of the east and west courtyard areas to	<100m	Falls within the Zol for all topics	<p>The development is located adjacent to the Scheme at Kingsway junction and there is potential that construction works would coincide with those associated with the Scheme. The development is small in scale (being confined to works within the Kingsway House building) and did not require an EIA nor any supporting environmental assessments as part of the planning application. The works associated with this development are not considered to have the potential to generate any significant environmental effects. Nevertheless, the works would still need to be progressed in a manner that appropriately manages potential environmental effects. Even though these works are in close proximity to the Scheme, and may take place at the same time as Scheme construction, it is considered that significant cumulative effects would be avoided due to the small scale nature of the development proposals.</p>	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	None	Not applicable

ID	Application Reference	Shortened name	Brief project description	Approx. distance from Scheme	Within Zol	Assessment of cumulative effect with Scheme	Proposed mitigation applicable to Scheme including any apportionment	Residual cumulative effect	Timescale
29/41	Various applications for Hackwood Farm: 06/15/00846, 06/15/00847, 12/16/01447, 12/16/01448, 08/17/01038, 12/17/01589, 12/17/01661, 06/18/00999 – New school, 12/17/01649, 03/18/00347, 09/18/01415, 06/15/00847, 9/2014/0562, 9/2016/1250, 9/2018/0665	Hackwood Farm development , Mickleover (noted that the Hackwood Farm development straddles the South Derbyshire District Council/ Derby City Council border, and will deliver 700 new homes)	Erection of up to 700 dwellings, public open space, drainage works and related infrastructure and landscaping, primary school. The Hackwood Farm development, straddles the South Derbyshire District Council/ Derby City Council border, and will deliver 700 new homes.	Approx. 1.8km	Falls within the Zol for: biodiversity, material assets and waste	The development is located approximately 1.8km from the Scheme and thus is outside the Zol for all disciplines other than biodiversity and material assets and waste. Whilst the Hackwood Farm development is located outside the Zol for air quality, cultural heritage, landscape and visual, noise and vibration, geology and soils, people and communities, and the water environment, a review of the potential interactions between the Scheme and this development across these technical disciplines was undertaken. This confirmed that significant cumulative effects associated with these disciplines would be avoided given the scale of the development, the characteristics of the development site, and the degree of separation from the Scheme. The risks of cumulative effects associated with these disciplines would be further reduced through the implementation of applicable construction phase mitigation measures by both the development and the Scheme. The potential for cumulative effects associated with biodiversity and material assets and waste are considered below: Biodiversity: The development Environmental Statement indicates that there are two Local Wildlife Sites within the site (Radbourne Lane Hedge and Hackwood Farm Pond) and one immediately to the south of the site (Mickleover-Etwell Trail). One hedgerow also qualifies as a Local Wildlife Site under the Derbyshire selection criteria. The site consists primarily of arable farmland and grassland of negligible nature conservation value with hedgerows and trees mainly of up to local value. There are also four ponds within and immediately adjacent to the site. There are also buildings and trees within the site with moderate potential to support roosting bats – one building supports a roost of brown long-eared bats. The Environmental Statement indicates that all ecologically valuable features within the site would be retained and some would be enhanced. Radbourne Lane Hedge LWS would require translocation in order to widen Radbourne Lane, which would have a short-term adverse effect, but long-term management and enhancements would result in a local level beneficial effect in the medium-to-long-term. Creation and enhancement of habitats would result in overall Local level beneficial effects. The Scheme has been assessed as having no effects upon the Radbourne Lane Hedge and Hackwood Farm Pond LWS, indicating that the Scheme biodiversity effects do not extend to the Hackwood Farm site. Given mitigation measures proposed by the Hackwood Farm development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation. Material assets and waste: This development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	None	Not applicable
39/47	12/15/01520, 12/15/0040, 05/17/00679, ERE/1215/0040	Land North of Mansfield Road, Breadsall (noted that land spans Derby City Council and Erewash Borough Council land)	Outline planning application for residential development of up to 230 dwellings.	Approx. 500m	Falls within the Zol for: cultural heritage, landscape/ visual, biodiversity, noise and vibration, geology and soils, material assets and waste, people and communities, road drainage and water environment	The development is located approximately 500m from the Scheme and thus is outside the Zol for air quality. Nevertheless, a review of the potential air quality interactions between the Scheme and this development was undertaken which confirmed that significant cumulative effects would be avoided given the scale of the development, the characteristics of the development site, and the degree of separation from the Scheme. The risks of cumulative effects associated with these disciplines would be further reduced through the implementation of applicable construction phase mitigation measures by both the development and the Scheme. The potential for cumulative effects associated with other technical disciplines are considered below. Whilst no EIA was required, a number of environmental surveys and assessments were submitted with the planning application. Construction works have started on site, although there remains a risk that works would still be ongoing during Scheme construction. Cultural heritage: An archaeological investigation has been undertaken at the north of Mansfield Road development site, including an archaeological geophysical survey - these works did not identify any anomalies of probable archaeological origin, whilst there was no evidence of Roman remains. Whilst this is the case, the development Heritage Impact Assessment indicated that the development could affect the setting of the Derwent Valley Mills World Heritage Site. There is thus the potential for the north of Mansfield Road development in association with the Scheme to generate a cumulative heritage impact on the Outstanding Universal Value of the World Heritage Site – however, this would be as a result of construction activity within the World Heritage Site visual environment and the introduction of new structures and features in the landscape. Construction activities are anticipated to be of short duration, whilst the overall cumulative effect on the World Heritage Site is not considered to be significant. No other cumulative cultural heritage effects are anticipated during Scheme construction or operation due to the degree of separation between the development and the Scheme. Landscape/ visual: The landscape and visual impact assessment submitted with the development planning application indicates that the development is considered unlikely to result in any adverse effect on the wider character of the surrounding landscape, whilst short-term visual effects of significance would be limited to the receptors at the immediate boundaries of the site and the sections of public rights of way crossing the site. Given that the Scheme landscape and visual effects would not extend as far as this development (due to the distance and the intervening land uses), significant cumulative landscape and visual effects would be avoided during Scheme construction and operation. Biodiversity: An ecological appraisal of the site has been undertaken and was submitted with the development planning application. The site is in proximity to the Breadsall Railway Cutting SSSI, DE015 Breadsall Railway Cutting, and ER005 Breadsall Disused Railway. Habitats on the site comprise arable land, veteran trees, hedgerows, ponds, scattered scrub and trees. The development has the potential to disturb non-statutory designated sites, loss of habitats, potential disturbance to nesting birds, and potential to spread invasive non-native plant species. The development would not damage the SSSI or non-statutory sites, whilst environmental management plan would be implemented. The illustrative development layout retains the vast majority of trees, whilst there would be no removal of vegetation during the bird breeding season. The development also includes planting of open water attenuation features. The Scheme has been assessed as having no effects upon the Breadsall Railway Cutting SSSI, DE015 Breadsall Railway Cutting, and ER005 Breadsall Disused Railway, indicating that the Scheme biodiversity effects do not extend to the Mansfield Road development site. Given mitigation measures proposed by the Mansfield Road development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation. It is also noted that as the site clearance works are already progressing, the development's ecological effects are likely to have been generated prior to the start of the Scheme construction works. Noise and vibration: The Scheme is not predicted to have adverse construction phase noise effects upon sensitive receptors in the vicinity of this development. Assuming that good site practices during the development construction phase would be adhered to, such works would not impact upon the same receptors that would be affected by Scheme construction noise. As such, significant cumulative construction noise effects would be avoided. With regard to potential operational phase cumulative traffic noise effects, refer to para. 15.3.27. Geology and soils: The north of Mansfield Road development has resulted in the loss of agricultural soils, noting that such losses have already occurred (given that the site has been cleared). Thus cumulative effects upon agricultural soils resources during Scheme construction would be avoided. No cumulative effects upon soils are anticipated during Scheme operation given the degree of separation between the sites and appropriate site management practices. Material assets and waste: The north of Mansfield Road development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation. People and communities: The development would not impact upon the sections of footpaths or cycleways that would be affected by the Scheme, nor would there be any effects upon private properties, public open space, community facilities, development land, or driver views. It is thus considered that significant cumulative effects upon people and the community would be avoided during both Scheme construction and operation. Road drainage and water environment: The development is located within the River Derwent catchment. The Flood Risk Assessment submitted with the north of Mansfield Road development planning application indicated that the development would not cause an increase of flood risk to surrounding properties or the development site, whilst the development would be provided with an appropriate drainage system. Given that good practice construction methods would be applied during the development construction works, the application of the water protection	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	No more than slight adverse (cultural heritage)	Short-term
40	04/15/00449, 03/17/00283	Land South of Mansfield Road, Breadsall Hilltop (between Porters Lane And Lime Lane)	Erection of 250 dwellings and formation of highways, public open space, drainage attenuation area and landscaping.	Approx. 1.5km	Falls within the Zol for: biodiversity, material assets and waste	The development is located approximately 1.5km from the Scheme and thus is outside the Zol for all disciplines other than biodiversity and material assets and waste. Whilst the Land South of Mansfield Road development is located outside the Zol for air quality, cultural heritage, landscape and visual, noise and vibration, geology and soils, people and communities, and the water environment, a review of the potential interactions between the Scheme and this development across these technical disciplines was undertaken. This confirmed that significant cumulative effects associated with these disciplines would be avoided given the scale of the development, the characteristics of the development site, and the degree of separation from the Scheme. The risks of cumulative effects associated with these disciplines would be further reduced through the implementation of applicable construction phase mitigation measures by both the development and the Scheme. The potential for cumulative effects associated with biodiversity and material assets and waste are considered below: Biodiversity: An ecological survey and appraisal was undertaken and submitted as part of the development planning application. This indicates that the development is located adjacent to the Chaddesden Wood and Lime Lane Wood LNR (adjacent to the development site), whilst on site habitats comprise arable fields with tall ruderal margins, hedgerows, trees. Development ecological impacts include indirect impacts on Chaddesden Wood LNR, loss of habitats, disturbance to foraging and commuting bats. The development would retain existing hedgerows and habitat links to Chaddesden Wood LNR, whilst there is a lighting strategy for bats, and vegetation clearance would avoid the nesting bird period. The Scheme has been assessed as having no effects upon the Chaddesden Wood and Lime Lane Wood LNR indicating that the Scheme biodiversity effects do not extend to the Breadsall Hilltop development site. Given mitigation measures proposed by the Breadsall Hilltop development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation. Material assets and waste: This development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	None	Not applicable
44	ERE 0618/0005	Ford Farm	Existing vehicular access from Ford Lane to be blocked up. Proposed new vehicular access formed from existing junction with B6179 (Alfreton Road). Site area: 10,990.00m ² .	<100m	Falls within the Zol for all topics	The development is located adjacent to the Scheme at Little Eaton junction and there is potential that construction works would coincide with those associated with the Scheme. The development is small in scale and did not require an EIA, whilst very limited environmental information was submitted with the planning application (flood risk assessment, access assessment). The works associated with this development are not considered to have the potential to generate any significant environmental effects. Nevertheless, the works would still need to be progressed in a manner that appropriately manages potential environmental effects. Even though these works are in close proximity to the Scheme, and may take place at the same time as Scheme construction, it is considered that significant cumulative effects would be avoided due to the small scale of the development proposals.	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP. However, the Scheme construction contractor should liaise with the applicable developer to discuss any issues that may arise associated with site access given that the development is located along the B6179 Alfreton Road which is the access to the Scheme construction compound north of Little Eaton junction.	None	Not applicable
49	AVA/2014/0928, AVA/2015/1243	Land at Kedleston Road	Outline application for the erection of up to 400 dwellings (Use Class C3), convenience store (Use Class A1 up to 500 sqm floorspace) with associated access, earthworks and other ancillary and enabling works. All other matters (appearance, landscaping, layout and scale) reserved. This is a Departure from the Development Plan. Outline application for the erection of up to 195 dwellings (Use Class C3) with associated access, earthworks and other ancillary and enabling works. All other matters (appearance, landscaping, layout and scale) reserved. This proposal constitutes a Departure from the	Approx. 1.7km	Falls within the Zol for: biodiversity, material assets and waste	The development is located approximately 1.7km from the Scheme and thus is outside the Zol for all disciplines other than biodiversity and material assets and waste. Whilst the Kedleston Road development is located outside the Zol for air quality, cultural heritage, landscape and visual, noise and vibration, geology and soils, people and communities, and the water environment, a review of the potential interactions between the Scheme and this development across these technical disciplines was undertaken. This confirmed that significant cumulative effects associated with these disciplines would be avoided given the scale of the development, the characteristics of the development site, and the degree of separation from the Scheme. The risks of cumulative effects associated with these disciplines would be further reduced through the implementation of applicable construction phase mitigation measures by both the development and the Scheme. The potential for cumulative effects associated with biodiversity and material assets and waste are considered below. Whilst no EIA was required for the development, a number of environmental surveys and assessments were submitted with the development planning application. Construction works have not started on site, and thus there is a risk that the construction works would coincide with the Scheme construction phase. Biodiversity: Environmental Statement and ecological assessment undertaken and submitted with the planning application for 195 dwellings. The assessment reports that the application site is considered to be of negligible ecological value comprising a single intensively cultivated arable field. The boundary forming hedgerows have value at the Local level due to their species richness and the scattered trees have value at the Site level. The closest LWS to the site is the Markeaton Brook LWS, located 60m northwest of the application site. Development ecological mitigation measures include the retention of hedgerows and scattered trees within the application site, provision of suitable buffers to retained hedgerows and the creation of public open space within the development, and the creation of an extensive attenuation area in the west of the application site. In addition, applicable controls would be implemented during the development construction phase, whilst the development drainage design ensures that adverse impacts upon Markeaton Brook would be prevented. Further ecological assessment was undertaken for the outline application for 400 dwellings. The assessment states that specific proposals for the avoidance, mitigation and compensation of predicted impacts would be provided. This includes a detailed Ecological Construction Method Statement and an Ecological Management Plan. With the mitigation proposed, the assessment confirms that no impacts are anticipated on Markeaton Brook. The Scheme has been assessed as having no effects upon the Markeaton Brook LWS, noting that the Kedleston Road development is located upstream of the Scheme and reports no adverse effects on the brook. Given mitigation measures proposed by the Kedleston Road development, together with the ecological mitigation measures associated with the Scheme, cumulative effects on biodiversity are not anticipated during Scheme construction or operation. Material assets and waste: The Kedleston Road development is not anticipated to result in significant effects with regard to materials resources nor generate large volumes of waste that would have an adverse effect on local waste management resources. With appropriate material sourcing and management of wastes, significant cumulative effects would be avoided during Scheme construction and operation.	None other than the Scheme adherence to the mitigation and management measures as detailed in the OEMP.	None	Not applicable