

16 Cumulative Effects

16.1 Introduction

- 16.1.1 Cumulative effects considered within this assessment are those that arise as a result of additive impacts from more than one project (under construction or reasonably foreseeable projects), combining together to have an effect on a receptor that may be larger than if the effect were considered separately. Broadly, reasonably foreseeable projects are those that are known to the planning system or are already consented (but not yet built).
- 16.1.2 This chapter provides an assessment of cumulative effects arising from the proposed Cardiff Hendre Lakes development in combination with other reasonably foreseeable projects in the local area.

16.2 Legislative Content

- 16.2.1 The requirement for cumulative effects assessment (CEA) is set out in Schedule 4 of the EIA Regulations, which states that the EIA should include an assessment of “*the direct effects and any indirect, secondary, cumulative, transboundary, short-term, medium-term and long-term, permanent and temporary, positive and negative effects of the development.*”

16.3 Assessment Methodology

Relevant guidance

- 16.3.1 There is currently no standard methodology for CEA although there is a range of guidance available. Whilst the proposed project is not classified as a major infrastructure scheme, it is considered that Advice Note 17: Cumulative effects assessment relevant to nationally significant infrastructure projects (Planning Inspectorate, 2015) is the most relevant guidance available.
- 16.3.2 Advice Note 17 provides a systematic approach to cumulative effects assessment which can be split into four distinct phases explained in Table 16.1. The guidance notes that the recommended process focusses on cumulative effects with ‘other developments’. It should not be confused with the assessment of interrelationships between topics, which are assessed within the individual specialist topic chapters.

Table 16.1: Stages of Cumulative Effects Assessment

CEA Stage	Key Activities
Stage 1: Establish the Zone of Influence (ZOI) and identify long list of ‘other developments’	<ul style="list-style-type: none"> Identify the ZOI for each of the environmental topics covered by the ES; Identify a long list of other developments in the vicinity of the proposed project which may have cumulative effects; Undertake desktop review of available environmental information for identified cumulative developments

Stage 2: Identify short list of 'other developments'.	<ul style="list-style-type: none"> Identify which of the identified other developments from Stage 1 has the potential to give rise to significant cumulative effects by virtue of overlaps in temporal scope, due to the scale and nature of the 'other development'/receiving environment; or any other relevant factors.
Stage 3: Information gathering	<ul style="list-style-type: none"> Information related to the shortlisted cumulative developments is gathered and reviewed
Stage 4: Assessment	<ul style="list-style-type: none"> CEA of shortlisted cumulative development is undertaken. Each individual 'other development' is reviewed in turn to identify whether there is potential for significant cumulative effects; Mitigation measures are identified.

Zone of Influence

16.3.3 The Zone of Influence (ZOI) refers to the spatial area over which an effect from a project is likely to be experienced. The ZOI for the proposed development varies for each environmental topic and these are set out in Table 16.2 below along with the identification of what type of impact is likely.

Table 16.2: Zone of Influence, potential impacts and receptors for EIS environmental topics


Environmental topic	Zone of Influence for assessments	Potential impact (construction and operation)	Receptor/ resource
Air quality	Up to 350m for the construction dust assessment and 200m from the road network for operational and construction traffic assessment	Reduction in air quality from: <ul style="list-style-type: none"> dust emissions during construction; exhaust emissions from vehicles during construction and operation; 	People living and working within the study area distance (i.e. 350m)
Noise	Within 300m of construction works for construction, except where there is an uninterrupted line of sight(1km)	The increase in noise from construction and/or operation.	Residential and commercial facilities within the assessment area.
Traffic and transport	Local highways and active travel network (as defined in the ES Chapter 4)	Increased traffic and congestion, changes to provision of public transport and Public Rights of Way (PRoW)	Road users, pedestrians, cyclists
Biodiversity	Up to 2km for protected and notable species, and designated sites	Disturbance, habitat fragmentation and severance, habitat loss, habitat damage and species mortalities.	Protected species, habitats, ecologically designated sites
Ground conditions	Site area and within 250m or 1km of site boundary (depending on receptors)	Groundwater, human health	Groundwater quality and flow, human health of people living and working within the study area distance
Water Resources	500m	Surface water quality impacts during construction and operation Hydromorphological impacts during construction and operation	Surface water bodies Groundwater bodies Residential properties Agricultural land

Environmental topic	Zone of Influence for assessments	Potential impact (construction and operation)	Receptor/ resource
		Groundwater quality impacts during construction and operation Surface water flood risk impacts during construction and operation Fluvial, tidal and pluvial flood risk impacts during operation	Proposed buildings Proposed landscape areas Proposed car park area Proposed railway station car parking and servicing areas
Heritage	Redline boundary and a study area of up to 1km surrounding the site	Change in setting of cultural heritage Loss of heritage assets	Setting of heritage resource Visitors to/users of the heritage asset
Health	Up to 2km from the proposed development boundary.	Changes to health determinants resulting in health effects during both construction and operation.	Residents Employees Visitors to the site
Socio-economics	1.5km	Potential benefit of construction spend, displacement of construction workers, demands on accommodation and other businesses and amenity effects.	People Employers / employees Businesses
Landscape and Visual Impact	1.5km core study area in LVIA.	Change to the character of landscape and to visual amenity.	Landscape Character Areas (LCAs) including designated features. People's views.

Establishing the long list of 'other developments'

16.3.4 The Planning Inspectorate guidance recommends that a wide range of future projects is included within the CEA which can be tiered (from Tier 1 – 3) according to how far advanced the development is within the planning system and to the level of detail that is likely to be available for each tier. These different tiers are set out in Table 16.3, adapted to the context of Cardiff.

Table 16.3: Project tiering for the purpose of CEA

Tier 1	<ul style="list-style-type: none"> Projects under construction; Permitted application(s) but not yet implemented; Submitted application(s) but not yet determined; 	<p>Decreasing level of detail likely to be available.</p> 
Tier 2	<ul style="list-style-type: none"> Projects on CC and NCC Programme of Projects where a scoping report has been submitted; 	
Tier 3	<ul style="list-style-type: none"> Projects on CC's and NCC Programme of Projects where a scoping report has not been submitted; Identified in the Cardiff Local Development Plan (2016) and Newport Local Development Plan (2015) cognising that much information on any relevant proposals may be limited; and Identified in other plans and programmes (as appropriate) which set the framework for future development consents/approvals, where such development is reasonably likely to come forward. 	

16.3.5 The less information that is available for the future projects (i.e. environmental impacts predicted, project definition), the less likely that the CEA will be able to make any robust assessment in relation to these projects.

16.3.6 Whilst projects that are Tier 2 and Tier 3, as defined by the Planning Inspectorate guidance are referenced within this assessment, it is considered that there is limited value in including schemes for which there is no environmental assessment information available as it will not be possible to assess environmental effects.

Assessment criteria

16.3.7 The CEA does not aim to assign significance levels to any of the cumulative effects identified. Rather, a judgement has been made on whether the cumulative effects are likely to be more or less significant than the effects identified for the proposed Cardiff Hendre Lakes development alone.

Topics scoped out of the CEA

16.3.8 The following topics have been scoped out of the CEA:

- Traffic – in order to generate the future baseline, likely future developments are included within the traffic model and are therefore already considered within the transport assessment. Effects related to traffic are therefore not considered further within the CEA;
- Rail – proposed changes to the wider rail network (e.g. track upgrades or rail related buildings) are not considered within the CEA. This is because the distance to any works and developments would be outside the zone of influence considered within the assessment and not be directly related to the proposed development site;
- Air quality - operational effects are based on traffic data, therefore, any cumulative operational effects are inherent within the results outlined in the air quality chapter of the ES. No further cumulative effects would be anticipated, therefore operational air

quality effects will not be considered further. Cumulative effects related to construction are considered as these are not inherent within the topic chapter assessment; and

- Noise - as above for air quality.

Consultation

- 16.3.9 The list of projects considered within the CEA has been obtained through consultation with CC Planning Department and through desktop research of developments in both Cardiff and Newport. Environmental information relating to each of the developments identified has been obtained from the Council's planning portals which are publicly available.

Limitations and assumptions

- 16.3.10 Assessment of cumulative effects is limited by the level of information that is available for each of the topic assessments. When consideration is given to effects that may arise as a result of impacts from other developments, the assessment becomes limited by the amount of information that is made publicly available.

16.4 Identification of Cumulative Developments

- 16.4.1 Developments relevant to the CEA have been identified through desktop research and in consultation with CC. No consultation was carried out with Newport CC, although a search was made for relevant developments using their online planning portal. Cumulative developments represent those within approximately 2km from the proposed Cardiff Hendre Lakes site.
- 16.4.2 Not all the identified cumulative projects are considered to have the potential to add any cumulative effects to the environmental impacts identified for the proposed development. This is based either on their spatial separation or because the temporal scope of the developments does not align (i.e. the impacts will occur at different times and will therefore not be cumulative). Some projects identified during consultation with CC have already been constructed and therefore are not considered further in the CEA as they have already been accounted for within the baseline of each of the assessments.
- 16.4.3 Table 16.4 lists the identified developments and identifies which of these have the potential to have cumulative effects with the proposed development, providing justification for the inclusion or exclusion from the assessment. Where it has been identified that cumulative impacts may arise, a more detailed assessment (set out below Table 16.4) has been undertaken for the relevant environmental topics and mitigation measures identified. The location of these cumulative developments is shown on Figure 16.1.

Table 16.4: Identified developments with potential for cumulative effects

Committed Development Ref. (See Figure 16.1)	Development	Planning Reference	Status	Development classification	Approx. Distance from Cardiff Hendre Lakes	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
Cardiff Council Committed Developments									
1	Melrose Hall Residential Development	17/02571/MJR	Approved: 15/05/18	Residential	Approximately 500m to the north-west of the proposed development.	1	Biodiversity, Water Resources, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport.	Yes	Outline planning application for the demolition of the existing office buildings, and the construction of 17 new residential dwellings, new pedestrian access to Vaendre Lane, parking and associated works.
2	Wentloog Industrial Estate – Parcel delivery distribution facility	14/01272/DCO	Approved: 20/08/14	Commercial	Approximately 1km to the south-west of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport.	Yes	Development of a new bespoke parcel delivery distribution facility within the established industrial area of Wentloog. The proposed development comprises a total of 5,844sqm gross external floor space which includes 2-storey ancillary office accommodation.
3	Willowbrook Drive/Crickhowell Road Residential Development	16/01670/MJR	Approved: 02/02/18	Residential	Approximately 1.1km to the west of the proposed development.	1	Biodiversity, Health, Landscape and Visual, Socio-economics, Transport.	Yes	70 no. dwellings accessed from Willowbrook Drive (Outline)
4	Willowbrook West Residential Development	16/01260/MJR	Approved: 18/11/16	Residential	Approximately 1.1km to the west of the proposed development.	1	Biodiversity, Health, Landscape and Visual, Socio-economics, Transport.	Yes	Development of 192 Dwellings to the West of Willowbrook Drive and the south of Crickhowell Road, on the site referred to as Willowbrook West. Proposal include 58 affordable units (comprised of 33 apartments and 25 houses), and associated landscaping.
5	H1.1 Land at areas 9-12, off Harrison Drive	Allocation within CC Local Plan Previous application: 06/00524/E	Planning application expired in 2011	Residential	Approximately 1.4km to the south-west of the proposed development.	3	Biodiversity, Health, Landscape and Visual, Socio-economics, Transport.	No	The site was identified in CC's (2016) and previous Local Plan (1996) as nonstrategic housing site H1.1, with potential for development of approximately 150 dwellings. In 2006, an outline application accompanied by a TA for development of approximately 350 dwellings was approved under application reference 06/00524/E. This followed a previous successful application for development of a portion of the site. The 2006 planning permission expired in 2011 and there is currently no active permission at the site.

Committed Development Ref. (See Figure 16.1)	Development	Planning Reference	Status	Development classification	Approx. Distance from Cardiff Hendre Lakes	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
6	H1.6 Land at former St Johns College/Greenway Road	Allocation within CC Local Plan Previous application: 14/00504/DCO	Planning Permission lapsed	Residential	Approximately 1.9km to the south-west of the proposed development.	3	Biodiversity, Health, Transport	No	The site was identified in CC's LDP (2016) as non-strategic housing site H1.6, with potential for development of approximately 64 dwellings. An application for the development of 64 homes was submitted in 2014. The application went to committee which advised the development was granted permission subject to agreement of a Section 106 agreement. A 106 agreement was not reached and therefore the permission has lapsed. No further applications have been made at the site since 2014.
7	Land adjacent to Blooms Garden Centre	13/01172/DCO (2013) 16/01150/MJR (2016)	Under construction	Residential	Approximately 1km to the north of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport.	No	The outline application in 2013 and the subsequent reserved matters application in 2016 has enabled the development of 83 homes. The works are under construction and are not likely to overlap in temporal scope.
8	Residential development comprising of 15 dwellings with access from Wakehurt place	16/01719/MJR	Approved 12/07/2017	Residential	Approximately 1km to the west of the proposed development	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport.	Yes	Residential development comprising of 15 dwellings identified for development along with adjacent sites (16/01680/MJR) as part of the re-planning of community provision in St Mellons
9	Outline application to demolish the existing building and erect 9 dwellings (2 storey) and 18 flats (3 storey) on the site.	16/01680/MJR	Approved 12/07/2019	Residential	Approximately 1 km to the west of the site of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport.	Yes	Development of 9 dwellings and 18 flats on the existing site. The site is currently occupied by St Mellons Community Centre, which has been identified for potential development along with an adjacent site (16/01719/MJR).
10	Communication Station, Cobol Road, St Mellons	20/00300/MNR	No prior approval required 01/4/2020	Commercial	Within the site of the proposed development.	1	All topics	No	Prior approval determination for the installation of electronic communications apparatus at Rhubina. The works include replacement and maintenance of electrical equipment on an existing electricity site and will therefore are deemed of a scale too small to impact on cumulative effects.
11	Land at Harrison Drive, St Mellons	18/00089/MJR	Approved 04/04/2018	Residential	Approximately 800m to the west of the site of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Health, Transport.	Yes	Proposed construction of 21 affordable housing units (including 18no. 1 bed flats, 2no. 2 bed flats and 1no. 1 bed accessible flat) and associated works.

Committed Development Ref. (See Figure 16.1)	Development	Planning Reference	Status	Development classification	Approx. Distance from Cardiff Hendre Lakes	Tier	Within ZOI?	Potential for CEA	Justification for potential cumulative effects
12	Site of former flats 11-20 Ty-to- Maen Close, Old St Mellons, Cardiff, CF3 5EY	16/01592/MJR	Approved 25/01/2017	Residential	Approximately 1.6km to the site of the proposed development.	1	Biodiversity, Health, Transport.	No	Development of 8 dwellings at Ty to Maen Close (6no. open market sale and 2no. affordable dwellings), associated landscaping, access and highway works. The works are under construction and are not likely to overlap in temporal scope.
13	Droke House, 948 Newport Road, Old St Mellons, Cardiff, CF3 5UA	17/01801/MJR	Approved 23/02/2018	Residential	Approximately 1.8km to the west of the site of the proposed development.	1	Biodiversity, Health, Transport.	No	Construction of 33 affordable apartments, access and associated works. This committed development is under construction and is not of a scale or proximity to impact on the Biodiversity zone of influence. The committed development is also unlikely to overlap in temporal scope.
Newport City Council Committed Developments									
14	St Mellons Country Hotel & Country Club, NEWPORT ROAD, CARDIFF, CF3 2XR	15/1228	Approved 03/08/2016	Commercial	Approximately 1km to the north of the site of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport	No	Proposed alterations and extension of hotel to include new conference centre. This committed development is not considered of a scale to impact on cumulative effects and is therefore not included within the assessment in Section 16.5.
15	21, St Mellons Road, Marshfield, Cardiff, CF3 2TX	19/1003	Registered application 04/03/2020	Residential	Approximately 800m to the east of the site of the proposed development.	1	Biodiversity, Ground Conditions, Heritage, Health, Landscape and Visual, Socio-economics, Transport	No	Demolition of derelict house and construction of 5no. detached dwellings This committed development is not considered of a scale to impact on cumulative effects and is therefore not included within the assessment in Section 16.5.
16	Marshfield Junior and Infants School, Marshfield Road, Cardiff, CF3 2UW	15/1312	Approved 06/01/2016	Commercial	Approximately 1.5km to the north east of the site of the proposed development.	1	Biodiversity, Health, Landscape and Visual, Socio-economics, Transport	No	Extension of Marshfield Junior and Infants school to provide a nursery This committed development is not considered of a scale to impact on cumulative effects and is therefore not included within the assessment in Section 16.5.

16.5 Assessment of Cumulative Effects

- 16.5.1 Based on the outputs from Table 16.4 and Figure 16.1, cumulative effects are discussed for each environmental topic in relation to the relevant Cumulative Developments. Consideration is given to both cumulative construction and cumulative operational effects. Any proposed mitigation is set out within the sections below.

Noise and Vibration

- 16.5.2 None of the cumulative developments for assessment are within the primary 300m zone of influence for construction or operational effects. The assessment also takes into consideration buildings which are further away but unscreened, however this is not applicable for any of the cumulative developments outside 300m. As such no cumulative effects are likely to arise during either construction or operation of the scheme.
- 16.5.3 It should be noted that traffic associated with the cumulative developments has been included in the traffic data used in the noise assessment of future year scenarios. Therefore, cumulative noise effects arising from traffic have already been assessed in Chapter 4.

Air Quality

- 16.5.4 None of the cumulative developments are within the air quality zone of influence of 350m for the assessment of construction dust effects. Due to the distance of the cumulative developments, no cumulative effects during construction are expected to arise. Nevertheless, it is anticipated, that all developments would employ appropriate mitigation measures to minimise the risk of dust nuisance during construction.
- 16.5.5 It should be noted that traffic associated with the cumulative developments has been included in the traffic data used in the air quality assessment of future year scenarios. Therefore, cumulative air quality effects arising from both construction and operational traffic have already been assessed in Chapter 8.

Water Resources

- 16.5.6 The Melrose Hall Development is the only cumulative development located within the study area that may result in cumulative effects on water resources.
- 16.5.7 It is not considered that the Melrose Hall Development and the proposed development will exacerbate flood risk in the area during construction and operation. During construction, the Melrose Hall Development is expected to incorporate good practice working methods that manage flood risk. The proposed development will be constructed through a phased approach to manage flood risk and will adhere construction practice guidance in the Construction Environmental Management Plan (CEMP). During the operational phase, the Melrose Hall Development would manage surface water run-off from site discharges into surface water bodies at a controlled rate. The proposed development would incorporate a series of flood risk mitigation measures which are designed to manage future flood risk, informed by flood risk modelling.
- 16.5.8 There is not considered to be an impact on drinking water resource availability during construction and operation as a result of the Melrose Hall Development and the proposed

development due the relatively small size of the two developments when compared to the capacity of drinking water availability.

- 16.5.9 There is not considered to be an impact on surface water quality during construction and operation as a result of the Melrose Hall Development and the proposed development. As previously mentioned, during construction it is assumed that the Melrose Hall development would adopt good practice working methods during construction. The proposed development would adhere to the CEMP which contains measures to ensure surface water quality is not impacted. During operation, the Melrose Hall Development and the proposed development include a surface water drainage strategy to manage the quality and quantity of surface run off entering water bodies.

Ground Conditions

- 16.5.10 None of the cumulative developments to be assessed are within the Ground Conditions zone of influence of 250m for the assessment of cumulative effects on human health. A number of cumulative developments are located within zone of influence of 1km for the assessment of cumulative effects on groundwater. Due to the distance of the cumulative developments away from the site, no cumulative effects are expected to arise and impact ground conditions at the site. However, it would be expected that all neighbouring developments would employ appropriate mitigation measures, in line with best practice and current regulatory guidance, to minimise the impact/risk of any potential contaminant migration (including dust) to the local environment (including controlled waters and human health).

Biodiversity

- 16.5.11 All of the cumulative developments identified are within the zone of influence of biodiversity receptors, particularly in relation to statutory designated sites. The Biodiversity Chapter and the Habitat Regulations Assessment for the proposed development concludes no likely significant effects to European Sites with assumed construction practises and embedded mitigation considered. However, the residual effects on the nationally designated Gwent Levels – Rumney and Peterstone SSSI is considered to be of moderate adverse significance during construction. The re-provision of reens of aquatic and marginal flora and invertebrate assemblage will reduce effects to a negligible level once they start to establish. It is likely that the committed developments assessed are hydrologically connected with the Rumney and Peterstone SSSI creating a potential pathway of effect alongside the proposed development, however the potential for cumulative effects is considered unlikely provided that standard construction mitigation methods are followed for all developments.
- 16.5.12 The cumulative loss of habitats associated with the identified committed plans and projects for protected species is minimal from a review of publicly available information. It was therefore assumed within the assessments for these developments that surveys for European Protected Species (EPS), such as dormouse, otter and bats, were either: not required; found no evidence of these species; or had sites which are of limited value for these species. As such, the cumulative effect on EPS is not considered likely to raise the levels of the predicted impacts identified in the ES Biodiversity Chapter.
- 16.5.13 No other biodiversity receptor identified within the proposed development site or within the zone of influence are considered likely to have cumulative impacts with the identified

committed development, and as such cumulative impacts are not considered likely to raise the levels of the predicted impacts within the existing ES Biodiversity Chapter.

Transport

- 16.5.14 Consideration of impacts related to traffic have been scoped out of the CEA, as discussed in Section 16.3.8. However, impacts related to public transport and active travel provision and accessibility have been considered. In relation to public transport, none of the other cumulative developments include the provision of or changes to public transport and therefore no significant cumulative effects are predicted in this regard. However, the increased developments in the area (in particular the residential developments), may result in higher patronage of the public transport that would be delivered as part of the Hendre Lakes development. This is likely to result in a beneficial effect for rail and bus operator companies, although unlikely to be significant.
- 16.5.15 In relation to active travel provision such as improved cycle and pedestrian routes, it is considered unlikely that there would be cumulative negative effects with the proposed development. Conversely, a cumulative benefit of several active travel improvements within the study area, is likely to result.

Archaeology and Cultural Heritage

- 16.5.16 The proposed development is located within the Registered Historic Landscape of HLW(GT) 2 Gwent Levels and as such, was subject to assessment of direct and indirect effects within a broad zone of influence (1km study area and further out for the ASIDHOL2 assessment). Of the potential developments listed in Table 16.4, only the Melrose Hall development is located within the study area for the proposed development. All of the assessed sites listed in Table 16.4 are located amid already extensively developed areas. None of these, with the exception of Melrose Hall and Wentloog Industrial Estate Parcel Delivery Distribution Facility, share intervisibility with the proposed development although for all practical purposes, both Melrose Hall and the Wentloog Industrial Estate Parcel Delivery Distribution Facility are obscured by trees and other existing developments. It has been assessed that any archaeological and heritage related receptors have already been affected by the existing developments and that there will therefore be no significant cumulative effect from the listed developments.

Landscape and Visual

- 16.5.17 The ES Landscape and Visual Chapter considers a wider study area in the LVIA process set at 3km to pick up sensitive visual receptors at distant viewpoints. As the assessment progressed, it was identified that likely significant effects would be experienced within 1.5km and this area was set as the core study area.
- 16.5.18 With the exception of Melrose Hall Residential Development and Wentloog Industrial Estate, there is no intervisibility between any of the assessed cumulative developments listed in Table 16.4 and the proposed development. These cumulative developments are therefore not considered further in this assessment which only considers the two

developments with intervisibility to the proposed development within the 1.5km core study area.

- 16.5.19 Melrose Hall site lies approximately 500m to the north-west of the proposed development and falls within a different LANDMAP visual aspect area: Wentloog Levels south west. The proposed residential development here will be largely in keeping with the scale and grain of the urban development surrounding it and will not impinge upon the character of the LANDMAP aspect area within which the proposed development sits (Wentloog Levels north west). From the selected viewpoints, the two developments will not be visible within the same view. Glimpsed views of the proposed development will be possible from Melrose Hall, however in combination the two developments will not give rise to additional visual effects.
- 16.5.20 Wentloog Industrial Estate Parcel Delivery Distribution Facility lies 1km south-west of the proposed development and falls within a different LANDMAP visual aspect area: Wentloog Levels south west. The scheme would be of a similar scale land appearance to existing buildings within that site. The proposed development will be visible from the Estate site, however given the existing nature of the estate is of a trade and engineering working environment, these two developments will not be out of character with the baseline context. There may be locations to the east of the proposed development where glimpsed views of both schemes could be seen together but given the visual separation and distance between the two developments, no significant visual cumulative effects will arise.
- 16.5.21 In combination with the proposed development, neither Melrose Hall Residential Development nor the Wentloog Industrial Estate Parcel Delivery Distribution Facility will give rise to significant landscape character or visual amenity cumulative effects.

Socio-economic

- 16.5.22 Due to the size, location and type of committed developments within the Socioeconomic zone of influence, no cumulative effects are expected to arise and significantly affect socioeconomic conditions. However, it would be expected that all neighbouring developments would employ appropriate mitigation measures, in line with best practice and current regulatory guidance, to minimise any adverse impacts of development on the socioeconomic conditions of the local environment. As such, cumulative impacts are not considered likely to raise the significance of the predicted impacts within the existing ES socioeconomic chapter.
- 16.5.23 During operation of the proposed development the facilities are anticipated to bring wider economic benefits to the local area and wider region. The increased connectivity and sustainable transport opportunities, alongside the investment / job creation through the business park could bring cumulative benefits to the developments in the local area that wouldn't be felt without the station and business park.

Health and Well-being

- 16.5.24 The cumulative developments outlined are not anticipated to result in changes to determinants of health that would result in significant cumulative health effects. This is because the cumulative developments are either not sufficiently close to the proposed development, are screened by intervening buildings, or are relatively small-scale proposals which would not change determinants of health. The assessments used to

inform the health and wellbeing assessment (noise, air quality, landscape and visual and socio-economics) have also not identified any significant cumulative negative effects. It is also expected that all the cumulative developments would employ appropriate mitigation methods in line with regulatory requirements and best practice, to minimise adverse impacts on sensitive receptors.