



REPORT

# IAMP TWO: Preliminary Environmental Information Report

*Chapter N: Cumulative Effects Assessment*

Submitted to:

**IAMP LLP**

Submitted by:

**Golder Associates (UK) Ltd**

Golder House, Tadcaster Enterprise Park, Station Road  
Tadcaster, North Yorkshire, LS24 9JF, UK

+44 0 1937 837800

1895128.624/A.0

March 2019



## Distribution List

IAMP LLP - 1 pdf

Lichfields - 1 pdf

Golder Associates (UK) Ltd - 1 pdf

# Table of Contents

**N1.0 INTRODUCTION AND BACKGROUND.....1**

    N1.1 Purpose of Chapter ..... 1

    N1.2 Legislative Background ..... 1

    N1.3 Guidance ..... 1

    N1.4 Structure of Chapter ..... 2

**N2.0 SCOPE AND METHODOLOGY ..... 4**

    N2.1 Introduction..... 4

    N2.2 Methodological Approach..... 4

**N3.0 INTER-RELATIONSHIP OF EFFECTS ..... 7**

    N3.1 Purpose of Chapter ..... 7

    N3.2 Identification of Main Sensitive Receptors ..... 7

    N3.3 Inter-relationship of Effects ..... 10

    N3.4 Summary ..... 14

**N4.0 ZONE OF INFLUENCE ..... 15**

    N4.1 Defining the Zone of Influence ..... 15

    N4.2 Summary ..... 16

**N5.0 CURRENT OUTCOMES FROM CUMULATIVE ASSESSMENT..... 18**

    N5.1 Introduction..... 18

    N5.2 Key Developments Identified in CEA to date ..... 18

    N5.3 Emerging Outcomes from Cumulative Assessment ..... 19

    N5.4 Response ..... 22

**N6.0 SUMMARY AND CONCLUSIONS ..... 27**

**N7.0 ABBREVIATIONS AND DEFINITIONS ..... 28**

**TABLES**

Table N1: Designation of Tiers for CEA (based on PINS Advice Note 17) .....5

Table N2: Summary of Key Sensitive Receptors and Nature of Impact from Chapters D to M..... 7

Table N3: Zone of Influence for Each Environmental Topic Area ..... 15

Table N4: Key Developments Identified in ongoing CEA where significant cumulative effects are more likely 18

**FIGURES**

Figure N1: Extract from LVIA (Chapter F) showing the ZTV extending from the site (see Chapter F for full size version of this figure) .....17

**APPENDICES**

Drawings

**APPENDIX N1**

Long List of Proposed Development Considered

Front image supplied under licence: Andrey Armyagov © 123RF.com

## N1.0 INTRODUCTION AND BACKGROUND

### N1.1 Purpose of Chapter

N1.1.1 This chapter of the Preliminary Information Report (PEIR) provides information on the approach to the assessment of likely significant cumulative effects in relation to the Proposed Development. At this consultation stage, the process of assessment is ongoing and will continue to be refined to reflect development activity in the surrounding area. However, it is considered that sufficient certainty exists to provide information on identified issues that have emerged from the Environmental Impact Assessment (EIA) process up to March 2019.

N1.1.2 There are two types of cumulative effects:

- Inter-relationship of effects - these are the combined effects from different types of direct impacts attributable to the proposed development on a particular receptor; and
- Cumulative effects – these are additional indirect effects that may arise when the Proposed Development is considered alongside other developments in the surrounding area.

N1.1.3 The overall objective of this type of assessment is to identify, through a review of these issues, whether additional mitigation is required that would not otherwise have been identified in this PEIR. It is provided to seek inputs from key consultees to assist in guiding the ongoing process of Cumulative Effects Assessment (CEA). Information from this stage will inform work feeding into the final Environmental Statement (ES) that will be submitted alongside the proposed application for a Development Consent Order (DCO) in respect of the Proposed Development.

### N1.2 Legislative Background

N1.2.1 Schedule 4 of The Infrastructure Planning (EIA) Regulations 2017 identifies the information to be included within ESs and incorporates the following reference to cumulative effects:

*“5. The description of the likely significant effects on the factors specified in regulation 5(2) should cover 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.”*

N1.2.2 Regulations 12(2)(b) also defines information that should be provided as part of a PEIR and that this should include that information specified in Schedule 4 that:

*“...is reasonably required for the consultation bodies to develop an informed view of the likely significant environmental effects of the development (and of any associated development).”*

### N1.3 Guidance

N1.3.1 The CEA for the Proposed Development is being carried out with regard to Advice Note 17 ‘Cumulative Effects Assessment’ (December 2015, The Planning Inspectorate (PINS)) that is relevant to projects that require a DCO. The guidance provides information on the CEA process that applicants may wish to adopt and advice on a staged approach and consistent template formats that should be used for documenting the outcomes of a CEA in an applicant’s ES.

N1.3.2 Section N2.0 of this chapter outlines the key stages of the CEA process and how this is being addressed by the Applicant in respect of the Proposed Development. Particular regard has been had to guidance provided at paragraph 2.4 of Advice Note 17 that states:

*“...the applicant should be aware that the process is both iterative and on-going and may need to be repeated a number of times during the preparation of a DCO application and during the examination stage.”*

**N1.3.3** At this PEIR stage, paragraph 2.3 of Advice Note 17 states that the objective should be to *“facilitate meaningful consultation”* and Section 3 of the same Advice Note goes on to describe what applicants should aim to achieve during the pre-application consultation stage as follows:

*“Applicants are strongly advised to take advantage of pre-application consultation with the relevant local planning authority(ies), statutory consultees and any other relevant organisations, to ensure that the list of ‘other development’ identified for CEA is comprehensive and accurate. Applicants should ideally use completed matrices to identify and discuss issues with consultees, including the relevant statutory consultees. Ultimately this approach should also assist with identifying a robust suite of mitigation measures submitted with the application for development consent that might otherwise remain unresolved and require exploration during the examination. This process may need to be repeated during the pre-application stage and should be based on the most up to date list of developments possible. The CEA should include a summary of any such consultations undertaken and evidence of any agreements reached”.*

**N1.3.4** In relation to the ongoing process of CEA, regard is also being given to Advice Note 9 *Using the Rochdale Envelope’* (July 2018, PINS) that sets out the approach to be adopted for cumulative assessments where applicants are following a parameters-led (or worst case) approach to assessments, which is the approach being followed for the Proposed Development. Paragraph 4.13 states that applicants should:

*“- ensure that interactions between aspect assessments are taken into account relevant to the worst case scenario(s) established and that careful consideration is given to how these are assessed; and*

*- ensure that the assessment of the worst case scenario(s) addressed impacts which may not be significant on their own but could become significant when they inter-relate with other impacts along or cumulatively with impacts from other development (including those identified in other aspect assessments”*

**N1.3.5** Other guidance taken into account in the ongoing CEA process includes Highways England's Design Manual for Roads and Bridges (DMRB) Volume 11.

**N1.3.6** The Applicant has also had regard to comments received from PINS in its EIA Scoping Opinion (November 2018). Details of how these comments have been addressed are provided in Appendix B1 to this PEIR.

## **N1.4 Structure of Chapter**

**N1.4.1** This chapter is divided into the following sections:-

- N1.0 – Introduction and Background – including a brief summary of the key legislative and best practice background that has been taken into account;
- N2.0 – Scope and Methodology – describes the methodological approach utilised to conduct the cumulative assessment and its scope. This includes reference to the list of other developments in the surrounding area that have been taken into account;
- N3.0 – Inter-relationship of Effects – this reviews the interactions with aspect assessments provided in this PEIR to identify whether additional mitigation is required that has not otherwise been identified;

- N4.0 – Zone of Influence – this describes the areas within which effects from the Proposed Development may arise and therefore cumulative effects need to be taken into account;
- N5.0 – Current Outcomes from Cumulative Assessment – this describes the outcomes from the ongoing process of reviewing cumulative effects as part of the EIA process;
- N6.0 – Summary and Conclusions – including a review of any additional mitigation measures that may be required as a result of the assessment; and
- N7.0 – Abbreviations.



## N2.0 SCOPE AND METHODOLOGY

### N2.1 Introduction

N2.1.1 This section explains the approach being adopted by the applicant in undertaking the CEA associated with the Proposed Development. It also sets out the current stage of work and how consultees can assist in taking the assessment forward as the DCO application is prepared.

N2.1.2 It explains in particular how the approach relates to the sequential or staged process for assessment described in PINS Advice Note 17:

- Stage 1 – establishing the Zone of Influence (ZOI) for the Proposed Development and identifying a 'long list' of other developments;
- Stage 2 – applying inclusion or exclusion criteria to the 'long list' to refine this into a 'short list' for the purposes of CEA;
- Stage 3 – gathering information to assist in the process of CEA for the 'short list'; and
- Stage 4 – assessment work and reporting.

### N2.2 Methodological Approach

#### Part 1 - Interrelationship Between Effects

N2.2.1 A review has been carried out to identify where, for the Proposed Development, the accumulation of effects on particular receptors, and the relationship between those effects, may give rise to a need for additional mitigation not previously identified. The assessment has focused only on those issues where the impact identified in the aspect assessments are significant; however, reference is made to other 'insignificant effects' where particular receptors may be affected by a number of minor impacts that may require consideration.

N2.2.2 To conduct this analysis, the key residual effects identified in this PEIR have been reviewed and are summarised in Section N3.0 as a means to identify those sensitive receptors most likely to be affected. It is with regard to those receptors that the analysis of any additional impacts associated with the Proposed Development has been carried out.

N2.2.3 Information from this process is described to seek consultees inputs on whether the outcomes from this assessment are accurate and whether additional information exists that can assist in its refinement in the final ES for the Proposed Development.

#### Part 2 – Identifying the Zone of Influence

N2.2.4 Section 3.1 of PINS Advice Note 17 describes how applicants should determine the likely spatial ZOI for each environmental topic area. A tabular format for presenting the outcomes from this review is recommended and this is presented in Section N4.0 of this chapter.

#### Part 3 – Cumulative Effects with Other Developments

N2.2.5 As described in Section N1.0, the applicant is carrying out the CEA in accordance with PINS Advice Note 17: Cumulative Effects Assessment and the four stage approach set out in paragraph N2.1.1 above. After defining the ZOI for the various technical assessments, the applicant has undertaken a process of defining those developments requiring assessment. This is described below.



### Identifying the Long List of Developments

- N2.2.6 The identified ‘long list’ of developments with the potential to interact with the Proposed Development were selected by the planning departments of Sunderland City Council (SCC), South Tyneside Council (STC) and Gateshead Council (GC). The long list primarily comprised of sites located within 5 km of the Proposed Developments or schemes considered to be of significant scale beyond that threshold.
- N2.2.7 In addition to this, a review of the Strategic Housing Land Availability Assessments (SHLAA) for each local authority and of the relevant Local Plan or emerging Local Plan were considered, to identify any emerging large allocations that may be of relevance to the Proposed Development.
- N2.2.8 The long list received is provided at Appendix N1 and the plan at Drawing N1 identifies the location of those schemes that fall within the 5 km thresholds or just beyond that boundary.
- N2.2.9 On receipt, each development on the long list was given a unique identifier. The developments were also geographically ordered as follows:
  - Zone A – sites within the Proposed Development scoping boundary;
  - Zone B – sites up to 1 km from the Proposed Development scoping boundary;
  - Zone C – sites between 1 km and 2 km from the Proposed Development scoping boundary;
  - Zone D – sites between 2 km and 3 km from the Proposed Development scoping boundary; and
  - Zone E – sites beyond 3 km from the Proposed Development scoping boundary.
- N2.2.10 The geographical zones identified had regard to the ZOI identified for the various technical assessment areas (see Section N4.0).
- N2.2.11 The developments on the long list were also assigned a Tier grading as defined by the PINS Advice Note 17 and summarised below (Table N1).

**Table N1: Designation of Tiers for CEA (based on PINS Advice Note 17)**

Tier	Description
Tier 1	<ul style="list-style-type: none"> <li>- Under construction</li> <li>- Permitted application(s) whether under the PA2008 or other regimes but not yet implemented</li> <li>- Submitted application(s) whether under the PA2008 or other regimes but not yet determined</li> </ul>
Tier 2	<ul style="list-style-type: none"> <li>- Projects on the PINS Programme of Projects where a scoping report has been submitted</li> </ul>
Tier 3	<ul style="list-style-type: none"> <li>- Projects on the PINS Programme of Projects where a scoping report has not been submitted</li> <li>- Identified in the relevant Development Plan (and emerging Development Plans – with appropriate weight being given as they move closer to adoption) recognising that much information on other relevant proposals may be limited</li> <li>- 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</li> </ul>

## Refining the Long List of Developments

N2.2.12 The ZOI for each technical area has been applied to the long list to create a 'short list' applicable for assessment by each environmental discipline. Further detailed data gathering for key developments on this short list has been sought where available.

## Assessment and Identification of Mitigation

N2.2.13 Each environmental discipline has undertaken an assessment of the potential for cumulative effects and this process will continue as part of an iterative process up to the point of submission of the DCO application. The aim at this pre-application stage has been to identify possible cumulative effects and to engage with relevant parties and applicants to seek to 'build in' mitigation where at all possible. This is described further in this chapter. Comments from consultees are sought to identify whether further effects are anticipated that have not been identified to date.

N2.2.14 Whilst the process of CIA assessment is ongoing, the PINS Guidance Note 17 recommends that an assessment 'cut-off date' is identified. This is a date at which an applicant has stopped assessment temporarily for the purposes of reporting.

N2.2.15 In relation to this PEIR, the 'cut-off date' has been defined as the date at which information was received from each of the three local authorities in seeking information to feed into the long list. These dates are as follows:

- Sunderland City Council – 6 December 2018
- South Tyneside Council – 14 January 2019
- Gateshead Council – 6 February 2019

N2.2.16 A process of further reviewing the 'long list' and the 'short list' for assessment purposes will continue up to the point of submission of the DCO application for the Proposed Development.

## N3.0 INTER-RELATIONSHIP OF EFFECTS

### N3.1 Purpose of Chapter

N3.1.1 This section provides a brief review of the potential for synergistic effects in respect of identified sensitive receptors recorded in this PEIR. It seeks to understand whether, when the impact of individual technical aspects (which may be individually non-significant) are considered together, new significant effects on a particular receptor may arise that needs additional mitigation. An example of this could include the combined impact of noise, air quality and transport impacts on a residential dwelling.

N3.1.2 Sensitive receptors have been identified in individual chapters D to M of this PEIR. These receptors are those with varying degrees of sensitivity to environmental impact and change as a result of the Proposed Development. Regard has been given to the sensitivity of individual receptors to ensure consideration is given to those that are potentially the most susceptible to impact, taking account of the extent of impacts arising. The professional judgement of those undertaking the EIA, as well as topic specific criteria, legislation or guidance have been used to identify the degree of sensitivity.

### N3.2 Identification of Main Sensitive Receptors

N3.2.1 A review of the residual environmental effects identified in Chapters D to M of this PEIR has been carried out as well as identification of those sensitive receptors most likely to be affected. The table below (Table N2) provides a brief summary of the outcomes of this process.

**Table N2: Summary of Key Sensitive Receptors and Nature of Impact from Chapters D to M**

Environmental Topic	Sensitive Receptors	Nature of Residual Impact	Magnitude of Residual Impact
Air Quality	<ul style="list-style-type: none"> <li>- 400 Residential receptors within 350 m of the Site boundary or 50 m from routes used by construction vehicles (mainly located on the edge of Town End Farm or within the Proposed Development scoping boundary) or within 200 m of 'affected roads' that will be used in the operational phase of the Proposed Development</li> <li>- Barmston Pond (nature reserve) – effects only during operational phase</li> </ul>	Mainly dust soiling during proposed construction period but mitigation measures identified to be secured through the DCO	Not significant
Noise and Vibration	<ul style="list-style-type: none"> <li>- Strother House Farm (Follingsby Lane)</li> <li>- Travellers site (West Pastures Lane)</li> <li>- Houses on Downhill Lane (east of A19)</li> <li>- North Moor Farm (south of Follingsby Lane)</li> <li>- Hylton Bridge Farm/Hylton Grove Farm/The White House (Follingsby Lane)</li> <li>- Houses on Baltimore Avenue (east of A19)</li> <li>- Houses on A1290 Glover Road</li> </ul>	Weekday construction noise Vibration during proposed construction period Noise and vibration through operation of Site businesses Road traffic noise and vibration effects	The only significant effect is that for weekday construction noise assuming a worst case scenario. All other effects are not significant

Environmental Topic	Sensitive Receptors	Nature of Residual Impact	Magnitude of Residual Impact
Landscape and Visual	<ul style="list-style-type: none"> <li>- The Great North Heritage Trail</li> <li>- The setting of the footpath between Follingsby Lane and West Pasture Lane</li> <li>- The River Don Corridor</li> <li>- Properties around Town End Farm, Downhill and Hylton (east of the Proposed Development scoping boundary) with views of the Site and River Don corridor</li> <li>- Long views to Cleadon Hill and the Penshaw monument</li> <li>- Middle distance views across agricultural land from areas to the west of the site and from high ground around Boldon to the north</li> </ul>	Urbanising effect of the development	Initially significant (mainly minor or moderate adverse) and major adverse for receptors within the Proposed Development scoping boundary – reducing over time as landscaping matures.
Cultural Heritage	<ul style="list-style-type: none"> <li>- Hylton Grove Bridge (Grade II listed) – within Site boundary</li> <li>- Archaeological remains within Site (enclosure and ditch)</li> <li>- Number of listed buildings and a Conservation area between 0.5 km and 1.2 km from the Site boundary</li> <li>- Bowes Railway (2.7 km from Site) and Hylton Castle (1 km from Site) – both Scheduled Ancient Monuments</li> <li>- Number of non-designated assets within or within 500 m of the Site</li> </ul>	Mainly due to change in setting/views of asset Loss of archaeological remains within the Site (enclosure and ditch)	Mainly neutral or minor adverse (not significant) Significant adverse effect on archaeological remains within the Site but mitigation proposed to reduce impact
Waste	<ul style="list-style-type: none"> <li>- Capacity of waste facilities in the NE region</li> </ul>	Low reduction in waste facility capacity	Not significant
Water Resources and Flood Risk	<ul style="list-style-type: none"> <li>- Surface water in the River Don and Usworth Burn</li> <li>- Drains receiving site discharge</li> <li>- Neighbouring land at potential risk of increased flooding</li> <li>- Land within the DCO application boundary (from flooding)</li> </ul>	Possible discharge of pollutants to water (if mitigation not secured) New drainage systems implemented across the site	Not significant
Geology, Ground Condition and Groundwater	<ul style="list-style-type: none"> <li>- Soils and ground water</li> <li>- construction workers during proposed construction period (high importance)</li> <li>- Coal resources (regional mineral interest)</li> <li>- Operational workers/visitors</li> </ul>	Changes in groundwater regime and land/water quality and associated impact on human health (mitigation identified)	Minor adverse but with the potential to reduce to low or negligible

Environmental Topic	Sensitive Receptors	Nature of Residual Impact	Magnitude of Residual Impact
	[other receptors are at very low or low risk and have therefore been excluded for the purposes of this assessment]		
Ecology and Biodiversity	<ul style="list-style-type: none"> <li>- Durham Coast SAC (6.4 km from the Site)</li> <li>- Northumbria Coast Ramsar and Northumbria Coast SPA (6.5 km from the Site)</li> <li>- Five SSSIs within 3 km of the Study Area (as defined in the chapter)</li> <li>- 20 Local Nature Reserves within 10 km of the Study Area (as defined in the chapter) of which 2 are within 2 km</li> <li>- Elliscope Farm/Hylton Bridge Local Wildlife site (within the Site)</li> <li>- River Don, East House Local Wildlife Site (within the Site)</li> <li>- Proposed River Don and Usworth Burn Local Wildlife Sites</li> <li>- Arable and Scattered Shrub habitat within the Site</li> <li>- Semi-natural/plantation woodland within the Site</li> <li>- Otter and Water vole (River Don)</li> <li>- Brown Hare</li> <li>- Badgers</li> <li>- Bats</li> <li>- Barn Owl (roost at West Moor Farm)</li> <li>- Breeding Birds</li> <li>- Passage and Over Wintering Birds</li> </ul>	Degradation of features and loss of features plus potential for mortality mitigated through delivery of ELMA, Habitat Management Plan and Biodiversity Construction Environmental Management Plan	Moderate Beneficial over medium to long term
Access and Transport	<ul style="list-style-type: none"> <li>- Nissan and Nissan staff</li> <li>- Washington Community Fire Station</li> <li>- Schools and nurseries</li> <li>- Sites of ecological value (Barmston Pond local nature reserve and Hylton Dene Local Nature Reserve)</li> <li>- Residential Areas (Usworth, Town End Farm, Hylton Castle, Castletown, West Boldon)</li> <li>- Access to Nissan from A1290</li> <li>- Traveller's site, West Pastures Lane</li> <li>- Elm Tree Farm Garden Nursery</li> </ul>	Severance of routes; driver stress and delay; pedestrian and cyclist amenity and delay; fear and intimidation (from traffic) and highway safety)	Minor to moderate adverse with the potential for these to be reduced over time with implementation of Travel Plan measures

Environmental Topic	Sensitive Receptors	Nature of Residual Impact	Magnitude of Residual Impact
Socio-Economics	<ul style="list-style-type: none"> <li>- Local workers (construction and operational phases of the Proposed Development)</li> <li>- Local residents</li> <li>- Local businesses</li> <li>- Non-motorised users accessing the site</li> <li>- The advanced manufacturing and automotive businesses</li> </ul>	<p>Creation of new construction (and supply chain) jobs and additional economic output</p> <p>Delivering new office, industrial and ancillary floorspace to create new employment opportunities and additional permanent economic output</p> <p>Improved amenity for NMUs</p> <p>Increased demand for housing</p>	<p>Significant beneficial effect on employment and economic output</p> <p>Minor beneficial (not significant) effect in improving amenity for NMUs</p> <p>Minor adverse (not significant) effect on local residents if planned housing delivery in the area is not achieved</p>

N3.2.2 From the above summary, there are several receptors that appear to be relevant to more than one environmental topic and for which it is necessary to consider the inter-relationship between any potential for likely significant impacts arising. The key sensitive receptors requiring further investigation are:

- Residents of Town End Farm on the western edge of the settlement closest to the Site;
- The River Don and Usworth Burn and immediately adjacent land;
- Hylton Grove Bridge;
- Traveller’s site (to the north);
- Local road users;
- NMUs;
- Local workers; and
- Local businesses.

N3.2.3 The inclusion of a particular receptor on the above list does not imply that these are the only receptors that may be subject to the potential for likely significant environmental impacts. As described in the table above (Table N2), other receptors may be subject to potential likely significant environmental impacts but only in relation to one particular environmental aspect.

### N3.3 Inter-relationship of Effects

N3.3.1 This section reviews whether the inter-relationship of impacts on the key sensitive receptors identified above give rise to the potential for new significant effects that may, in turn, give rise to the potential need for additional mitigation. Each receptor is considered in turn.

### **Residents of Town End Farm (on the western edge of the settlement closest to the site)**

**N3.3.2** As described above, residents may be subject to:

- Non-significant adverse air quality impacts during the construction period due to dust soiling;
- In a worst case scenario assessment, to adverse weekday construction noise impacts;
- Minor or moderate significant adverse effects for those viewing the Site due to urbanisation of a currently undeveloped site (nature of effect will reduce over time as landscaping matures);
- Minor to moderate adverse impacts in relation to transport and accessibility that will reduce over time as Travel Plan measures are implemented and the junction improvements are completed;
- A significant beneficial effect due to an increase in employment opportunities and increased economic output that they may take advantage of due to their proximity to the Site; and
- A minor beneficial impact in amenity if residents take advantage of new routes to and through the Site for recreation or accessibility.

**N3.3.3** The inter-relationship of impacts in relation to residents on the western edge of Town End Farm (closest to the Site) has the potential to give rise to impacts in a worst case scenario. These properties fall within the ZOI of a number of environmental aspects. These impacts are both beneficial and adverse in nature and of varying magnitude. Communication and the implementation of measures to allow residents to report any particular issues expeditiously should be put in place to address any concerns as the construction and development of the Proposed Development is brought forward.

### **The River Don and Usworth Burn and immediately adjacent land**

**N3.3.4** As described above, these receptors may be subject to:

- Minor or moderate significant adverse effects due to the urbanisation of the surrounding area; however also raising the importance of the corridor in landscape terms in acting as a green buffer to prevent the coalescence of built up areas;
- In a worst case scenario assessment, minor effects on groundwater that has the potential to reduce to low or negligible impacts with the implementation of further mitigation measures; and
- Moderate beneficial ecological and biodiversity impacts over the medium to long term through the delivery of new habitat management measures embedded in the Proposed Development.

**N3.3.5** There is the potential for inter-relationship of effects to create a largely significant beneficial effect on this corridor. This depends on the successful implementation and maintenance of the range of habitat management and water management regimes identified as part of this PEIR. This will need to be incorporated as part of the forthcoming DCO for the Proposed Development.

### **Hylton Grove Bridge (Grade II Listed)**

**N3.3.6** As described above, this receptor may be subject to:

- For visitors or users of this asset, there is the potential for significant weekday construction noise impacts in a worst case scenario;
- A minor/moderate adverse (significant) effect on the landscape setting of this asset due to the urbanisation of the surrounding area but this is likely to reduce over time as landscaping matures;
- A minor adverse (not significant) impact on the feature in heritage terms (similar to the landscape and due to the change in setting and views of the asset);



- A non-significant but beneficial impact in the long term due to changes in the drainage regime that will reduce the risk of flooding over time;
- Moderate beneficial significant ecological impacts over the medium to long term in relation to the ecological receptors close to the asset (Local Wildlife Site); and
- Beneficial non significant access impacts due to the use of the bridge in the long term by NMUs.

N3.3.7 The Hylton Grove Bridge asset may be subject to a number of adverse and beneficial significant and non-significant impacts over the short, medium and long term. It is considered that, balanced together, these could lead to an overall beneficial impact on the asset. However, the successful implementation of mitigation measures (as described in the PEIR, as they relate to this asset) will ensure these overall benefits occurs over time.

### Traveller's site (to the north)

N3.3.8 As described above, these receptors may be subject to:

- Non-significant adverse air quality impacts during the proposed construction period for the Proposed Development due to dust soiling;
- Adverse weekday construction noise impacts (in a worst case scenario assessment);
- Minor or moderate significant adverse effects for those viewing the Site due to urbanisation of a currently undeveloped site (nature of effect will reduce over time as landscaping matures);
- Minor to moderate adverse impacts in relation to transport and accessibility due to a change in access arrangements to the Site;
- A significant beneficial effect due to an increase in employment opportunities and increased economic output that they may take advantage of due to their proximity to the Site; and
- A minor beneficial impact in amenity if residents take advantage of new routes to and through the Site for recreation or accessibility.

N3.3.9 The inter-relationship of impacts in relation to residents of the traveller's site (to the north of the Proposed Development) has the potential to give rise to impacts in a worst case scenario. The site falls within the ZOI of a number of environmental aspects. These impacts are both beneficial and adverse in nature and of varying magnitude. Communication and the implementation of measures to allow occupiers within the Site to report any particular issues expeditiously should be put in place to address any concerns as the construction and development of the Proposed Development is brought forward.

### Local Road Users

N3.3.10 As described above, these receptors may be subject to:

- Minor or moderate significant adverse effects for those viewing the Site due to urbanisation of a currently undeveloped site (nature of effect will reduce over time as landscaping matures); and
- Minor to moderate significant adverse effects in relation to temporary and permanent severance of routes and driver stress and delay. However, there is potential for these to reduce over time as the proposed road improvements and Travel Plan measures (described in Chapter L) are implemented.

N3.3.11 A short term adverse significant effect may occur due to the inter-relationship of the above two aspects on local road users. However, these effects are expected to reduce over time (and may in fact become

beneficial impacts). A robust communication strategy is proposed to reduce the significance of adverse impacts that occur (at least in the short term) as outlined above.

### Non Motorised Users

N3.3.12 As described above, these receptors may be subject to:

- Adverse weekday construction noise impacts (in a worst case scenario assessment);
- Minor or moderate significant adverse effects for those viewing the Site due to urbanisation of a currently undeveloped site (nature of effect will reduce over time as landscaping matures); and
- Minor to moderate significant adverse effects in relation to temporary severance of routes and a reduction in amenity and increased delay as routes are temporarily diverted during the proposed construction period of the Proposed Development. In the long term, these impacts are likely to be beneficial in nature (significant and non-significant) in providing improved facilities for users in the form of new bridge crossings and routes through the site.

N3.3.13 A short term adverse significant effect may occur due to the inter-relationship of the above three aspects on non-motorised users of the Site during the proposed construction periods for the Proposed Development. These effects are expected to be replaced with largely significant and non-significant beneficial impacts in the long term, during the operational period of the Proposed Development. It is anticipated that communication of changes to routes and accessibility during the construction period of the Proposed Development will work to reduce the significance of adverse impacts that occur as outlined above.

### Local workers

N3.3.14 As described above, these receptors may be subject to:

- Adverse weekday construction noise impacts (in a worst case scenario assessment);
- Possible risks to on-site workers due to impacts of pollutants in the groundwater during the construction and operational phases (in a worst case scenario assessment);
- Minor or moderate significant adverse effects for those coming into the Site due to the urbanisation of a currently undeveloped site. The sensitivity of these users to this effect is less than those living in proximity to the Site and these impacts will reduce over time as landscaping matures;
- Temporary adverse minor and moderate significant adverse impacts for workers travelling to the Site (by vehicular or non-motorised means) but these are likely to reduce to non-significant and beneficial impacts over time as the new infrastructure is brought into operation. This will improve accessibility to the Site for local workers; and
- Significant beneficial effect on employment opportunities in the construction and operational periods of the Proposed Development.

N3.3.15 Local workers may be subject to a range of significant and non-significant adverse and beneficial short and long term impacts as a result of the Proposed Development. It is anticipated that these receptors are likely to be more sensitive to the beneficial impact of the new job opportunities than the other impacts identified. It is expected that the successful implementation of mitigation measures identified in this PEIR will reduce the significance of these impacts to workers visiting the Site.

## Local businesses

N3.3.16 As described above, these receptors may be subject to:

- Potential non-significant adverse air quality impacts during the proposed construction period of the Proposed Development due to dust soiling and, in a worst case scenario assessment, to adverse construction noise impacts (these potential effects are dependent upon the location of the local businesses to the Site);
- Minor or moderate significant adverse effects for those coming into the site due to the urbanisation of a currently undeveloped site (this is dependent upon the location of the local businesses to the Site). The sensitivity of these users to this effect is less than those living in proximity to the Site and these impacts will reduce over time as landscaping matures;
- Temporary adverse minor and moderate significant adverse impacts for workers travelling to the businesses (by vehicular or non-motorised means) as well as for customers and those delivering to businesses. However, these potential effects are likely to reduce to non-significant and beneficial impacts over time as the new infrastructure is brought into operation; and
- A significant beneficial effect due to an increased economic output in the area and due to increased opportunities in terms of Site availability for businesses in the advanced manufacturing and automotive businesses to address identified needs.

N3.3.17 Local businesses are anticipated to be subject to a range of significant and non-significant adverse and beneficial short and long term impacts as a result of the Proposed Development and depending on their proximity to the Site. The successful implementation of mitigation measures identified in this PEIR is expected to reduce the significance of these impacts to local businesses and enhance the economic benefits and beneficial impacts in the medium to long term.

## N3.4 Summary

N3.4.1 There are several receptors affected by the Proposed Development that have the potential to be affected by a range of environmental aspects. The effect of mitigation measures identified in this PEIR will work to reduce any adverse synergistic effects and it is likely that, for several aspects, any temporary adverse effects will reduce or become beneficial in the medium to long term. Communication and consultation with those receptors affected by the assessment above will assist in ensuring that any concerns arising can be addressed as soon as they arise. The mitigation measures identified are all capable of being secured through their incorporation into the Proposed Development as an embedded measure or through Requirements included in the DCO.

## N4.0 ZONE OF INFLUENCE

### N4.1 Defining the Zone of Influence

N4.1.1 This section provides a summary of the likely spatial ZOI for each environmental topic area and has been provided in a tabular format below (Table N3) as recommended by PINS Advice Note 17.

**Table N3: Zone of Influence for Each Environmental Topic Area**

Environmental Topic	Zone of Influence
Air Quality	Construction dust – 350 m from the boundary of the Site or 50 m from the route(s) used by construction vehicles on the public highway, up to 500 m from the Site entrance Construction traffic – 200 m from each side of all affected roads Operational traffic – 200 m from each side of all affected roads
Noise and Vibration	Up to 1 km from the boundary of the Proposed Development as any cumulative commercial/industrial noise beyond 1 km of the Site is likely to be below the background noise levels in the assessment 'study area' (as defined in Chapter E of this PEIR) which is dominated by road traffic
Landscape and Visual	The ZOI has been determined to align with the Zone of Theoretical Visibility (ZTV) as defined in Chapter F of this PEIR
Cultural Heritage	Up to 1 km from the boundary of the Proposed Development which accords with the cultural heritage 'study area' as defined in Chapter G of this PEIR
Waste	Wide ZOI covering the North East Region relating to the catchment area for available waste void space. However likely to only be relevant for large scale development projects where significant quantities of waste will be generated.
Water Resources and Flood Risk	Locations within the catchment area of the River Don and within approximately 500 m of surface watercourses of the River done and its tributaries. Plus all locations within approximately 500 m of the Proposed Development boundary and those that may connect into the immediate discharge location of the culverted watercourse at Washington Road.
Geology, Ground Condition and Groundwater	Restricted to developments within the Site boundary.
Ecology and Biodiversity	Up to 2 km from the Site boundary as defined by professional judgement.
Access and Transport	Extensive ZOI covering much of the sub-region and included in a transport model utilised for the purposes of assessment and considered in Chapter L of this PEIR. Within the traffic model, future year housing and employment developments are included, along with proposed highway infrastructure schemes and other developments within the region that could influence the traffic in the 'study area' (as defined in Chapter L of this PEIR). The traffic model considered other developments in the wider region, in terms of volumes that these developments are expected to generate and any expected change in the pattern of traffic on the highway network. The region within which

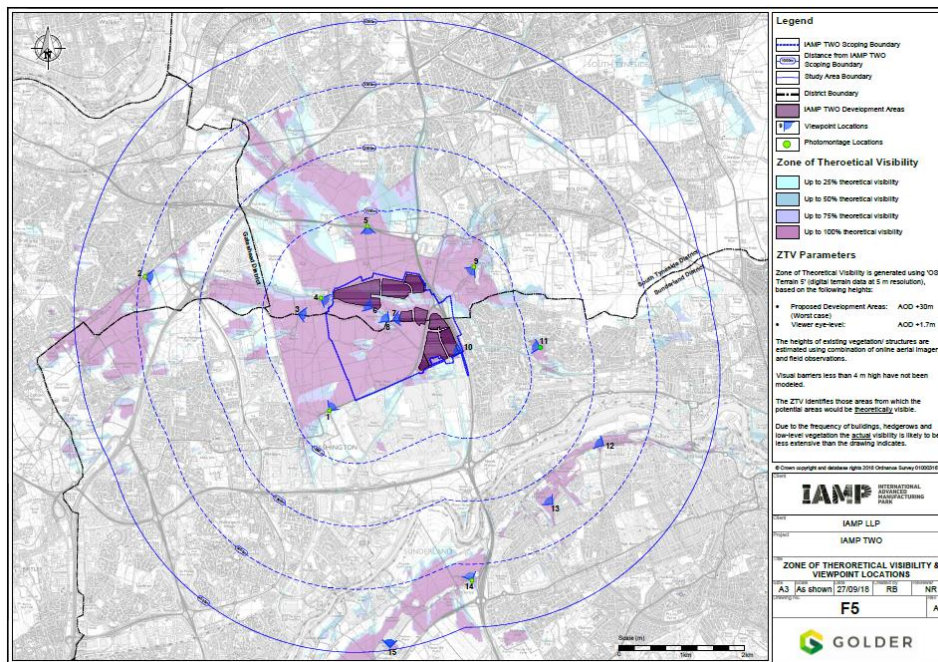
Environmental Topic	Zone of Influence
	developments have been identified for inclusion in the traffic model includes Newcastle, Gateshead, North Tyneside, South Tyneside and Sunderland.
Socio-Economics	The ZOI extends to an area comprising of 5 local authorities as defined in Chapter M of this PEIR. Further screening of developments within this area have focused on the scale and nature of development with only schemes above 100 residential units and major employment/commercial/leisure/community infrastructure developments being taken into account.

N4.1.2 As recommended by PINS Advice Note 17, these ZOI will be mapped and this information will be presented in the final ES submitted with the DCO application for the Proposed Development.

## N4.2 Summary

N4.2.1 The overall ZOI for the Proposed Development varies significantly for each environmental topic area but the following key conclusions can be drawn that are relevant to the cumulative assessment for the Proposed Development:

- Within the Site boundary – all environmental topics require consideration;
- Within 1 km from the Site boundary – all environmental topics with the exception of ground conditions require consideration but with potential effects diminishing with distance from the Site in relation to air quality and water resources (except for developments extending along the River Don corridor broadly to the east and west from the Site);
- Between 1 km and 2 km from the Site boundary – all environmental topics with the exception of air quality, noise and vibration, cultural heritage plus water resources (except for developments extending along the River Don Corridor) and landscape and views (except for the ZTV - Figure N1 - that extends towards the north and west from the site (plus areas of higher ground to the south); and



**Figure N1: Extract from LVIA (Chapter F) showing the ZTV extending from the site (see Chapter F for full size version of this figure)**

- Beyond 2 km – only transport, socio-economics and waste are relevant and with specific filtering applied to relevant developments. Cumulative effects for landscape and views can extend along a zone of visual influence that extends towards the north and west from the Site (plus areas of higher ground to the south) and water resources and flood risk extends along the River Don corridor.



## N5.0 CURRENT OUTCOMES FROM CUMULATIVE ASSESSMENT

### N5.1 Introduction

N5.1.1 This section describes the key outcomes emerging from the ongoing process of cumulative assessment in relation to the Proposed Development. It has been prepared to provide consultees with an understanding of likely significant cumulative effects and the response of the Applicant to address these impacts and build mitigation into the Proposed Development where required.

### N5.2 Key Developments Identified in CEA to date

N5.2.1 The application of the ZOI to the ‘long list’ of developments provided by the local authorities identified a number of developments for assessment under each of the technical disciplines. From these, there are several key developments that emerge in the zone up to 2 km from the Site from which it is clear that there is an increased potential for likely significant cumulative effects to arise. The developments are all those that are either industry or infrastructure based and of a significant scale or of a proximity to the Site. They are also predominantly with consent or under construction at present or on a similar timescale to that for the Proposed Development.

N5.2.2 These are summarised in the table below (Table N4) along with an indication of the environmental disciplines that have considered each as part of the cumulative assessment. For full details please see the complete ‘long list’ of developments at Appendix N1.

**Table N4: Key Developments Identified in ongoing CEA where significant cumulative effects are more likely**

Geographical Assessment Zone	Tier	
A – sites within the Proposed Development scoping boundary	1	<ul style="list-style-type: none"> <li>- IAMP ONE Phase One (ID SCC 136)</li> <li>- A19 Downhill Lane Junction Improvements (DCO)</li> <li>- A19 Testo’s Roundabout Improvements (DCO)</li> </ul>
	3	<ul style="list-style-type: none"> <li>- IAMP ONE Phase Two (ID SCC 275)</li> </ul>
B – sites up to 1 km from the IAMP TWO Scoping Boundary	1	<ul style="list-style-type: none"> <li>- Developments at Nissan Motor Manufacturing (UK) Ltd (IDs SCC137, SCC138, SCC140, SCC233, SCC235, SCC237, SCC239)</li> <li>- Land at Hillthorne Farm (IDs SCC133, SCC240)</li> <li>- Land at Turbine Way (ID SCC 135)</li> <li>- Washington Road highway improvements (ID SCC238)</li> <li>- Development at Unipres UK Ltd (ID SCC259)</li> </ul>
C – sites between 1 km and 2 km from the Proposed Development scoping boundary	1	<ul style="list-style-type: none"> <li>- Developments associated with Nissan Motor Manufacturing (UK) Ltd including the Future Technology Centre (IDs SCC234, SCC236)</li> <li>- Land at the Pattinson Industrial Estate (B8 development) (ID SCC244)</li> <li>- Land at Hillthorn Farm (Renewable Energy Centre) (ID SCC276)</li> <li>- Developments at Follingsby Park South (IDs STC17, GC18, GC07, GC09, GC10, GC11, GC13, GC16, GC17, GCLP01, GCLP02, GCLP25, GCLP26, GCLP27)</li> </ul>



N5.2.3 Whilst there are several other developments within the zone up to 2 km, these are primarily residential schemes of a relatively moderate scale or schemes that are unaffected by the Proposed Development.

N5.2.4 Schemes beyond 2 km are only relevant for a few of the technical disciplines and, as described in Section N4.0, the majority of these disciplines have built in consideration of wider developments into the assessments described in Chapters D to M of this PEIR. This reduces the potential for further cumulative effects that have not been previously identified, to arise beyond the 2 km from the Site zone.

## N5.3 Emerging Outcomes from Cumulative Assessment

### Assessment Zone A (Developments within the EIA Scoping Boundary)

N5.3.1 The CEA of the Proposed Development and IAMP ONE identified the potential for:

- Cumulative dust impacts should the construction programmes overlap requiring the implementation of dust management and mitigation measures;
- Cumulative industrial noise due to the overall floorspace arising from IAMP ONE and the Proposed Development requiring both to seek to mitigate noise impacts as far as is possible through management measures;
- Vehicular noise and air quality cumulative effects have been determined to be negligible and measures to ensure this is the case through traffic management measures are built in to both the approved IAMP ONE development and the emerging proposals for the Proposed Development;
- A minor and non significant cumulative effect is anticipated in relation to non-designated cultural heritage assets within the ZOI;
- There will be general urbanising effect on the landscape that is likely to give rise to potentially significant adverse cumulative effects with both schemes being brought forward together but this will reduce over time as landscaping grows within both IAMP ONE and the Proposed Development. The current construction of IAMP ONE serves to reduce the sensitivity of the baseline condition when considering cumulative effects that reduces the adverse magnitude of any landscape and visual effects;
- No significant cumulative impacts are anticipated in relation to transport as the potential for cumulative effects has been built into the traffic model for the Proposed Development and other surrounding developments and measures incorporated to ensure the management of issues as schemes are brought forward;
- The effect on non-motorised users (pedestrians, cyclist, equestrians) may have an adverse short term cumulative effect if the two schemes are constructed simultaneously but both schemes seek to keep the need for temporary diversion of routes to a minimum and will be bringing forward an improved network to enhance movement in the long term;
- The drainage systems for IAMP ONE and the emerging design for the Proposed Development have been and are being designed together by the same team to ensure that mitigation is embedded and ensuring that any cumulative effects will be, at worst, minor adverse in magnitude. This would occur in the construction and operational phases of the Proposed Development;
- Due to the cumulative land take of both IAMP ONE and the Proposed Development, a displacement of bird species is anticipated that is mitigated in part through the delivery of the ELMA being brought forward through both schemes;

- There will be a temporary moderate or substantial beneficial socio-economic cumulative impact due to the generation of 224 permanent, direct and 339 additional indirect/induced jobs per annum during the construction period of the Proposed Development and a permanent substantial beneficial cumulative socio-economic impact due to the creation of up to 5,542 net additional full time equivalent jobs through IAMP ONE and the Proposed Development; and
- Some minor adverse temporary cumulative impacts can be anticipated in the event that housing delivery planned for by local authorities in the ZOI are not achieved. As such, it will be important to liaise with neighbouring authorities to ensure their timely delivery to support IAMP ONE and the Proposed Development.

**N5.3.2** The CEA of the Proposed Development with the Testo's and Downhill schemes has identified:

- That the inclusion of both schemes in the traffic model that has been used for assessment by HE and the applicant means that mitigation required to address issues has been built in to the developments where possible. A key component of this is the need for co-ordination between HE and the Applicant and further information is provided below on this issue;
- The implementation of all three schemes together will significantly improve access and movement through the area giving rise to a positive cumulative impact in the local area and improving access for workers to the new employment uses within the Proposed Development;
- There will be a significant cumulative beneficial impact on non motorised users as both projects have incorporated schemes to improve facilities for users in the long term;
- As the two projects have been built into the traffic model used by the air quality and noise assessors, then it is also the case that the potential for significant adverse cumulative effects in relation to both environmental matters has been reduced as far as is possible but ongoing monitoring will ensure that this is the case as the schemes are brought forward; and
- There is the potential for significant cumulative visual impacts during the construction period of the Proposed Development and for this to have a general urbanising effect in the long term that may be significant.

### **Assessment Zone B (Developments up to 1 km from the EIA Scoping Boundary)**

**N5.3.3** The key outcomes from the CEA at this stage that are relevant to an assessment of the potential for cumulative impacts when the Proposed Development is considered with those up to 1 km from the EIA scoping boundary has identified the following:

- In relation to air quality, cumulative impacts due to dust during construction are considered unlikely as there is limited potential for overlap between the identified schemes and the Proposed Development. In the operational stage, all occupiers will comply with legislative requirements to ensure that significant cumulative effects are unlikely to arise;
- There is potential cumulative industrial noise impact in the operational phase of the Proposed Development but this is considered not likely to be significant;
- No effects on cultural heritage assets within the ZOI are anticipated when considering the Proposed Development alongside schemes within Assessment Zone B;
- The location of the developments within Assessment Zone B are all on brownfield sites amongst other industrial buildings. No ecological pathways or synergies within the Proposed Development are anticipated that may give rise to significant cumulative effects;

- As the majority of the developments considered in Assessment Zone B are within existing industrial areas no significant cumulative effects in relation to landscape and views can be expected;
- The developments considered are all included within the transport model that has been assessed within this PEIR and therefore consideration of cumulative impacts has been built into the assessment work described in Chapter L. No further cumulative effects are considered necessary, although this is dependent on careful management and monitoring and engagement between all parties; and
- Development of the developments in Assessment Zone B and the Proposed Development will together give rise a significant beneficial socio-economic impact in relation to employment and investment in the area.

### **Assessment Zone C (Developments between 1 km and 2 km from the EIA Scoping Boundary)**

N5.3.4 The key outcomes from the CEA at this stage that are relevant to an assessment of the potential for cumulative impacts when the Proposed Development is considered alongside the range of major employment schemes and proposals within Assessment Zone C has identified:

- With the range of developments coming forward at Follingsby Park, a temporary short term minor beneficial cumulative effect is anticipated during the construction period of the Proposed Development due to new employment opportunities. In the long term operational period, a permanent Substantial beneficial cumulative effect is anticipated arising from new job opportunities;
- As for Assessment Zone B, the developments considered are all included within the transport model that has been assessed within this PEIR and therefore consideration of cumulative impacts has been built into the assessment work described in Chapter L. No further cumulative effects are considered necessary although this is dependent on careful management and monitoring and engagement between all parties; and
- As Zone B is outside the ZOI for air quality, noise, cultural heritage and (where relevant) for water resources and landscape and views, there is no or negligible potential for cumulative effects in relation to these environmental disciplines.

### **Assessment Zones D and E (Developments beyond 2 km from the EIA Scoping Boundary)**

N5.3.5 Beyond 2 km from the scoping boundary for the Proposed Development, the only relevant matters for consideration in respect of cumulative effects are those where the ZOI extends. This comprises waste, transport, socio-economics and, along certain defined corridors, for landscape and views and water resources. The following outcomes have been identified at this stage:

- The assessment has identified no potential cumulative effects in relation to water resources and landscape and views within Assessment Zones D and E;
- There is insufficient information for developments within this area to identify whether there is the potential for cumulative effects in relation to waste when considered alongside the Proposed Development. As such, a worst case scenario approach is being applied to mitigation associated with the Proposed Development to ensure a robust assessment and seek to ensure that a significant adverse cumulative impact on waste storage capacity does not arise;
- As noted above, the majority of developments on the long list have already been included in the traffic model for the Proposed Development and therefore the potential for cumulative effects has

been built into the Proposed Development as described in Chapter L of this PEIR. There are a relatively few number of, mainly, small residential developments in Zones D and E that have not been included in the traffic model but a review of these schemes has concluded that, whilst they may influence traffic routing they are unable to give rise to significant adverse cumulative effects;

- All schemes that are within 'Tier 1' have been taken into account in respect of the potential for cumulative socio-economic terms and in aggregate – in brief it is anticipated that they are likely to deliver in the region of 7,800 new homes and 95,000 sq m of employment floorspace. Having regard to standard assumptions surrounding build costs (BCIS, 2018) and employment densities (HCA Employment Densities Guide, 2015), the requisite capital invested is estimated to generate approximately 10,500 person years of employment (over the course of the Sunderland local plan period). This has the potential to deliver approximately 700 temporary direct construction jobs per annum over the course of the plan period with an additional 1,050 'spin-off' indirect/induced jobs in the wider supply chain per annum. In terms of operational employment, the delivery of Tier 1 scheme employment floorspace is likely to generate in the region 750 full time equivalent (FTE) jobs. Tier 3 schemes have also been considered and likely to deliver in the region of 3,200 homes and approximately 400,000 sqm of employment floorspace. This level of capital investment could facilitate an estimated 10,500 person years of employment, supporting approximately 700 temporary direct construction jobs per annum and a further 1,100 'spin off' jobs in the supply chain and related services per annum. In terms of operational employment, the delivery of Tier 3 scheme employment floorspace is likely to generate in the region 5,700 FTE jobs;
- As a result of this, and collectively the Tier 1 and Tier 3 cumulative schemes are assessed as having a temporary (long-term) substantial beneficial cumulative effect on construction and operational employment associated with the Proposed Development. Notwithstanding, in the event that all construction employment requirements come forward over a similar timeframe there is the potential risk of there being a shortage of skilled construction labour availability. In which case, this could give rise to adverse effects with regards to construction employment. However, this potential risk is considered to be very low given that the cumulative schemes are likely to be phased across a period of development; indeed, among the identified Tier 3 schemes are several emerging local plan allocations; and
- Chapter M indicates that the Proposed Development could give rise to additional demand for housing across the AOI. If all of the identified cumulative schemes came forward, this could result in the delivery of approximately 11,000 homes across the AOI which could significantly contribute towards meeting the housing requirements associated with the Proposed Development. Whilst this cannot be assessed with a great degree of certainty, it is anticipated that the cumulative socio-economic effects associated with housing are likely to be beneficial in overall terms.

## N5.4 Response

### Ongoing Assessment

- N5.4.1 As described earlier in this chapter the team are committed to an ongoing and iterative process of cumulative assessment up to the point of submission of the DCO application. This will allow ongoing review and the identification of new cumulative effects as they arise. The 'long list' of developments will be further updated as part of this process and details added as they become available to the team. This commitment to building cumulative assessment into the ongoing EIA process will ensure that new issues will be identified, and a strategy identified to address these, where they arise. It is however important to recognise that the process of engagement and monitoring of development activity by the team to date

means that the likelihood of major new development in the key assessment zones A to C coming forward that could significantly alter the conclusions reached in this PEIR are low.

- N5.4.2 Where mitigation measures are required to address the outcomes from the CEA, and it is within the power of the applicant to bring these forward, then these will be built into the Proposed Development or into the wording of the DCO where possible and appropriate.

### **Assessment of a Worst Case Scenario**

- N5.4.3 As described in paragraph N1.1.9 of this chapter PINS Guidance Note 9 explains how schemes relying on a parameter based (or worst case) approach to assessment should ensure that the worst case scenario also applies to the cumulative impact assessment. The team has taken this into account by assuming, for example, that where construction periods for certain developments is unknown that it is assumed that this period will overlap with that of the Proposed Development. This will ensure that the maximum extent of any cumulative impacts are identified and mitigation built in to the Proposed Development or the wording of the DCO.
- N5.4.4 Consideration is also being given as part of the CEA to the likelihood of developments or groups of developments coming forward simultaneously and the potential for cumulative impacts due to this interaction. Mitigation measures to address the worst case scenario will be built into the DCO where possible and appropriate.

### **Engagement and Liaison**

- N5.4.5 A key focus of the Applicant has been to seek to address cumulative effects at an early stage through close engagement with key parties bringing forward major development within the main ZOI for the Proposed Development. A summary of some of the key engagement to date is summarised below.

### **Appointment of a Development Partner**

- N5.4.6 Within Assessment Zone A are the two phases of the IAMP ONE scheme that have been taken into account as part of the CEA.
- N5.4.7 The IAMP ONE scheme promoter IAMP LLP recognises that the Project needs to be delivered in a coordinated and comprehensive manner, to fit with the policies in the AAP and to ensure that the impact of the project during construction and operation is controlled and minimised. A key element in this strategy has been the appointment of a Development Partner, Henry Boot Developments Limited (HBDL). The role of HBDL is to coordinate the implementation of the project – including all infrastructure, the ELMA and the construction of buildings on site – in accordance with the AAP, the planning permission granted for IAMP ONE and the Requirements within the DCO.
- N5.4.8 IAMP ONE is being constructed at present, as the first part of the wider IAMP project, and all elements of its infrastructure are part of the wider implementation strategy for the Site. For example, the new spine road for IAMP ONE includes the necessary connections to align with the Proposed Development; and the mitigation strategy for the ELMA aligns fully with the wider ELMA strategy for the whole Site.
- N5.4.9 This would have been challenging to achieve if the Site came forward in an uncoordinated, piecemeal fashion and the ability for the project to be clear on and present a coordinated mitigation strategy for cumulative effects would have been problematic. The contractual relationship between the LLP and HBDL means that coordination and timing of investment and mitigation measures across the wider site can be planned to ensure cumulative effects are limited as far as possible.

### *Engagement with Highways England*

- N5.4.10** Within Assessment Zones A and B are the two Highways England (HE) DCO schemes seeking improvements to the A19 (including improving accessibility to the Proposed Development site). One of these schemes (Testo's) has a confirmed DCO and the second (Downhill) has been accepted for Examination by PINS in February 2019.
- N5.4.11** The engagement with HE, to establish the potential cumulative effects of the Proposed Development and the necessary works to the adjacent A19, has been extensive and over a long period of time. Joint working with HE began in earnest as part of the preparation of the IAMP Area Action Plan in 2014 and also the re-commencement of proposals for the Testos junction by HE, after a period of delay due to national funding priorities and approvals. This period of joint working established that key to addressing cumulative effects were the need to also progress the Downhill Lane junction (DLJ) as a Major Project within HE, and the need for the Proposed Development to include the construction of a new internal spine road and bridge over the A19. Both of these mitigation measures were referred to and included in the adopted AAP.
- N5.4.12** Whilst these schemes address the cumulative effects of traffic and access during the longer term operational phase of the Proposed Development, the key cumulative impacts on local people and businesses will largely be experienced during the construction phase of the Proposed Development. PINS, in recognition of this, has required HE and IAMP LLP to jointly prepare an 'Inter-relationship Document' (IRD) which was firstly submitted by HE as part of its Testo's DCO Examination and updated recently to be included within the DLJ DCO submission, to be subject to Examination later in 2019. This document sets out the joint liaison between HE and IAMP in relation to three adjoining DCO's (Testo's, DLJ and IAMP TWO), the key areas of cumulative effect and the programming of the three schemes. HE and IAMP LLP has worked together to identify where peak cumulative construction effects could occur and to plan to avoid those. The IRD is reviewed by the Examining Authority and any cumulative impacts identified are discussed within the Examination – the latest and updated version of the IRD will be included within the IAMP TWO DCO submission.
- N5.4.13** A Requirement within the Testo's DCO was for HE to establish an 'A19 Testo's Traffic Management Forum'. This has been created as a monthly traffic management forum and held its first meeting in January 2019. IAMP LLP attend this, together with the local authorities, other stakeholders and local businesses, to discuss traffic management proposals associated with works impacting upon the A19, and to mitigate effects on road users as far as reasonably practicable. In due course, the coordination of works at DLJ and also the Proposed Development will be set out and coordinated by the forum, to ensure that cumulative effects during construction are carefully managed.

### *Engagement with NMUK*

- N5.4.14** Within Assessment Zones B and C are a number of developments and improvements to the existing Nissan factory complex to the south of the Site are being brought forward.
- N5.4.15** Nissan Manufacturing UK (NMUK) has been a key and constant stakeholder in the progression of the IAMP scheme and also the adjoining DCO projects on the A19 at Testos and DLJ. As a large international business, which employs in excess of 7,000 people at the plant and builds in excess of 2,000 cars per day, the movement of people and goods in and out of NMUK is a major consideration when assessing the impact of IAMP TWO during construction and operation. A key principle has been to limit disruption wherever possible to the plant - for example, the phasing of new highway infrastructure for IAMP TWO has taken into account the need to maintain access to certain junctions for NMUK on the A1290, until there is an alternative access route in place.



N5.4.16 An important cumulative effect during operation is consideration of NMUK shift changes, which can result in unnaturally large peaks in traffic flow on the local and strategic network. This is particularly evident in the morning peak and early traffic modelling highlighted that adding IAMP traffic to this already significant peak flow would exacerbate matters further. In cumulative effect terms, this would create an unacceptable position. Engagement on this matter has also involved Highways England, with much joint working to establish how this cumulative impact could be mitigated. A number of solutions have been identified and included within the IAMP TWO project:

- The Project includes for a new bridge over the A19, as part of the local road network, which enables IAMP TWO and NMUK traffic to exit IAMP without using DLJ, unless it particularly wants to or needs to. This has the effect of reducing the traffic levels through DLJ at peak times and improves flow on the local and strategic road network. This bridge also contains provision for non-motorised users, which, for cyclists in particular, improves the connectivity into NMUK and other businesses in and around NMUK.
- The A1290 is to become a dual carriageway. This serves to improve traffic flow through the development but also provides extra capacity during NMUK shift change to avoid congestion and potential queuing on the strategic network.

### *Engagement with the Host Authorities*

N5.4.17 Within Assessment Zones B and C there are also a number of developments of a significant scale in the designated Employment Zones and also a major employment development at Follingsby Park that will also be brought forward on a similar timescale. It is important for the three authorities within which these developments are located to work together to effectively monitor the implementation of measures to ensure that cumulative effects are minimised as far as is possible whilst the likely significant economic benefits are maximised.

N5.4.18 The Applicant has discussed the cumulative effects of the Proposed Development and other projects in the local area with the host authorities over the course of a number of years, and this was a key feature within the Area Action Plan (AAP) and also the IAMP ONE planning application process. The AAP was the first step in setting out the framework for IAMP and this included consideration of the potential impacts of the Proposed Development and how these would be mitigated. Access and Transport; and Ecology; were key features of that, to (i) establish a new road hierarchy for IAMP that would address the impact of the scheme but also the cumulative effects of investment on the nearby Enterprise Zones and at Follingsby; and (ii) to establish an ELMA that not only addressed the impacts of IAMP but also supported wider initiatives to create a wider positive cumulative effect on ecology and landscape. These are examples of where IAMP LLP has worked closely with stakeholders, including the host authorities, to assess cumulative effects and identify mitigation for those.

N5.4.19 A further measure to limit the cumulative effect of increased traffic in the local area of the Proposed Development has been the establishment of the 'IAMP Public Transport Working Group'. This group was formed as result of the IAMP ONE planning application and the need to identify measures to diverse modal choice by employees and reduce the cumulative effect of car travel. The Group comprises the host authorities, Gateshead Council, the Tyne & Wear passenger transport body 'NEXUS' and IAMP LLP – it meets regularly, and its remit is to develop and implement the public transport strategy for the Proposed Development. Currently, work is nearing completion on the viability assessment of a demand led bus service for IAMP ONE; the Applicant has supported the group with its ambitions to create a public transport hub at Wardley linked to the Tyne & Wear Metro and will be including a number of measures within the Proposed Development to enhance bus connections into and from the Site – all in agreement with the Group.



N5.4.20 In addition to physical cumulative effects as summarised above, the Applicant has also worked closely with the host authorities, NMUK and local training partners to consider the potential effect of a lack of skilled people to take up the new employment to be created at the Site. This was a key concern of local businesses i.e. new, incoming businesses would seek to recruit staff from local businesses by offering higher wages and therefore creating a significant negative cumulative effect lower down the supply chain. The parties have been working together in the development of a Skills Training Plan, to ensure that there are sufficiently skilled people in the local workforce to fill the new jobs created – thereby avoiding competition for labour amongst local businesses.

## N6.0 SUMMARY AND CONCLUSIONS

- N6.1.1 This chapter of the PEIR provides information on the approach to the assessment of likely significant cumulative effects in relation to the Proposed Development.
- N6.1.2 It has described the legislative and best practice background to the assessment and has explained that the process is iterative and ongoing and will be reported in full in the final ES submitted alongside the DCO application for the Proposed Development. It provides an update on key conclusions emerging from the assessment process with regard to:
- Inter-relationship of effects - these are the combined effects from different type of direct impacts attributable to the proposed development on a particular receptor; and
  - Cumulative effects – these are additional indirect effects that may arise when the Proposed Development is considered alongside other developments in the surrounding area.
- N6.1.3 Information has been provided on the key receptors identified in relation to the Proposed Development as part of this PEIR and where impacts associated with those receptors may inter-relate and further effects may arise. It has been defined that, based on information to date, that the mitigation emerging through the PEIR process works to reduce adverse effects. Communication and consultation with receptors affected by the inter-relationship of effects will also assist to ensure that any further impacts arising as construction and operations proceed can be addressed. Further inputs from consultees at the pre-application stage will also assist to further refine this assessment to feed into the final ES that will be submitted with the DCO application.
- N6.1.4 In accordance with best practice guidance by PINS, the applicant has recorded the current stage of assessment of potential cumulative impacts and has confirmed that the process is ongoing and will be recorded in the final ES submitted with the DCO application. However, it is considered that sufficient certainty exists to provide information on identified issues that have emerged from the EIA process up to March 2019.
- N6.1.5 This chapter describes the process of defining a 'long list' of proposed developments for inclusion in the cumulative assessment and how this has been subject to initial filtering with reference to the various ZOI of each technical aspect included in this PEIR, to create a 'short list' for CEA. Further inputs from consultees during the pre-application consultation stage will work to refine both the long list and the filtering process to further enhance the robustness of assessment as the EIA process proceeds up to submission of the DCO application. This is in full accordance with PINS guidance for assessments of this nature.
- N6.1.6 A number of key developments within or up to 2 km from the IAMP TWO Scoping Boundary have been identified for particular examination as part of the cumulative assessment and the likelihood for cumulative effects to arise has been identified based on information available as at March 2019 (when this PEIR was prepared). The Applicant is committed to working with the occupiers and developers of those schemes, to seek to reduce the potential for cumulative effects as far as is possible and this has been recorded in this chapter.

## N7.0 ABBREVIATIONS AND DEFINITIONS

- AOI – Area of Influence
- CEA – Cumulative Effects Assessment
- DCO – Development Consent Order
- DMRB – Design Manual for Roads and Bridges
- EIA – Environmental Impact Assessment
- EA – Environment Agency
- EIA – Environmental Impact Assessment
- GC – Gateshead Council
- HE – Highways England
- NO<sub>2</sub> – Nitrogen Dioxide
- PINS – The Planning Inspectorate
- PM<sub>10</sub> – Particles less than 10 µm
- SCC – Sunderland City Council
- STC – South Tyneside Council
- TA – Transport Assessment
- ZOI – Zone of Influence
- ZTV – Zone of Theoretical Visibility

# Drawings

**APPENDIX N1**

**Long List of Proposed  
Development Considered**



**[golder.com](http://golder.com)**