

Navigator Quarter

Land adjacent to Southampton Airport, Eastleigh

EIA Scoping Report



Prepared on behalf of:

blocwork (Eastleigh) LLP & SIAL

11th November 2024

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1. Introduction

1.1 Blocwork (Eastleigh) LLP/SIAL are seeking planning permission for an employment development, known as the Navigator Quarter, on land adjacent to Southampton Airport in Eastleigh. The application site is c34 hectares in area and mainly comprises previously undeveloped land.

1.2 The draft description of development is as follows:

Hybrid Planning Application - Outline application for development of the land adjacent to Southampton Airport to provide employment floorspace of up to 92,000 sqm (GIA) within Use Classes E(g) (ii & iii), B2 and B8 with ancillary offices and areas for service yards, car parking, landscaping, ancillary buildings and associated activities, and access from Wide Lane (all matters reserved except for access). Full planning application for initial infrastructure works and construction of new access road including site levelling and other engineering works.

1.3 Under Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations, 2017, the proposals exceed the applicable thresholds and criteria (0.5 hectare) relating to:

10. Infrastructure projects, (a) Industrial estate development projects.

1.4 The proposals therefore qualify as “Schedule 2 development”, and must be screened to determine whether EIA is required.

1.5 The scale of development and sensitivity of the local area are such that a likelihood of significant environmental effects cannot be ruled out. The applicant has therefore decided to undertake an environmental impact assessment (EIA) in any event, which will be reported in the form of an Environmental Statement (ES).

1.6 This report supports a request for a Scoping Opinion in accordance with Regulation 15 of the EIA Regulations.

1.7 The remainder of this report is organised as follows:

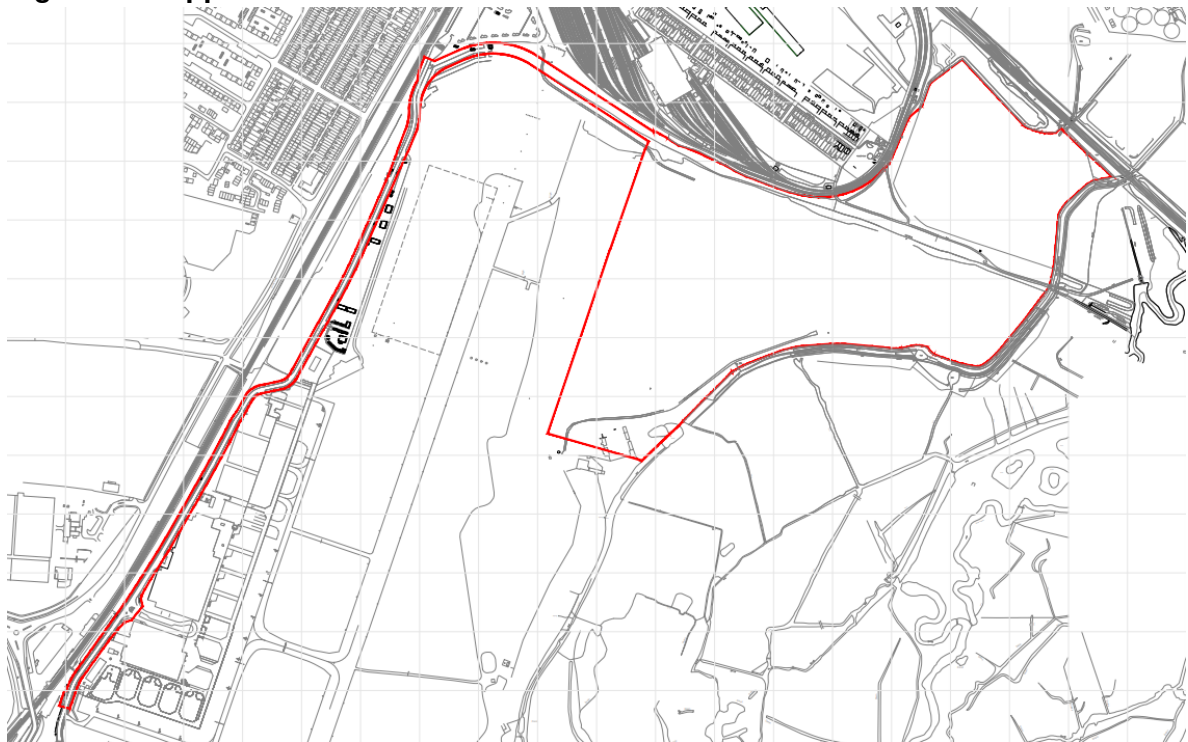
- Section 2 describes the site location and characteristics of the area;
- Section 3 describes the proposed development;
- Section 4 sets out our approach to scoping;
- Section 5 identifies the likely significant effects; and
- Section 6 sets out the proposed EIA scope and ES structure.

1.8 A series of appendices, relating to the scoping of specific topics, are attached.

2. Application Site and Environmental Context

- 2.1 The site is located immediately to the north-east of Southampton Airport and south-east of the Eastleigh train depot (operated by Arriva TrainCare). The area of the depot includes an early 20thC residential neighbourhood around Campbell Road. The main built-up area of Eastleigh is located to the west, beyond the airport.
- 2.2 The northern boundary of the site follows the Eastleigh to Portsmouth railway, whilst its eastern boundary forms the edge of the floodplain of the River Itchen, which is largely in a greenfield condition, including former gravel pits.
- 2.3 The application site is shown on **Figure 2.1**. In addition to the main part of the site for accommodating the employment use, an extension of its western boundary allows for the construction of an access road to link with Mitchell Way within the airport.

Figure 2.1: Application Site



- 2.4 The potential environmental sensitivities of the site and surrounding area are identified in the supporting appendices, and may be summarized as follows:

Air Quality

- There are two Air Quality Management Areas (AQMAs) in the surrounding area, associated with traffic emissions on the A335 and M3;
- Potentially sensitive air quality receptors comprise surrounding residential properties, community facilities and designated wildlife sites, notably the River Itchen SSSI/SAC.

Cultural Heritage

- The paleo-environmental context of the site indicates that the surrounding area may contain evidence of Palaeolithic, Bronze Age, Iron Age and Roman activity.
- The only designated built heritage assets in the vicinity comprise 20thC housing and railway structures, together with undesignated WWII structures.

Ecology

- The site adjoins the River Itchen SSSI/SAC and is connected ecologically to four non-statutory Sites of Interest for Nature Conservation (SINCs).
- It supports breeding populations of farmland/woodland birds (e.g. skylark), and hosts a modest number of wintering birds.
- High levels of bat activity associated with woodland and other foraging habitats have been recorded within the site, together with approximately 30 trees with a low/moderate roosting potential.
- The site supports a mosaic of habitats, including neutral grassland, mixed scrub and broadleaved/mixed deciduous woodland.

Flood Risk and Drainage

- The site lies within Flood Zone 1 (<1:1,000 probability of flooding from rivers).
- Small areas of the site are subject to a medium/high risk of surfacewater flooding.
- Effective attenuation is likely to be achievable using a “treatment train” approach and sub-surface storage.

Ground Contamination

- The superficial geology of the site comprises River Terrace Deposits, containing shallow groundwater, overlying London Clay.
- The status of the site is assumed to be greenfield, but with evidence of former gravel and clay pits, backfilled with inert material and/or household waste.
- An area to the north of the site has been flagged for hydrocarbon and heavy metal contamination, associated with oil spills relating to the airport.

Landscape and Views

- There are no designated landscapes within the local area, although the Itchen Valley Country Park lies to the south and east.
- The area lies within national character area (NCA) 128: South Hampshire Lowlands.

- The Hampshire Integrated Character Assessment locates the site within Character Area 3c: Itchen Valley.
- The Eastleigh LCA locates the site within LCA 4: Southampton – Airport.

Noise and Vibration

- The nearest noise-sensitive receptors comprise residential properties in Campbell Road and on the edge of the main built-up area.
- The background noise climate is influenced mainly by sources of transport noise such as highways (M3), aircraft (especially on take-off) and passing trains.

Socio-Economics

- The Wider impact Area for the development includes Southampton and Winchester, and has the potential to extend across the Southampton and Portsmouth travel-to-work areas.
- Local rates of economic activity are relatively high, with jobs density close to the UK average and employment spread across a range of sectors.

Transport

- Access to the site is currently provided informally via a track from Mitchell Way and an underpass beneath the railway from Chicken Hall Lane.
- The site is well located in relation to the strategic highway network via the M27.
- Train and bus services are available from Southampton Airport Parkway Station.

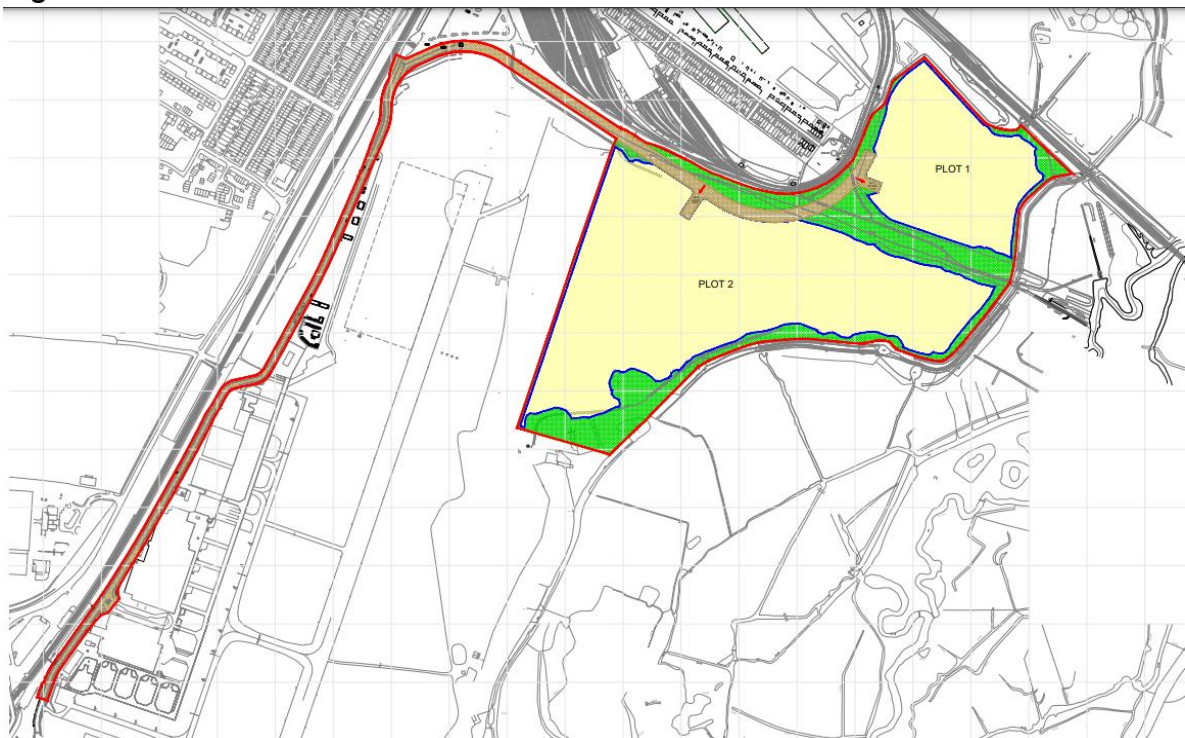
3. Proposed Development

3.1 The development would be brought forward in two main elements:

- A full planning application for initial infrastructure works and construction of new access road including site levelling and other engineering works; and
- An outline application for development of the land adjacent to Southampton Airport to provide employment floorspace of up to 92,000 sqm (GIA) within Use Classes E(g) (ii & iii), B2 and B8 with ancillary offices and areas for service yards, car parking, landscaping, ancillary buildings and associated activities, and access from Wide Lane (all matters reserved except for access).

3.2 The employment units would be laid out, providing a range of sizes, across two overall plots: a smaller North plot and a larger South plot. Both would be accessed from the new access road. The plots would be separated by a corridor of green space (along a former railway alignment), whilst the south-eastern boundary of the South plot would be set within a framework of vegetation. The arrangement of the plots is shown as a parameter plan in **Figure 3.1**.

Figure 3.1: Site Parameter Plan



3.3 The development layout has yet to be fixed, but the maximum height of the units would be up to 18m to haunch and no more than 21.8m to ridge.

3.4 The development programme will depend on the planning process, but on the assumption that this is concluded in a timely fashion construction would be phased over a 5-year period, from 2026 to 2031. The opening year of the first phase of development is anticipated as being 2016.

4. Approach to Scoping

Requirements for the Technical Content of an ES

4.1 Regulation 4(2) identifies the following factors (and the interactions between them) that should be addressed in an EIA:

(a) Population and human health;

(b) Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC(a) and Directive 2009/147/EC(b);

(c) Land, soil, water, air and climate; and

(d) Material assets, cultural heritage and the landscape.

4.2 Further requirements are identified in Schedule 4: Information for Inclusion in Environmental Impact Assessment Reports. Paragraph 5 sets out the sources of likely significant effects that should be considered, which include the following (only the sub-paras that refer to specific topics are quoted):

(b) the use of natural resources, in particular land, soil, water and biodiversity...;

(c) the emission of pollutants, noise, vibration, light, heat and radiation, the creation of nuisances, and the disposal and recovery of waste;

(d) the risks to human health, cultural heritage or the environment (for example due to accidents or disasters); [and]

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change.

Guidance

4.3 Paragraph 018 of the Planning Practice Guidance (PPG) states:

Only a very small proportion of Schedule 2 development will require an Environmental Impact Assessment. While it is not possible to formulate criteria or thresholds which will provide a universal test of whether or not an assessment is required, it is possible to offer a broad indication of the type or scale of development which is likely to require an assessment. It is also possible to provide an indication of the sort of development for which an assessment is unlikely to be necessary. To aid local planning authorities to determine whether a project is likely to have significant environmental effects, a set of indicative thresholds and criteria have been produced. See the [indicative thresholds and criteria](#). The table also gives an indication of the types of impact that are most likely to be significant for particular types of development.

However, it should not be presumed that developments above the indicative thresholds should always be subject to assessment, or those falling below these thresholds could never give rise to significant effects, especially where the development is in an environmentally sensitive location. Each development will need to be considered on its merits.

Identifying the Likely Significant Effects

- 4.4 The primary purpose of EIA is to identify the “likely significant effects” of a development. Effects that are unlikely to occur, or that would be insignificant, do not trigger a need for EIA or for the inclusion of a topic within the scope of an EIA. In summary, likelihood and significance are derived from the interaction between:
- the sensitivity of the receiving environment, as described in Section 2; and
 - the characteristics of the development, as described in Section 3.
- 4.5 Whether the resulting effects are both likely and significant will depend, amongst other things, on:
- their magnitude and predictability;
 - the sensitivity of the resources/receptors that would be affected;
 - the importance of the effects in the decision-making process; and
 - the extent to which adverse effects may be avoided or reduced through mitigation.
- 4.6 Significance can be a problematic concept. Its definition varies between topics; in some cases, it can be related to numerical criteria (e.g. for air quality, noise or traffic), whilst in others it is more reliant on judgement (e.g. for townscape and cultural heritage). Significance can also reflect the policy and regulatory context (e.g. in terms of whether policy requirements would be met).
- 4.7 The role of mitigation is critical, since the majority of adverse effects can normally be avoided, reduced or offset by a range of measures. These can include design features incorporated into a development (e.g. sound insulation), management measures (e.g. travel plans), pre-emptive measures (e.g. archaeological or ground investigations), compensatory measures (e.g. habitat creation) or financial contributions (e.g. via the CIL).
- 4.8 Such measures are well understood, of proven efficacy and can be implemented through the planning and regulatory process (e.g. via conditions or obligations). Where a potential for significant effects has been identified, it is therefore legitimate to consider the likelihood that they could be avoided through mitigation. This approach is endorsed in the PPG, which states (in para 018):

Where it is determined that the proposed development is not Environmental Impact Assessment development, the authority must state any features of the proposed development and measures envisaged to avoid, or prevent what might otherwise have been, significant adverse effects on the environment.

5. Likelihood of Significant Effects

Initial Checklist of Topics

- 5.1 Based on the regulatory requirements and the environmental work carried out to date, an initial checklist of assessment topics has been derived for scoping purposes, as set out in **Table 5.1** below, together with a brief explanation.

Table 5.1: Initial Checklist of Topics

Assessment Topic	Explanation for Inclusion
1. Air Quality	The development has the potential to generate traffic emissions, and is close to sensitive receptors
2. Climate Change	Specifically referred to in the EIA Regs. The development would both give rise to carbon emissions from traffic and energy use.
3. Cultural Heritage	The site is considered to have some archaeological potential, subject to confirmation by geophysical survey.
4. Ecology	The site supports a mosaic of habitats, together with protected species such as bats, reptiles and breeding/wintering birds. It adjoins the River Itchen SSSI/SAC.
5. Flood Risk and Drainage	The site is generally at low risk of flooding (except for small areas of surfacewater), such that an effective SuDs solution is likely to be achievable.
6. Ground Conditions	The site is considered to be in a greenfield condition, but with localised evidence of mineral extraction, tipping and oil spills.
7. Human Health	Specifically referred to in the EIA Regs.
8. Landscape and Views	The scale/form of development would change the character of the site and would affect local views.
9. Major Accidents and Disasters	Specifically referred to in the EIA Regs.
10. Material Assets	Specifically referred to in the EIA Regs.
11. Noise and Vibration	Noise could arise during construction and from operational traffic, with the potential to affect nearby residential properties.
12. Socio-Economics	The development would generate employment and bring indirect benefits to the local/regional economy.
13. Transport	The development would generate traffic, especially HGVs. New/amended highway infrastructure would be required.
14. Waste	Specifically referred to in the EIA Regs.

Sifting of Topics

- 5.2 The likelihood of significant effects arising from this development in relation to the checklist topics is set out in **Table 5.2** below. Account has been taken of the potential effectiveness of mitigation, where this can reasonably be assumed to be adopted as a policy requirement or a matter of best practice, in assessing whether the residual effects (i.e. those following mitigation) are likely to be significant.
- 5.3 The likelihood of significant effects has been defined as follows:
- Not relevant: The relevant receptors or sources of impact are absent;
 - Unlikely: Significant effects are definitely or highly unlikely to occur;
 - Cannot be ruled out: An effect that may or may not occur, or which may or may not be significant, but which cannot be confirmed on the basis of the information currently available; or
 - Likely: Significant effects are definitely or highly likely to occur.
- 5.4 A series of topic-specific notes on which this appraisal has been based are referenced in the table and attached as **appendices**.

Table 5.2: Likelihood of Significant Effects

Topic	Significant Effects?	Explanation + Appendix Ref (where relevant)
1. Agricultural Land	Not Relevant	There is no such land-use within the site.
2. Air Quality	Cannot be ruled out	Due to the number of vehicle trips likely to be generated, including HGVs, and proximity to residential and ecological receptors. Appendix A
3. Climate Change	Likely	Mainly due to carbon emissions from traffic and energy use. Resilience may also be a concern in this floodplain-edge location. Appendix B
4. Cultural Heritage	Unlikely	There are no designated heritage assets within the site. The potential for buried remains/deposits across the site will be confirmed via a DBA, subject to which it is proposed that this topic be scoped out of the EIA. Appendix C
5. Ecology	Likely	Primarily due to proximity to the River Itchen SSSI/SAC. A “shadow” Habitats Regs assessment is also assumed to be required. Appendix D
6. Flood Risk and Drainage	Unlikely	Flood risk is anticipated to be mitigated through a “treatment train” SuDs system, on the basis of which this topic is proposed to be scoped out of the EIA. Appendix E
7. Ground Contamination	Unlikely	Contamination risks associated with the site will be identified via a Phase 1 geo-environmental study, with the recommendation of

		appropriate investigation and/or remediation works, on the basis of which this topic is proposed to be scoped out of the EIA. Appendix F
8. Human Health	Unlikely	The development would not introduce any particularly vulnerable receptors or sources of health risk onto the site, and – as a non-residential use - would not place additional demands on healthcare. Health and safety criteria are in any event implicit in the assessment of topics such as air quality, noise and transport.
9. Landscape and Views	Cannot be ruled out	The development would wholly alter the character of the site, albeit within a context already influenced by major infrastructure, and would affect a range of local views. Appendix G
10. Major Accidents and Disasters	Unlikely	The site is not known to be subject to any material environmental risks, and the development would be designed and managed in accordance with all relevant safety standards. No interference with the operational safety of the airport would be permitted, such that structures would be located and designed so as to avoid any impact on electronic communications or “protected surfaces”. External fittings as part of the development, such as external lighting and solar PV panels would be designed and installed to ensure that these will have no effect on the safe operation of the Airport. These matters can be controlled via established regulatory procedures and the use of appropriate worded planning conditions.
11. Material Assets	Unlikely	Changes to infrastructure such as the highway network and other utilities would be agreed with the relevant authorities, so as to minimise any environmental impacts or disruption to users. The radar installation to be removed from within the site is redundant.
12. Noise and Vibration	Unlikely	Due to the existing noise environment, which includes railway and aviation activity, and the relative lack of sensitive receptors near the site, the potential for significant disturbance to arise during construction and/or from operational is considered unlikely. This topic is therefore proposed to be scoped out of the EIA. Appendix H.
13. Socio-Economics	Likely	But probably wholly beneficial, due to employment generation and multiplier effects within the local economy. The social aspects of the scope are proposed to be scoped out, since the development is not residential and would not directly affect any social infrastructure. The assessment of other topics (e.g. air quality and noise) would address potential effects on nearby residential areas. Appendix I.
14. Transport	Cannot be ruled out	Due to the likely number of vehicle trips (especially HGVs) and the need to test the capacity of key junctions and to make physical changes to the highway network. Appendix J
15. Waste	Unlikely	Waste would be managed in accordance with the waste hierarchy and a Site Waste Management Plan. The operational development would not give rise to any excessive or hazardous waste streams.

6. Proposed Scope and ES Structure

6.1 On the basis of the sifting exercise, the following topics are proposed to be **scoped out** of the EIA:

- Agriculture (no such use within the site)
- Cultural Heritage (ref **Appendix B**)
- Flood Risk and Drainage (ref **Appendix E**)
- Ground Contamination (ref **Appendix F**)
- Human Health (addressed where relevant to other topics)
- Major Accidents and Disasters (airport safety to be addressed separately from the EIA)
- Material Assets (addressed as necessary with statutory undertakers etc)
- Noise and Vibration (ref **Appendix H**)
- Waste (addressed through waste management procedures)

6.2 This is for one or more of the following reasons:

- Such effects are not permissible for reasons of regulatory compliance;
- Relevant resources and receptors are either absent or of low sensitivity;
- The magnitude and/or spatial scope of effects would be insufficient to exceed accepted thresholds of significance;
- Potential effects can be considered most appropriately under other topics; and/or
- Where a potential for significant effects has been identified, these would be avoided through mitigation by design or management, which would be secured by condition.

6.3 The **technical scope of the EIA** would therefore address the following topics (for which specific scopes/methodologies are set out in the referenced appendices):

- Air Quality (**Appendix A**)
- Climate Change (**Appendix B**)
- Ecology (**Appendix D**)
- Landscape and Views (**Appendix G**)
- Socio-Economics (**Appendix I**)
- Transport (**Appendix J**)

6.4 The ES would provide the information set out in Schedule 4 of the Regulations, which in summary comprises:

- A description of the development, including its purpose, scale, layout, appearance, operation and construction;
- A description of the reasonable alternatives studied by the applicant, and an explanation for the reason for choosing the preferred scheme, taking account of the environmental effects;
- A description of the baseline environmental conditions relating to each topic;
- A description of the likely significant effects relating to each topic, and the characteristics of these effects (i.e. whether direct/indirect, temporary/permanent, beneficial/adverse etc);
- Any cumulative effects resulting from interaction between the impacts of this development and any other consented or reasonably foreseeable developments;
- A description of the evidence base, forecasting methods, modelling techniques etc used to assess the significant effects;
- A description of the measures envisaged to avoid, prevent, reduce or offset any significant adverse effects, the means by which these would be implemented and any monitoring proposed to ensure that they are effective; and
- A non-technical summary.

6.6 In relation to cumulative schemes, the LPA are invited to identify any committed developments they consider should be taken into account for assessment purposes.

6.7 As required under Regulation 18(5), the ES will set out the qualifications and expertise of the experts responsible for its preparation.

6.8 There is no prescribed format for an ES. However, based on experience and the regulatory requirements, the following three-volume structure is proposed:

1. Non-Technical Summary (NTS);
2. Main Report; and
3. Technical Annexes, comprising standalone reports and supporting technical information.

Appendices

APPENDIX A

Air Quality

ES Scoping Input – Air Quality

Introduction

This chapter will set out the findings of the Air Quality Assessment undertaken in support of the planning application. The assessment will consider the impact of the development on the surrounding area, during both the construction and operational phases.

Existing local air quality, the likely future air quality in the absence of the new development, and the likely future air quality if the development goes ahead will all be defined. The assessment of construction impacts will focus on the anticipated duration of works. The assessment of operational impacts will focus on the earliest year that the development is likely to be operational to provide a worst-case assessment.

Eastleigh Borough Council (EBC) has declared a number Air Quality Management Areas (AQMA) for exceedances of the annual mean nitrogen dioxide (NO₂) objective including AQMA No.1 covering the A335 and AQMA No.2 covering the M3, both of which lie to the west of the development area. The Application Site falls outside of the AQMA, however, traffic generated by the development has the potential to impact air quality within the AQMA. The assessment will therefore consider impacts within the AQMA and surrounding area.

There are a large number of sites designated for the protection of wildlife in the area around the Site including the River Itchen Site of Special Scientific Interest (SSSI) and Special Protection Area (SAC), located immediately east and south-east of the Site and the New Forest SSSI and SAC in the wider area. Emissions generated during the construction phase and associated with construction and operational traffic has the potential to impact sensitive qualifying features within a number of designated sites. The assessment will therefore consider impacts on relevant ecological receptors.

Baseline Conditions

Monitoring carried out by EBC has shown a downward trend in NO₂ concentrations in recent years, and data recorded during 2023¹ shows widespread compliance with the annual mean and 1-hour NO₂ objective limits across the borough, including within the AQMAs.

There is limited monitoring of particulate matter across the borough. However, monitoring at the automatic roadside site ES1 Southampton Road, which falls within the AQMA No.1, shows long-term compliance with the annual mean and 24-hour PM₁₀ objective limits. Data recorded during 2023 also shows PM_{2.5} concentrations below the annual mean objective limit for this pollutant and below the Governments interim and long-term Environmental Improvement Targets. Monitoring also shows a slight downward trend in particulate concentrations across the borough.

It is expected that traffic related NO₂ and PM concentrations will continue to decline in future years due to improvements in vehicle emissions, however there is the potential that increases in traffic associated with the proposed development and other committed developments may outweigh any improvements in vehicle emissions resulting in an overall increase in concentrations in future years, particularly within sensitive locations such as AQMA No.1.

The development site is located approximately 0.5 km to the east of the A335 and is considered to be a background location in terms of air quality. Air quality at the Site is expected to be generally equivalent to background concentrations, i.e. well below the relevant air quality objectives for NO₂, PM₁₀ and PM_{2.5}.

¹ Eastleigh Borough Council (2024) 2024 Air Quality Annual Status Report (ASR), June 2024

As part of the ES monitoring undertaken by EBC and collated within the EBC 2024 ASR will be used to inform the baseline assessment. Further data relating to background concentrations of nitrogen oxides and nutrient deposition rates within those designated wildlife sites that are identified and scoped into the assessment will be collated from the Air Pollution information System (APIS)².

Potential Impacts

Construction Phase

There is the potential for significant impacts during construction at sensitive receptors within 250 m of the site. The most significant impacts are likely to occur at those receptors closest to the site including residential properties to the west/North-west on Campbell Road and the adjacent River Itchen SSSI/SAC.

There is also the potential for significant impacts on local air quality from construction traffic travelling to and from the site along Mitchell Way and the wider network. Although trip generation during the construction phase is generally lower than the trips associated with the operational phase, construction vehicles include a high proportion of heavy duty vehicles, which can generate higher emissions, and in conjunction with trips associated with other developments being constructed at the same time can result in significant impacts on local air quality, all be it of a temporary and short-term nature.

Operational Phase

As previously discussed, the operational development will generate additional vehicle movements on the adjacent road network, potentially within the AQMA No.1 and AQMA No.2 and designated sites within close proximity to the affected road network. There is the potential for these additional vehicle movements to result in a significant impact on air quality within the AQMA and any identified designated sites. The main receptors of concern will be residential properties, educational facilities and health/community related facilities located close to the main road network where traffic flows are likely to be most significant and designated wildlife sites that fall within 200 m of an 'affected road' as defined within guidance published by the Institute of Air Quality Management (IAQM) on assessing air quality impacts on designated conservation sites³ and the Design Manual for Roads and Bridges (DMRB)⁴.

Approach and Methodology

Baseline Air Quality

Existing local air quality will be defined within the study area drawing on monitoring carried out by EBC with the information provided within the Council's Air Quality Review and Assessment reports (2024 ASR) and through detailed modelling of local traffic related emissions.

Receptors

Air quality will be assessed at a range of worst-case receptor locations. For construction activities these will be existing properties closest to the proposed development and the adjacent River Itchen SSSI.

For traffic-related impacts these will be existing sensitive human receptors (i.e. residential and educational properties) that are closest to busy roads, in particular those close to junctions, where traffic emissions are greatest and ecological receptors within designated sites within 200m of 'affected roads'.

² <https://www.apis.ac.uk/>

³ IAQM (2020) A Guide to the Assessment of Air Quality Impacts on Designated Nature Conservation Sites, Version 1.1, May 2020

⁴ Highways Agency (2019) Design Manual for Roads and Bridges, Sustainability & Environment Appraisal, LA 105 Air Quality

Study Area

For construction and demolition effects, the study area will be within 250 metres of the site, as defined by the IAQM guidance on assessing emissions from construction and demolition⁵.

For construction and operational traffic effects, an initial screening of construction and operational development trips will be carried out to determine the full extent of the study area.

For assessing impacts on human receptors, the study area will be defined by screening the construction and operational trips against the following criteria set out within the current air quality planning guidance published by the Institute of Air Quality Management (IAQM)⁶:

- A change in LGV (and cars) of more than 100 per day (as Annual Average Daily Traffic (AADT) within or adjacent to an AQMA, a change of more than 500 per day elsewhere;
- A change in HGV of more than 25 per day within or adjacent to an AQMA, a change of more than 100 per day elsewhere.

For assessing ecological receptors construction and operational trips associated with the development will be screened against the following criteria as detailed in IAQM guidance and DMRB:

- An in combination with other committed developments increase in traffic flows of >1,000 total annual average daily traffic (AADT) and/or >200 HDV AADT – Defined as an 'Affected Road';

The study area for ecological effects will be determined where any international (SAC, Special Protection Area (SPA) or RAMSAR) or national (SSSI, National Nature Reserve (NNR), Ancient Woodland) designated sites fall within 200m of an 'affected road'.

Construction Dust Assessment

The potential impacts of dust during construction will be assessed, making reference to the IAQM guidance on the assessment of dust from demolition and construction. Emissions from on-site plant during construction will be assessed if any potentially significant sources are identified.

The assessment will consider all phases of the construction process and will determine the likely risk of significant effects at adjacent receptors to define appropriate mitigation measures to be employed during the construction phase to minimise emissions and reduce the risk of effects to negligible.

Traffic Emissions Assessment

The assessment of road traffic impacts (construction and operational) will be undertaken using the ADMS Roads detailed dispersion model. This modelling will make use of 2023 meteorological data from Southampton Airport, mapped background concentration data provided by Defra or local background monitoring data, and of traffic flow projections.

Model outputs will be verified against local air quality monitoring data using the latest full years' worth of data available for 2023.

Air quality at the site will be assessed in relation to the national air quality objectives, established by the Government to protect human health. The objectives are set as concentrations below which effects are unlikely even in sensitive population groups, or below which risks to public health would be exceedingly small. Predicted concentrations will be used to determine impacts associated with exposure of future occupants of the site.

The road traffic modelling will assess the with and without construction/operational traffic scenarios (where trips exceed the IAQM screening criteria) to determine impacts of construction and operational phase traffic on local air quality at human receptors. The model will predict changes in NO₂, PM₁₀ and PM_{2.5} at selected sensitive receptors.

⁵ IAQM (2024) Guidance on the Assessment of Dust from Demolition and Construction, Version 2.2, January 2024

⁶ IAQM (2017) Land-Use Planning & development Control: Planning for Air Quality

The significance of identified effects from development traffic will be determined referring to criteria defined by the IAQM guidance on land-use planning and development control.

The road traffic modelling will assess the with and without construction/operational traffic scenarios at the relevant designated sites identified within the study area.

The change in NO_x, Ammonia (NH₃) and nutrient nitrogen as a result of the proposed development will be determined based on the relevant critical levels (CL) and critical loads (CLO) for each designated site as defined on the APIS website. In accordance with the IAQM guidance on the assessment of air quality impacts on designated nature conservations sites, where the predicted change falls below 1% of the relevant CL and CLO, impacts will be concluded as 'not significant'.

Where the predicted effects exceeds the 1% screening criteria, the results will be assessed in more detail by the project ecologist to determine whether the predicted change will be significant, taking into account the location of qualifying features within the designated sties.

All practical and reasonable measures which can be implemented to mitigate any detrimental impacts associated with construction and operation of the proposed development will be considered and highlighted within the air quality assessment. The mitigation measures will be based on the measures recommended through current best practice guidance, while mitigation during the construction phase will be based on the measures recommended within the IAQM construction assessment guidance.

Cumulative Impacts

Traffic associated with other committed developments will be included within the traffic data used for the construction and operational assessment, where relevant.

Construction impacts will take account of the cumulative impacts of other committed developments within 500 m of the Site, given that emissions can result in impacts up to 250 m from construction related activities.

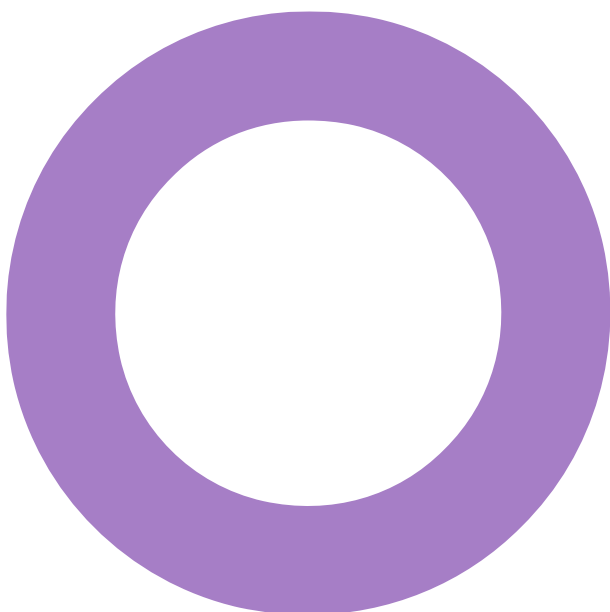
APPENDIX B

Climate Change

Navigator Quarter. Southampton. blocwork (Eastleigh) LLP & SIAL.

SUSTAINABILITY

EIA SCOPING REPORT
CLIMATE CHANGE AND GHG EMISSIONS
REVISION 02 – 08 NOVEMBER 0204



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
01	01/11/2024	For issue	B. Lambert	E. Jolly	G. Jones
02	08/11/2024	For submission	T. Brown	-	G. Jones

This document has been prepared for blocwork (Eastleigh) LLP & SIAL only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

Project number: 56/25721

Document reference: 5625721-Navigation Quarter EIA scoping chapter-P02.docx

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1. Introduction.

This chapter of the ES will identify, describe and assess the likely significant environmental effects arising from the construction and operation of the Proposed Development in relation to climate change. In accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended), the ES chapter will assess the following:

- The quantity, magnitude and impact of greenhouse gas emissions.
- Impacts relative to climate change adaptation and the vulnerability (resilience) of the project to climate change.

The Climate Change chapter will address the quantification of greenhouse gas emissions. It is expected that Climate Change Resilience and Adaptation will be addressed within each respective chapter of the ES and also summarised within this chapter to determine the significance. The assessment of the later should follow recommendations and best practice contained within IEMA (2020) Environmental Impact Assessment Guide to: Climate Change Resilience & Adaptation.

The assessment will be completed by Hoare Lea and will be supported by further detailed information contained within the planning application.

1.1 Legislative context.

The EIA Regulations require the consideration of Climate Change as a factor of the environment, together with the requirement for a description relating to the nature and magnitude of greenhouse gas emissions, impacts relevant to adaptation, and the vulnerability of the project to climate change.

The Climate Change Act (2008) established the context for government action to enable the UK to achieve its long-term carbon reduction goals. Through the Climate Change Act, the UK government has set a target to reduce UK greenhouse gas emissions by at least 85% by the year 2050, relative to 1990 levels, and outlined a path to get there. Most recently, the UK government implemented the recommendations of the Committee on Climate Change through the Climate Change Act 2008 (2050 Target Amendment) Order 2019, which commit to a new legally binding 'net-zero' carbon target for 2050, thus exceeding the previous legally binding target introduced by the Climate Change Act.

The Climate Change Act also incorporated the requirement on the government to undertake Climate Change Risk Assessments every five years and to develop a National Adaptation Programme to address opportunities and risks from climate change. The UK's Third Climate Change Risk Assessment was published in January 2022 and updated in 2022.

1.2 Policy context and guidance.

National policy

The assessment will review the following national policy and guidance:

- UK Climate Change Risk Assessment (2017);
- National Planning Policy Framework (2019);
- National Planning Practice Guidance;
- The Fifth Carbon Budget issued by the Committee on Climate Change in 2015;
- The Sixth Carbon Budget issued by the Committee on Climate Change in 2020;
- Part L 2021 of the Building Regulations (Conservation of fuel and power).
- BS EN 15978 (2011) Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method.

Local policy

The assessment will review the following local policy:

- Adopted Eastleigh Borough Local Plan 2016-2036
- Supplementary Planning Guidance

- Trees and Development Supplementary Planning Document (Adopted April 2022)
- Biodiversity (Adopted December 2009)
- Environmentally Sustainable Development (Adopted March 2009)
- Planning Obligations (Adopted July 2008)
- Quality Places (Adopted November 2011)

1.3 Guidance / best practice.

There is no standard methodology for identifying and assessing the significance of climate change within the EIA process. Nevertheless, the climate change assessment will follow the recommendations and best practice contained within the IEMA Principles Series: Climate Change Mitigation & EIA (2010), IEMA (2016) Environmental Impact Assessment Guide to: Delivering Quality Development, IEMA (2017) Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating Their Significance and IEMA (2020) EIA Guide to: Climate Change Resilience and Adaptation. The key legislative instruments and national and local planning policy and related guidance set out above will also inform the assessment approach.

IEMA (2017) provides guidance to assist practitioners with addressing greenhouse gas emissions assessment and mitigation in EIA. The guidance sets out key principles including that climate change is a cumulative issue, all greenhouse gas emissions may be considered significant in the context that global greenhouse gases are reaching a scientifically defined environmental limit, but that greenhouse emissions should be considered and reported at varying degrees of detail depending on the EIA project. Where mitigation can reasonably be applied this implies significance at the project scale, but that there is no single preferred method for evaluating effect significance. The guidance recommends a proportionate approach where boundaries to the assessment are set and effects are contextualised on a case by case basis.

IEMA (2020) provides guidance for practitioners undertaking climate change impact assessment in setting a framework for considering climate change resilience and adaptation in EIA. The guidance sets out key principles including setting out the future scenarios of climate change, coordinating assessment of climate change risks between EIA topics, and reporting on the in-combination climate change impacts.

2. Study area.

The Climate Change chapter will assess the GHG emissions and climate change impacts related to the Proposed Development and all land uses within the physical extent of the Site, as shown on the Location Plan.

3. Baseline data collection.

3.1 Climate Change Adaptation & Resilience.

When assessing the effects of climate change on the Proposed Development, the baseline will be based on the latest UK climate projections produced by the Met Office (currently UKCP18). The UKCP18 projections use a range of Representative Concentration Pathways (RCPs) which represent differing levels of climate change, e.g. RCP 2.6 represents a low emissions scenario where the UK is on track to meet carbon targets, while RCP 8.5 represents a high emissions scenario where carbon targets are not being met. In accordance with IEMA Guidance, the most conservative and highest emissions scenario (RCP 8.5) will be assumed for the future baseline scenarios of climate change.

3.2 Greenhouse gas emissions (GHG).

The baseline for the Proposed Development is defined as the current greenhouse gas emissions arising from activities and infrastructure within the site boundary, in line with the Institute of Environmental Management and Assessment (IEMA) EIA Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance (2017).

As the existing site is considered Green Field, there are no existing operational emissions that can be associated within the baseline assessment. Therefore, the assessment will consider local and regional GHG emissions data

as part of the review of baseline conditions, to help contextualise the emissions generated by the Proposed Development and implement a proportional approach to the later evaluation of effects. Greenhouse gas emissions observed at local and regional level will be sourced from UK national statistics collated by the Department for Business, Energy and Industrial Strategy (BEIS).

4. Receptors.

With respect to climate change adaptation and vulnerability, sensitive receptors are identified as human beings and material assets for the purpose of the climate change assessment. The climate change adaptation and vulnerability assessment will rely upon the information provided in associated technical reports to be provided with the Planning Application, which will define the specific sensitive receptors. The relevant reports will be appended to the ES.

With respect to greenhouse gas emissions the global climate has been identified as the 'sensitive receptor' for the purpose of the climate change assessment. In light of the extreme importance of limiting global warming to below 1.5°C and in the absence of published standard definition of receptor sensitivity of carbon emissions, this assessment asserts that the sensitivity of global climate to increases in carbon emissions is always considered to be 'high'.

5. Scoping.

5.1 Geographical scope.

The Climate Change chapter will assess the GHG emissions related to the Proposed Development and all land uses within the physical extent of the Site, as shown on the Location Plan.

The assessment will also include any increase or decrease in emissions as a result of the Proposed Development, including:

- Significant emissions from the construction phase, related to the embodied carbon of materials and the vehicles used during the construction phase; and
- Significant emissions from the operational phase, related to building use and transport emissions throughout operation.

5.2 Temporal scope.

As set out in the EIA approach, this chapter will assess the climate change effects associated with the Project during the construction and operational phases.

The Climate Change chapter will assess the Project based upon the following scenarios:

- Baseline
- Baseline + Construction of the Proposed Development
- Baseline + Operation of the Proposed Development in year one.

The Climate Change chapter will not assess any cumulative development.

5.3 Baseline environment.

The site is currently greenfield and therefore has no current operational energy usage related to buildings on site.

Baseline transport emissions will be based on information provided by the Transport Consultant, should there be baseline transport emissions to exist.

5.4 Construction impacts and effects

It is likely that GHG emissions associated with the construction of the Proposed Development will be deemed significant. The emissions will consider up front embodied carbon emissions (i.e. RICS modules A1-A5), that

consider emissions associated with material generation and process, transport to site and site activities. Therefore, the embodied carbon is only considered up to practical completion/building handover (see Section 6.1). IEMA (2017) guidance states the following: 'GHG emissions have a combined environmental effect that is approaching a scientifically defined environmental limit, as such any GHG emissions or reductions from a project might be considered to be significant.'

5.5 Operational impacts and effects.

The operational effects are likely to be carbon emissions associated with traffic and regulated and unregulated carbon emissions generated by buildings once occupied.

Following the same reasoning as with construction effects, it is likely that GHG emissions associated with the operation effects of the Proposed Development will be deemed significant.

Embodied carbon associated with ongoing maintenance, repair and replacement of materials and systems during the building(s) lifetime (i.e. RICS modules B-C) will not be considered as part of the assessment due to levels of uncertainty and assumption that would be applied at this stage of design (See Section 6.2). This could be reviewed further during detailed design.

Table 1: Magnitude of effect.

	Criteria	Receptor sensitivity	Effect significance	Effect significance description
Magnitude of effect	High	High	Major	Typically, a considerable effect (by extent, duration of magnitude) of more than local significance or in breach of recognised acceptability, legislation, policy of standards.
	Medium		Moderate	Typically, a limited effect (by extent, duration or magnitude) which may be considered significant.
	Low		Minor	Typically, a slight, very short term or highly localised effect.

6. Proposed assessment methodology.

No baseline studies/surveys with respect to climate change or GHG emissions have been undertaken to date.

As stated previously, there is no standard methodology for identifying and assessing the significance of carbon emissions within the EIA process. This assessment will follow the recommendations and best practice contained within the IEMA (2017) guidance and the EU Guidance on Integrating Climate Change and Biodiversity into Environmental Impact Assessment (2013). It will also review the list of key legislative instruments and national and local planning policy and related guidance set out above to inform the approach and impact significance classification.

This Climate Change chapter will aim to:

- Determine the existing sources of carbon emissions currently present at the Site, and consider how these could change in the future;
- Identify the likely sources of carbon emissions arising from the construction and operation of the Proposed Development, and measure them as far as practical; and
- Review measures in which different alternatives can demonstrably reduce carbon emissions (mitigation).

It is expected that Climate Change Resilience and Adaptation will be addressed within each respective chapter of the ES as well as supporting documentation submitted as part of the planning application, including the sustainability and energy strategy, transport assessment and flood risk assessment and drainage strategy.

6.1 Construction assessment.

Construction emissions would be applicable.

With reference to BS EN 15978 (2011) the following elements are considered to have the potential to give rise to likely significant effects during construction of the Proposed Development and therefore would be considered within the greenhouse gases assessment:

- Product stage A1: Raw material, A2: Transport, A3: Manufacturing;
- Construction Process Stage A4: Transport;
- Construction Process Stage A5: Construction Installation Process; and

6.2 Operational development assessment

The following elements are considered to have the potential to give rise to likely significant effects during operation of the Proposed Development and would therefore be considered within the greenhouse gas assessment:

- Use stage B6: Operational energy use

Separately, transport related impacts are also likely to be significant and will also subsequently be considered in the greenhouse gas emissions appraisal.

The elements provided in Table 2 are not considered to give rise to likely significant effects as a result of the Proposed Development and would therefore not be considered further within the greenhouse gases assessment.

Table 2: Elements scoped out of the greenhouse gas assessment.

Use stage	Definition
Use Stage B2: Maintenance	Maintenance associated with the Proposed Development is not considered to be a large emissions source as only a small amount will be additional to the maintenance that already takes place within the region.
Use Stage B3: Repair	The Proposed Development is designed to be maintained rather than repaired, therefore subsequent repair emissions sources are not considered to be large.
Use Stage B4: Replacement	Expected replacement requirements are uncertain. Due to also being far into the future, this emission source will not be considered.
Use Stage B5: Refurbishment	Subsequent maintenance/ repair refurbishment emissions sources are not considered to be large.
Use Stage B7: Operational Water Use	Water use will be limited within the Proposed Development in line with Part G of Chartered Institute of Building Services Engineers Guidance (2018). There is limited further influence the development can have on any emissions associated with water supply, and therefore, it has been scoped out.
C1: De-construction	End of life stages: Expected timescales for decommissioning are so far into the future that there is insufficient certainty about the likelihood, type or scale of emissions activity to determine their likely magnitude, even if they take place at all. As such these emissions sources will not be considered.
C2: Transport	
C3: Waste processing	
C4: Disposal	

6.3 Uncertainties.

It is noted that the wider assessment approach to EIA will be based on a parameters approach. Maximum parameters will therefore be assumed when undertaking the climate change assessment.

At the time of writing, the masterplan layout is at an early stage of design and therefore any changes to the design up to the Planning Application submission that will influence the carbon emissions of the project will be taken into account in the Climate Change chapter.

The RICS building benchmark values will be used to calculate the anticipated embodied carbon emissions including A1-A3 (construction materials) associated with the Proposed Development. These benchmark emissions factors are based on broad building use type/size and are provided on a per floor area basis. As such they may not be wholly representative of the Proposed Development at detailed design. Nonetheless, the RICS benchmarks are considered to be an industry recognised approach for an initial analysis of the anticipated embodied carbon.

The estimated carbon emissions associated with the operational energy consumption will be indicative values based on benchmark Part L data for different building types and indicative areas for different uses included in the Proposed Development. The Part L methodology uses standardised parameters, including operational profiles, ventilation rates, and heating and cooling setpoints, based on the building use, which may be different from how the buildings will operate in practice.

The expected operational energy emissions shall be determined off benchmarks from previous Building Regulations Part L modelling of similar developments.

Emissions associated with operational traffic of the existing site (if such emissions exist) as well as (operational) transport-related emission for the Proposed Development will be estimated on the basis of traffic data provided by the transport consultant.

Indicative construction plant equipment information will be based on professional judgement and experience with similar schemes. A detailed quantification of construction plant emissions will not be conducted, as the parameters of these will depend on the selected contractor.

In line with IEMA guidance, activities which account for under 5% of the energy usage and, therefore, do not have a significant contribution to the overall energy consumption will be excluded from the assessment. These are likely to include:

- Temporary construction site accommodation;
- Release of greenhouse gases from vegetation removal and soil disturbance;
- Refuse collection from public bins; and
- Street lighting, traffic signals and security cameras.

6.4 Assessment thresholds / magnitude of effect.

The impact assessment will follow the assessment framework provided in the ES.

Climate Change Adaptation & Resilience

With respect to climate change resilience and adaptation, the assessment will rely upon the information provided in associated technical reports to be provided with the Planning Application. Therefore, the impact magnitude for the purpose of the climate change ES chapter will be assumed to be in accordance with how the magnitude of change is treated in the associated technical reports and ES chapters.

Greenhouse gas emissions

With respect to greenhouse gas emissions, in the absence of clearly defined criteria for assessing magnitude of impacts in the context of greenhouse gas emissions, a blended quantitative-qualitative assessment utilising professional judgement relying on standard greenhouse gas accounting and reporting principles would be undertaken.

To provide context and to assist with determining impact magnitude, the carbon emissions generated by the Proposed Development would be assessed in the context of emissions at a local, regional and national scale. Carbon emissions at the local and regional level would be sourced from UK national statistics collated by the Department for Business, Energy & Industrial Strategy (BEIS) whereas the national-scale data would be based on the five-year National Carbon Budgets produced by the Committee on Climate Change, which reflect the

requirement to remain within agreed global emission limits. The relevant national carbon budgets would effectively provide a proxy for the level of effect produced by the Proposed Development on the global climate. They would also be apportioned to reflect the contribution of the built environment towards the UK total carbon footprint (estimated to be nearly 40%).

In greenhouse gas accounting, it is a widely accepted practice to exclude emission sources that do not have a material contribution to the overall carbon footprint. ISO guidance on greenhouse gas reporting (ISO 14064-1) states that ‘the organisation may exclude from quantification direct or indirect greenhouse gas sources or sinks whose contribution to greenhouse gas emissions or removals is not material or whose quantification would not be technically feasible or cost effective’ while PAS 2050 stipulates a materiality threshold of 1% of the total greenhouse gas emissions associated with the element being assessed.

Additionally, as part of its public reporting under the Task Force on Climate-related Financial Disclosures framework (IFC Performance Standard 3: Resource Efficiency and Pollution Prevention), the International Finance Corporation (IFC) discloses emissions of projects with estimated annual emissions over 25,000 metric tons of carbon dioxide equivalent through the Environmental and Social Review Summary for each project.

In line with the above, a 1% materiality threshold has been implemented in this assessment when determining magnitude of the relevant change in carbon emissions. To ensure a robust approach, a second reference point has been included, i.e. 25,000 tCO₂e annual emission maximum level. It is, therefore, assumed that any annual carbon emissions quantum <1% of the (proportional value) of the relevant carbon budget(s) and < 25,000 tCO₂e would not be considered to have a ‘material’ contribution to the relevant UK greenhouse gas inventory.

6.5 Significance of residual effects.

Climate Change Adaptation & Resilience

With respect to climate change adaptation and resilience, effect significance would be assessed as a climate change risk assessment following the guidance provided in IEMA (2020).

Greenhouse gas emissions

While the emission thresholds outlined above have been used to provide context, for the majority of development projects, the individual contribution to total greenhouse gas emissions (from local through to global scale) will be very small. However the IEMA (2017) guidance recognises that the contribution of greenhouse gas emissions to climate change is a cumulative global issue, and as such it is important for developments of all scales to acknowledge the significance of any increases in GHG emissions, and that the EIA should ensure the project addresses their occurrence by taking mitigating action.

In terms of mitigation, IEMA (2017) recommends that mitigation should in the first instance seek to avoid greenhouse gas emissions. Where greenhouse gas emissions cannot be avoided, the development should aim to reduce a project’s residual emissions at all stages. Where additional greenhouse gas emissions remain but cannot be further reduced at source, approaches should be considered that compensate the project’s remaining emissions, for example offsetting.

The approach to defining likely significant effects will be undertaken in three steps:

- The first step is to compare the Proposed Development’s greenhouse gas emissions in the opening year to the baseline greenhouse gas emissions to determine whether there is a net increase or decrease in greenhouse gas emissions as a result of the development;
- The second step is to compare the calculated change in emissions to local greenhouse gas emissions for context; and
- The third step applies expert judgment on the significance of those emissions taking into account the changes in emissions, their contribution to local and regional greenhouse gas emissions, their consistency with relevant policy, and an evaluation of the mitigation measures proposed to avoid, reduce and compensate greenhouse gas emissions.

The assessment of effects would also take into account the energy context, driven by the ongoing decarbonisation of the national electricity grid and the country’s recent legally binding ‘net-zero’ carbon target

for 2050, as well as the influence and validity of any assumptions adopted when undertaking the prediction of impacts.

6.6 Mitigation envisaged.

An energy and sustainability strategy is currently being prepared in support of the application which will consider the potential for avoiding greenhouse gas emissions. The energy strategy will be provided as part of the Planning Application, appended to the ES, and cross referenced in the climate change ES chapter.

The climate change assessment will also include identification of suitable mitigation measures to eliminate, reduce and/or offset any adverse carbon impacts as a result of the Proposed Development. The climate change ES chapter will include recommendations that could be adopted at site level to effectively manage and reduce the significance of carbon emissions, for example related to enabling works and demolition, construction and operation and maintenance. On site renewable energy technology will be integrated to add a degree of resilience to the scheme and offset associated operational emissions.

7. Cumulative effects assessment.

It is acknowledged that there is a need to apply a systematic, coordinated approach to climate change mitigation and adaptation on a scale beyond that of individual projects. An overarching principle of the IEMA guidelines is that the greenhouse gas emissions from all projects cumulatively contribute to climate change and affect all projects, thus making climate change by its very nature a cumulative effect.

A quantitative analysis of the GHG emissions associated with the schemes set out in the Cumulative Schemes List is not likely to be deemed feasible due to the likely absence of sufficient, robust data on the technical specifications of these projects, notably their building servicing strategy, materials specification and transport provision.

It is expected that all cumulative schemes will carefully consider and embed appropriate mitigation measures to avoid, prevent, reduce or offset GHG emissions and move in the direction of net zero carbon in line with the UK's pathway to a carbon neutral economy embarked on in 2019 at the recommendation of the CCC. It can, therefore, be reasonably expected that any adverse cumulative effects will be kept to a minimum and would not result in likely significant effects in the long term.



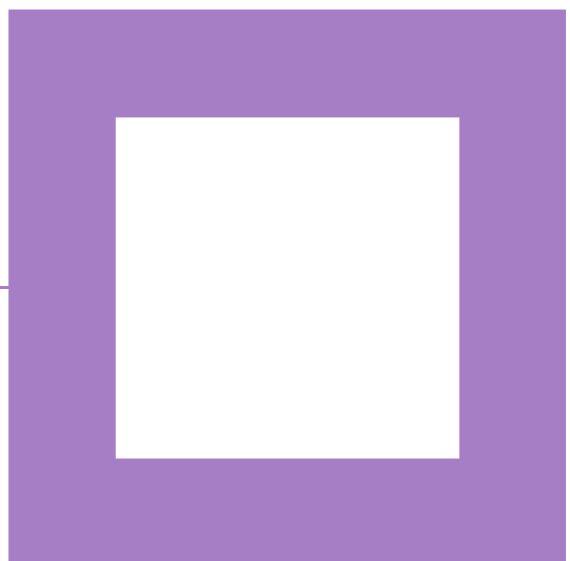
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APPENDIX C

Cultural Heritage

James Digby
Blocwork (Eastleigh) LPP
The Toll House
Delamere Terrace
London
W2 6ND

Our ref: NB/303320/05.11.24

Tuesday 5 November 2024

Via e-mail

Dear James,

Re: Navigator Quarter, Land adjacent to Southampton Airport

We have undertaken an initial appraisal of the historic environment in relation to the proposed development.

There are no designated heritage assets within the site.

There are no designated heritage assets within a 1km study area of the site and none in the wider landscape which are considered to have a meaningful relationship with the site.

To the north of the site there are locally listed heritage assets relating to early 20th century housing and railway facilities. Development within the site is not anticipated to have a significant effect on these assets as they will retain their association with the working railway, from which much of their significance derives.

Some extant WWII structures may be situated within or immediately adjacent to the site but it is anticipated that the design of the development would seek to preserve the significance of these assets.

Based on this initial assessment, and the nature of the proposed development, it is concluded that there will not be significant impacts to built heritage and it is suggested that this topic is scoped out of any required Environmental Impact Assessment.

In terms of the archaeological resource the underlying gravel terraces have some potential for Palaeolithic artefactual and environmental evidence. There is also nearby evidence of Bronze Age field systems and cultivation which may potentially extend across the site.

Just north of the site remains have been uncovered suggesting evidence of Iron age settlement. Additionally Roman activity has been identified in the area of the water treatment works including evidence of a buildings remains, funerary activity and findspots suggesting a significant Roman site but the exact location is unclear. Further buried archaeological remains from these periods may extend into the site area.

Cartographic and LiDAR evidence suggests a post-medieval or earlier farmstead lies at southern edge of the site. Early 20th century railway sidings and embankments cross through the site and some below ground remains related to WWII activity may also survive.

The exact character, location and significance (in heritage terms) of these potential remains is currently unknown but there is currently no evidence to suggest nationally significant remains lie within the site. Impacts arising from development are expected to be permanent, adverse and substantial to any buried archaeological remains, though these effects can be mitigated through a

programme of archaeological investigation and recording. If localised more significant remains are identified there may be options to preserve *in situ* through the detailed design process.

The current programme of desk-based assessment and geophysical survey should provide further detail and information on the archaeological potential of the site and inform any further investigation which might be required.

I hope that the above provides useful information and context about the historic environment in relation to any required Environment Impact Assessment.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Naomi Brennan'.

Naomi Brennan ACIfA
Principal Heritage Consultant

APPENDIX D

Ecology

Navigator Quarter

Ecology – Ecological Impact Assessment Scoping

1. INTRODUCTION

- 1.1 This note has been prepared by Ecological Planning & Research Ltd (EPR) in relation to proposals for development of land to the east and north east of Southampton International Airport. It set out the assessment methodology and baseline on which the assessment will be based and identifies the potential environmental impacts and effects that will be included in the assessment.

2. ASSESSMENT CRITERIA & METHODOLOGY

Legislative Context, Technical Guidance and Best Practice

Legislative Context

- 2.1 Key articles of nature conservation legislation of relevance to the ecological assessment of the Proposed Development include:
- The Environment Act (2021);
 - The Conservation of Habitats and Species Regulations 2017 (as amended);
 - The Wildlife and Countryside Act 1981 (as amended);
 - The Natural Environment and Rural communities (NERC) Act 2006; and
 - The Protection of Badgers Act 1992.

Guidance and Best Practice

- 2.2 The ecological impact assessment of the Proposed Development will take account of best practice guidance in the Chartered Institute of Ecology and Environmental Management (CIEEM) *Guidelines for Ecological Impact Assessment in the United Kingdom and Ireland: Terrestrial, Freshwater, Coastal and Marine. Version 1.3* (CIEEM, 2018), and will also have regard to the following additional biodiversity and planning practice guidance:
- Biodiversity 2020: A strategy for England's wildlife and ecosystem services (DEFRA, 2011);
 - Biodiversity: Code of practice for planning and development published by the British Standards Institute (BS 42020:2013); and
 - Revised and updated Planning Practice Guidance (PPG) (MHCLG, 2014); Assessment Criteria and Methodology.

Baseline Data Collection

- 2.3 A series of baseline surveys were undertaken by Ricardo Energy and Environment over the period 2021 -2023 and have in some cases been supplemented with further surveys under taken in 2024 by EPR. **Table 2.1** provides a summary of the survey data and an evaluation of the features. The surveys were undertaken follow best practice guidance.

Table 2.1: Summary of baseline data

Survey	Date	Summary	Evaluation of Feature	Carried through to Impact Assessment
Appraisal	June 21	European Statutory Designated Sites within 2km. River Itchen Special Area of Conservation	International	Yes
		National Statutory Designated Sites within 2km River Itchen Site of Special Scientific Interest	National	Yes
		Sites of Interest for Nature Conservation (SINCS) within 2km – 32 SINCS identified within the search area. Only those that are ecologically connected to the Site are considered further: - Allington Manor Farm Water Meadows - Itchen Valley Nature Reserve SINC - Stanford Meadows - Meadow North of Railway	County	Yes
Breeding Birds	April - June 2022, July 2024	Site supports breeding populations of: - Wren <i>Troglodytes Troglodytes</i> - Blackcap <i>Sylvia atricapilla</i> - Skylark <i>Alauda arvensis</i> - Greenfinch <i>Chloris chloris</i> - Song Thrush <i>Turdus philomelos</i> - Wood Pigeon <i>Columba livia domestica</i> - Dunnock <i>Prunella modularis</i> - Long-tailed Tit <i>Aegithalos caudatus</i> - Whitethroat <i>Curruca communis</i> - Song Thrush <i>Turdus philomelos</i>	Local	Yes

		- House Sparrow <i>Passer domesticus</i> - Cetti's Warbler <i>Cettia cetti</i>		
Wintering Birds	November 2021 – February 2022	A total of 33 bird species were recorded during the survey including a small number of waterfowl species with international and national conservation status.	Local	Yes
Dormouse	May – Sep 2019 August 2021 – June 2022	Not present		No
Bat – Activity Survey	Aug 2018 – July 2019 July 2021- June 2022	High levels of bat activity being focussed on the areas of woodland and associated foraging habitat. Common Pipistrelle <i>Pipistrellus pipistrellus</i> , Soprano Pipistrelle <i>P. pygmaeus</i> , and Noctule <i>Nyctalus noctula</i> widespread across the Site, with occasional, Brown Long-eared <i>Plecotus auritus</i> bat and Myotis species <i>Myotis sp.</i>	District	Yes
Bat – Tree Assessment – woodland strip	Aug 2018, July 2023	Preliminary Ground Level Roost Assessment: 13 low roost potential trees 5 low/moderate roost potential 15 moderate roost potential trees		
Reptiles	Sep – Oct 2018, September 2021 – May 2022	Small populations of Slow Worms <i>Anguis fragilis</i> , Common Lizard <i>Zootoca vivipara</i> and Grass Snake <i>Natrix helvetica</i> mainly associated with the boundary habitats	Local	Yes
Great Crested Newt	June 2021 June 24	eDNA survey returned negative results		No
Botany	Airport field – Mar 2020 Nov 2023 Sep 2024 Railway field – Nov 2023, Sep 2024	Habitats present are composed of widespread and common species and include: - Other Neutral Grassland - Mixed Scrub - Broadleaved Woodland - Mixed Deciduous Woodland	Local	No

Assessment Methodology

Proposed Approach

- 2.4 The approach to Ecological Impact Assessment (EcIA) to be utilised within the Ecology Chapter of the ES takes account of guidance provided by CIEEM within the Guidelines for Ecological Impact Assessment v1.3 (CIEEM, 2018).
- 2.5 In accordance with the above guidance, EPR takes the following step-wise approach to EcIA.
- 2.6 Important Ecological Features (IEFs) within the Site will be identified utilising the data gained through desktop and field surveys, as outlined above. IEFs are features within the Site whereby the ecological importance is valued at the Local geographical level or above. To determine whether an ecological feature is of Local value or higher, an assessment will be made using the relevant guidance, knowledge and local information for the ecological feature. For example, the national and local distribution and/or abundance of a species/habitat within the landscape will affect its ecological importance. In some instances, guidelines are available against which to measure an IEF, such as the standard evaluation method used for bird assemblages developed by Fuller¹.
- 2.7 Activities associated with the delivery and operation of the Proposed Development that are likely to result in biophysical changes will be identified, where these activities are considered likely to lead to significant effects (either positive or negative) upon the IEFs.
- 2.8 The Zone of Influence (ZoI) is the area over which these biophysical changes will impact upon the identified IEFs. The size will be dependent upon the activity and the sensitivity of the ecological receptor to the anticipated biophysical changes.
- 2.9 An effect is considered to be significant if it is likely to change the structure and function of defined sites and ecosystems or the conservation status of habitats and/or species.
- 2.10 The conservation status of habitats is determined by considering the cumulative influences on a habitat that may impact upon its '*extent, structure and functions*'² alongside its distribution and species composition. The conservation status of species is determined by considering the cumulative influences that may impact upon the abundance and distribution. Some habitats and/or species may have a known conservation status, with objectives and targets against which the impact can be considered. For other habitats/species, a professional judgement must be made using available data, in agreement with the relevant statutory nature conservation body.
- 2.11 Once significant impacts on IEFs have been determined, refinement of the Proposed Development will be made to avoid impacts, and/or mitigate measures for negative impacts on IEFs. Opportunities to provide enhancements will also be identified, such as habitat creation to increase the cover of priority habitats which will in turn provide opportunities for IEFs on the Site.

¹ Fuller, RJ. (1980) *A method of assessing the ornithological interest of sites for nature conservation*. Biological Conservation. 17, 229-239.

Fuller, RJ. (1982) *Bird Habitats in Britain*, London, T & AD Poyser.

² CIEEM (2018) Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.2. Chartered Institute of Ecology and Environmental Management, Winchester.

- 2.12 An assessment of the significant residual effects on IEFs will be undertaken, and an identification of any policy drivers for the requirement of additional mitigation and/compensation in the event of residual significant negative effects.
- 2.13 Whereby an ecological feature is not considered to be an IEF, advice will be provided on relevant policy and legislation to ensure conformity.

Geographical Scope

- 2.14 Many of the biophysical changes generated by the Proposed Development have the potential to impact IEFs within the Site and its immediate environs. However, some impact pathways have the potential to affect more distant receptors, including potentially significant ecological effects arising from hydrological change and air pollution within offsite nature conservation sites up to a radius of 5km or more.

Temporal Scope

- 2.15 The temporal scope of the ecological assessment will cover the construction and occupation phases of the Proposed Development.

3. POTENTIAL ENVIRONMENTAL IMPACTS & EFFECTS

Construction Impacts and Effects

- 3.1 Consideration will be given to the following potential impacts and effects on IEFs during the Construction phase:
- Land-take (habitat loss and fragmentation);
 - Temporary and/or permanent damage to retained habitats;
 - Habitat creation;
 - Direct harm to protected/notable species and/or damage to breeding sites or resting places;
 - Temporary disturbance to protected/notable species (visual, noise, vibration, lighting); and
 - Hydrological change and pollution (dust generation, pollution of terrestrial and aquatic habitats, changes to ground and surface water quality and quantity).

Occupation Impacts and Effects

- 3.2 Consideration will be given to the following potential impacts and effects on IEFs during the operational phase:
- Air pollution;
 - Hydrological change (ground and surface water quality and quantity);
 - Lighting; and
 - Increased traffic-related mortality; and
 - Implementation of habitat management and monitoring plans.

Scoping Summary

3.3 **Table 3.1** below provides a summary of the key issues scoped in for further EclA to be reported in the ES.

Ecological Feature	Effect	Scoped In
Internationally Designated Sites	• Damage to retained habitats • Disturbance (visual, noise, vibration, lighting) • Hydrological change and pollution (dust generation, pollution of habitats, change in surface and groundwater quality and quantity) • Changes in air quality	Y
Nationally Designated Sites		Y
Locally Designated Sites		Y
Habitats/Botany	• Damage to retained habitats • Disturbance (visual, noise, vibration, lighting) • Hydrological change and pollution (dust generation, pollution of habitats, change in surface and groundwater quality and quantity) • Habitat creation • Direct harm to protected/notable species • Increased risk of road traffic mortality • Implementation of habitat management and monitoring plans	Y
Bat Assemblage		Y
Breeding Bird Assemblage		Y
Winter Bird Assemblage		Y
Reptiles		Y

Document Prepared By: Alison Hogan BSc (Hons) MSc MCIEEM

Document Dated: 08 November 2024

APPENDIX E

Flood Risk and Drainage

Navigator Quarter, Southampton
Drainage Scoping Technical Note

for

blocwork (Eastleigh) LLP & SIAL

Ref: 30228-BGL-XX-XX-TN-C-00002

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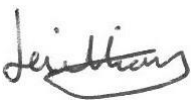
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P01	06/11/2024	First Issue

Burrows Graham Limited has prepared this report in accordance with the instructions of the above-named Client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

Introduction

This Drainage Scoping Technical Note has been prepared on behalf of blocwork (Eastleigh) LLP & SIAL ('the Applicant') to set out the proposed drainage strategy and flood risk assessment for the development site.

The flood risk assessment and drainage strategy will be completed and submitted for the forthcoming planning application. This document will include an assessment of all relevant sources of flooding, outline drainage strategy and outline hydraulic calculations.

Flood Risk

From a review of the Environment Agency (EA) Flood Map for planning and as shown on figure 1, the site is entirely located in Flood Zone 1 (land defined as having a less than 1:1000 annual probability of flooding from rivers or the sea). The site is therefore at low risk of flooding from fluvial and tidal sources.

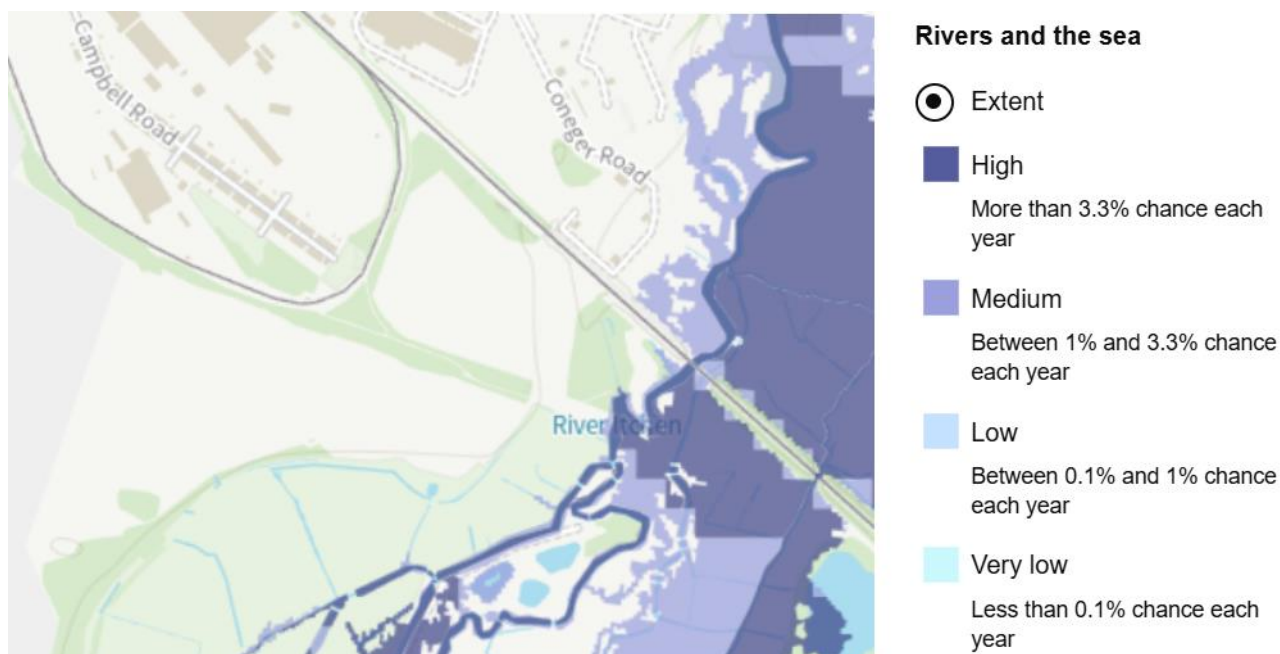


Figure 1: EA Flood Map (Rivers and Sea)

The EA maps for surface water flooding (see figure 2) show some very small areas of the site as medium/high risk which is generally associated with low lying areas of the existing topography. As such, it is considered that this can be mitigated through the proposed levels and drainage design for the proposed development and therefore the residual risk for the site is low and significant effects are not likely.

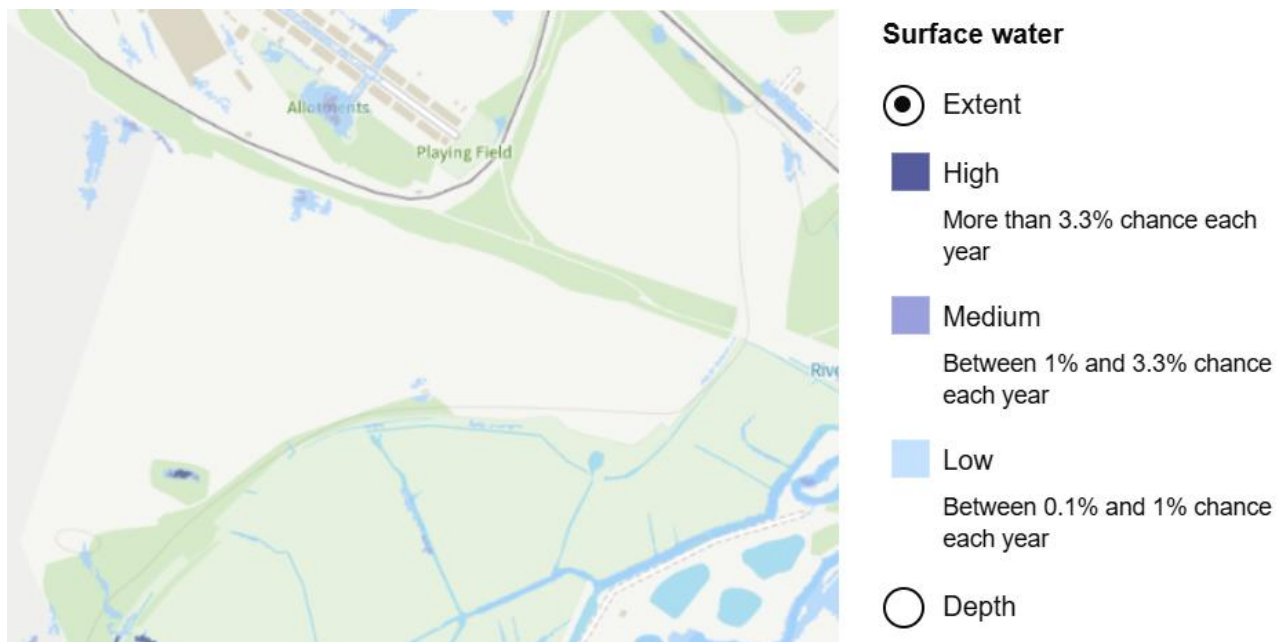


Figure 2: EA Flood Map (Surface Water)

The EA Flood Maps confirm that the site is expected to be at low risk from other sources of flooding such as Groundwater and Reservoirs. There are not anticipated to be any sewers that run through the site which would pose a higher risk of sewer flooding, in any case these would be maintained and managed by Southern Water and therefore the residual risk would be low.

Surface Water Drainage

The site is considered to be greenfield, with no evidence of previous development. An intrusive site investigation has yet to be carried out but due to the expected presence of clay generally across the site we anticipate the use of solely infiltration may be unsuitable. This will be confirmed with BRE testing as part of intrusive investigation works.

The existing site generally falls west to east towards the River Itchen with flows across the ground into the watercourse. In line with the SuDS hierarchy the surface water discharge will mimic the existing greenfield scenario by restricting the runoff rate to Q_{bar} , up to the 100 year plus climate change event, which will provide a significant betterment in most storm events.

Due to the restricted discharge rate, attenuation will need to be provided. This will follow the SuDS Treatment Train approach, due to the proximity of the airport runway, we understand that the use of open attenuation features that could be attractive to birds will not be permitted and therefore attenuation will generally be provided below ground. The potential use of permeable paving will be considered as an option to treat flows from car park areas subject to the detailed proposals.

Foul Water Drainage

The foul water system will be separate from the surface water system. It will be designed to discharge to the nearest Southern Water connection point which is assumed to be adjacent to the Airport subject to confirmation from Southern Water.

Significant Effects

Based on the information provided above and the proposed strategy set out which will be designed in detail in due course, we do not believe the development will have any likely significant effect on the flood risk and drainage on the site or the surrounding area in the construction and operational phases.

APPENDIX F

Ground Contamination

Navigator Quarter, Southampton
Ground Conditions Scoping Technical Note

for

blocwork (Eastleigh) LLP & SIAL

Ref: 30228-BGL-XX-XX-TN-C-00003

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P02	07/11/2024	Updated to suit client comments

Burrows Graham Limited has prepared this report in accordance with the instructions of the above-named Client for their sole and specific use. Any third parties who may use the information contained herein do so at their own risk.

Introduction

This Ground Conditions Scoping Technical Note has been prepared on behalf of blocwork (Eastleigh) LLP & SIAL ('the Applicant') to set out the anticipated ground conditions for the development site.

A full phase 1 desktop study will be commissioned and completed for submission with the forthcoming planning application, supported by intrusive site investigations to confirm assessment.

The detailed assessment including the Phase 1 and intrusive investigations will consider the following to inform future development proposals;

- Identify potential sources for soil and/or groundwater contamination;
- Identify potential receptors for the baseline conditions;
- Develop a conceptual site model (CSM) in order to identify potential migration pathways between the identified potential soil and groundwater sources and receptors in order to determine the baseline plausible contaminant linkages (PCLs); and
- Evaluate the magnitude of the potential effect of current land contamination on current human health, controlled waters and other sensitive receptors for each of the PCLs.

Sensitive Receptors

In respect of ground conditions and contaminated land, the following sensitive receptors have been identified that have been considered in the preparation of this scoping note and will be assessed as part of the supporting reports to cover the construction and operational phase of the development:

- Construction/ maintenance workers;
- Future site users;
- Adjacent land uses and habitats (residential, commercial and amenity);
- Controlled Waters; and
- Water supply pipes.

Ground Conditions

In preparation of this report, no physical site investigation works have yet been undertaken on site to date, these will be undertaken prior to the planning submission. Recent reports to support nearby development proposals, that include intrusive investigations have, however been reviewed, notably reports that supported the discharge of condition 12 for planning permission 19/86707 that include:

- Phase II Land Quality Assessment for runway extension (H Fraser Consulting, 23rd January 2023)

Based on the available information and a review of the BGS geology maps, the site is understood to be underlain by superficial River Terrace Deposits, and then bedrock of the London Clay Formation and Wittering Formation. The superficial deposits are expected to be present to c. 5.50m depth. There is expected to be shallow groundwater at a depth of 3.5m below ground level.

Online mapping shows no historical development on the site, and therefore the site is considered to be greenfield. The site is generally expected to be natural ground, however, as noted in the information reviewed and historical mapping, there are a number of areas that are flagged as potential local made ground/landfill/contamination hotspots (see figure 1 below), these areas will need to be reviewed in detail;

- There is an old gravel pit in the north of the site, the licence for this is held by British Rail and waste deposited included household waste.
- There is localised evidence of gravel and clay pits to the south and north of the site but at this stage it is anticipated that these areas were backfilled with inert material, which will be confirmed following completion of the intrusive investigation.
- There is an area to the north of the site which has been flagged for 'significant hydrocarbon contamination' and 'heavy metals' contamination. This is associated with numerous oil spillage events from the airport operations.

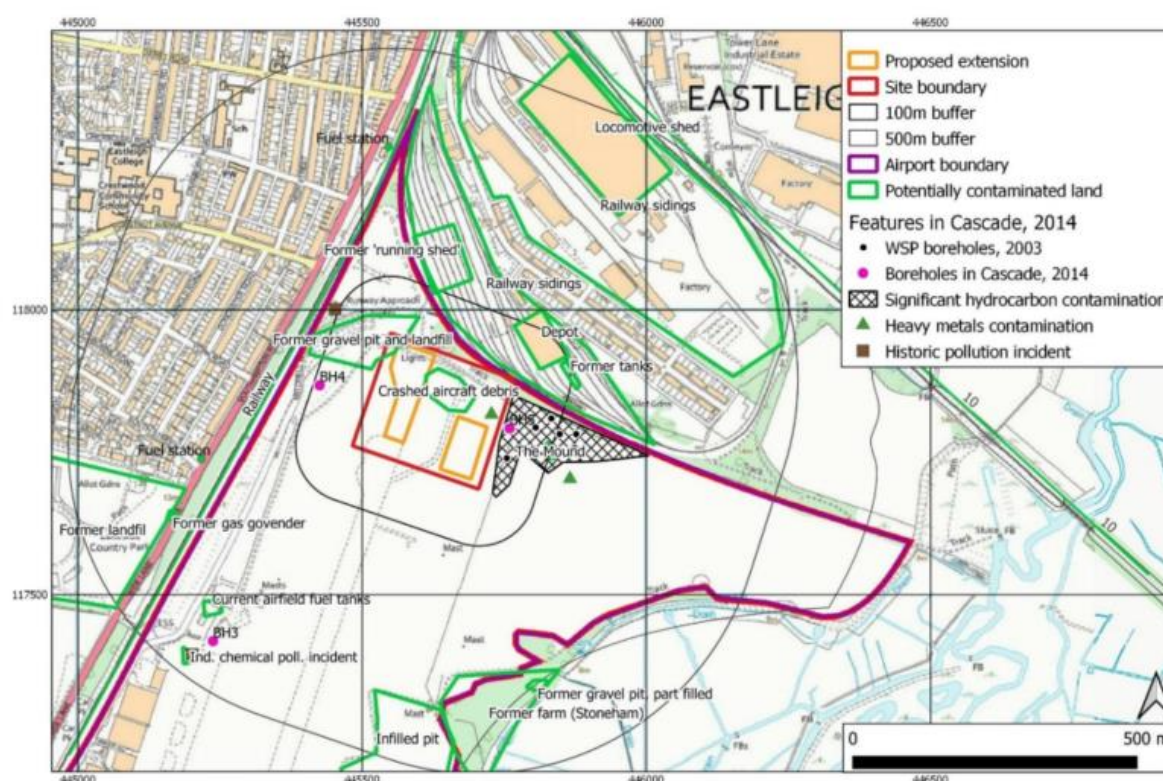


Figure 1: Summary of Potential Contamination (Source: Hannah Fraser report ref. 30691R2 Figure 2-5)

Proposed Approach

Intrusive ground investigations and a preliminary Geo Environmental Risk Assessment will be completed to support the planning application. This will assess the site to confirm the assumptions made regarding the nature of the site. The ground investigation and associated reporting will enable characterisation of the scheme and further assess potential risks to identified receptors identifying whether any subsequent monitoring or localised remediation may be required.

Potential mitigation may be achieved through appropriate management of any identified contaminated land if found in the intrusive investigation, chemical analysis, remediation, construction controls and design. If required,

the mitigation of potential impacts on materials would be expected to be in the form of contractor's commitments to management approaches and obligations for waste management during construction, which will be controlled via method statements and management documents such as a Site Waste Management Plan (SWMP) Construction Environment Management Plan (CEMP), with an Outline CEMP prepared to support the forthcoming application followed by detailed CEMP and SWMP to support the various phases of development once a contractor is appointed.

Likely Significant Effects

It is considered that whilst the site is generally greenfield and will be underlain by predominantly natural material, there is evidence of localised hotspots which could contain a combination of made ground/landfill materials which may in turn increase the risk of contamination in these specific areas.

As noted above, during construction this will be managed through any required CEMP and SWMP documents which will detail the principles of suitable containment measures and pollution prevention measures that will be adopted during the construction phase including appropriate procedures for the storage and handling of materials and wastes, both on the construction site and within the construction compound, to make sure that spills or contaminant releases do not enter the ground or surface water courses in line with relevant regulations and good practice guidance.

Following construction, providing the development is constructed in accordance with any required remediation strategies highlighted in the geo environmental study the residual risk of potential significant impacts related to ground conditions and contamination, is considered to be low and as such, this topic is proposed to be scoped out of the Environmental Statement.

APPENDIX G

Landscape and Views



STEPHENSON
HALLIDAY

Planning, Landscape & Environment
an **RSK** company

NAVIGATION QUARTER

LVIA Scoping Report

Blocwork (Eastleigh) LLP & SIAL

October 2024

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Document history

	Name	Date
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Technical Reviewer	Stuart Robinson	28.10.2024
Approved	Stuart Robinson	28.10.2024

1 LANDSCAPE AND VISUAL SCOPING

1.1 Introduction

- 1.1.1 The need for Landscape and Visual Impact Assessment (LVIA) has been considered by Stephenson Halliday. As shown in this report, it is considered that there is the potential for significant effects relating to Landscape and Visual receptors as a result of the Proposed Development and therefore this topic shall be 'scoped in' to the ES.
- 1.1.2 No prior consultation to inform the LVIA has been undertaken to date. Following submission of the EIA scoping report, discussions will be held with Eastleigh Borough Council (EBC) to agree the finer detail of the LVIA. Agreement will be sought on the selection of assessment viewpoints to be used in the LVIA, including the illustrative techniques to be used for any visualisations of the Proposed Development.

1.2 Study Area

- 1.2.1 Best practice guidance for the assessment of landscape and visual effects (Guidelines for Landscape and Visual Impact Assessment – GLVIA3) states:
- "Scoping should ... identify the area of landscape that needs to be covered in assessing landscape effects. This should be agreed with the competent authority, but it should also be recognised that it may change as the work progresses, for example as a result of fieldwork, or changes to the proposal. The study area should include the site itself and the full extent of the wider landscape around it which the Proposed Development may influence in a significant manner."*
- And:*
- "Scoping should identify the area that needs to be covered in assessing visual effect, the range of people who may be affected by these effects and the related viewpoints in the study area that will need to be examined. The study area should be agreed with the competent authority at the outset and should consider the area from which the Proposed Development will potentially be visible. The emphasis must be on a reasonable approach which is proportional to the scale and nature of the Proposed Development."*
- 1.2.2 The Proposed Development is located to the immediate north-east of Southampton Airport on an area of undeveloped land to the south of a train depot as depicted in **Figure 1**. The site is split into two parts by a mature band of trees that tie back to a tree belt that marks the boundary of the River Itchen Site of Special Scientific Interest (SSSI) that lies to the south and east of the Site. The SSSI is also designated as a Special Area of Conservation (SAC).
- 1.2.3 **Figure 2** shows the topography surrounding the Site and shows that the Site borders the River Itchen flood plain to the east and south. The Site sits within a wider natural bowl with a more defined river corridor to the south and north resulting in the land generally rising up gradually away from the Site in all directions. The landscape is well wooded though resulting in a more limited extent of visibility than there would have been otherwise.
- 1.2.4 To assist in determining an appropriate and proportionate study area for the LVIA, a preliminary ZTV plan has been prepared that is presented in **Figure 3**. The ZTV illustrates

the 'maximum effect scenario' of visibility for the emerging development parameters based on the projection of the existing ground level within the development parameter line up by 21.5m. The purpose of the ZTV at this stage is to identify the maximum possible extents of visibility and to help identify potential visual receptors.

- 1.2.5 Based on analysis of the ZTV and past experience of similar projects, it is considered unlikely that there would be anything other than negligible, distant and filtered glimpses of the Proposed Development beyond a 3km offset of the Site boundary and at such distances, the effects would in no circumstance be significant. In most directions, visibility would in reality be restricted to much closer than this. It is therefore proposed that a 3km study area offset from the Site boundary is more than adequate and proportionate for the consideration of landscape and visual effects arising as a result of the Proposed Development.

1.3 Data sources to inform the LVIA.

- National Character Area 128 – South Hampshire Lowlands
- Hampshire Integrated Character Assessment
- Landscape Character Assessment for Eastleigh Borough (Dec 2011)
- Character Area Appraisals for Eastleigh Borough (Jan 2008)
- National Planning Policy Framework
- Planning Practice Guidance for Natural Environment (July 2019)
- Planning Practice Guidance: Design – Process and Tools (Oct 2019)
- Eastleigh Borough Local Plan (2016-2036) (Apr 2022)

1.4 Surveys to Inform the LVIA

- 1.4.1 Visits to the site and surrounding area will be undertaken during winter 2024/25 to photograph the baseline views from the agreed viewpoint locations surrounding the Site to represent a range of views and visual receptors of the Proposed Development. Proposed viewpoint locations are shown on **Figure 3** and are to be agreed through further consultation with EBC.
- 1.4.2 An initial review of the area surrounding the Site has not identified any residential properties that are in close enough proximity to the Site for the threshold needed to assess residential visual amenity to be reached. It is not therefore intended to carry out a Residential Visual Amenity Assessment as part of the LVIA.

1.5 Baseline Conditions

Landscape Designations

- 1.5.1 The ZTV for the Proposed Development suggests that notable views towards the Site will be largely contained within Eastleigh District. Within the Local Plan, the larger southern section

of the Site falls within the boundary of Southampton Airport with the smaller northern section designated for new employment purposes. None of the Site sits within any landscape, heritage or ecological designation. The land to the south and east of the Site is designated as both a SAC and SSSI. Parts of this ecological designation form the Itchen Valley Country Park. Also within relatively close proximity of the Site are Lakeside Country Park to the west of the airport and Townhill Park registered park and garden to the south of the M27.

- 1.5.2 In terms of heritage designations there are none within the Site, with the nearest listed structures being the housing along Campbell Road. Within Eastleigh Borough there are Conservation areas at Bishopstoke which is located to the north of Bishopstoke Road, and also at Gaters Mill and Romill Close – West End which is south of the M27. There are also Conservation areas within Southampton that fall within the 3km study area including the Itchen Valley, Ethelburt and Bassett Green. Please refer to **Figure 4** for the locations of the surrounding designations

Landscape Character

- 1.5.3 The Site and proposed study area lie largely within National Character Area 128 (NCA128) – South Hampshire Lowlands. The Natural England profile describes NCA 128 – South Hampshire Lowlands as:
- 1.5.4 *‘...a low lying plain between the chalk hills of the Hampshire and South Downs and Southampton Water. Its highest point is an outlying chalk ridge – Portsdown Hill – but the bedrock geology is mostly open marine, estuarine and freshwater Tertiary deposits. The NCA is dominated by the city and port of Southampton and its adjoining towns and suburbs – 29 per cent of the area is urban. In the more rural areas, it is a mixture of farmland, particularly pasture, and woodland.*
- 1.5.5 *Some 18 per cent of the land cover of the NCA is woodland, of which almost half is designated ancient woodland, a legacy of the Forest of Bere, a Royal Hunting Forest that once covered the area. Today the most significant blocks of woodland are West Walk near Wickham, Botley Wood at Swanwick and Ampfield Wood near Romsey.*
- 1.5.6 *Although a high percentage of the area is urban, the NCA has considerable biodiversity interest. Southampton Water is internationally recognised for its importance for breeding and overwintering waterfowl and waders and for its wetland habitats such as mudflats and salt marshes. Three Natura 2000 designations cover parts of the area – Solent and Southampton Water Ramsar site, Solent and Southampton Water Special Protection Area and Solent Maritime Special Area of Conservation.*
- 1.5.7 *The NCA is drained by several rivers: the lower reaches of the Test and Itchen, the source and headwaters of the Hamble and the middle section of the Meon. These provide not only a refuge for species in decline elsewhere, such as otters, but also examples of unusual habitats such as the estuarine woodlands on the Hamble. Both the Test and Itchen are important sources of potable water.*

The NCA however faces many challenges, particularly ongoing development. This will need to be implemented sensitively in order to safeguard not only the designated sites within the NCA but also the important adjacent sites such as the New Forest and South Downs National Parks.’

1.5.8 While the National Character Area will be considered within the LVIA, the effects on landscape character will be reported with reference to the regional and district landscape and townscape character assessments. At a regional level the area is covered by the Hampshire Integrated Character Assessment (HICA) (ref **Figure 5**), this splits the county up into a series of landscape character areas with the Site and immediate surroundings located with the Itchen Valley Character Area (3c). The HICA also splits the landscape into landscape types with the site largely siting within the settlement character type that also contains Southampton Airport. A small part of the Site, close to the boundary with the adjacent SSSI, falls within the River Valley Floor character type.

1.5.9 At a finer grain still the Landscape Character Assessment for Eastleigh (LCAE) (ref **Figure 6**) places the Site within Landscape Character Area (LCA) 4 – Southampton – Airport. This is described as follows:

'Most of the airport site is runway and grassland. The main airport buildings lie along the A335 frontage accompanied by a mix of other new, large commercial buildings. This forms the western boundary to the landscape character area. Outside of the character area, on the opposite side of Wide Lane, is Lakeside Country Park and the Southampton University playing fields. The northern boundary runs along the edge of the sidings and works associated with the railway. It extends across the railway line to meet the boundary of the sewage treatment works in Chickenhall lane. There is a dense woodland strip forming a buffer to the flood meadow landscape to the east. This acts as the eastern boundary to this landscape character area, until it stops. The boundary then runs along the Navigation. The southern boundary bisects the bottom of the runway incorporating a small section of M27 motorway.'

Within the airport there are distant views to the wooded edges of Southampton to the south-east and to High Hill to the east. The main views in are from the A335, the M27 and to travellers using the railway. The elevated section of the M27 to the south west (east bound) offers views right across the airfield to the Itchen valley.'

Key characteristics for the area are:

- Dominance of airport buildings
- Flat expanse of runways and grassland
- Views out to wooded horizons
- Views across M27 across open airfield toward River Itchen
- Limited Access
- Importance of Eastern Tree Belt

1.5.10 The ZTV also suggests that there is potential for visibility from the following:

- LCA2 – Upper Itchen Valley
- LCA3 – Lower Itchen Floodplain

- LCA5 – Itchen Valley Sports Pitches.
- LCA6 – North Stoneham Park
- LCA9 – Horton Heath Undulating Farmland.
- LCA10 – Oaklands Woodland & Parkland.

1.5.11 Due to urban fringe characteristics of the study area, the surrounding townscape will also be a consideration within the LVIA. The HICA also contains assessments of the surrounding townscape types. In addition, there are a series of supplemental planning documents produced for Eastleigh Borough Council which consider the townscape character of the surrounding settlements. Both of the sources will be used to aid with assessing any potential effects of the Proposed Development on the surrounding townscape character.

Visual Receptors

- 1.5.12 Visual receptors are “the different groups of people who may experience views of the development” (GLVIA, 3rd edition, para 6.3). In order to identify those groups who may be significantly affected by the Proposed Development, an initial review of the ZTV along with baseline studies have been undertaken. When preparing the LVIA, this work will be expanded on and considered in greater detail.
- 1.5.13 The different types of groups assessed will encompass local residents; people using key routes such as roads; cycle ways, people within accessible or recreational landscapes; people using PRoW; or people visiting key viewpoints.

Settlements

- 1.5.14 The Site sits within an urban fringe environment with the ZTV suggesting a limited extent of visibility from within the surrounding townscape. Areas with potential visibility of the Proposed Development are:
- Eastleigh – The ZTV suggests limited pockets of visibility from within the town to west of the A335, at the closest point around 440m from the Site. This includes the area around Nightingale Avenue, Kenworthy Way and Chestnut Avenue.
 - Bishopstoke – The ZTV suggests some potential for visibility from several areas within the town including the areas around Guest Road, Sedgwick Road, Underwood Road and south of the B3027 which is at the closest point around 1km north of the Site.
 - Horton Heath – The ZTV suggests visibility from the western edge of Horton Heath which at its nearest point is approximately 2.7km east of the Site.
 - In addition to the larger settlements there are also a number of small clusters and individual properties within the landscape to the east of the River Itchen between the M27, Horton Heath and Bishopstoke where the ZTV suggests the possibility of views back towards the Proposed Development. The closest of these is approximately 1.1km to the east and they include the hamlet of Allington, West Horton Farm and Lake Farm.

- The ZTV suggests glimpsed views from some locations to the south of the M27, it is considered that if visible, the Proposed Development would be viewed as a small part of the wider urban area.

Key Routes

1.5.15 The key routes within the 3km study area are the:

- M27 - runs broadly east to west and borders the southern edge of Southampton Airport, at its closest around 1.25km from the Site. The ZTV suggests limited views with the primary view being from the edge of the airport.
- South-west Mainline – Runs north to south across the study area bordering the western edge of Southampton Airport, at its closest point around 400m west of the Site. The ZTV suggests visibility when approaching the Site from the north.
- Eastleigh to Fareham Line – Borders the northern edge of the Site. The ZTV suggests visibility on the approach to the Site in both directions.
- A335 – Follows a similar line to the South-west mainline to the west of the Site and, as its closest point is around 400m west of the Site. The ZTV suggests potential visibility of the Site from the junction with Bishopstoke Road southwards until level with the airport terminal buildings.
- M3 – The M3 motorway passes around 2.4km to the west of the Site with the ZTV suggesting that there will be no visibility.

Recreational Routes

1.5.16 Recreational users of PRoW would likely be the most sensitive visual receptors of any change in the landscape.

- The Itchen Navigation Heritage Trail stretches from Winchester in the north, to Woodmill near Swaythling in the south. It follows the Itchen Navigation, which is a straightened, controlled and diverted part of the River Itchen. The route borders the Site to the east and south, separated by a band of mature vegetation which is around 20-30m in width. The ZTV suggests some visibility of the Proposed Development along the route, in particular between Decoy Covert in the south and the Eastleigh to Fareham line in the north.
- National Cycle Network Route 23 runs to the west of the airport at approximately 275m at its closest point. The ZTV suggests that there will be visibility of the Proposed Development where the route follows the southern boundary of Lakeside Country Park along Doncaster Drove.
- Route Number 072/54/1 which runs approximately 1.7km to the west of the Site adjacent to Kenworthy Way.
- Route Number 241/4/1 which runs adjacent to the Eastleigh to Fareham Line at approximately 1.5km to the east of the Site close to Allington Lane.

- Route Number 262/780/1 which runs along the southern edge of Bishopstoke, at the edge of the River Itchen water meadows.
- Routes to the west of Horton Heath including routes 085/702/1, 085/701/1, 085/701/2, 085/7/2, 085/8/1 and 085/10/4. These routes lie a minimum of 2km east of the Site with the ZTV suggesting the possibility of visibility from the routes listed.
- Routes to the east of West Horton Farm including routes 262/743/1, 262/746/1, 085/14/1, 085/13/1, 262/780/5, 762/780/3 and 762/741/1. These routes lie a minimum of 1.3km east of the Site with the ZTV suggesting the possibility of visibility on the routes listed.

Other Recreational and/or Tourist Receptors

1.5.17 Other receptors within the study area include receptors at:

- The Itchen Valley Country Park is located to the south-east of the Site with the water meadows that form part of the wider park bordering the Site to the south. Existing tree cover around the periphery of the park will restrict most views however there will be the potential for some views back towards the Proposed Development from more open elevated parts of the park such as on High Hill and from the area of the park within the River Itchen water meadows.
- The Lakeside Country Park is located to the west of the South-west mainline to the immediate west of the airport and at its closest point around 560m west of the Site. The ZTV suggests visibility along the northern edge of the park.

1.6 Proposed Mitigation

Construction

- 1.6.1 Consideration will be given to the locations of site compounds and equipment laydown to minimise landscape and visual effects as far as practicable. There is however limited potential for additional mitigation of short-term landscape and visual construction effects
- 1.6.2 Lighting of any construction compounds would be designed to minimise visual intrusion. Existing trees, woodlands and hedgerows would be protected in accordance with best practice for construction in proximity to trees and in accordance with relevant British Standards. In addition, the Construction and Environmental Management Plan (CEMP) will secure the protection of retained trees and hedgerows during construction.

Operation

- 1.6.3 A high-quality design will be secured, firstly through careful consideration of the emerging development parameters for the Proposed Development, taking account of the potential landscape and visual effects. Removal or disruption to any existing landscape fabric (e.g. trees and hedgerows) will be minimised to that which is required to facilitate the implementation of Proposed Development.
- 1.6.4 The landscape proposals will be embedded into the scheme as primary mitigation where necessary to mitigate landscape and visual effects. An outline Landscape and Ecological Management Plan (LEMP) will be developed and will form secondary mitigation. Also, the

design and access statement will set out key design principles, both in terms of the design of the buildings that come forward on the Site and in terms of how the landscape treatments will seek to integrate the Proposed Development into the surrounding environment.

1.7 Description of Likely Significant Effects

- 1.7.1 At this stage, prior to any formal assessment and in the absence of fixed development proposals, it is acknowledged that there is the potential for significant landscape and visual effects to arise during construction and operation of the Proposed Development.
- 1.7.2 The LVIA will therefore consider the potential effects upon:
- Landscape fabric;
 - Landscape character; and
 - Visual receptors including residential, transport and recreational receptors.
- 1.7.3 Whilst the ZTV presented in Figure 3 illustrates theoretical visibility out to 3 km, it is likely that any significant effects would only extend across a much narrower radius from the Site boundary than this.
- 1.7.4 Based on analysis to date and previous experience of assessing the significance of landscape and visual effects for commercial developments in similar landscapes, it is considered likely that any significant landscape and visual effects arising from the Proposed Development would be limited to within a distance of approximately 3km.

1.8 Receptors to be scoped into further assessment.

Receptor/Matter	Phase	Justification
LCAE LCA 4 – Southampton Airport	Construction and operation	The majority of the Site falls within this LCA and as such there is likely to be a large scale of change.
LCAE LCA 2 – Upper Itchen Valley	Construction and operation	The Site sits to the south of this LCA with the ZTV suggesting some interaction with the Proposed Development on the Site.
LCAE LCA 3 – Lower Itchen Floodplain	Construction and operation	The Site borders this LCA which sits directly to the east with the ZTV suggesting extensive visibility with the northern part of the LCA.
LCAE LCA 5 – Itchen Valley Sports Pitches	Construction and operation	The ZTV suggests some visibility back towards the site from within this LCA. The extent to which the Proposed Development interacts with the character area, given the surrounding urban context, is likely to be limited. However, the effects will still be considered within the LVIA chapter.
LCAE LCA 9 – Horton Heath Undulating Farmland	Construction and operation	The ZTV suggests that the Proposed Development will not interact to any great degree with the LCA. However, there will be some intervisibility within relatively close proximity to the site (0.9km) so this LCA will be considered within the assessment.

LCAE LCA 10 – Oaklands Woodland & Farmland	Construction and operation	The ZTV suggests that there will be interaction between the Proposed Development and the LCA from a limited number of locations. The potential effects will be considered within the LVIA chapter.
Eastleigh townscape	Construction and operation	The ZTV suggests that the Proposed Development will interact with the townscape of Eastleigh. The potential effects will be considered within the LVIA chapter.
Bishopstoke townscape	Construction and operation	The ZTV suggests that the Proposed Development will interact with the townscape of Bishopstoke. The potential effects will be considered within the LVIA chapter.
Views from Eastleigh	Construction and operation	The ZTV suggests pockets of visibility from within the town which will be considered further within the LVIA chapter.
Bishopstoke	Construction and operation	The ZTV suggests pockets of visibility from within the town which will be considered further within the LVIA chapter.
Horton Heath	Construction and operation	The ZTV suggests pockets of visibility from within the town which will be considered further within the LVIA chapter.
The countryside that lies between the M27, Horton Heath and Bishopstoke.	Construction and operation	The ZTV suggests that there will be views back towards the Site from this area which contains individual properties, the hamlet of Allington, along with Allington Lane and Fir Tree Lane. Views from within this area will be considered within the LVIA chapter.
M27	Construction and operation	There will be clear views across Southampton Airport towards the Proposed Development for an approximately 400m stretch of the M27. Views from the route will be considered within the LVIA chapter.
Eastleigh to Fareham line	Construction and operation	This line passes along the northern boundary of the Site. While views towards the Proposed Development would be filtered by trackside vegetation, there would still be views into the Site and as such views from the route will be considered further within the LVIA chapter.
The Itchen Navigation Heritage Trail	Construction and operation	This route passes by the eastern boundary of the Site with the ZTV suggesting the possibility of views towards the Proposed Development along much of the route as it runs between Bishopstoke and the M27. Views along the route will be considered within the LVIA chapter.
PRoW Route Number 262/780/1	Construction and operation	This route runs along the southern edge of Bishopstoke at the edge of the River Itchen water meadows. The ZTV suggests views back towards the Proposed Development. Views along the route will be considered within the LVIA chapter.
PRoW Route Number 241/4/1	Construction and operation	This route runs eastwards from Allington Lane alongside the Eastleigh to Fareham line. The ZTV suggests that there will be some level of visibility along the route so it will be considered further in the LVIA chapter.
Routes to the west of Horton Heath	Construction and operation	These routes sit to the immediate west of the village with the ZTV suggesting some level of visibility towards the Proposed

		Development from this location. The extent of visibility will therefore be considered within the LVIA chapter.
Routes to the east of West Horton Farm	Construction and operation	The ZTV suggests the potential for views towards the Proposed Development from a number of PRow within this location. The extent of visibility will therefore be considered within the LVIA chapter.
The Itchen Valley Country Park	Construction and operation	The ZTV suggests that while there may be some limited visibility from much of the park, the area within the Itchen water meadows will have views back towards the Proposed Development. The extent of visibility within the park will therefore be considered in the LVIA chapter.
The Lakeside Country Park	Construction and operation	The ZTV suggests visibility of the Proposed Development along the northern edge of the country park. The extent of visibility within the park will therefore be considered in the LVIA chapter.

1.9 Receptors to be scoped out of further assessment.

Receptor /Matter	Phase	Justification
South Downs National Landscape	Construction and operation	This nationally important designation is, at its closest point 4.7km from the Site. While there may be scope for distant views towards the Proposed Development from more elevated and open points within the landscape, when visible it would be seen in the wider context of Southampton and the wider urban context. This includes existing development of a similar scale at the airport and at Barton Park Industrial Estate to the north. As such it is not envisaged that the Proposed Development would result in a landscape or visual effects greater than negligible and that none of the special qualities of the National Landscape would be impacted.
New Forest National Park	Construction and operation	At its closest point, the National Park sits approximately 9.6km from the Site and on the opposite side of Southampton docks. As such it is not likely to visually interact with the Proposed Development.
Townhill Park Registered Park and Garden (RPAG)	Construction and operation	This Grade II listed RPAG is located 2km to the south of the Site. The ZTV suggests that the Site should be screened from within the RPAG with the treed nature of the much of the Site enclosing views. As such it is not likely to interact with the Proposed Development on the Site.
Conservation Areas in Southampton and Eastleigh	Construction and operation	The ZTV suggests no visibility of the Proposed Development from any of the Conservation Areas within the study area. It is not therefore proposed to consider these further within the LVIA Chapter.
LCAE LCA 6 – North Stoneham Park	Construction and operation	Since the Eastleigh Landscape Character Assessment was published, the majority of this character area has been developed for housing. As such any potential interaction with the site will be considered in terms of townscape.

Southampton townscape	Construction and operation	While the ZTV suggests limited visibility with the townscape of Southampton to the south of the M27, the limited extent, the distance from the site and the surrounding largely urban environment is unlikely to result in effects greater than Negligible to the townscape. As such it will not be considered further within the LVIA chapter.
Fair Oak townscape	Construction and operation	While the ZTV suggests limited visibility with the townscape of Fair Oak to the east of the Site, the limited extent, the distance from the site and the adjacent existing large commercial development is unlikely to result in effects greater than Negligible to the townscape. As such it will not be considered further within the LVIA chapter.
Horton Heath townscape	Construction and operation	The ZTV suggests limited views back towards the Site from the western edge of the village. However, these views will be in the context of views back towards the existing urban edge and adjacent large commercial development. It is not therefore anticipated that there will be any effects on the townscape greater than Negligible and as such it will not be considered further within the LVIA chapter.
South-West Mainline	Construction and operation	While the ZTV does suggest the possibility of views towards the Site as it passes along the northern part of the airport's western boundary, in reality these will be limited in scope due to the track side vegetation and the sunken nature of the line at this point. If there was any visibility of the Proposed Development, the view would be glimpsed and seen within the wider context of the adjacent industrial area and the airport. Views from the railway line will not therefore be considered further within the LVIA chapter.
M3	Construction and operation	The ZTV suggests no visibility from the M3 so views from it will not be considered in the LVIA chapter.
National Cycle Route 23	Construction and operation	While the ZTV does suggest the possibility of glimpsed views towards the Site, in reality this is unlikely to be the case due to the existing built form and vegetation that borders much of the route. If there was a glimpsed view it would be fleeting in nature and visible within the wider urban context and at a distance where any likely visual effect would be no greater than Negligible. It will not therefore be considered further in the LVIA chapter.
PRoW Route Number 072/54/1	Construction and operation	The ZTV suggests that the majority of the Proposed Development would be screened from view with only the very top of any buildings having potential for glimpsed views. This lack of clear view along with the distance from the Site and surrounding urban context will result in any likely visual effect being no greater than Negligible. It will not therefore be considered within the LVIA chapter.

1.10 Representative Viewpoints

1.10.1 To aid with the assessment of the landscape and visual receptors identified above, a series of 10no. representative viewpoints have been identified as shown on Figure 1. These are as follows:

- Viewpoint A – View from Campbell Road.
- Viewpoint B – View from The Itchen Navigation Heritage Trail north of the Eastleigh / Fareham Line.
- Viewpoint C - View from The River Itchen Water Meadows looking north-west.
- Viewpoint D – View from The Itchen Navigation Heritage Trail at north-western boundary of Itchen Valley Country Park.
- Viewpoint E – View from northern edge of Lakeside Country Park.
- Viewpoint F – View from PRoW route 262/780/1 to the south of Fair Oak Road.
- Viewpoint G – View from junction of PRoW route 262/780/3 and 262/743/1 east of West Horton Farm.
- Viewpoint H - View from junction of PRoW route 085/701/1 and 085/702/1/780/3 west of Horton Heath.
- Viewpoint I – View from High Hill within Itchen Valley Country Park.
- Viewpoint J – View from bridge within Itchen Valley Country Park.

1.11 Proposed Assessment Methodology

1.11.1 The LVIA will be undertaken in accordance with published best practice namely the 'Guidelines for Landscape and Visual Impact Assessment (Third Edition)', Landscape Institute and IEMA 2013 (GLVIA3) and associated technical guidance notes published by the Landscape Institute, as detailed below.

1.11.2 "Landscape and Visual Impact Assessment is a tool used to identify and assess the significance of and the effects of change resulting from development on both the landscape as an environmental resource in its own right and people's views and visual amenity." (GLVIA3, paragraph 1.1).

1.11.3 In addition to GLVIA3, other associated technical guidance notes of relevance to the assessment published by the Landscape Institute include:

- Technical Guidance Note 06/19: Visual Representation of Development Proposals, published by the Landscape Institute (2019).
- Technical Guidance Note 02/21: Assessing landscape value outside national designations.

- Technical Guidance Note 02/19: Residential Visual Amenity Assessment.
- Technical Guidance Note LITGN-2024-01: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3)

- 1.11.4 Wherever possible, identified effects are quantified, but the nature of landscape and visual assessment requires interpretation using professional judgement. In order to provide a level of consistency to the assessment, the prediction of magnitude and assessment of significance of the residual landscape and visual effects will be based on pre-defined criteria.
- 1.11.5 GLVIA3 states that '*professional judgement is a very important part of the LVIA*' (paragraph 2.23) and that '*in all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others.*' (paragraph 2.24). It goes on at paragraph 3.32 to state that '*there are no hard and fast rules about what effects should be deemed 'significant' but LVIA's should always distinguish clearly between what are considered to be the significant and non-significant effects.*'
- 1.11.6 The LVIA will define the existing landscape and visual baseline environment; assess its sensitivity to change; describe the key landscape and visual related aspects of the Proposed Development; describe the nature of the anticipated changes and assess the effects arising during construction, operation and decommissioning.
- 1.11.7 Although linked, landscape and visual effects are considered separately. Landscape effects derive from changes in the landscape fabric, which may result in changes to the character, whereas visual effects are the effect of these changes as experienced by people (visual receptors).
- 1.11.8 The specific significance criteria to be used in the LVIA are set out in Appendix A.
- 1.11.9 A selection of viewpoints, to be agreed with EBC, will be used in the LVIA to consider effects on different receptor groups, at various distances from the Site and to illustrate any particularly sensitive views identified through scoping.
- 1.11.10 Wireline images of the Proposed Development Parameters will be provided for each of the assessment viewpoints used in the LVIA. The photographs will accord with guidance for 'Type 3' visualisations as defined in Landscape Institute Technical Guidance Note 06/19 (TGN 06/19).
- 1.11.11 Mitigation measures will be developed as appropriate and taken into consideration in the assessment of effects. Operational phase effects will be assessed in Year 1 and Year 15.
- 1.11.12 The LVIA will conclude by summarising which, if any, effects are considered to be 'significant'.
- 1.11.13 As set out within LI Technical Guidance Note 02/19 'Residential Visual Amenity Assessment':

"Changes in views and visual amenity are considered in the planning process. In respect of private views and visual amenity, it is widely known that no one has 'a right to a view.'"

And:

"It is not uncommon for significant adverse effects on views and visual amenity to be experienced by people at their place of residence as a result of introducing a new development into the landscape. In itself this does not necessarily cause particular planning concern. However, there are situations where the effect on the outlook/visual amenity of a residential property is so great that it is not generally considered to be in the public interest to permit such conditions to occur where they did not exist before."

- 1.11.14 Given the location of the site and the distance to any residential receptors, it is not anticipated that the threshold for residential visual amenity assessment will be reached. It is not therefore intended to produce one as part of the LVIA chapter or supporting appendices.
- 1.11.15 Cumulative landscape and visual effects will be assessed as appropriate. Other projects to be considered in the cumulative LVIA will be identified through stakeholder consultation.

1.12 Assumptions / limitations

- 1.12.1 In undertaking the landscape and visual assessment of the Proposed Development, there are a number of limitations and constraints that have potential to affect the output of the LVIA chapter. These will include:
- The assessment will be based on an agreed phased approach to the implementation of any screening measures with the assumption that these measures will be implemented as part of the first phase of the development that requires them to mitigate views from sensitive landscape and visual receptors.
 - The operational effects of the Proposed Development will be assessed based on all the plots being developed and operational from day 1. This represents a 'maximum effect' scenario with the reality likely to be that the development will be sequenced with the gradual build out of the development over several years.
 - Seasonal variation in terms of leaf colour will be considered within the report, while growth rates for proposed mitigation will be considered within the report, future growth rates outside of the Site will not be relied upon when assessing likely effects at Year 15 as their future management cannot be controlled.
 - The assessment will be based on the assumption that primary and secondary mitigation measures and any enhancement measures are fully implemented with the assumption of 300mm annual growth rates for any proposed screen planting.
 - The development parameters that will be assessed will represent a 'maximum effect' for the purposes of assessment. In reality the finished Proposed Development would sit within these parameters and in places would be set back further from the Site boundary. The quantum of development within the development zones would be significantly less than the area of the development zone which would often result in a reduction in effect to that assessed and reported within this ES chapter. This is particularly true within close proximity to the application site.
 - Visual effects are based on good visibility. In reality visibility would be expected to vary, with poor visibility at times of cloud, rainfall and dusk. At these times a reduction in visual clarity, colour and contrast will be experienced. Reduced visibility will limit the extent of

views, particularly longer distance view. Therefore, the assessment of effects will present a 'maximum effect' scenario, where the development would be most visible.

1.13 References

- Guidelines for Landscape and Visual Impact Assessment, Third Edition, Landscape Institute and IEMA (2013).
- Landscape Institute Technical Guidance Note 06/19: Visual Representation of Development Proposals, published by the Landscape Institute (2019)
- Landscape Institute Technical Guidance Note 02/21: Assessing landscape value outside national designations
- Landscape Institute Technical Guidance Note 02/19: Residential Visual Amenity Assessment
- Landscape Institute Technical Guidance Note 01/24: Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA3)
- National Character Area Profile 128 – South Hampshire Lowlands, 2014. Available online [here](#)
- Hampshire Definitive Map. Available online [here](#)
- Landscape Character Assessment for Eastleigh Borough. Available online [here](#)
- Character Area Appraisals for Eastleigh Borough. Available online [here](#)
- Hampshire Integrated Character Assessment. Available online [here](#)
- Eastleigh Borough Local Plan (2016-2036) 2022. Available online [here](#)

1.14 Scoping Questions

- Do you agree with the proposed list of consultees?
- Do you agree with the proposed LVIA study areas?
- Do you agree that the data sources listed to inform the LVIA are appropriate?
- Do you agree that the surveys proposed to inform the LVIA are appropriate?
- Are any receptors/assets/resources not identified that you would like to see included in the LVIA?
- Do you agree with the proposed mitigation measures and is this mitigation appropriate?
- Will night time views require consideration within the LVIA?

- Do you agree with the landscape and visual receptors that are proposed to be scoped in and out of further assessment?
- Do you agree with the proposed factor-specific assessment approach?
- Are there any specific viewpoints that you would like us to consider other than those put forward?
- Do you agree with the approach of producing 'wireline' views of the development parameters from each of the representative viewpoints?
- Are there any other developments which you consider it will be necessary for us to address in a cumulative landscape and visual impact assessment?

APPENDIX A:

LANDSCAPE AND VISUAL IMPACT ASSESSMENT METHODOLOGY AND CRITERIA

Introduction

1. The purpose of a Landscape and Visual Impact Assessment (LVIA) when produced in the context of an EIA is to identify and report any likely significant landscape and visual effects.
2. The following appendix sets out the methodology and criteria against which the assessment of landscape and visual effects has been undertaken.
3. The Guidelines for Landscape and Visual Impact Assessment (Third Edition) (GLVIA3)¹ are widely recognised as the primary source of guidance for LVIA in the UK but clearly state that: *“The guidance concentrates on principles while also seeking to steer specific approaches where there is a general consensus on methods and techniques. It is not intended to be prescriptive, in that it does not provide a detailed ‘recipe’ that can be followed in every situation. It is always the primary responsibility of any landscape professional carrying out an assessment to ensure that the approach and methodology adopted are appropriate to the particular circumstances.”* (paragraph 1.20)
4. GLVIA 3 also states that: *“professional judgement is a very important part of the LVIA”* (paragraph 2.23) and that *“in all cases there is a need for the judgements that are made to be reasonable and based on clear and transparent methods so that the reasoning applied at different stages can be traced and examined by others.”* (paragraph 2.24).
5. It goes on to state that *“there are no hard and fast rules about what effects should be deemed significant but LVIAAs should always distinguish clearly between what are considered to be the significant and non-significant effects.”* (paragraph 3.32)
6. Wherever possible, identified effects are quantified, but as noted above, the nature of landscape and visual assessment requires interpretation using professional judgement. In order to provide a level of consistency to the assessment, the prediction of magnitude and the assessment of significance of the residual landscape and visual effects are based on pre-defined criteria as set out in this appendix.
7. Landscape and Visual Assessments are separate, though linked processes which GLVIA3 notes are *“related but very different considerations”*. The assessment of the potential effect on the landscape is carried out as an effect on the environmental resource (i.e. the landscape). Visual effects are assessed as an inter-related effect on people.
 - Landscape effects derive from changes in the physical landscape elements which may give rise to changes in its distinctive character and how this is experienced, including consideration of aesthetic and perceptual aspects.

¹ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment Third Edition*; Spon; 2013

- Visual effects relate to changes that arise in the composition of available views as a result of changes to the landscape, to people's responses to the changes and to the overall effects with respect to visual amenity.

Establishing the Baseline

8. The baseline for consideration of landscape and visual effects is evaluated through desk study and site work and is the current situation at the time of the assessment, unless noted otherwise. Existing operational/ built development and development under construction is considered as part of the baseline.
9. The **future baseline**, where relevant, incorporates any anticipated natural change to the landscape (eg change to land cover through natural regeneration), and also in the case of built development, changes which are considered certain or likely to happen (including consented proposals which are not yet present in the landscape but which are expected to be constructed). These may or may not be included as part of the landscape and visual baseline depending on individual project circumstances. Where the future baseline differs from the current baseline, it is clearly stated in the LVIA which baseline has been adopted for the assessment of effects and a rationale for the approach taken is provided as necessary.

Direct and Indirect Effects

10. Direct and indirect effects are defined in GLVIA3. Direct effects may be defined as resulting "*directly from the development itself*" (paragraph 3.22). An indirect (or secondary) effect is one that results "*from consequential change resulting from the development*" (paragraph 3.22) and is often produced away from the site of the proposed development or as a result of a complex pathway or secondary association.

Landscape Effects

11. The starting point for an assessment of landscape effects is a desk-based assessment of published landscape studies, which may include landscape character assessments, sensitivity and capacity studies and/or landscape designation reviews. Relevant documents are listed as appropriate in the assessment and relevant extracts may be included as appendices where this is judged appropriate. Desk based assessment is supplemented by field work to verify the key characteristics of the landscape.
12. In accordance with GLVIA3, the significance of landscape effects is determined by combining judgements regarding the sensitivity of the receiving landscape and the magnitude of the landscape effects arising from the Proposed Development.
13. An assessment of the degree to which the proposed development changes "*distinct and recognisable pattern of elements, or characteristics, in the landscape that make one landscape different from another, rather than better or worse*" ('An Approach to Landscape Character Assessment', Natural England, 2014), enables a judgement to be made as to the significance of the effect in landscape character terms.
14. In order to reach an understanding of the effects of development upon the landscape resource it is necessary to consider different aspects of the landscape baseline including:
 - **Landscape Fabric/Elements:** The individual features of the landscape, such as hills, valleys, woods, hedges, tree cover, vegetation, buildings and roads for example which can usually be described and quantified.

- **Landscape key characteristics:** The particularly notable elements or combinations of elements which make a particular contribution to defining or describing the character of an area, which may include experiential characteristics such as wildness and tranquillity.

Landscape Sensitivity

15. It should be noted, as stated in GLVIA3, *“LVIA sensitivity is similar to the concept of landscape sensitivity used in the wider arena of landscape planning but is not the same as it is specific to the particular project or development that is being proposed and to the location in question”* (paragraph 5.39).
16. In LVIA, landscape sensitivity is assessed by combining judgements about the value attached to a landscape and its susceptibility to the type of change and nature of the development proposed. The overall sensitivity of the landscape to a particular development is described in the assessment as **High, Medium** or **Low**.
 - **Landscape Value:** This is the relative value or importance attached to different landscapes by society on account of their landscape qualities. Sometimes it is used as a basis for designation or recognition which expresses national or local authority consensus, because of its special qualities/attributes. Whilst the presence of formal designations are an important component when determining landscape value, other aspects are also considered as part of the judgement process as explained in Landscape Institute Technical Guidance Note 02-21², especially when considering the value of landscapes outside of national designations. These include factors related to natural and cultural heritage (for example ecological, geological or heritage matters), landscape condition, cultural associations (in terms of connections with people, arts or events), distinctiveness (i.e. a sense of unique identity in the landscape), recreational opportunities, perceptual aspects (including scenic quality, wildness and tranquillity) and landscapes with a clearly identifiable role or function. In this assessment, the value attributed to the landscape is described as: **National, Regional** or **Community**.
 - **Landscape Susceptibility:** Landscape Susceptibility according to GLVIA3 means *“the ability of the landscape receptor to accommodate the proposed Development without undue consequences for maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies”* (paragraph 5.40). The susceptibility of the landscape varies depending on the type of development proposed and the particular site location. Judgements on landscape susceptibility include references to both the physical and aesthetic characteristics and the potential scope for mitigation. In this assessment, the susceptibility of the landscape is described as **High, Medium** or **Low**.
17. The criteria and the detailed judgements regarding susceptibility and value of landscape receptors are identified within the sensitivity tables included within the assessment.
18. Sensitivity is evaluated taking into account the component judgements about the value and susceptibility of the receptor as illustrated by the table below. Where sensitivity is judged to lie between levels, an intermediate assessment is adopted. Note that equal weighting is attributed to susceptibility and value when determining overall landscape sensitivity.

² Landscape Institute Technical Guidance Note 02-21: Assessing Landscape Value Outside National Designations

Value	Susceptibility			
		High	Medium	Low
	National	High	High/Medium	Medium
	Regional	High/Medium	Medium	Medium/Low
	Community	Medium	Medium/Low	Low

Magnitude of Landscape Change

19. The magnitude of landscape change arising from the proposed development at any particular location is assessed in terms of *“size or scale, the geographic extent of the area or receptor that is influenced and its duration and reversibility”* (paragraph 5.48).
20. Judgements concerning the **Scale** of the change take account of:
 - degree of loss or alteration to key landscape features/elements; characteristics; and for designated areas – special qualities and/or purposes of designation;
 - distance from the development; and
 - landscape context to the development.
21. The approach to assessing effects on landscape character is to consider the key characteristics for the Landscape Character Area (LCA) within which the proposed development is located (the host LCA) and if relevant the adjacent LCA's (non-host) and identify which of these the proposed development would affect. A large scale change in landscape character is likely to occur where key characteristics would be lost or substantially changed. A small scale change is likely to occur where key characteristics are altered to a lesser degree and this can be influenced by distance and surrounding context.
22. Where particular views are a key characteristic of a landscape type, large or medium scale landscape character effects may occur where the proposed development becomes a key feature of those views. A similar approach applies to designated landscapes, for which the effects on the defined purposes of designation and special qualities are considered.
23. In this assessment, the scale of landscape change is described as: **Large, Medium, Small or Negligible**.
24. Having established the scale of change to the landscape baseline, the **Geographic Extent** of the change can be identified. In this assessment, the geographical extent of landscape change is described as: **Wide, Intermediate, Localised or Limited**.
25. **Duration and Reversibility** can be linked depending on the nature of the development. Reversibility is a judgement about the practicality of reversing the landscape effects of the proposed development (for example, solar farms are ultimately largely reversible whilst housing is permanent). Duration reflects how long the change will last and can include frequency the effect would be experienced. In this assessment, the duration of the change would be considered:
 - **short term** when lasting less than 2 years;
 - **medium term** when lasting between 2 and 10 years;
 - **long term** when lasting between 10 and 40 years, and
 - **permanent** for more than 40 years.

26. Magnitude is considered taking into account the three contributory factors as illustrated by the diagrams in Plate 1 below.

Visual Effects

27. In accordance with GLVIA3, the significance of visual effects is determined by combining judgements regarding the sensitivity of visual receptors (people who view the landscape) and the magnitude of the change they experience arising from the Proposed Development.

Visual Receptor Sensitivity

28. In visual assessment, visual receptor sensitivity is assessed by combining judgements about the value attached to views and the susceptibility of the viewer to the type of change and nature of the development proposed. The overall sensitivity of the visual receptor to a particular development is described in this assessment as **High**, **Medium** or **Low**.

- **Value of Views:** The value of public views, which is the focus of GLVIA3, will vary depending on the nature, location and context of the view and the recognised importance of the view. Considerations include cultural associations; designation or policy protection; views of or from landmarks; and/or the scenic quality of the view. It should be noted that the value attributed relates to the value of the view only (e.g. a National Trail is nationally valued for access, but not always for the available views from every section). In this assessment, the value attributed to visual amenity is described as: **National**, **Regional** or **Community**.
- **Susceptibility of Visual Receptors:** Those living within view of the Proposed Development are usually regarded as the highest susceptibility group as well as those engaged in outdoor pursuits for whom landscape experience is the primary objective. The susceptibility of potential visual receptors will also vary depending on the activity of the receptor. For visual receptors, susceptibility and value are closely linked - the most valued views are also likely to be those where viewer's expectations will be highest. In this assessment, visual receptor susceptibility is defined in accordance with the criteria below.

High - Local residents; tourists; people engaged in outdoor recreation focused on an appreciation of views including users of footpaths and quiet country lanes, beauty spots and picnic areas and people experiencing views to or from important features of physical, visual, cultural or historic interest.

Medium - Local road users and travelers on trains. People engaged in outdoor recreation with some appreciation of the landscape e.g. road cycling, nature conservation, golf and water based recreation.

Low - Workers, users of facilities and commercial buildings (indoors) experiencing views from buildings. Road and rail users on fast moving commuting or trunk routes. Visual receptors where views are incidental to the activity and/or location.

29. Sensitivity is evaluated taking into account component judgements about the value and susceptibility of the receptor as illustrated by the table below. Where sensitivity is judged to lie between levels, an intermediate assessment is adopted. Note that a greater weight is intentionally attributed to the susceptibility of the visual receptor than to value. This is in recognition of the fact that relatively few views are specifically recognised through designation or cultural reference. This approach still acknowledges that value associations influence sensitivity.

Value	Susceptibility			
		High	Medium	Low
	National	High	High/Medium	Medium
	Regional	High/Medium	High/Medium	Medium/Low
	Community	High/Medium	Medium	Low

Magnitude of Visual Change

30. The magnitude of visual change arising from the Proposed Development is assessed in terms of its size or scale, geographic extent of the area or receptor that is influenced and its duration.
31. Representative viewpoints are used in the LVIA as 'samples' on which to base judgements of the scale of change experienced by visual receptors. The wider extent of the effect and its duration are not captured in the viewpoint analysis (as a viewpoint cannot capture these factors for an entire route or area). As duration and extent are necessary considerations in determining magnitude of change, judgements concerning magnitude and significance are provided for visual receptors and not for representative viewpoints. The only exception to this would be a specific viewpoint – where people visiting that location to look at the view are assessed as a visual receptor group in its own right.
32. With the exception of specific viewpoints (as noted above), each route (e.g. a footpath or road) and receptor group (e.g. a community or village) will encompass a range of possible views, which might vary from no view of the development to very clear, close views. Therefore, effects are described in such a way as to identify where views towards the development are likely to arise and what the scale and duration and extent of those views is likely to be. In some cases, this will be further informed by a nearby viewpoint and in others it will be informed with reference to ZTV studies, aerial photography and site visits. Each of these individual effects are then considered together in order to reach a judgement of the effects on the visual receptors along that route, or in that place.
33. The Scale of change arising from the Proposed Development as experienced by a visual receptor group reflects the degree to which the nature of the views from that location would be changed taking into account:
 - The distance of the viewpoint from the development;
 - the degree to which the development is visible or screened;
 - the angle of view in relation to main receptor activity or main focus of the view;
 - the horizontal and vertical field of view occupied by the development; and
 - the extent and nature of other built development visible.
34. In this assessment, the scale of change in view is described as: **Large, Medium, Small or Negligible**.
35. The approach to assessing effects on views is to consider the full 360 degree view from any given receptor – not just those towards the development and/or shown in visualisations. It is assumed that the change would be seen in clear visibility and the assessment is carried out on that basis. Seasonal variation in visibility due to varying vegetation cover is also taken into account in all judgements. Where there are operational (and consented) developments considered as part of the baseline, the visual effects consider the effects of adding the proposed development to that baseline. Where appropriate, comment may be made on lighting and weather conditions.
36. For visual receptors moving through the landscape (e.g. road and footpath users), the length of their journey during which they would see the Proposed Development is reflected in the judgement of the

Geographic Extent of effects. In this assessment, the geographical extent of visual change is described as: **Wide, Intermediate, Localised** or **Limited**.

37. **Duration** reflects how long the change will last and judgements are framed in the same way as described above for landscape effects. In this assessment, the duration of the change would be considered:
- **short term** when lasting less than 2 years;
 - **medium term** when lasting between 2 and 10 years;
 - **long term** when lasting between 10 and 40 years, and
 - **permanent** for more than 40 years.
38. Magnitude is considered taking into account the three contributory factors as illustrated by the diagrams in Plate 1 below.

Combining Scale of Change, Extent and Duration to Determine Magnitude of Landscape and Visual Effects

39. Scale of change is the first and primary factor in determining magnitude. Geographical extent and duration of the effect are modifying factors to the overall magnitude judgement which may be higher if the effect is particularly widespread and/or long lasting, or lower if it is constrained in geographic extent and/or timescale.
40. The diagrams presented below in Plate 1 illustrate in outline how these two modifying factors are considered in a two-stage process. A judgement is first formed about the scale of the change to the landscape or visual receptor. The geographic extent of the effect is then considered as a modifying influence in the first part of Plate 1 (Stage 1). The result or outcome of Stage 1 is then considered again in relation to the duration of the effect as illustrated in the second part of Plate 1 (Stage 2). The outcome of Stage 2 is the overall magnitude of effect judgement reported in the assessment. Plate 1 is not intended to be interpreted rigidly as a chart to provide definitive answers; professional judgement is employed as appropriate to arrive at an overall magnitude judgement.
41. In this assessment, the magnitude of effects is described as **Substantial, Moderate, Slight** or **Negligible**. Where magnitude is judged to lie between levels, an intermediate assessment will be adopted.

Plate 1 Combining Scale of Change, Extent and Duration to Determine Magnitude of Landscape and Visual Effects

Stage 1 - Modifying Influence of Geographic Extent on Magnitude of Effect

		Scale of Change			
Geographic Extent		Large	Medium	Small	Negligible
	Wide	Substantial			
	Intermediate				
	Localised		Moderate		
	Limited			Slight	Negligible

Stage 2 - Modifying Influence of Duration on Magnitude of Effect

		Stage 1 Result			
Duration		Substantial	Moderate	Slight	Negligible
	Permanent	Substantial			
	Long-term				
	Medium-term		Moderate		
	Short-term			Slight	Negligible

Significance of Landscape and Visual Effects

42. The significance of any identified landscape or visual effect is described as **Major, Moderate, Minor** or **Negligible**. These categories are based on the consideration of receptor sensitivity with the predicted magnitude of effect. The table below is not used as a prescriptive tool and illustrates the typical outcomes, allowing for the exercise of professional judgement. In some instances a particular parameter may be considered as having a determining effect on the analysis.

		Magnitude of Effect			
		Substantial	Moderate	Slight	Negligible
Receptor Sensitivity	High	Major	Major/ Moderate	Moderate	Minor
	Medium	Major/ Moderate	Moderate	Moderate/ Minor	Minor/ Negligible
	Low	Moderate	Moderate/ Minor	Minor	Negligible

43. Where the effect has been classified as Major or Major/Moderate, this is considered to be equivalent to a likely significant effect. Where 'Moderate' effects are predicted, professional judgement is applied to determine whether the effect is significant or not ensuring that the potential for significant effects to arise has been thoroughly considered and justification is provided for the judgement reached as appropriate. Effects of Moderate/ Minor, Minor, Minor/ Negligible or Negligible significance are considered to be not significant.

Beneficial/Adverse

44. Landscape and visual effects can be beneficial or adverse and in some instances may be considered neutral. Neutral effects are those which overall are neither adverse nor positive but may incorporate a combination of both. Whether an effect is beneficial, neutral or adverse is identified based on professional judgement. GLVIA3 indicates at paragraph 2.15 that this is a "*particularly challenging*" aspect of assessment, especially in the context of a changing landscape.
45. However, for the avoidance of doubt, in this assessment it has been assumed that where new infrastructure is introduced into the landscape or views, this will generally constitute an adverse effect. Any variation from this stance will be clearly justified.

Cumulative Effects

46. If required cumulative effects will be assessed as follows. In a broad generic sense, cumulative impacts "*result from the incremental changes caused by other past, present or reasonably foreseeable actions together with the project*"³ However, an assessment of cumulative effects should focus on whether there are any potential cumulative impacts which are reasonably foreseeable and which are likely to influence the decision making of the proposed development, rather than an assessment of every potential cumulative effect⁴, which in practice means focusing on other nearby development proposals and the effects that might arise from the combined influence of those developments on landscape and visual receptors.

³ GLVIA3 page 120, paragraph 7.1 quoting Hyder, 1999 'Guidelines for the assessment of indirect and cumulative impacts as well as impact interactions'

⁴ GLVIA3 page 121 paragraph 7.5.

47. As recommended by the NatureScot cumulative guidance, this assessment focusses on the “*additional cumulative change which would be brought about by the proposed development*”⁵.
48. As noted above, operational developments are included in the baseline, Consented development which are expected to be constructed, form part of the future baseline and will be included as such. However, where there is some uncertainty regarding the future construction of consented developments, they may be considered as the first scenario of the cumulative assessment.
49. Proposals in planning are considered where there is good reason to assume that the timing of decisions may be similar and significant cumulative effects are likely. The assessment of effects is considered within the cumulative assessment.
50. Proposals in scoping are noted but not considered within the cumulative assessment, as there is no certainty that these proposals will progress to planning submissions and the nature of the proposed schemes may be subject to change.
51. The assessment is based on the same landscape and visual baseline and receptor groups as the main LVIA, and the methodology is also the same in terms of forming and expressing judgements.
52. Cumulative effects on landscape receptors arise from combined direct and/or indirect effects on the same receptor – such as two developments within the same character area; or one development within, and one visible from, a designated area.
53. Cumulative effects on visual receptors arise either from two (or more) developments both being visible from the same place; or from sequential views as people travel through the landscape.
54. In order to simplify what may otherwise be a complex assessment, where appropriate, the following approaches are also used:
- The cumulative assessment considers scenarios within which developments may be ‘grouped’ - for instance two nearby cumulative proposals may be considered in one scenario if it is considered that the cumulative effects arising if one or both are developed are likely to be similar.
 - Receptors judged to receive Negligible or Slight-Negligible magnitude effects are not considered for cumulative effects on the basis that any significant effects arising would primarily be caused by the cumulative developments and would be unlikely to be contributed to by the proposed development.
 - Only those receptors judged likely to experience effects from the cumulative development(s) being considered within a given scenario are described within that scenario.
55. Qualitative assessment of design and aesthetic considerations arising as a result of cumulative development, and/or considerations set out within local guidance provided in relation to cumulative development, is also provided where relevant.

ANNEX 1: GLOSSARY OF TERMS

Term	Definition
CLVIA	Cumulative Landscape and Visual Impact Assessment.
Cumulative Effects	Cumulative effects are the additional effects arising from changes caused by a development in conjunction with other past, present or reasonably foreseeable actions.

⁵ Assessing the Cumulative Impact of Onshore Wind Energy Developments, NatureScot, 2021

Term	Definition
Direct Effect	A direct (or primary) effect may be defined as an effect that is directly attributable to the development. ⁶
GLVIA3	' <i>Guidelines for Landscape and Visual Impact Assessment, Third Edition</i> ', published jointly by the Landscape Institute and Institute of Environmental Management and Assessment 2013.
Indirect Effect	An indirect (or secondary) effect is an effect that results indirectly from the proposed project as a consequence of the direct effect, often occurring away from the site, or as a result of a sequence of interrelationships or a complex pathway. They may be separated by distance or in time from the source of the effects. ⁷
Key Characteristics	Those combinations of elements which are particularly important to the current character of the landscape and help to give an area its particularly distinctive sense of place.
LVIA	Landscape and Visual Impact Assessment.
Landscape Capacity	The amount of change which a particular landscape character type or area is able to accommodate without significant detrimental effects on its character. Capacity is likely to vary according to the type and nature of change proposed.
Landscape Character	The distinct and recognisable pattern of elements in the landscape that makes one landscape different from another, rather than better or worse. ⁸
Landscape Character Areas	These are single unique areas which are the discrete geographical areas of a particular landscape type. ⁹
Landscape Character Types	These are distinct types of landscape that are relatively homogeneous in character. They are generic in nature in that they may occur in different areas in different parts of the country, but wherever they occur, they share broadly similar combinations of geology, topography, drainage patterns, vegetation and historical land use and settlement pattern, and perceptual and aesthetic attributes.
Landscape Effects	Effects on the landscape as a resource in its own right. ¹⁰
Landscape Elements	Individual components which make up the landscape such as trees and hedges.
Landscape Features	Particularly prominent or eye-catching elements, like tree clumps, church towers or wooded skylines.

⁶ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p155

⁷ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p156

⁸ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p156

⁹ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157

¹⁰ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157

Term	Definition
Landscape Quality or Condition	This is a measure of the physical state of the landscape. It may include the extent to which a typical character is represented in individual areas, the intactness of the landscape and the condition of individual elements. ¹¹
Landscape Receptor	Defined aspects of the landscape resource that have the potential to be affected by a proposal.
Landscape Resource	The combination of elements that contribute to landscape context, character and value.
Landscape Value	The relative value or importance attached to different landscapes by society on account of their landscape qualities. ¹²
Level of Effect	Determined through the combination of sensitivity of the receptor and the proposed magnitude of change brought about by the development.
Magnitude (of effect)	A term that combines judgements about the size and scale of the effect, the extent of the area over which it occurs, whether it is reversible or irreversible and whether it is short or long term in duration.
Mitigation	Measures including any process, activity or design to avoid, reduce, remedy or compensate for adverse environmental impact or effects of a development.
Photomontage	A visualisation which superimposes an image of a proposed development upon a photograph or series of photographs.
Residential Visual Amenity	A collective term describing the views and visual amenity from a residential property, relating to the type, nature, extent and quality of views that may be experienced from the property and its 'domestic curtilage' including gardens and access driveway. Residential Visual Amenity is only one component of the overall Residential Amenity, others being for example noise, shadow flicker and access amongst others.
Residual Effects	Potential environmental effects remaining after mitigation.
Sense of Place	The essential character and spirit of an area: <i>genius loci</i> literally means 'spirit of the place'.
Sensitivity	A term applied to specific receptors, combining judgements of the susceptibility of the receptor to the specific type of change or development proposed and the value related to that receptor. ¹³
Significant Effects	It is a requirement of the EIA Regulations to determine the likely significant effects of development on the environment which should relate to the level of an effect and the type of effect. Where possible significant effects should be mitigated. The significance of an effect gives an indication as to the degree of importance (based on the magnitude of the effect and sensitivity of the receptor) that should be attached to the impact described. Whether an effect should be considered significant is not absolute and requires the application of professional judgement.
Type or Nature of Effect	Whether an effect is direct, indirect, temporary or permanent, positive (beneficial), neutral or negative (adverse) or cumulative.

¹¹ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157

¹² The Landscape Institute; Technical Guidance Note 02/21 Assessing Landscape Value Outside National Designations

¹³ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p157

Term	Definition
Visual amenity	Value of a particular place in terms of what is seen by visual receptors taking account of all available views and the total visual experience.
Visual Effect	Effects on specific views and on the general visual amenity experienced by people. ¹⁴
Visual Receptors	Individuals and/or defined groups of people who have the potential to be affected by a proposal.
Visualisation	Computer simulation, photomontage or other technique to illustrate the appearance of a development. ¹⁵
Wildness	A quality of appearing to be remote, inaccessible and rugged with little evidence of human influence.
Wireframe or Wireline	A computer generated line drawing of the DTM (Digital Terrain Model) and the proposed development from a known location.
Zone of Theoretical Visibility (ZTV)	Area within which a proposed development may have an influence or an effect on visual amenity. ¹⁶

¹⁴ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158

¹⁵ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158

¹⁶ The Landscape Institute/Institute of Environmental Management and Assessment; *Guidelines for Landscape and Visual Impact Assessment*; Spon; 2013; p158

NAVIGATION QUARTER

FIGURE 01
Site Context



KEY

- Site Boundary
- Distance Radii from Site (1, 2, 3km)
- Proposed Viewpoint Locations
- Existing Waterbodies and Watercourses
- Authority Boundary
- Railway Line
- Road Network

Primary Road
- Secondary Road
- Tertiary Road
- Motorway

NAVIGATION QUARTER

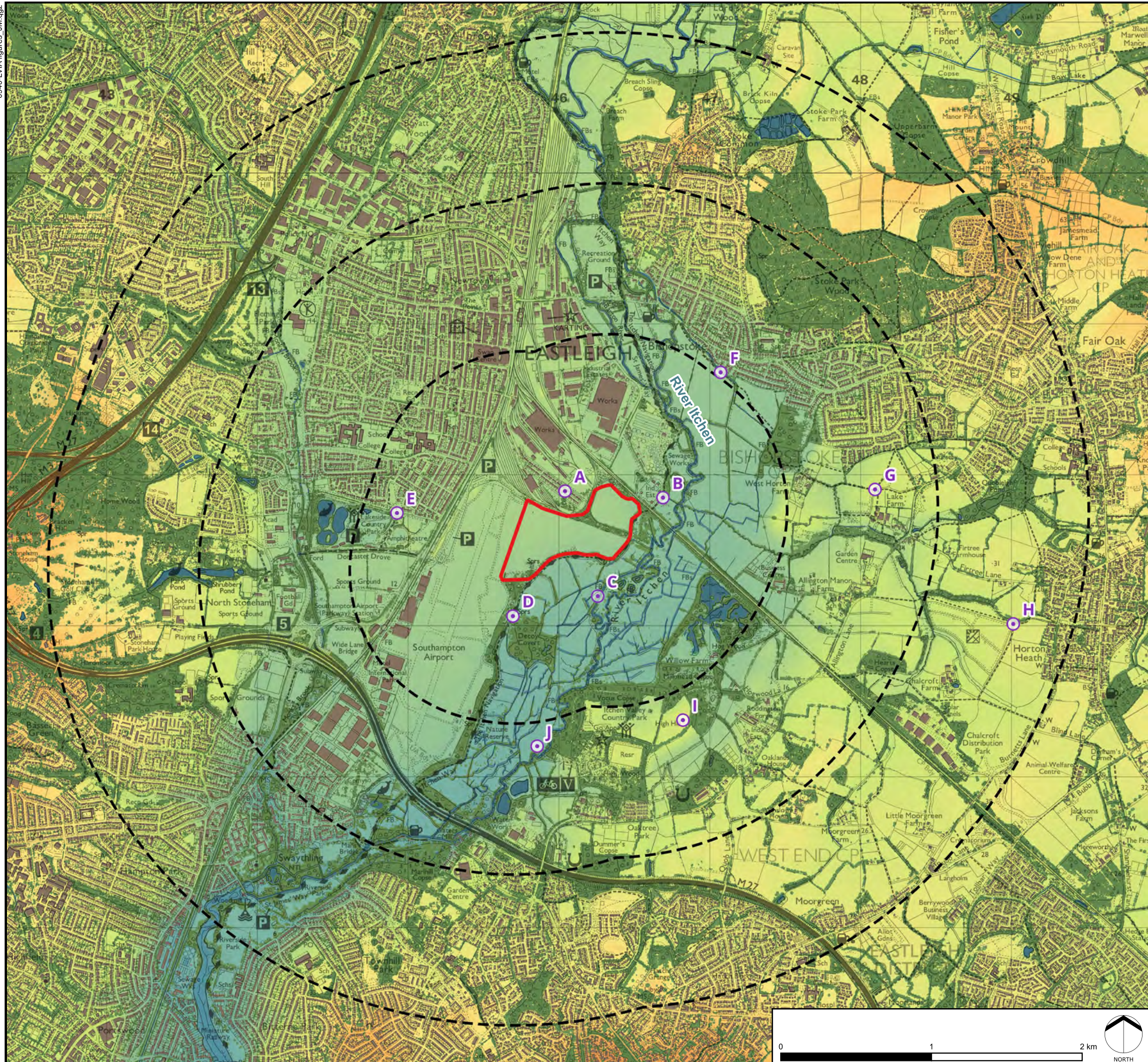
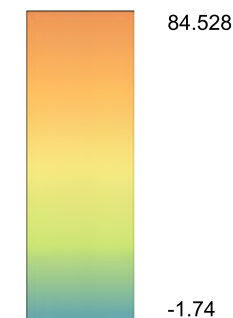
FIGURE 02

Topography and Land Cover

KEY

-  Site Boundary
-  Distance Radii from Site (1, 2, 3km)
-  Proposed Viewpoint Locations
-  Existing Vegetation
-  Existing Waterbodies and Watercourses

Elevation (m AOD)



Projected Coordinate System: British National Grid

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NAVIGATION QUARTER

FIGURE A

Preliminary ZTV with Screening of Woodland and Buildings

KEY

- Parameters Boundary
- Distance Radii from Site (1, 2, 3km)
- Proposed Viewpoint Locations
- Existing Vegetation
- Existing Buildings
- Country Park
- Zone of Theoretical Visibility (ZTV)

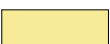
Potential Visibility of Proposed Development

FIGURE DATA:
This figure has been based on the following data:

Terrain data: Defra Survey Data Download lidar_composite_dtm-2022
Viewer's eye height: 2m above ground level
Calculation grid size: 2m

NOTES:
This drawing is based upon computer generated Zone of Theoretical Visibility (ZTV) studies produced using the Viewshed routine in the Visibility Analysis plugin for QGIS.

The areas shown are the maximum theoretical visibility, taking into account topography, principal woodlands and buildings.

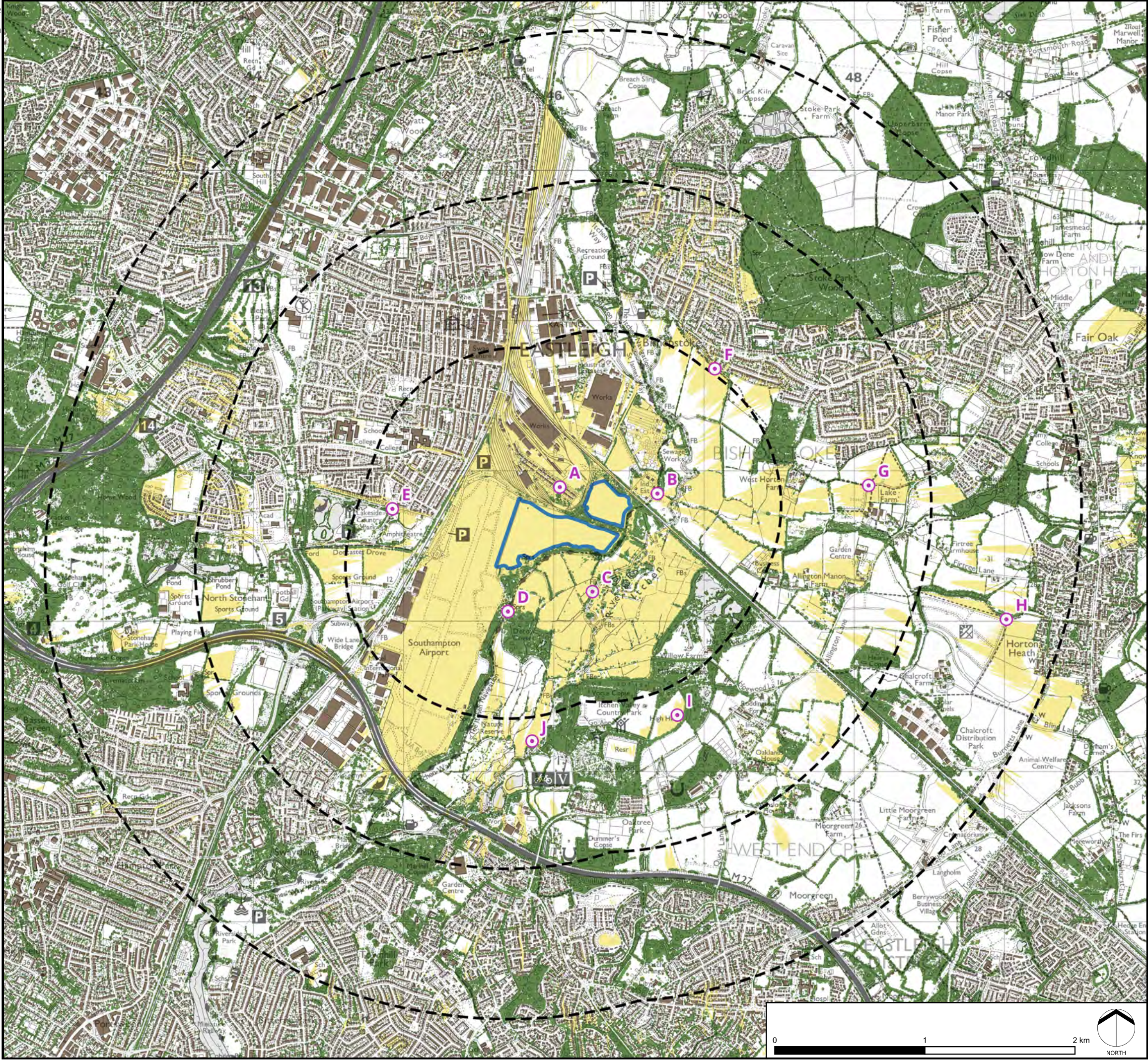
A digital surface model (DSM) has been derived from Defra Survey Data Download lidar_composite_first_return_dsm-2022 height data. Locations of buildings are taken from the OS Open Map Local dataset, and locations of woodland and vegetation higher than 2.5m are taken from the Environment Agency's Vegetation Object Model (VOM) dataset. Heights of buildings and woodland have been taken from Defra Survey Data Download lidar_composite_first_return_dsm-2022 height data.

The actual extent of visibility on the ground will be less than that suggested by this plan.

The ZTV includes an adjustment that allows for Earth's curvature and light refraction. It is based on a derived DSM and has a 2m² resolution.

Projected Coordinate System: British National Grid

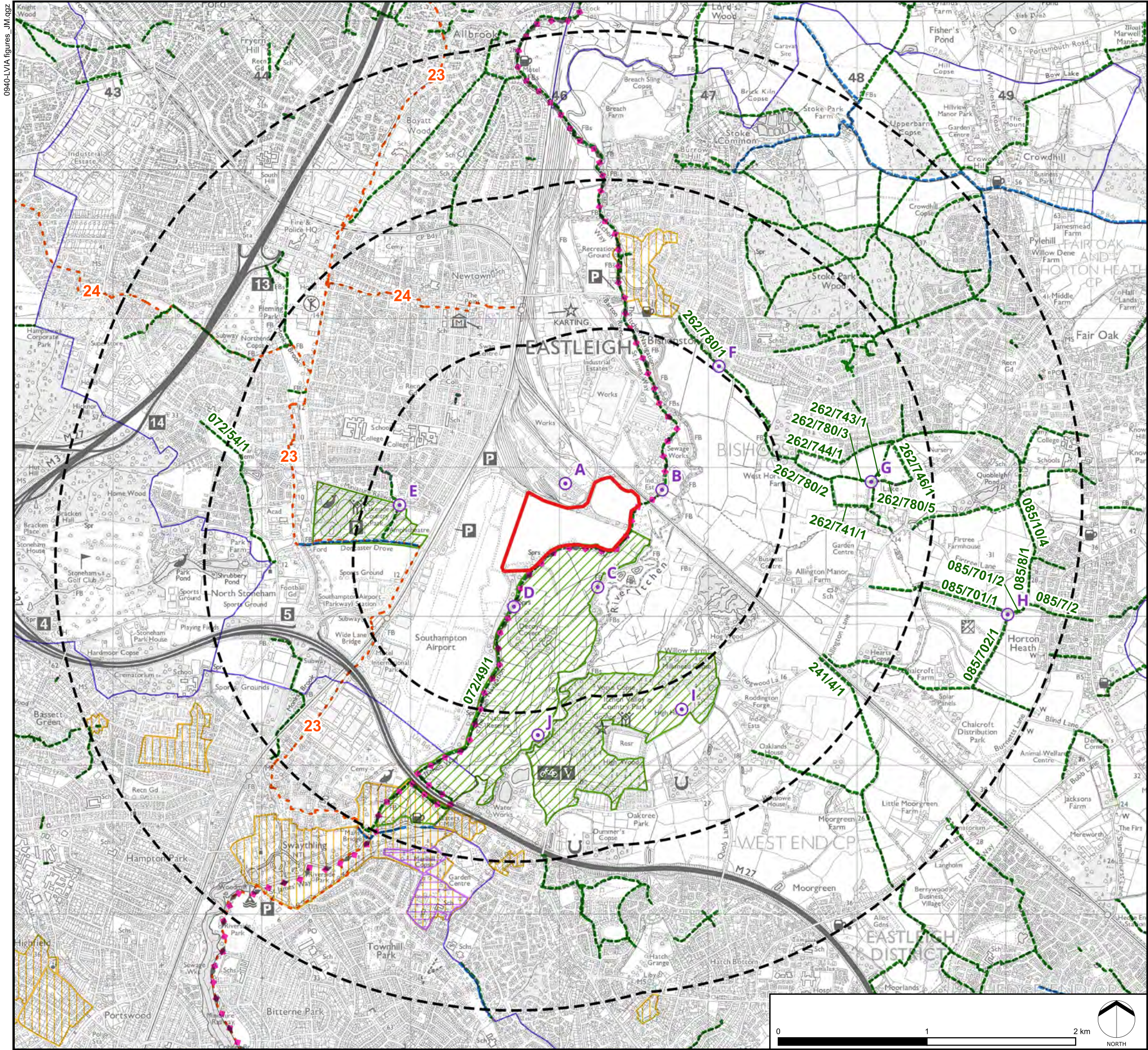
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NAVIGATION QUARTER

FIGURE 04

Landscape Designations



KEY

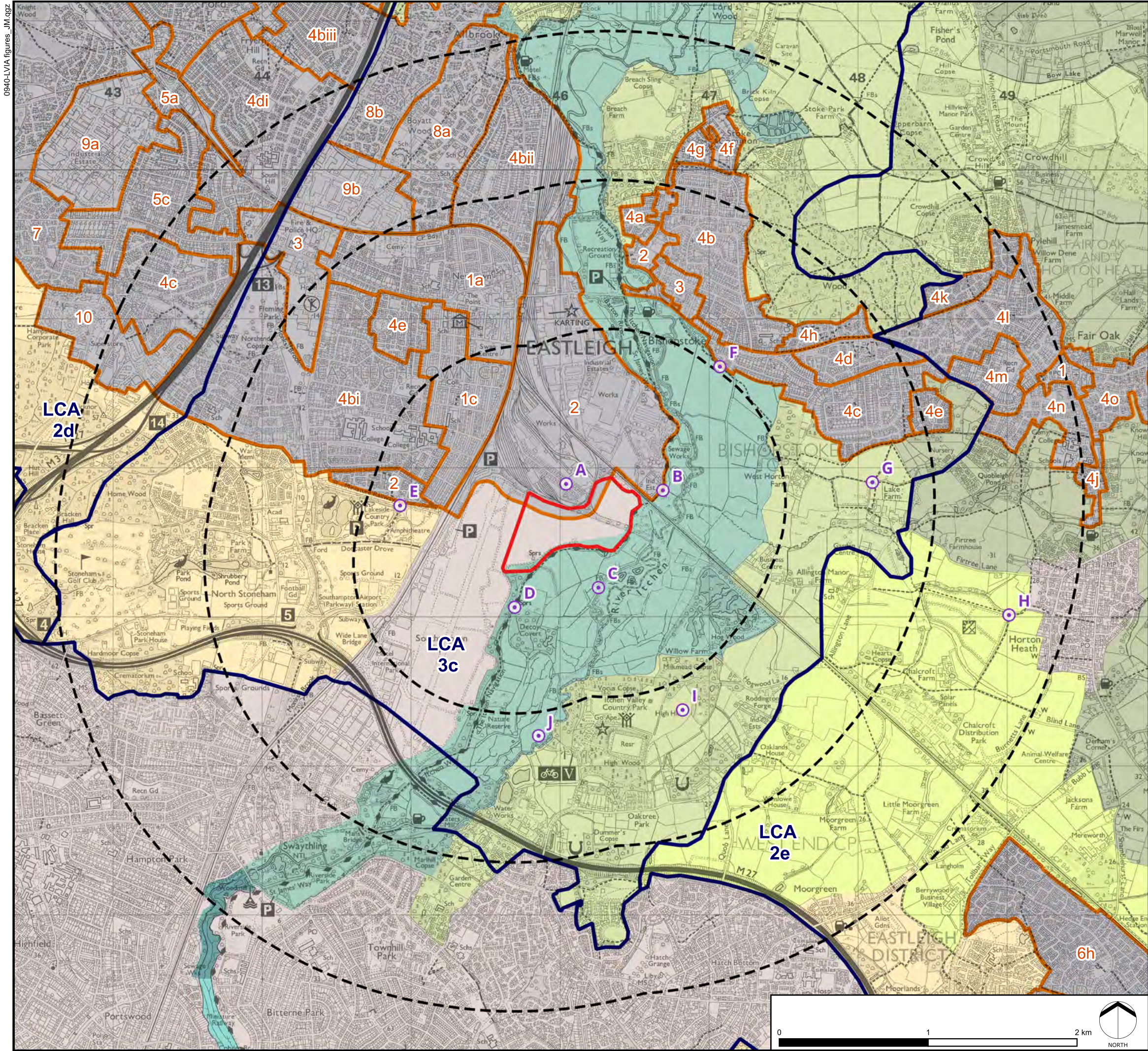
- Site Boundary
- Distance Radii from Site (1, 2, 3km)
- Proposed Viewpoint Locations
- Authority Boundary
- Country Park
- Registered Park and Garden
- Conservation Area
- Public Bridleway
- Public Footpath (with reference)
- Itchen Navigation Trail (Long Distance Path)
- National Cycle Network (with reference)

Projected Coordinate System: British National Grid

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NAVIGATION QUARTER

FIGURE 05
Landscape/Townscape Character (Hampshire)



KEY

- Site Boundary
- Distance Radii from Site (1, 2, 3km)
- Proposed Viewpoint Locations

Hampshire County Integrated Character Assessment

- Landscape Character Area Boundary
- LCA 2d: Romsey to Eastleigh Woodland Lowland Meadows
- LCA 2e: Forest of Bere West
- LCA 3c: Itchen Valley

Landscape Types

- Estuary
- Intertidal Estuary and Harbour
- Lowland Mosaic Heath Associated
- Lowland Mosaic Medium Scale
- Lowland Mosaic Open
- Lowland Mosaic Small Scale
- River Valley Floor
- Settlement
- Townscape Area Settlement

Townscape

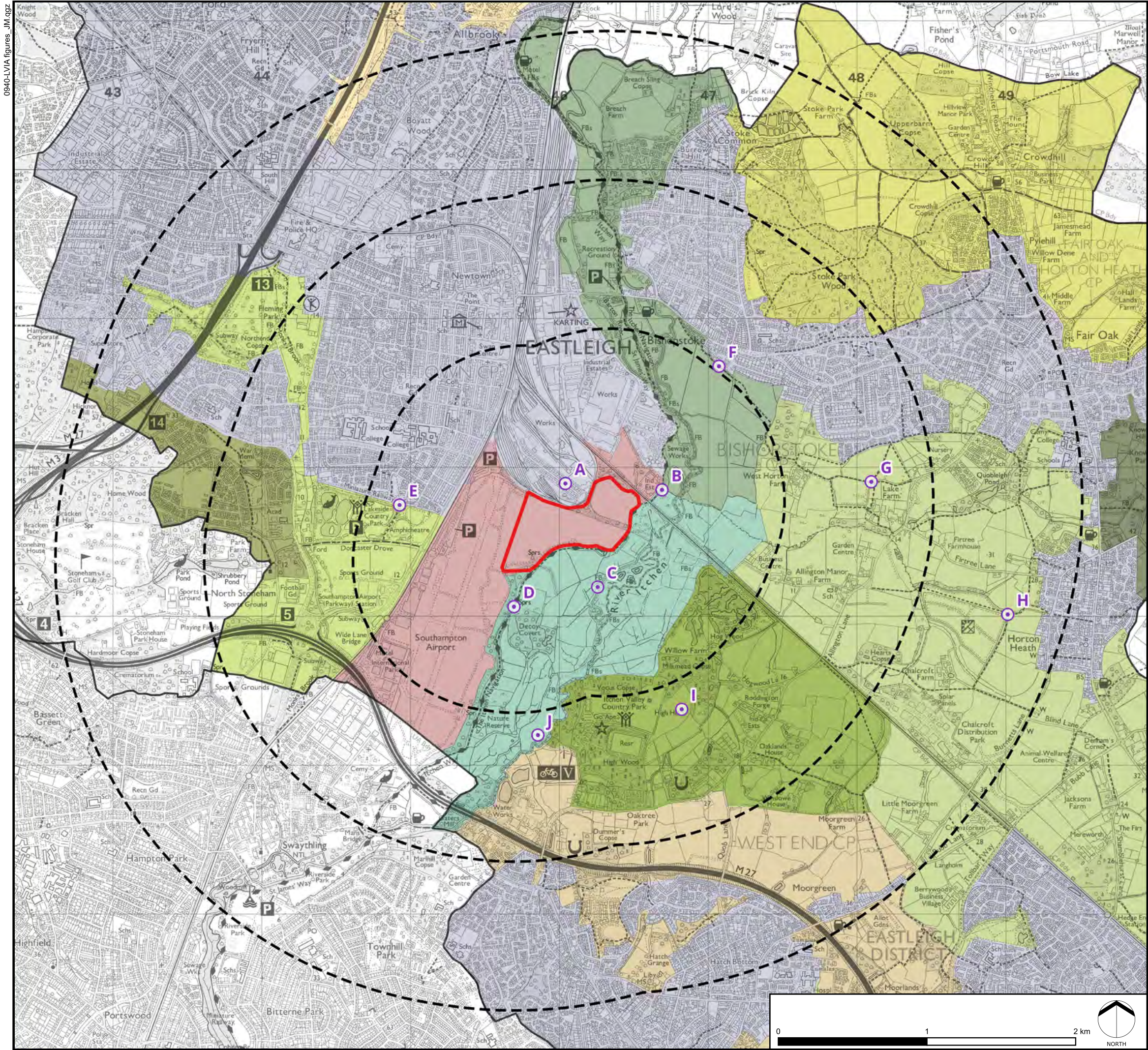
- Townscape Type Boundary
- 1: Medieval Urban Settlement
- 2: Rural Settlement
- 3: Post Medieval Development 1600-1819
- 4: Residential 1820-1849
- 5: Residential 1850-1914 (Terraces, Semi-detached, Small Detached Houses)
- 6: Residential 1850-1914 (Villas and Larger Homes)
- 7: Residential 1915-1945
- 8: Residential Post 1945 - Present (Houses, bungalows, 3 Storey Flats)
- 9: Residential Post 1945 - Present (4 Storey + Flats)
- 10: Commercial 1870 - 1945

Projected Coordinate System: British National Grid

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NAVIGATION QUARTER

FIGURE 06
Landscape Character (Eastleigh)



KEY

- Site Boundary
- Distance Radii from Site (1, 2, 3km)
- Proposed Viewpoint Locations
- Authority Boundary
- Urban

Eastleigh Landscape Character Areas

- 1: Broom Hill Farmland and Woodland
- 2: Upper Itchen Valley
- 3: Lower Itchen Valley Floodplain
- 4: Southampton Airport
- 5: Itchen Valley Sports Pitches
- 6: North Stoneham Park
- 7: Bishopstoke-Fair Oak Woodland and Farmland
- 8: Knowle Hill Farmland and Woodland
- 9: Horton Heath Undulating Farmland
- 10: Oaklands Woodland and Parkland
- 11: M27 Corridor

Projected Coordinate System: British National Grid

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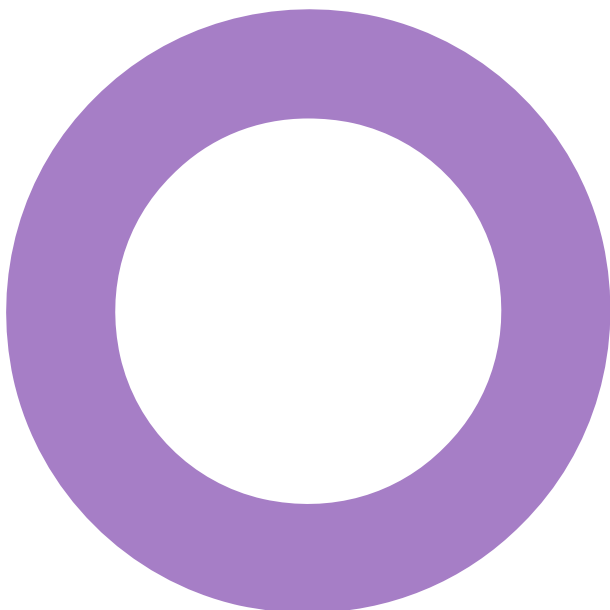
APPENDIX H

Noise and Vibration

Navigator Quarter. Eastleigh. Bloc.

ACOUSTICS

EIA SCOPING REPORT
NOISE AND VIBRATION
REVISION 01 – 06 NOVEMBER 2024



Audit sheet.

Rev.	Date	Description of change / purpose of issue	Prepared	Reviewed	Authorised
00	04/11/2024	Draft issue	AS	JB	JB
01	06/11/2024	Minor amendments for formal issue	AS	JB	JB

This document has been prepared for Bloc only and solely for the purposes expressly defined herein. We owe no duty of care to any third parties in respect of its content. Therefore, unless expressly agreed by us in signed writing, we hereby exclude all liability to third parties, including liability for negligence, save only for liabilities that cannot be so excluded by operation of applicable law. The consequences of climate change and the effects of future changes in climatic conditions cannot be accurately predicted. This report has been based solely on the specific design assumptions and criteria stated herein.

Project number: 10/15XXX

Document reference: HLE-1015XXX-RP-AC-Scoping for Noise and Vibration-R1.docx

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1. Introduction.

A planning application is being submitted for Navigator Quarter, at Land Adjacent to Southampton Airport.

This note summarises the scoping input for Noise and Vibration in relation to an Environmental Statement for the proposed development. This note has been compiled by Hoare Lea.

It is proposed that the Noise and Vibration be scoped out of the Environmental Impact Assessment (EIA), if an EIA is deemed to be warranted for the proposed development.

The key potential impacts and effects, and the likelihood of them being significant, are summarised in this note.

2. Assessment methodology.

2.1 Legislative context.

The Noise and Vibration assessment is to be undertaken with the ultimate aim of using quantitative criteria derived based on published guidance and best practice (see following section), to satisfy the qualitative requirements in National Planning Policy Framework (Department for Levelling Up, Housing and Communities, 2023), Planning Practice Guidance – Noise (Department for Levelling Up, Housing and Communities and Ministry of Housing, Communities & Local Government, 2021) and Noise Policy Statement for England (Department for Environment, Food & Rural Affairs, 2010) .

Reference to, and account for, the requirements of local policy will also be made in the Noise Impact Assessment - most notably Policy DM8 of the Eastleigh Borough Local Plan (Eastleigh Borough Council, 2022), which serves to protect against impacts from environmental pollutants.

Noise and vibration impacts are always dependent on context. Therefore, the numerical criteria used for assessment will be derived with context borne in mind and the impacts contextualised.

Where appropriate, the noise and vibration assessment will reference and facilitate compliance with legislation relating to noise and vibration: The Control of Pollution Act (HM Government, 1974); The Environmental Protection Act (HM Government, 1990); The Control of Noise (Code of Practice for Construction and Open Sites) Order (HM Government, 2015); and Noise Insulation Regulations (HM Government, 1975).

2.2 Guidance and criteria.

The noise and vibration assessment methodologies are informed by the IEMA Guidelines for Environmental Noise Impact Assessment (Institute of Environmental Management & Assessment, 2014).

Noise from external building services plant associated with the proposed development is to be assessed based on the guidance contained in British Standard BS 4142 (British Standards Institution, 2019). Building services plant noise limits will be derived to protect against adverse noise impacts.

Noise from road traffic accessing site will be assessed based on the relative changes in road traffic noise levels, using the short-term changing criteria in Design Manual for Roads and Bridges (DMRB) (Highways England, Transport Scotland, Welsh Government, Department for Infrastructure, 2020). This will be discussed in the context of the overall influence on the sound climate.

Based on the results on an acoustic survey (see Section 3.2) a noise model will be compiled (in the software CadnaA) to predict noise levels in the area from transportation sources, based on the calculation procedures contained in Calculation of Road Traffic Noise (Department of Transport Welsh Office, 1988) for road traffic and Calculation of Railway Noise (Department of Transport, 1995) for trains and ISO 9613-2 (International Organization for Standardization, 2024) for aircraft, building services plant and industrial noise sources. Source noise levels for on-site vehicle movements will be predicted based on the guidance contained in Common Noise Assessment Methods in Europe (CNOSSOS-EU) (Institute for Health and Consumer Protection, 2002).

Current noise policy and guidance advises that no specific measures are required if noise is below the threshold of Lowest Observed Adverse Effect Level (LOAEL) and development exposed to noise above a threshold

considered to be the Significant Observed Adverse Effect (SOAEL) level should be avoided. Where the noise levels across the site fall between LOAEL and SOAEL it is appropriate to mitigate and reduce to a minimum. Where no effect on health and/or quality of life can be detected, noise and/or vibration levels are below No Observed Effect Level (NOEL).

2.3 Receptors and Study Area.

Figure 1 below shows the nearest residential receptors to the proposed development (to the north and west) that the Noise Impact Assessment will focus on. Nevertheless, consideration will also be given to residential properties to the south and east, to review if residential properties away from the airport are subject to meaningfully lower background sound levels, warranting specific assessment. The proposed development is not considered meaningfully noise and vibration sensitive in planning terms.



Figure 1: Receptor locations.

3. Baseline conditions.

3.1 Acoustic context.

The existing sound climate is expected to be characterised predominantly by existing sources of transportation noise. Nevertheless, many of these sources are likely to be transient and not perceived in the same way that constant building services plant are. Therefore, the existing background sound levels (i.e. noise levels in the absence short-term events) and the context of the soundscape are to be observed and quantified for assessment of building services plant noise.

Vehicle movements across the site may potentially be a perceivable new source of noise for nearby residential dwellings, if there is lack of comparable noise in that direction. Therefore, existing road traffic noise levels are to be quantified.

Survey work, discussed below, will also determine if there are any parts of nearby residential dwellings that are notably screened from local sources of noise and have more tranquil sound climates that could be compromised by the proposed development.

3.2 Acoustic survey.

To quantify existing background sound levels in the area, sound level measurements are to be made at two locations across site (locations to be confirmed) for a period of at least 5 days, spanning a weekend.

These long-term measurements will be supplemented by short-term measurements at nearby residential receptor locations to determine how representative the measurements made are of the sound climate of nearby sensitive receptors. Observations will be made of how the soundscape changes across the site and at different nearby noise sensitive receptors. Suitable noise limits for building services plant will be derived for all nearby noise sensitive receptors warranting assessment, based on the results of the acoustic survey and requirements of Eastleigh Borough Council.

4. Potential Impacts and Effects.

4.1 Effects likely to be significant.

Given that the site is located in a noisy area, with existing railway lines likely generating moderate levels of vibration, it is considered unlikely that significant adverse effects associated with noise and/or vibration will arise due to the proposed development.

Building services plant noise and onsite vehicle movements present the greatest risks of potential adverse noise impacts from the proposed development. However, as noted below, it is considered likely that these can be suitably managed/mitigated to protect against significant adverse effects.

4.2 Effects likely to be insignificant.

Noise and vibration from construction works (particularly noise) will be perceivable at times at nearby sensitive receptors during construction of the proposed development. However, assuming a suitable Construction Environmental Management Plan is compiled for the works, noise and vibration are likely to be comparable in terms of levels to existing sources in the area and sufficiently transient and temporary that significant adverse effects are unlikely.

Any uplifts in road traffic noise on local roads caused by construction traffic and operational traffic are expected to be negligible. Typically, road traffic flow increases need to be above 20% for any risk of perceivable change to road traffic noise levels this is considered unlikely.

On site vehicle movements are more likely to result in a perceivable change in sound climate. However, as this noise will likely be limited to daytime hours, significant adverse effects related to noise are considered unlikely, given the context of the area. Nevertheless, an assessment of the potential noise impacts is considered

worthwhile to understand if there are any scenarios that would need to be mitigated against to protect against adverse effects (e.g. regular night-time movements).

Significant adverse effects from building services plant noise are considered unlikely, assuming that the development design facilitates compliance with the policy requirements of Eastleigh Borough Council. The Noise Impact Assessment will derive suitable noise limits to protect against adverse noise impacts. These limits can be conditioned.

Noise and vibration from existing environmental sources on occupants of the proposed development is not considered likely to result in significant adverse effects, because occupants of the proposed development would be classed as having a low sensitivity to noise and vibration in planning terms. Moreover, the designs of the proposed development buildings would likely include for measures to manage noise intrusion as a minimum. Nevertheless, design advice to protect against reradiated noise from railway traffic induced vibration would be advisable.

5. Cumulative considerations.

Building services plant noise and onsite vehicle movements are the only impacts/effects considered to have the potential to result in adverse impacts. As previously noted, it is considered unlikely that these will result in significant adverse effects. Cumulative consideration of these impacts/effects is not considered to be warranted, as the effects will be very localised. Building services plant noise levels will be designed to typically be below existing background sound levels. On this basis it is unlikely that building services plant noise will perceptibly sum cumulatively. Onsite vehicle movements will be irregular, as well as not notably loud. Therefore, they are only considered to warrant assessment due to the potential influence on the very local sound climate. Cumulatively, these local vehicle movements would have a negligible influence on general noise levels in the area.



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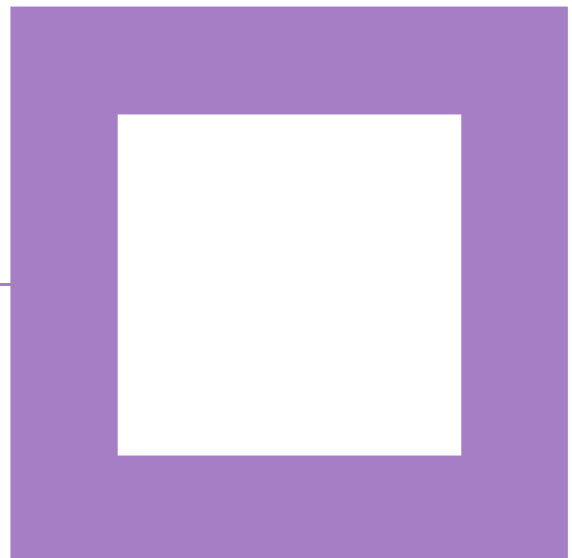
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APPENDIX I

Socio-Economics

Contribution to the Environmental Impact Assessment Scoping Report for Navigator Quarter, Land adjacent to Southampton Airport

Economic impacts

Introduction

Produced by SQW, this section sets out the scope of assessment of the scheme in relation to anticipated economic impacts. It outlines:

- The proposed area of impact
- An initial analysis of baseline conditions
- Potential economic impacts which are likely to be significant
- The proposed methodology for impact assessment

Proposed area of impact

Impacts will be measured at the level of the following geographies:

- Eastleigh
- A Wider Impact Area, defined as Eastleigh plus Fareham, Gosport, Havant, New Forest, Portsmouth, Southampton, Test Valley and Winchester
- The UK

These geographies have been identified because while the site will lead to direct employment and generate direct gross value added in Eastleigh, it is likely that some people will travel to work from neighbouring districts, and that supply chain impacts will be dispersed regionally and nationally. The economic impact assessment will seek to account for the totality of impacts, including (but not only) those that are local. In this context, it should be noted the site is around 4km from the boundary with the city of Southampton, and that road and rail access is good.

The Wider Impact Area includes Southampton and Winchester (the local authority districts with which Eastleigh has the closest relationships in terms of travel to work flows) and crosses the Southampton and Portsmouth Travel to Work Areas¹. It also includes the established Solent economic policy and planning area (minus the Isle of Wight)² and incorporates those local authorities which also have tax and customs sites within the Solent Freeport.

Initial analysis of baseline conditions

¹ TTWAs are defined according to the 2011 Census. Eastleigh is in the Southampton TTWA, although there are significant commuting flows between Eastleigh and the Portsmouth TTWA, principally to and from Fareham.

² This was the former Solent Local Enterprise Partnership. While LEPs have been abolished, a successor body, Solent Partners, operates to the same geography and the *Solent 2050* economic strategy is relatively recent (April 2022). The Solent geography is Eastleigh, Fareham, Gosport, Havant, New Forest, Portsmouth and Southampton, as well as the Isle of Wight. The Isle of Wight is excluded from the area of impact as it has a high degree of self-containment and travel flow relationships with Eastleigh are minimal.

Labour force

In 2023, around 86,000 people aged 16-64 (commonly used as a proxy for the 'working-age population') lived in Eastleigh. Around 849,000 'working age' people lived in the Wider Impact Area³.

Local economic activity rates are relatively high. 86% of people in Eastleigh aged 16-64 were economically active in 2023 (compared with 82% in the Wider Impact Area and 78.7% in the UK as a whole)⁴.

Jobs

In 2022, there were around 70,000 jobs in Eastleigh and around 717,000 in the Wider Impact Area. The 'jobs density' (the number of jobs per person aged 16-64) in both Eastleigh and the Wider Impact Area was 0.86, roughly in line with the UK average (0.87)⁵.

Travel to work

According to the 2021 census, Eastleigh had a net outflow of commuters overall. The most important destinations were Southampton and Winchester, followed by Test Valley, Fareham and New Forest. These districts were also the most important sources of labour for workplaces in Eastleigh. It is worth noting that there was a net *inflow* to Eastleigh from Southampton, despite the latter's larger economy and role as a regional centre.

Gross value added and productivity

The economies of Eastleigh and the Wider Impact Area generated GVA of around £4.5 billion and £42.3 billion respectively in 2022⁶.

Both Eastleigh and the Wider Impact Area have relatively productive economies. In 2022, Eastleigh generated around £67.5k per filled job (109% of the UK average), with the Wider Impact Area generating £63.3k (102% of the UK).

Sectoral profile

Within Eastleigh itself, the largest employment sector is wholesale and retail, accounting for around 16% of all employee jobs⁷. In relative terms, the borough has a high concentration of employment in transportation and storage; professional, scientific and technical services; finance and insurance; manufacturing; and public administration and defence (and, from a smaller employment base, arts, entertainment and recreation and electricity and gas). Transport and storage, electricity and gas and public administration are also disproportionately represented within the Wider Impact Area, although the wider area's economy is complex and contains significant science and technology assets, notably in the defence technologies and marine sectors.

Potential economic impacts which are likely to be significant

³ Note that all data quoted for the Wider Impact Area also include Eastleigh.

⁴ ONS, Annual Population Survey. Note that APS estimates at local level are subject to larger confidence intervals than those at larger geographies.

⁵ ONS, Jobs Density.

⁶ ONS, Current price (smoothed) GVA (B).

⁷ ONS, Business Register and Employment Survey.

Significant economic impacts are likely to be:

- Additional employment generated during the operational phase
- Additional GVA resulting from increased economic activity in the operational phase
- Additional temporary employment generated during the construction phase.

Assessment methodology

To assess these impacts, the following approach will be taken, with all impacts estimated for Eastleigh, the Wider Impact Area and the UK, as set out above. While all analysis will make use of established national benchmarks, wider research will be drawn on relevant to the activities that are likely to be accommodated within Navigator Quarter. It is noted that the tax incentives associated with Freeport designation may help to accelerate some of the identified impacts: this will be considered as part of the assessment process.

Additional employment during the operational phase

Gross jobs generated as a result of the scheme will be calculated with reference to the Homes and Communities *Employment Densities Guide* (2015) and more recent sector-specific analysis.

Economic impact modelling will be carried out in line with current guidance, including the Homes England *Additionality Guide*. This will enable net additional economic impacts to be estimated, accounting for leakage and displacement, and for indirect effects (i.e. supply chain impacts) and induced effects (i.e. the impact of additional employee spend in the economy). To support this, a detailed analysis of the local labour market will be prepared, to consider (*inter alia*) likely labour capacity and potential impacts on travel-to-work patterns.

Additional GVA resulting from increased economic activity

Estimated GVA will be calculated based on estimated employment, using sectoral estimates of GVA per filled job and other sector-specific evidence. This will also be adjusted to yield the net GVA impacts.

Additional temporary employment generated through the construction phase

Construction 'job years' will be calculated using the Homes England labour coefficient, adjusted to account for inflation and applied to the total value of estimated construction expenditure.

Limitations and assumptions

The assessment will be reliant on a) data and information produced by a variety of official sources; b) wider local and sectoral intelligence; and c) information regarding potential occupancy derived from the developer. In considering these sources of intelligence, professional and realistic judgments will be applied where appropriate.

APPENDIX J

Transport

To	Eastleigh Borough Council	Technical Note	
Cc	Blocwork LLP/ ASG, MSA Architects		
From	Steer		
Date	8 November 2024		
Project	Navigator Quarter, Land Adjacent to Southampton Airport	Project No.	24733101

EIA Scoping Report – Highways and Transport

Introduction

1. This Technical Note has been produced by Steer who are transport consultants for the Proposed Southampton Navigation Quarter Development, Eastleigh and seeks to scope the requirements for a full Environmental Impact Assessment (EIA) Transport Chapter.
2. The Proposed Development opening year for the first building is 2026, with completion expected in 2031.
3. This Technical Note addresses the proposed scope of EIA with respect to Highways and Transport. It includes a summary of baseline conditions and the proposed approach to the assessment of possible construction and operational impacts. Areas that are proposed to be scoped in and out of the assessment are identified.

Relevant Law, Policy and Guidance

Legislative Context

4. There is no legislation of relevance to this assessment. The following policies are applicable:

Planning Policy and Guidance

- National Planning Policy Framework (NPPF) (2023);
- Department for Transport Circular 01/2022: Strategic Road Network and the Delivery of Sustainable Development (2022);
- National Planning Practice Guidance (NPPG) on Travel Plans, Transport Assessments and Statements (2014);
- DMRB, LA 104 Environmental Assessment and Monitoring (2020);
- Department for Communities and Local Government / Department for Transport: The Manual for Streets (2007);
- Department for Communities and Local Government / Department for Transport: The Manual for Streets 2 (2010);
- Institute of Environmental Management and Assessment (IEMA) Guidelines: Environmental Assessment of Traffic and Movement (2023) ("the IEMA Guidelines");
- Hampshire County Council Local Transport Plan 4 (LTP4) (February 2024);
- Local Cycling and Walking Infrastructure Plan (LCWIP), HCC (2022);
- Eastleigh Borough Local Plan (2016-2036), (2022);
- Eastleigh Borough Council Cycling and Walking Strategy (2023); and
- Eastleigh Borough Council Parking Standards Supplementary Planning Document (SPD), (draft 2023).

Baseline Conditions and Main Issues

Existing Site

5. The site is 32.05 hectares in size and located between the town of Eastleigh and the city of Southampton, falling within the boundary of Eastleigh Borough Council (EBC). The Site includes two plots of land, both of which are allocated within the Eastleigh Local Plan.
6. Southampton Airport is located immediately to the south and west of the site, on the edge of the city's suburbs. To the immediate north of the site there is a train depot, located at the convergence of trainlines from Southampton and Portsmouth. Sandwiched between the train depot land there is also a residential area known as Campbell Road. To the north of the train depot land is the Barton Park Industrial Estate which runs from the train depot, north to Bishopstoke Road.

Existing Local Highway Network

7. Existing access to the site(s) is limited and informal. Access to the southern land parcel is from the eastern side of the airport's long stay car park off Mitchell Way. There is an informal track which loops to the south of the train depot onto the site. This access sits within the land between the two Airport perimeter fences and is not publicly accessible.
8. The north eastern parcel is access via a farm gate from the private road at the end of Chicken Hall Lane. An informal route is present across land controlled by Hampshire County Council via a tunnel which passes beneath the railway line, proving a right of access into the site.
9. Mitchell Way is a two-way single-carriageway road that connects to the Spitfire roundabout to the south and the long-stay car park operated by Southampton Airport to the north. The adopted carriageway has a 30mph speed limit and is public highway up to the HSBC House building. Beyond this point the road is privately owned by the Airport and is subject to a 20mph speed restriction. Double yellow lines are located along the length of the road and in places there are red double lines, restricting any stopping within the vicinity of the airport. A footway is provided on the western side of the carriageway from the Spitfire roundabout to the Signature Aviation building. Between the Signature Aviation building and the Long stay car park, there are sporadic stretches of footway, providing pedestrian access between bus stops and car parks.
10. Wide Lane is a two-way single-carriageway road subject to a 40 mph speed limit. It connects to Stoneham Way to the south and merges into the A355 Southampton Road to the north (towards Eastleigh). Between the Spitfire Roundabout and the A335/ Wide Lane roundabout the road crosses the railway line, on the bend. There is a shared use footway/ cycleway provided on the eastern side of the road over the bridge.
11. The eastern footway continues on the eastern side of the road on the A335 Wide Lane to the north of the A335 / Wide Lane roundabout, from the roundabout to the north of the Southampton Airport Parkway Station, before the shared footway/ cycleway changes to the western side of the road.
12. South of the Spitfire roundabout, there are footways on both sides of the A355 Wide Lane carriageway.

Existing Strategic Highway Network (SRN)

13. The M27 and its junctions are managed by National Highways. The M27 Junction 5 is 2.7km southwest of the Site and is the main link to the SRN. All vehicles travelling between Southampton Airport and the M27 J5 need to use a route encompassing the Spitfire Roundabout and the A355 via the A335 Wide Lane roundabout.
14. The M27 heads in an east/west direction to access the south coast of England. The M27 links to the M3 close by (at J4 and J14 respectively) to access destinations north of the Site.
15. The M3 can also be accessed via the A335 (turning into Leigh Road) at J13, 3.5km northwest of the Site and via the A27 to the west of the Site.

Existing Public Transport Network

Bus

16. Southampton Airport Parkway rail station is well-connected by bus and coach. The Southampton Airport Parkway bus stop is located approximately 1.7km from the centre of Site. This would require pedestrians to cross the railway line using the station footbridge/ lifts. Journey times to Southampton City Centre are approximately 35 minutes. There are also bus stops on Spitfire Loop (1.6km from the Site) and Mitchell Way (1.8km from the Site).
17. To the north, a bus stop is located at the Bishopstoke Road/ Chickenhall Lane roundabout (named Recreation Ground), approximately 2km from the centre of the Site. This is not easily accessible from the current Site and to become a future option would require the pedestrian connection beneath the railway line (north of the Site) which also crosses the Hampshire County Council land to be formalised, with pedestrians then walking along Chicken Hall Lane.
18. **Table 1** presents the bus services available from each stop and associated frequencies.

Table 1: Bus and Coach Services and Frequencies

Bus Stop	Bus Service	Weekday AM Peak Hour Frequency (per hour)
Southampton Airport Parkway	U1E: Southampton City Centre – Airport (To Airport)	0 (1 PM service per hour only)
	24/ 424/425: Eastleigh – Hedge End	1
	U8: Airport Parkway – Science Park	1
	Megabus (Coach)	Once per day
Mitchell Way/ Spitfire Loop (Airport Parkway/ Outside Royal Mail)	U1A: Southampton City Centre – Airport (To Airport)	8
	U1C: Airport – Southampton City Centre (from Airport)	6
Recreation Ground (Bishopstoke Road/ Chicken Hall Lane roundabout)	2: Southampton – Fair Oak	3
	3: Southampton – Eastleigh	1

Rail

20. The nearest rail station is Southampton Airport Parkway Station. It is located approximately 1.7km from the centre of the Site on foot. The journey time to the Site is approximately 25 minutes on foot. The main direct destinations accessible from this station include London Waterloo, Winchester, Bournemouth, Birmingham New Street and Manchester Piccadilly.

21. Eastleigh Station is located approximately 2km north of Southampton Airport Parkway Station. The majority of the services that stop at Eastleigh Station also stop at Southampton Airport Parkway, except for the services to Birmingham New Street, Weymouth, Poole and Manchester Piccadilly. In addition, services to Portsmouth do stop at Eastleigh Station but not at Southampton Airport Parkway Station.
22. A summary of train services from both stations is provided in **Table 2**.

Table 2: Train Services and Frequencies

Train Station	Service	Frequency
Southampton Airport Parkway Station	Bournemouth	3
	Basingstoke	2
	London Waterloo	2
	Weymouth	1
	Manchester Piccadilly	1
	Salisbury	1
	Poole	2
	Romsey	2
	Birmingham New Street	1
Eastleigh Station	Bournemouth	2
	Basingstoke	2
	London Waterloo	1
	Salisbury	1
	Romsey	2
	Portsmouth Harbour	1

Existing Walking and Cycling Network

23. Pedestrian and cycle access are similarly limited due to the Site currently being on undeveloped land.
24. There is no public pedestrian access from Mitchell Way or from the Private Road at the southern end of Chicken Hall Lane.
25. The Mitchell Way long-stay car park to the west of the Site can be accessed from Mitchell Way. Mitchell Way has footways along both sides of the road from the Spitfire roundabout up to Southampton Airport Parkway Station.
26. To the north of Southampton Airport Parkway Station the footway continues along the western side of the road up to the Signature Aviation building. There is then no footway present until the section of eastern footway provided adjacent to the long stay car park that borders the road to the east. There are no footways present on the northern section of Mitchell Way between this car park and the long stay car park at the northernmost end of Mitchell Way.
27. There are two zebra crossings across Mitchell Way between the Southampton Airport Parkway Station and the Airport Terminal building and Spitfire Loop providing access between the Terminal and the Station.
28. Southampton Airport Parkway Station can be accessed directly from stairs and a ramp to the western side of Mitchell Way with two footbridges provided to access the northbound platforms. The northern footbridge includes lift facilities.

29. Southampton Airport Parkway Station has c. 236 cycle parking spaces. Short stay cycle parking spaces for airport users are also provided in the short stay car park opposite the main airport terminal building.
30. On Wide Lane between the Spitfire Roundabout and the A335/ Wide Lane roundabout there is a bend in the road, across the railway line and there is shared use footway/ cycleway provided on the eastern side of the road.
31. The eastern footway continues to the north of the A335/ Wide Lane roundabout, from the roundabout to a point to the north of the Southampton Airport Parkway Station, before the shared footway/ cycleway changes to the western side of the road.
32. South of the Spitfire roundabout, there are footways on both sides of the A355 Wide Lane carriageway.
33. National Cycle Route (NCR) 23 provides a connection for cyclists between Southampton and Reading via Winchester, Basingstoke and Bramley. NCN23 runs along Wide Lane, passing the Southampton Airport Parkway Station and heading over the Wide Lane bridge, providing direct access to Mitchell Way. It provides access to the Site from Eastleigh and Southampton, running north/ south. NCR 24 also runs east/west through Eastleigh, meeting NCR23 at Passfield Avenue.
34. The Site is also directly adjacent to the Itchen Way, a long-distance walking route which follows the River Itchen, heading north/ south.

Perceived Main Issues

35. The Proposed Development is perceived to impact on the existing local transport networks in the following ways:
 - Increased vehicle flows across the network, with the potential to cause delays on local junctions promoted as access routes;
 - Increased traffic flows in and around Eastleigh;
 - Increased vehicle flows on the Strategic Road network including through M27 Junction 5;
 - Increased use of public transport;
 - Increased walking and cycling locally;
 - Increased HGV traffic reducing the attractiveness for pedestrians and cyclists, especially in respect to crossings over Mitchell Way and use of Wide Lane bridge
36. The Proposed Development will seek to increase the number of staff accessing the Site by sustainable modes. The level of increase and significance of effects on traffic, public transport users and active travel users across the network will be assessed as part of the EIA.

Approach and Methodology

Baseline Data Collection

37. Several datasets are intended to be used as part of this assessment and the Transport Assessment:
 - Baseline data collection including Automatic Traffic Counts and Turning Counts;
 - SRTM outputs – 2026 and 2036 Do Something 3 (DS3);
 - Personal Injury Collision data for the latest 5-year period; and
 - TEMPro growth factors.
38. Baseline data was collected by Paul Castle Associates between 28th June 2023 and 4th July 2023. Data was collected from:
 - Automatic Traffic Counts;
 - A335, Station Hill;
 - A335, Wide Lane (north of airport);

- A335 link to M27 Junction 5.
- Wide Lane Bridge;
- Mitchell Way;
- Wide Lane south of Spitfire roundabout;
- Turning Counts;
 - A335 Southampton Road/ A335 Wide Lane/ South Street;
 - A335 Wide Lane/ Southampton Airport Parkway;
 - A335/ A335 Wide Lane/ Wide Lane;
 - Stoneham Interchange;
 - Spitfire roundabout;
 - Wide Lane/ Mountpark;
 - Wide Lane/ Mansbridge Road;
 - Twyford Road/ Coles Close/ Bishopstoke Road/ A335 Station Hill/ A335 Romsey Road; and
 - A335 Station Hill/ Bishopstoke Road.

39. Further baseline data to be obtained will comprise:

- Bus timetable and routing information;
- Rail timetable and routing information;
- Pedestrian and cycle route networks including counts on A335 Wide Lane Bridge and Mitchell Way;
- Parking demand;
- Personal Injury Collision (PIC) data for latest 5 year period; and
- Travel behaviour information relevant to the trip generation, mode split and assignment calculations.

Receptors

40. The Environmental Assessment of Traffic and Movement¹ guidance (IEMA Guidelines) identifies groups and special interests which should be considered within the assessment. However, it is proposed that the following apply to this traffic, accessibility and movement assessment:

- People at home;
- People at work;
- People using the NCN23;
- People using affected local roads within a defined study area;
- People using Southampton Airport Parkway;
- People using Southampton Airport;
- Sensitive and/ or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors);
- Collision clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

Proposed Assessment Methodology

Consultations to Date

41. Steer has attended a general Pre-Application meeting with Eastleigh Borough Council (5th November 2024) and has entered into Pre-Application discussions with Hampshire County Council as highway authority. A transport-related pre-application meeting with HCC has been organised for 11 November 2024.

¹ Environmental Assessment of Traffic and Movement, Institute of Environmental Management and Assessment (IEMA) Guidelines, 2023

Study Area

42. The EIA study area will be in line with the IEMA Guidelines which recommend the following rules are considered when assessing the impact of development traffic on a highway link:

Rule 1: Include highways links where total traffic flows will increase by more than 30% (or the number of Heavy Goods Vehicles (HGVs) will increase by more than 30%).

Rule 2: Include any other specifically sensitive areas where traffic flows will increase by 10% or more.

43. Given the different criteria between the assessments, it is likely that the EIA study area and the Transport Assessment (TA) study area will vary.
44. A study area for the vehicular assessments will be based on the areas in which data will be collected which covers the key routes into and out of the Site:
- Mitchell Way (entire length);
 - Spitfire roundabout;
 - A335/ Wide Lane roundabout;
 - A335 Wide Lane Bridge;
 - M27 Junction 5 roundabout; and
 - A335 Stoneham Way/ A27 Bassett Green Road/ Wide Lane.
45. A study area for the pedestrian and cyclist assessments will include:
- Mitchell Way (entire length);
 - Spitfire roundabout;
 - A335/ Wide Lane roundabout;
 - A335/ Wide Lane Bridge; and
 - A335 Wide Lane/ Southampton Road (from A335 Wide Lane Roundabout to Bishopstoke Road).

Approach to Cumulative Development

46. The committed developments will be cross-checked with the latest committed development list prepared for the EIA and Transport Assessment, with a focus on each committed development's relevance to transport impacts. The committed development will be agreed upon with EBC as the planning authority and HCC Highways.

Assessment Criteria

47. The assessment of environmental impacts arising from the Proposed Development as a result of traffic and movement will follow the IEMA Guidelines and be informed by the calculation of the anticipated traffic flows that would be generated by the Proposed Development during construction and operation compared to the baseline. The assessment will be based on Average Annual Daily Traffic (AADT) flows.
48. Traffic impact assessments will be undertaken for the following scenarios within the Transport and Movement ES Chapter and will be used to inform assessments relating to Noise and vibration and Air Quality assessments being undertaken by others.:
- 2024 Existing Baseline - Informed by baseline traffic counts and TEMPro growth rates.
 - 2026 - Future Baseline - Opening year traffic flows without the Proposed Development
 - 2026 - Future Baseline + Proposed Development - This represents the impacts of the Future Baseline plus the Proposed Development.
 - 2036 - Future Baseline traffic flows without the Proposed Development.

- 2036 - Future Baseline + Proposed Development - This represents the impacts of the Future Baseline plus the Proposed Development.
 - Future Baseline + Peak Construction Trips - Future Baseline plus Proposed Development peak construction vehicles trips [Date TBC]
49. The following approach will be undertaken:
- The indicative construction programme for the Proposed Development will be used to derive an average daily vehicle trip generation from which resultant average daily HGV traffic flows (associated with construction materials and equipment) and car flows (associated with construction workers) will be estimated to determine whether traffic increases would be likely to generate significant effects. Standalone junction modelling will not be undertaken but a link-based impact assessment for the peak period will be completed for the construction scenario.
 - Existing 2023 surveyed counts factored to 2024 Existing Baseline and 2026 Opening Year using TEMPRO/ committed developments.
 - 2026 SRTM outputs will be bench marked against the above.
 - AADT flows from the Solent Sub Regional Transport Model (SRTM) will be extracted. Any trips assigned to the Site in the SRTM will be removed and trips derived from TRICS for the Proposed Development will be applied.
 - A planning permission (for which this EIA has been prepared) will be sought.
50. It is noted that the above scenarios could differ from the assessment scenarios being assessed within the TA – which are yet to be confirmed and subject to consultation with the HCC Highways team and National Highways – that will be prepared and submitted with the Hybrid Planning Application. The TA may include assessments of phased access arrangements, public transport provision and any other mitigation, which may require interim scenarios to be considered. However, as outlined within the PPG², it is common for the traffic scenarios being assessed within EIAs to be different from those being undertaken within a TA. In addition, the traffic data will be provided to inform the assessment of impacts in relation to Noise and vibration and Air Quality being undertaken by others.
51. Traffic flows arising from the Proposed Development will be determined through the production of the TA which will be prepared and submitted with the Hybrid Planning Application. The TA will be prepared in line with relevant NPPF, PPG and other relevant highways guidance. Traffic flows will be determined using traffic data, independently collected, and TEMPro growth factors, with operational flows and construction flows then applied depending on the scenario, or through the use of the SRTM, as agreed with relevant stakeholders. Again, it is noted that the EIA is based on the AADT flow, which is an average of weekday and weekend flows.
52. The assessment of traffic impacts will be undertaken in line with IEMA Guidelines, the relevant factors and advised threshold criteria for severance, pedestrian amenity, driver delay, and fear and intimidation (further information is set out below) linked to predicted changes in traffic flows and composition, as well as professional judgement (as advised within the IEMA Guidelines).
53. Consideration will also be given to the temporal scope of identified impacts. Impacts which would only occur over a short duration or infrequently will be reviewed using professional judgment to determine whether it would be appropriate to reduce the impact magnitudes suggested by the criteria identified.
54. The assessment of likely significant impacts on sensitive receptors will consider the sensitivity of the receptor and the magnitude of change/ impact to determine the level of effect (positive or negative). Significant impacts will be determined following this through professional judgment.

² Paragraph 014 Reference ID: 42-014-20140306

55. The Chapter will draw upon information used for the TA consistent with the IEMA Guidelines which identify several potential transport impact types as follows:
- Severance of communities;
 - Driver and passenger delay;
 - Non-motorised user delay;
 - Non-motorised amenity;
 - Fear and intimidation on and by road users;
 - Road user and pedestrian safety; and
 - Hazardous/large loads.
56. Consideration will also be given to the temporal scope of identified impacts. Impacts which would only occur over a short duration or infrequently will be reviewed using professional judgment to determine whether it would be appropriate to reduce the impact magnitudes suggested by the criteria identified.
57. These criteria will be assessed as part of the construction and operational developments or scoped out if deemed necessary.

Severance

58. Severance is defined by the IEMA Guidelines as (refer to paragraph 3.13):
- “the perceived division that can occur within a community when it becomes separated by major transport infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure.”*
59. Paragraph 3.16 of the IEMA Guidelines references the historic Department for Transport (DfT) indicators of severance, where changes in flows of 30% equate to slight changes in severance, 60% equate to moderate changes and 90% equate to substantial changes. Although the IEMA Guidelines do suggest professional judgement is used when using these indicators.
60. This will be assessed by considering the existing and future baselines, and the predicted change in traffic flows on each road link within the study area.
61. For both the construction and operational scenarios, quantitative assessments will be completed for this criterion.

Driver Delay

62. Based on our professional judgement and the IEMA Guidelines, driver delay may change where:
63. Traffic flows change at junctions;
- Existing junctions are changed;
 - Speeds on existing roads or accesses are changed;
 - New roads or accesses are opened;
 - Frequency of use of controlled pedestrian or cycle crossings change; and/or
 - New controlled pedestrian or cycle crossings are introduced.
64. For the assessment of the construction scenario, given the relatively low impacts expected on driver delay, this would be assessed qualitatively.
65. For the operational assessment, driver delay will be assessed using the strategic models which will dynamically assess traffic flow impacts resulting from the Proposed Development across the highway network for an average day. Outputs from the models will present changes in queueing and journey times at key junctions and along key routes.

Non-Motorised User Delay

66. The IEMA Guidelines refer to potential delays to pedestrians and users of other modes, such as cyclists.
67. Pedestrian and cycle delay will primarily be assessed by considering existing and proposed walking and cycling infrastructure.
68. Pedestrian and cyclist delay, or severance may change where:
- Pedestrians and cyclists cross existing roads where motorised traffic flows are projected to change.
 - Pedestrians and cyclists are required to cross new roads.
 - Existing roads which pedestrians and cyclists would have crossed are removed.
 - Pedestrian and cycle volumes change.
 - New crossing facilities are provided.
 - Existing pedestrian crossing facilities change.
69. For both the construction and operational scenarios, qualitative assessments will be completed for this criterion.

Non-Motorised User Amenity

70. Pedestrian amenity, which can also be applied to cyclists and horse riders, is defined by the IEMA Guidelines as (refer to paragraph 3.29):
- “relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic”.*
71. The assessment could also include consideration of exposure to noise and air pollution.
72. Significant change in non-motorised user amenity is considered to be when traffic flows (and/ or the HGV component) are halved or doubled. Although the IEMA Guidelines do suggest professional judgement is used when using these indicators and as such, alongside the assessment using the IEMA Guidelines, commentary will be provided on how traffic increases can deter users.
73. For both the construction and operational scenarios, qualitative assessments will be completed for this criterion.

Fear and intimidation on and by road users

74. Fear and intimidation refer to that created by moving objects and are assessed within the context of pedestrians. The extent of fear and intimidation is described in the IEMA Guidance (refer to paragraph 3.32):
- *“The total volume of traffic*
 - *The heavy vehicle composition*
 - *The speed these vehicles are passing*
 - *The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people from stepping further away from moving vehicles.”*
75. The IEMA Guidelines provide a weighting system to provide assessors with an approximation of pedestrian fear and intimidation. It uses a calculated degree of hazard (see **Table 3**) score to determine the level of fear and intimidation (see **Table 4**). This is calculated for the existing development and future baselines, with the resulting difference used to approximate the magnitude of the impact (see **Table 5**).

Table 3: Fear and Intimidation Degree of Hazard

Average Traffic Flow Over 18-Hour Day – All Vehicles/Hour 2-Way (a)	Total 18-Hour Heavy Vehicle Flow (b)	Average Vehicle Speed (c)	Degree Of Hazard Score
+1,800	+3,000	->40	30
1,200 – 1,800	2,000 – 3,000	30-40	20
600 – 1,200	1,000 – 2,000	20-30	10
<600	<1,000	<20	0
+1,800	+3,000	->40	30

Source: IEMA Guidelines, Table 3.1

Table 4: Levels of Fear and Intimidation

Level Of Fear And Intimidation	Total Hazard Score (a) + (b) + (c)
Extreme	71+
Great	41-70
Moderate	21-40
Small	0-20

Source: IEMA Guidelines, Table 3.2

Table 5: Fear and Intimidation Magnitude of Impact

Level Of Fear and Intimidation	Total Hazard Score (a) + (b) + (c)
High	Two-step changes in level
Medium	One step change in level, but with >400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or >500 Heavy Vehicle increase in total 18hr Heavy Vehicle flow
Low	One step change in level, with <400 vehicles increase in average 18hr all vehicle two-way all vehicle flow; and/or <500 Heavy Vehicle increase in total 18hr Heavy Vehicle flow
Negligible	No change in step changes

Source: IEMA Guidelines, Table 3.3

76. For both the construction and operational scenarios, quantitative assessments will be completed for this criterion.

Road Safety

77. The key issue in assessing road safety is understanding the potential for change. For example, there can be some small changes in collision rates arising simply due to a greater number of journeys being made; hence, the more people that are travelling, the more people that are liable to become involved in a collision. However, the more important issue is how travel and the design of the transport networks interrelate to affect road safety.
78. For both the construction and operational scenarios, qualitative assessments will be completed for this criterion.

Hazardous Loads

79. Hazardous loads are considered in the IEMA Guidelines (refer to paragraph 3.49):

“Some developments may involve the transportation of dangerous or hazardous loads by road and this should be recognised within any Environmental Statement. Such movements should include specialist loads which might be involved in the construction or decommissioning phases of the development, in addition to the movement associated with the operation of the establishment”.

80. Hazardous loads could include, for example:

- Explosives
- Gases
- Flammable liquid
- Flammable solids
- Oxidising substances
- Toxic substances
- Radioactive material
- Corrosive substances.

81. The Proposed Development is not expected to generate or attract hazardous loads during construction or when operational. Therefore, potential impacts relating to hazardous loads have been scoped out of this assessment.

Preliminary Assessment of Potential Impacts

Construction Impacts and Effects

82. Information on the construction programme and resultant HGV traffic flows will be reviewed to determine whether traffic increases would be likely to generate significant transport effects. Construction effects are considered to be temporary and concentrated during the construction phase of the Proposed Development only.
83. It is considered that the Chapter will identify the following potential environmental effects linked to the construction phase:
- Adverse effects on driver delay, non-motorised user amenity, fear and intimidation, road safety severance of communities and non-motorised user delay associated with the increased number of HGV movements during the construction phase.

Occupation Impacts and Effects

84. Permanent impacts during the operational phase would be mainly associated with users of the Proposed Development, and associated servicing activities. The impacts during operation that will be considered include:
- Increases in motor traffic on the local highway network that may adversely affect driver delay, non-motorised user amenities, fear and intimidation and road safety.
 - The operational phase may generate positive effects on non-motorised user severance, delay, amenity fear and intimidation as a result of improved pedestrian and cycle connections within the Proposed Development and connecting to local areas.

Proposed Avoidance and Mitigation Measures

85. A package of mitigation measures, including improved pedestrian and cycle access, aimed at promoting active travel for both existing users of the network and future occupiers will be developed.
86. The mitigation package will also be prepared to address overcapacity and queuing, associated with the Proposed Development, on the local road network.

87. Mitigation will include:

- Connecting to existing public transport amenities and considering opportunities for trips to be undertaken by public transport to reduce private car use.
- Providing a high-quality walking and cycling network within the Proposed Development and improving connections to the local area and public transport nodes.
- Pedestrian/ cycle improvements to Mitchell Way and enhanced link to Chicken Hall Lane.
- Enhancements to Mitchell Way to accommodate two-way HGV's.
- Contribution towards addressing the current limitations of Wide Lane Bridge in terms of both vehicular movements and active travel.
- Seeking to route traffic away from the most sensitive areas through highway measures.
- Potential junction capacity improvement measures – subject to traffic modelling.
- Delivery of part of the Chicken Hall Lane Link Road – a long-term aspiration of EBC.
- Promoting sustainable travel and vehicle choices, such as car sharing, through a comprehensive Framework Travel Plan.
- Preparing an Outline Construction Logistics Plan to mitigate construction impacts.

Uncertainties

88. To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- Several assumptions will be made in association with construction and operational trip generation. These will be set out in full in the ES chapter.
- While the proposal will deliver part of the Chicken Hall Lane Link Road its full delivery is not anticipated within the timeframe of the opening and early operation of the scheme and as such it is assumed that it will not be in place for the purposes of any assessments.

Matters to be Scoped Out

89. **Table 6** summarises the assessment criteria that are proposed to be scoped in or scoped out.

Table 6: Scoped Assessment Criteria

Assessment Criteria	Scoped In (for Construction and Operational Assessment)
Severance of communities	Yes
Road vehicle driver and passenger delay	Yes
Non-motorised user delay	Yes
Non-motorised amenity	Yes
Fear and intimidation on and by road users	Yes
Road user and pedestrian safety	Yes
Hazardous/large loads	No