Land at Brickyard Farm, Boxworth

Environmental Impact Assessment Scoping Report

On behalf of **Newlands Developments**

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For and on behalf of Stantec UK Limited				

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1 Introduction

1.1.1 This report has been prepared by Stantec on behalf of Newlands Developments (the 'Applicant') for land at Brickyard Farm, Boxworth (the 'Site'). The report accompanies a request for an Environmental Impact Assessment ('EIA') Scoping Opinion from South Cambridgeshire District Council ('SCDC') in accordance with Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017[1] (as amended) (the 'EIA Regulations'). The Scoping Report is being produced in respect of an outline planning application (with all matters reserved aside from access) for up to 150,000 sqm of storage and distribution floorspace (Use Class B8), and an Employee Amenity Hub (the 'Proposed Development'), with access arrangements (provided in detail); a new electricity substation; foul water treatment facility, country park and associated landscaping, amenity space and associated works and infrastructure. The Proposed Development is phased with each phase being a separate and severable part of the development. All matters are reserved except for site access. Refer to Section 2 for a description of the Proposed Development.

1.1.2 In accordance with the EIA Regulations, a person who is minded to make an EIA application may ask the relevant planning authority to state in writing their opinion as to the information to be provided in the Environmental Statement ('ES') (a 'scoping opinion'). Regulation 15 (2) states that a scoping request must be accompanied by:

i. a plan sufficient to identify the land;

ii. a brief description of the nature and purpose of the development, including its location and technical capacity;

iii. an explanation of the likely significant effects of the development on the environment; and

iv. such other information or representations as the person making the request may wish to provide or make.

1.1.3 The potential for likely significant effects has been considered in the respective technical chapters of this Scoping Report as an outcome of the predicted magnitude of the proposed development's potential impacts and the sensitivity of the identified receptors, giving consideration to the duration and nature of the effect. This will be further detailed within the Environmental Statement (ES) and is set out in Chapter 15.

1.1.4 The purpose of the Scoping Report is to provide sufficient information on the Proposed Development and its likely significant environmental effects to allow SCDC to adopt an informed Scoping Opinion.

1.1.5 EIA Scoping is a statutory process through which the content and detailed methodology of the EIA process is agreed, formally, with SCDC and statutory consultees. It is best practice and ensures that any future planning application is accompanied by a suitably proportionate and focused ES that takes all significant environmental issues into account.

1.1.6 Given the nature and scale of the Proposed Development, no formal EIA Screening Request has been submitted to SCDC and instead the Applicant has decided to voluntarily undertake an EIA and proceed with a request for a Scoping Opinion under Regulation 15 of the EIA Regulations.

[1] The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (2017 SI No.571) (as amended in 2018 by SI No. 695)

2 The Site and Proposed Development

2.1 The Site and Baseline Conditions

Site Context

2.1.1 The Site (see Figure 2.1 Site Location Plan) is located to the southwest of the A14 Junction 24 'Swavesey Interchange', to the north of the village of Boxworth and northwest of Cambridge, within the administrative area of South Cambridgeshire.

2.1.2 The Site is bound to the east by the highway network associated with 'Swavesey Interchange', including Boxworth Road, with the A14 beyond.

2.1.3 The south of the Site is bound by a small area of woodland adjacent to the south of Boxworth Road, with an agricultural field, and Cambridge Services, just beyond, with the services surrounded by a small area of uniform woodland.

2.1.4 To the west, the Site is bound predominantly by a large field of grassland, that doesn't appear to be in agricultural rotation, along with a small area of woodland and a field in agricultural use. The village of Boxworth is 650m beyond.

2.1.5 Adjacent to the north of the Site is two uniform rows of trees which bound field boundaries, with an agricultural field and agricultural buildings just beyond.

2.1.6 The A14 forms part of the Strategic Road Network (SRN), linking the M1 / M6 Catthorpe Interchange in the west, to the port of Felixstowe in the east. The site is, therefore, conveniently located for access to the SRN, as well as serving Cambridge and its surrounding towns.

2.2 Baseline Conditions

2.2.1 Schedule 4 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations') EIA Regulations states that ES must include:

'A description of the relevant aspects of the current state of the environment (baseline scenario) and an outline of the likely evolution thereof without implementation of the development as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the availability of environmental information and scientific knowledge'.

2.2.2 There are no statutory designated ecological sites of national importance located within the Site. Within a 2km radius, there is one nationally designated ecological site, namely 'Overhall Grove' Site of Special Scientific Interest ('SSSI'), located approximately 1.9km to the south west of the Site. There are no non-statutory designated sites within or directly adjacent to the Site boundary. The closest non-statutory Site is Boxworth Protected Road Verge (PRV) City Wildlife Site (CWS) located approximately 1.8km to the south west.

2.2.3 The Site is not located within or in a 2km radius of any statutory landscape designations. The wider surrounding area is predominantly made up of the rural land mostly in agricultural use, and the highway network, with the village of Boxworth in close proximity to the west and Buckingway Business Park to the east.

2.2.4 There are no Scheduled Monuments, Registered Battlefields or Registered Parks and Gardens within 2km of the Site. There are also no listed buildings within the Site, however,

there are 13 within 2km, 11 being Grade II listed and two Grade II* listed. The closest listed building is the Grade II listed 'Mile Post to West of Scotland Drove' (List Entry: 1127245), situated approximately 180m north of the Site alongside the A1307 highway. The Grade II* lusted buildings are both situated south of the Site, and are 'Parish Church of St Peter' (List Entry: 1127250) and 'Parish Church of All Saints' (List Entry: 1127241), 750m and 2km from the Site respectively.

2.2.5 There are no Public Rights of Way (PRoW) within the Site. The closest PRoW are 'Bridleway 27/1' 600 m south west of the Site and runs from the east of Boxworth northwards towards Conington village, and 'Bridleway 225/14', situated approximately 150m north of the Site to the east of the A14 and runs eastwards in the direction of Swavesey village.

2.3 Planning Context

2.3.1 The Site is being promoted by the client through the call for sites for the emerging Greater Cambridge Local Plan[2] for employment land (Site URN: 558). The Site is currently not designated as per the current South Cambridgeshire Local Plan 2018[3], nor is it within the Green Belt.

2.3.2 Part of the site in the northeast corner, between the A14 Slip Road and Boxworth Road has recently been used by National Highways as a compound, for the storage of vehicles and associated machinery associated with the A14 Upgrade Works. The use was permitted pursuant to a wider Development Consent Order (DCO) for the A14 Highways upgrade granted in 2016. The compound was used by National Highways throughout the works from commencement in November 2016 to completion in 2020 and remained in use beyond into 2024 when the wider localised works were complete.

2.3.3 The EIA will be progressed with consideration of both the adopted and emerging local planning policies, subject to the status of the emerging Local Plan at the point of assessment.

2.4 Site Description

2.4.1 The Site refers to the area that reflects the planning application's redline boundary (see Figure 2.1), which is located to the east of Boxworth village and north of Cambridge services and extends to 90.84 hectares ('ha').

2.4.2 The Site comprises of four fields of varying sizes which are all in active agricultural use, and includes a section of Boxworth Road to the south and south east of the Site. The north east corner of the Site, covering 7.84 hectares (ha), extending circa 400m west/northwest of Boxworth Road, and west of the roundabout that links the A14 Swavesey Services and the link to Junction 24 of the A14, has most recently been used by National Highways (formerly Highways England) as a compound for the storage of vehicles, materials and associated infrastructure. The land is visible from the link road that bounds to the north/northeast, due to its lower AOD. Pursuant to the DCO, the land is to be re-profiled, and returned to grassland, but at the time of this report, much of the hardstanding, fencing etc. remains and thus has a previously development character. This area forms part of the wider redevelopment that is the subject of this Scoping Report.

2.4.3 The EA's flood map shows the site is entirely within Flood Zone 1 and therefore, at a low probability of fluvial flooding. In terms of surface water flooding, 2% of the site lies in a 1 in 30-year event, 5% lies in a 1 in 100-year event and 20% lies in a 1 in 1000-year event. As such,

[2] Greater Cambridge Shared Planning (2023) Graeter Cambridge Local Plan: the 20-year master plan for the Greater Cambridge area. Available at: Greater Cambridge Local Plan: the 20-year master plan for the Greater Cambridge area

[3] South Cambridgeshire District Council (2018) South Cambridgeshire Local Plan. Available at: South Cambridgeshire Adopted Local Plan 2018

flood risk at the Site is predominantly at low and very low risk of surface water flooding. Groundwater and reservoir flooding is considered unlikely.

2.4.4 The Site is provisionally graded as Grade 3 by the Provisional Agricultural Land Classification, with no Post-1988 study available for the Site. Therefore, there is the potential for the Site to include best and most versatile (BMV) soils, should further study consider it to be Grade 3a.

2.5 The Proposed Development

2.5.1 The Proposed Development description for the forthcoming outline planning application, with all matters reserved (aside from access) is as follows:

"The Proposed Development will comprise an outline planning application for up to 150,000sqm of storage and distribution floorspace (Use Class B8). The development will incorporate an Employee Amenity Hub up to 750sqm for use class F.2, including a Shop (up to 280sqm); Café or Restaurant (use class E); Training Centre / Community Centre (use class F.2); Community Facility (use class F.2); Training Centre / Public Hall (use class F.1), and will include access arrangements (to be provided in detail), a new electricity substation; foul water treatment facility, country park, and associated landscaping, amenity space and associated works and infrastructure. The proposed development is phased with each phase being a separate and severable part of the development. All matters reserved except for site access.

The Proposed Development will deliver significant areas of green and blue infrastructure that will provide outdoor amenity spaces for utilisation by employees. Existing hedgerows are to be maintained where possible and enhanced as part of a wider landscape-led design strategy, with enhanced boundary planting/screening, including a landscape bund to the A14, and the development as a whole is to achieve a minimum 25% Biodiversity Net Gain."

2.5.2 Vehicular access will be provided off Boxworth Road, accessed from the A14 via junction 24 (Swavesey Interchange), where there is good existing vehicle infrastructure. There is the potential for a secondary emergency vehicle access location if required. To accommodate the access, a new roundabout along Boxworth Road is proposed. Footway/Cycleway provision would be provided into and throughout the Site to deliver a provision for active travel and ensure connectivity alongside a properly considered road network. Pedestrian / cycle access is proposed from four locations, three along Boxworth Road to the south of the Site and one along a farm track which runs parallel to the A14 from Swavesey Interchange to New Barns Lane, providing northern access to the Site.

2.5.3 The maximum parameters of the Proposed Development include the Site area of 90.84 ha and building heights of up to 21m to ridge above ground level.

2.5.4 The area of land most recently used by National Highways to the north east of the Site will be used for Use Class B8 purposes and associated landscaping.

2.5.5 Roof-mounted solar panels may be incorporated into the Proposed Development as an on-Site renewable energy source.

2.6 Requirement for EIA

2.6.1 The EIA Regulations require that any Proposed Development falling within the description of a 'Schedule 2 development' (as defined within the meaning of the Regulations), will be subject to an EIA where such development is likely to have 'significant' effects on the environment - by virtue of such factors such as its nature, size or location (Regulation 2(b)).

2.6.2 The Proposed Development is considered to constitute a Schedule 2 development as defined by the EIA Regulations, as an "industrial estate development project" (Schedule 2, 10, (a) where *"The area of the development exceeds 0.5 hectare."*

2.6.3 The Proposed Development significantly exceeds the 0.5 ha thresholds as set out in the EIA Regulation (as amended) and therefore can be considered to constitute EIA Development.

3 Scoping

3.1 Overview

3.1.1 This scoping exercise has been informed by desk-based research, professional judgement and other information available for the Site. Table 3.1 sets out the proposed scope of the ES.

Table 3.1: EIA Scoping Summary

Topics	Potential Construction Phase Effects	Potential Operational Phase Effects	Likely Significant Effects (Pre-Mitigation)	Comments
Transport and Access	✓ - T	✓ - P	✓	Topic scoped into the ES
Landscape and Visual Effects	✓ - T	✓ - P	✓	
Noise and Vibration	✓ - T	✓ - P	✓	
Ecology	✓ - T	✓ - P	✓	
Air Quality	✓ - T	✓ - P	✓	
Flood Risk and Drainage	✓ - T	✓ - P	✓	
Soil Resources and Agricultural Land	✓ - P	✓ - P	✓	
Historic Environment	✓ - T	✓ - P	✓	
Socio-Economics	✓ - T	✓ - P	✓	
Climate Change	✓ - T	✓ - P	✓	
Human Health	x	x	x	Topics to be scoped out of the ES
Ground Conditions	x	x	x	
Lighting	x	x	x	
Daylight, Sunlight, and Overshadowing	x	x	x	
Wind Microclimate	x	x	x	
Waste	x	x	x	
Major Accidents and Disasters	x	x	x	

Key: ✓ Likely Significant Effect / x No Likely Significant Effect.
T – Temporary Effect / P – Permanent Effect

3.1.2 Within this Scoping Report, decommissioning of the Proposed Development has not been explicitly referred to. For the purposes of this report and the various assessments, decommissioning effects are considered akin to construction effects, and this will be replicated within the ES.

3.2 Environmental Disciplines Scoped Out

3.2.1 Further information on the topics scoped out of the EIA in Table 3.1 is set out in the following sections.

3.3 Ground Conditions

Introduction

3.3.1 The Site predominantly comprises open fields, divided by hedgerows, with a former laydown yard and offices (associated with the A14 highway improvements), in the north-eastern corner. Please refer to Chapter 2 for a detailed site description.

Site Context and Baseline

3.3.2 A Phase 1 Geo-Environmental Desk Study Report has been prepared for the Site by Hydrock (July 2022, document reference: 18444-HYD-XX-ZZ-RP-GE-1001-S2-P01)[4]. In addition, a preliminary ground investigation, geotechnical assessment and geo-environmental interpretation, comprising risk assessment, risk evaluation and outline mitigation recommendations has also been undertaken by Hydrock (March 2023, document reference: 18444-HYD-XX-ZZ-RP-GE-1003-S2-P01)[5]. These reports will be submitted in support of the forthcoming planning application.

3.3.3 The Phase 1 Desk Study covers the entire Site and has identified that the majority of the Site has never been developed and has been utilised for agricultural use. The areas where historical development has occurred are restricted to the National Highways compound area used for the storage of vehicles, materials and associated infrastructure north-east corner of the Site, which extends to 7.84 ha of the Site.

3.3.4 The Ground Investigation covers the majority of the Site, with no access possible to the 7.84 ha of land accommodating the National Highways compound. This area forms part of the wider redevelopment and will be used for B8 purposes and associated landscaping, and thus the conclusions of the Desk Study and Ground Investigation are not anticipated to change.

3.3.5 The Site investigation and associated risk assessment has identified:

- No significant Controlled Waters receptors at, or in the immediate surroundings;
- No significantly elevated concentrations of Chemicals of Potential Concern (CoPC), in soils at the site, with regard to, current site users, construction workers and future site users;
- No significant concentrations of ground gas to be present, with the site classified as CS-1 (low risk), and no protective measures are required; and
- A low risk from radon and no protective measures are required.

3.3.6 The reports conclude that for the areas investigated, no further consideration is required with regard to human health, plant life and Controlled Waters. As the laydown area in the north-east is to be restored to greenfield agricultural use through the Proposed Development, it is

15..16?

[4] Hydrock. 26 July 2022. Brickyard Farm, Boxworth. Geotechnical and Geo-environmental Desk Study and Field Reconnaissance. Ref: 18444-HYD-XX-ZZ-RP-GE-1001-S2-P01

[5] Hydrock. 10 March 2023. Brickyard Farm, Boxworth. Ground Investigation Report. Ref: 18444-HYD-XX-ZZ-RP-GE-1003-S2-P01

considered that this area will present a similar low risk. No mitigation is required. As such, these are proposed to be scoped out of the Ground Conditions assessment.

Potential Effects and Mitigation

Construction Phase Effects

3.3.7 During the construction phase of the Proposed Development, there are potential effects from:

- spillages (such as oil, fuel, cement, chemicals, etc.);
- creation of dust and soil erosion; and
- the generation of suspended solids during construction activities (including earthworks, excavations and plant/wheel washing).

3.3.8 These are considered standard construction activities for this type of development and would be dealt with through standard construction practices. As such, these are proposed to be scoped out of the Ground Conditions assessment.

Construction Phase Mitigation

3.3.9 It is expected that the above normal construction effects will be mitigated by means of the Proposed Development of:

- Construction Sequence and Programme;
- CEMP – this will include measures relating to Air, noise, dust, light, odour, and is likely to include a Site Waste Management Plan (SWMP) - Demolition & Construction;
- Materials Management Plan (MMP) - Soils reuse & earthworks; and
- Construction Code of Practice (CCoP) - Considerate construction planning.

3.3.10 All earthworks at the site will be undertaken in accordance with: a suitable geotechnical design and Earthworks Specification; and a Materials Management Strategy, written in general accordance with the Contaminated Land: Applications In Real Environments (CL:AIRE) document: 'The Definition of Waste: Development Industry Code of Practice (Version 2)', dated March 2011 (DoWCoP).

3.3.11 A site watching brief will be undertaken by Hydrock during earthworks (for unexpected contamination) and all earthworks and materials management will be reported in feedback and verification reports. If unexpected contamination is encountered, this will be discussed with the Environmental Heath Team before remediation and re-use as appropriate, or disposal off site. As such, this is proposed to be scoped out of the Ground Conditions assessment.

Operational Phase Effects

3.3.12 During the operational phase, the Proposed Development has the potential to generate adverse effects from localised spillages of fuel, which may be carried to surface watercourses and underlying groundwater through surface run-off and leaching through the soil profile.

3.3.13 Contaminants from fuel spillages during the operation phase, are likely to occur on hardstanding such as re-fuelling areas and car parking areas and will therefore be subject to a controlled drainage scheme as part of the permanent drainage strategy. In addition, the individual operators of the facilities will have standard operating procedures, with regards to minimising the impacts of spills. This will minimise the contaminants reaching surface water

and limit infiltration and permeation to groundwater. As such, it is considered that Ground Conditions can be scoped out of the ES.

Summary

3.3.14 In summary, with regard to Ground Conditions, it is considered that standard practice mitigation measures will be implemented during the construction and operation of the Proposed Development, and as such no significant environmental effects are anticipated. As such, it is considered that Ground Conditions can be scoped out of the ES.

3.4 Lighting

Introduction

3.4.1 This section covers the potential effects of obtrusive light, the intention of how these effects will be assessed, and provides details of work completed so far in assessing lighting effects.

3.4.2 This scoping input has been written by Daniel Spreadborough a Principal Engineer in the Lighting Impact and Planning Department at DFL-UK. Daniel has over 5 years' experience in the assessment of lighting impacts for developments across the UK and has worked in the lighting industry for a total of 12 years. Daniel has two specialist degrees within the field of lighting and lighting design, including a MSc from UCL.

Baseline

3.4.3 To date, the lighting baseline within and surrounding the Site has been assessed using a desk-based assessment. However, the full Lighting Impact Assessment will be supported by a Lighting Baseline Survey undertaken using the methodology described within ILP PLG04:20136.

3.4.4 The desk-based assessment has been undertaken within a 6 km radius of the Site boundary. This area has been chosen in line with ILP guidance[7][8] as it captures all receptors that could potentially be affected by any proposed lighting and provides a reasonable area to conduct an assessment of the lighting baseline within.

3.4.5 No permanent existing lighting infrastructure has been identified within the Site. However, it is likely that within the recent past there was existing lighting installed in the east of the Site to support several buildings and a car park that were located here.

3.4.6 The immediate area surrounding the Site is not dark. There is a large presence of existing lighting north, east and south of the Site associated with the following locations:

- Cambridge Services;
- A14 Huntingdon Road and its associated slip roads;

[6] Institution of Lighting Professional 2013. Guidance on Undertaking Environmental Lighting Impact Assessments. Publish 2013. https://theilp.org.uk/publication/plg04-guidance-on-undertaking-environmental-lighting-impact-assessments/ ILP 2013

[7] Institution of Lighting Professional 2013. Guidance on Undertaking Environmental Lighting Impact Assessments. Publish 2013. https://theilp.org.uk/publication/plg04-guidance-on-undertaking-environmental-lighting-impact-assessments/ ILP 2013

[8] Institution of Lighting Professional 2021 Guidance Note 01:2021. The Reduction of Obtrusive Light. Publish 2021. https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/ ILP 2021

- A1307 Huntingdon Road; and
- Buckingway Business Park.

3.4.7 Further from the Site in the south and west there is existing lighting associated with the villages of Boxworth, Knapwell, Elsworth, and Conington.

3.4.8 The land between the Site and these towns is made up of agricultural fields which have not been identified as containing any artificial lighting.

3.4.9 The wider area surrounding the Site (within the study area) is a broad mixture of rural settlement, agricultural land, forest, water courses, suburban settlement, commercial uses, educational facilities and sports facilities. The Site is also not located within a National Landscape or a National Park.

3.4.10 Based on this, the Site and surrounding area is assessed as an E2 environmental zone as detailed within ILP GN01:2021[9], and this will inform the assessment of lighting effects.

Table 3.2: Limitations of the Identified Environmental Zone

Zone	Surroundings	Example	Limitations		Upward Light Ratio (Max)**
			Pre-Curfew	Post-Curfew	
E2	Rural	Sparsely inhabited rural areas, Village or relatively dark outer suburban locations	5	1	2.5%

Identified Receptor to Lighting

3.4.11 During the desktop assessment several potential receptors to lighting effects have been identified. These are listed within Table 3.3. Sensitive receptors to lighting consist of:

- Human Amenity Receptors: These are locations (primarily dwellings) where obtrusive light can affect the amenity of those living within and using these locations. Light Intrusion (into windows) typically has the greatest effects on these receptors.
- Human Safety Receptors: These are locations where obtrusive light can affect the safety of those using these locations. These are typically road where glare may have distractive effect on drivers.
- Ecology Receptors: The most light sensitive species within the UK are typically Bats. These have been identified using the field boundary habitats for foraging and commuting, and effects on these areas will be assessed against guidance from ILP GN08:2023[10].

3.4.12 All of these receptors are within the 6km study areas, however only the closest of the receptors are listed within Table 3.3. This is because the effects of lighting reduce as the distance from a light source increase, allowing the listed receptors to also provide an assessment of effects of those behind them.

[9] Institution of Lighting Professional 2021 Guidance Note 01:2021. The Reduction of Obtrusive Light. Publish 2021. https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/ ILP 2021

[10] Institution of Lighting Professional and Bat Conservation Trust 2023. Guidance Note 08:2023 Bats and Artificial Lighting at Night. Publish 2023. https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/ ILP 2023

Table 3.3: Identified Potentially Sensitive Receptors to Lighting

Receptor Type	Receptor Number	Description	Approximate Distance and Direction from the Site
Human Amenity	PHAR 001	Dwellings on Highstreet	220m south
Human Amenity	PHAR 002	Dwellings within Boxworth	530m south
Human Amenity	PHAR 003	Dwellings at Yarmoth Farm	1.2Km southeast
Human Amenity	PHAR 004	Dwellings within Lolworth	1.6Km southeast
Human Amenity	PHAR 005	Farm House East of the Application Site	1.2Km southeast
Human Amenity	PHAR 006	Dwellings within Conington	1.6Km west
Human Amenity	PHAR 007	Dwelling on New Barns Lane	1.5Km northwest
Human Amenity	PHAR 008	Dwellings at St John's College Farm	1Km north
Human Amenity	PHAR 009	Dwellings within Scotland Drove Mobile Park	1.3Km north
Human Amenity	PHAR 010	Dwellings on Rose Crown Road	1.5Km north
Human Amenity	PHAR 011	Dwellings within Swavesey	1.3Km north
Human Amenity	PHAR 012	Dwellings on the A1307 Huntingdon Road	1.3Km east
Human Amenity	PHAR 013	Dwelling at Friesland Farm	Adjacent to the Site west
Human Safety	PSR 001	Drivers on the A14 Huntingdon Road, including the access and slip roads	Adjacent to the Site north
Human Safety	PSR 002	Drivers on High Street	Adjacent to the Site north
Ecology	PSER 001	Bats: foraging and commuting opportunities along the field boundary habitats. Primarily Common Pipistrelle, with other rarer species also being recorded.	Adjacent to and within the Site. Surrounding the Site.

Potential Effects

Parameters of Obtrusive Light

3.4.13 The parameters of obtrusive light that will be assessed are:

- Illuminance: Light Spill and Light Intrusion;
- Glare; and
- Sky Glow: Upward Light Ratio and Upward Light Output Ratio.

3.4.14 These parameters of obtrusive light are assessed against the limitations detailed within ILP GN01:2021[11] for the relevant environmental zone (Table 3.2) and the limitations detailed within ILP GN08:2023[12] (Table 3.4).

Table 3.4: Guidance Limitations from GN08:2023

Guidance Parameter	GN08:2023 Description
Illuminance (Lux) Levels	4.54: It is acknowledged that, especially for vertical calculation planes, very low levels of light (<0.5 lux) may occur even at considerable distances from the source if there is little intervening attenuation. It is therefore very difficult to demonstrate 'complete darkness' or a 'complete absence of illumination' on vertical planes where some form of lighting is proposed on site despite efforts to reduce them as far as possible and where horizontal plane illuminance levels are zero. Consequently, where 'complete darkness' on a feature or buffer is required, it may be appropriate to consider this to be where illuminance is below 0.2 lux on the horizontal plane and below 0.4 lux on the vertical plane. These figures are still lower than what may be expected on a moonlit night and are in line with research findings for the illuminance found at hedgerows used by lesser horseshoe bats, a species well known for its light adverse behaviour (Stone, 2012).

Method of Assessment

3.4.15 The parameters of obtrusive light discussed above will be assessed using lighting calculations based on the Lighting Strategy that will be developed for the Proposed Development.

3.4.16 The Lighting Strategy will focus on external lighting for the Proposed Development only due to the level of detail available at this stage. Internal lighting has a far lesser effect in terms of obtrusive light when compared to external lighting, so this approach will provide a reasonable assessment of the effects of lighting for the Proposed Development.

3.4.17 These lighting calculations will be used to assess the levels of obtrusive light reaching the identified receptors against the limitations detailed within lighting guidance (Table 3.2 and Table 3.4), and this will be compared to the lighting baseline at the receptors.

Mitigation

3.4.18 The effects of obtrusive light on the identified receptors can typically be mitigated using best practice for lighting design and mitigation embedded into the Proposed Development. This will include as a minimum the mitigation detailed within Table 3.5.

Table 3.5: Mitigation by Design (Lighting Best Practice)

Mitigation Name	Description of Mitigation	Installation Location
Restricting the Upward Light Output Ratio	All luminaires will have an Upward Light Output Ratio of 0%.	Whole Proposed Development
Restricting Luminaire Tilt	All luminaires will be installed with a tilt of 0° as standard. An allowance to tilt luminaires to 5° may be made, where it is demonstrated that:	Whole Proposed Development

[11] Institution of Lighting Professional 2021 Guidance Note 01:2021. The Reduction of Obtrusive Light. Publish 2021. https://theilp.org.uk/publication/guidance-note-1-for-the-reduction-of-obtrusive-light-2021/ ILP 2021

[12] Institution of Lighting Professional and Bat Conservation Trust 2023. Guidance Note 08:2023 Bats and Artificial Lighting at Night. Publish 2023. https://theilp.org.uk/publication/guidance-note-8-bats-and-artificial-lighting/ ILP 2023

Mitigation Name	Description of Mitigation	Installation Location
	• This is required to achieve a standard lighting level on the task or area, • This will not result in any significant effects on the surrounding receptors, This does not result in an increase in the Upward Light Ratio of the lighting design above 0%.	
Glare Class Restriction	All luminaires will have a minimum Glare Class of G3.	Whole Proposed Development
Installation of Back Light Shielding	Manufactures often provide “back light optics” where back light mitigation is integrated on the lenses of the luminaires. This is the preferred option as it provides the greatest degree of controlled. Where this is not available, traditional back light shields can be used.	Where luminaires are installed on the boundary of an area facing into the site. Especially if adjacent to areas of ecological interest.
Using the lowest possible Correlated Colour Temperature	Throughout the Proposed Development the standard Correlated Colour Temperature used will be ≤3000K. Where there are areas of specific ecological sensitivity the lighting near this area will be dropped to ≤2700K. In locations where there is a specific reason for using a higher colour temperature, for example for safety concerns, the CCT may be increase to 4000K for these areas. This must be clearly justified using standards and guidance, and a clear risk assessment based on the environmental effects of the lighting.	Whole Proposed Development
Using the lowest applicable lighting levels for tasks and areas	All areas and task will be lit using the lowest applicable lighting levels as defined in the relevant British Standard[13][14][15]. This will ensure a standard and recognised level of light is provided for all areas of the Proposed Development, while ensuring no area is over lit. During the detailed lighting design, a risk assessment must be undertaken to help defined the specific lighting class for any area. If any guidance encourages the increase in the lighting level compared to the British Standard, the British Standard level must take precedence.	Whole Proposed Development
Centralised Lighting Controls	Throughout the Proposed Development a centralised lighting control system/s will be used. This will ensure lighting is only active as require during the hours of darkness, will allow dimming based on traffic	Whole Proposed Development

[13] The British Standards Institution 2020. BS 5489-2:2020 Design of road lighting - Lighting of roads and public amenity areas Code of practice. Published May 2020. https://knowledge.bsigroup.com/products/design-of-road-lighting-lighting-of-roads-and-public-amenity-areas-code-of-practice The British Standards Institution 2020

[14] The British Standards Institution 2016. BS EN 13201-2:2015 Road lighting - Performance requirements. Published January 2016. https://knowledge.bsigroup.com/products/road-lighting-performance-requirements-1 The British Standards Institution 2016

[15] The British Standards Institution 2024. BS EN 12464-2:2024 Light and lighting. Lighting of work places - Outdoor work places. Published November 2024. https://knowledge.bsigroup.com/products/light-and-lighting-lighting-of-work-places-outdoor-work-places-1 The British Standards Institution 2024

Mitigation Name	Description of Mitigation	Installation Location
	flow, and switching to take place based on the hours of use. For example: 1. When a car park is experiencing low use over night the lighting can be dimmed, 2. If a unit is closed overnight, then all associated lighting can be switched off. This will not only reduce the effects of lighting but will save money and energy for the owner of the lighting system. All lighting dimming and switching will be subject to a risk assessment based on the task being performed. This is to ensure the safety for those using the area is maintained at all times.	
Using the minimum practical mounting height	All luminaires will be mounted at the minimum practical mounting height for the area or task. This will reduce the visibility of the luminaires in the landscape, by allowing surrounding trees and buildings to act as blocking features to direct views of luminaires. It must be noted that mounting luminaires lower than the minimum practical mounting height will increase the need to tilt luminaires to achieve British Standard lighting levels. Doing this will increase light spill, glare and upward light.	Whole Proposed Development
Using appropriate optics for the areas being illuminated	The luminaire optic used will be specific to the area being lit. This will ensure the task and area is lit to a standard level of light, while also allow the lux contours to be shaped to the specific areas. This will help reduce light spill out of area and either over lighting or under lighting area. This will also prevent the need to tilt luminaires and will reduce light spill and upward light.	Whole Proposed Development
Only using Luminaires where Photometry is Available from the Manufacturer	Luminaires will be used with integral LEDs and only where the luminaire photometry is available from the manufacturer. This is to ensure the photometric footprint of the luminaires can be modelled to ensure the potential effects of light spill are minimised or mitigated.	Whole Proposed Development

3.4.19 The mitigation detailed within Table 3.5 follows best practice from ILP GN01:2021 and ILP GN08:2023.

Potential Effects of Lighting

3.4.20 Based on the identification of receptors surrounding the Site and their distances from the Site, there are unlikely to be significant effects of obtrusive light on the majority of these receptors due to their distance from the Site alone.

3.4.21 Where receptors are close to the Site the effects of obtrusive light on these receptors will be effectively mitigated by a sensitive Lighting Strategy. This Lighting Strategy will follow best practice as detailed within ILP GN01:2021 and ILP GN08:2023.

3.4.22 As such, it is not expected that there will be significant effects of obtrusive light on the identified receptors from:

- Illuminance: Light Spill and Light Intrusion;
- Glare; and
- Sky Glow: Upward Light Ratio and Upward Light Output Ratio.

Conclusion

3.4.23 Following the implementation of best practice design mitigation, it is considered unlikely that there will be significant effects of obtrusive light on the identified receptors and as such, it is proposed that lighting is scoped out of the ES.

3.4.24 It is proposed that the effects of obtrusive light are assessed within a Technical Appendix to the ES. This Technical Appendix will include:

- Lighting Impact Assessment including Lighting Strategy and Lighting Baseline Survey Annexes; and
- Obtrusive Light Calculations and Light Spill Diagrams.

3.4.25 The Lighting Impact Assessment will be based on industry best practice and follow guidance publishing by the ILP16, The Chartered Institution of Building Services[17] and the Society of Light and Lighting and National Highways[18].

3.5 Human Health

Introduction

3.5.1 This section has been prepared by Stantec UK and sets out the likely significant effects and non-significant effects of the Proposed Development on human health. A number of guidance documents have been used to inform this section[19].

3.5.2 Regulation 4(2)(a) of the 2017 EIA Regulations requires significant effects on population and human health to be considered, as appropriate, within the EIA process. In this section human

[16] Institution of Lighting Professional 2013. Guidance on Undertaking Environmental Lighting Impact Assessments. Publish 2013. https://theilp.org.uk/publication/plg04-guidance-on-undertaking-environmental-lighting-impact-assessments/ ILP 2013

[17] The Chartered Institution of Building Services and the Society of Light and Lighting 2021. Lighting Guide 21 Protecting the Night-time Environment. Publish September 2021. https://www.cibse.org/knowledge-research/knowledge-portal/lg21-protecting-the-night-time-environment#:~:text=This%20lighting%20guide%2C%20Protecting%20the,for%20the%20wider%20nocturnal%20environment. Society of Light and Lighting 2021

[18] National Highways 2020. Desing Manual for Roads and Bridges LA 104 Environmental Assessment and Monitoring. Publish August 2020. https://www.standardsforhighways.co.uk/search/0f6e0b6a-d08e-4673-8691-cab564d4a60a National Highways 2020

[19] Institute of Environmental Management & Assessment (IEMA) (2022) 'Effective Scoping of Human Health in Environmental Impact Assessment' Available at: iemaeiaguidetoeffectivescopingofhumanhealth.pdf [Accessed 30 November 2023]

health is considered, and further population effects are considered within the socio-economic section.

Baseline

Baseline Sources

3.5.3 IEMA's Effective Scoping of Human Health in Environmental Impact Assessment (2022) is the most up to date guidance regarding scoping human health in EIA. This does not provide any specific guidance on data to include as part of a human health baseline. However, based on best practice the baseline normally includes information regarding local population conditions, a local health profile, and draws on other relevant disciplines as necessary of a defined impact area. For the purposes of scoping a brief overview of potential human health receptors based on the vicinity has been provided.

3.5.4 A range of sources will therefore be used to inform the baseline, this will include:

- South Cambridgeshire Local Plan (2018)[20];
- Greater Cambridge Health Impact Assessment Supplementary Planning Document (2025)[21];
- ONS Census 2021;
- IMD Map; and
- OHID Local Health Authority Profiles.

Baseline Description

3.5.5 For the purposes of scoping a demographic and human health profile has been provided. Given the location of the Proposed Development, the Local Study Area (LSA) includes three adjacent Lower Super Output Areas (LSOAs):

- South Cambridgeshire 022C, where the Proposed Development is located;
- South Cambridgeshire 003C, located adjacent to the east.

3.5.6 This will provide a robust overview of the local baseline health conditions and receptors which could potentially experience localised impacts, such as noise or air quality effects. The baseline for the LSA will be calculated by taking an average of the three LSOAs, with comparators of South Cambridgeshire (local authority level), East of England (regional level) and England (national level). The baseline conditions are as follows[22]:

- Age: Children aged 0-19 accounted for 24.5% of the LSA's population, which is slightly higher than the South Cambridgeshire average (23.7%), and the national average (23.1%). People aged 65-84 accounted for 19.0% of the LSA's population, which is greater than both the South Cambridgeshire average (16.9%), and the national average (15.9%). Those aged 85 and over accounted for 1.9% of the population in the LSA, which

[20] South Cambridge District Council (2018) South Cambridgeshire Local Plan. Available at: South Cambridgeshire Adopted Local Plan 2018

[21] Greater Cambridge Shared Planning (2025) Greater Cambridge Health Impact Assessment Supplementary Planning Document. Available at: Greater Cambridge Health Impact Assessment Supplementary Planning Document

[22] Office for National Statistics (2022) nomis. Available at: Dataset Selection - Query - Nomis - Official Census and Labour Market Statistics

is below both the South Cambridgeshire average (2.7%) and the national average (2.4%) Overall, the LSA has an comparable population than the South Cambridgeshire and the national averages.

- Sex: Within the LSA, 51.4% of people identified as female, and 48.7% identified as male. The female population is marginally than the South Cambridgeshire and national average (50.9% and 51.0% respectively). As a result, the male population is slightly lower than the South Cambridgeshire and national average (49.1% and 49.0% respectively).

- Ethnicity: As of 2021, 93.1% of the LSA's population was White, which is higher than the South Cambridgeshire (89.0%), and the national average (81%). The leading ethnic minority in the LSA was Asian, Asian British or Asian Welsh (2.8%), which is lower than both the South Cambridgeshire (5.8%) and national (9.6%) averages.

- Disability: Within the LSA, people with disabilities under the Equalities Act 2010 was 13.7%. This percentage is lower than both than the South Cambridgeshire (14.7%) and national (17.3%) averages. Of these people, 3.6% within the LSA have their day-to-day activities limited a lot by their disability, which is lower than both the South Cambridgeshire (5.2%) and national (7.3%) averages.

- Indices of Multiple Deprivation: The LSA has low levels of deprivation. IMD data available at both the LSOAs which constitute the LSA shows that South Cambridgeshire 022C is within the 40% least deprived and South Cambridgeshire 003C is in the 10% least deprived neighbourhoods in England[23].

- Population Projections: Between 2020 and 2040, the ONS estimates that the population in South Cambridgeshire will increase across all ages by 3.3%, which is below the England average of 7.3%.

Health Profile

3.5.7 In the LSA, 87.3% of people report being in 'very good' or 'good' health, which is above the South Cambridgeshire (85.8%) and national (82.2%) averages. 2.9% of people in the LSA report being in 'bad' or 'very bad' health' which is below the South Cambridgeshire (3.5%) and the national (5.2%) averages[4].

- Common causes of death: In South Cambridgeshire, cancer was the leading cause of death (86.0 per 100,000)[24], which is well below the East of England average (113.4 per 100,000) and national average (120.8 per 100,000). Total mortality for under 75s in South Cambridgeshire is significantly lower than the national average.

- Obesity: In South Cambridgeshire, 58.2% of adults were overweight or obese in 2023/24. This is below the East of England (65.9%) and national (64.5%) averages. In 10–11-year-olds, the average obesity rate in South Cambridgeshire was 13.2%. The national average for obesity in 10–11-year-olds is 22.1%, so South Cambridgeshire is substantially better than the national average[25].

- Cardiovascular disease: For under 75's in 2023, in South Cambridgeshire, there were 63.5 deaths from cardiovascular disease per 100,000 population. This is lower than the

[23] Ministry of Housing, Communities and Local Government (2019) Indices of Multiple Deprivation (IMD) Map. Available at: Indices of Deprivation 2015 and 2019

[24] Under 75 mortality rate.

[25] Department of Health and Social Care (2025) Local Authority Health Profiles. Available at: Local Authority Health Profiles - Data | Fingertips | Department of Health and Social Care

East of England average (68.6 per 100,000) and the national average (77.4 per 100,000)7.

- Mental health: In South Cambridgeshire, there were 9.7 suicides per 100,000 population in 2021-2023, which is marginally above the East of England average (9.5 per 100,000) but is lower than the national average (10.7 per 100,000). In South Cambridgeshire there were 89.5 hospital admissions per 100,000 for intentional self-harm in 2023/24, which is well below the East of England (108.1 per 100,000) and national (117.0 per 100,000) averages7.

- Life expectancy: In South Cambridgeshire, the life expectancy at birth is 82.2 for a male (1 year range), which is greater than the East of England (80.1) and national (79.3) averages. The life expectancy at birth is 85.8 for a female (1 year range) in South Cambridgeshire, which is greater than the East of England (83.6) and national (83.2) values7.

- Behavioural determinants of health: In 2023, it was estimated that 5.8% of adults in South Cambridgeshire were current smokers, which is better than the East of England (11.5%) and national (11.6%) averages. However, in South Cambridgeshire, 9.5%* of mothers smoked at the time of birth in 2023/24, which is worse than both the East of England (7.3%) and national (7.4%) averages. There were 469 per 100,000 population admission episodes for alcohol-specific conditions in 2023/24, with 17.3 per 100,000 population alcohol-related hospital emissions for under 18's in South Cambridgeshire. These figures are below the East of England and national averages7.

- Physical activity: In South Cambridgeshire, the percentage of physically active adults in 2023/24 was 71.3%. This is greater than the East of England (68.2%) and national (67.4%) averages[7].

Potential Effects

3.5.8 IEMA guidance (Guide to Effective Scoping of Human Health, IEMA 2022) notes that scoping should determine the potential for health effects to be both 'likely' and 'potentially significant'. This can be achieved through considering:

- If there is a likelihood that there is a plausible source-pathway-receptor link through the probable given activities;

- If the effect is likely to be potentially significant;

- Understanding consultation responses;

- If committed mitigation avoids significant population health effects; and

- Considering if committed enhancements maximise public health opportunity.

3.5.9 The IEMA guidance notes the following wider determinants of health to consider:

- Health Related behaviours;

- Social Environment.;

- Economic Environment;

- Bio-physical environment; and

- Institutional and built environment.

3.5.10 It is considered that there would be no likely significant stand-alone human health effects under these wider determinants identified using this methodology. This is because it is likely that any significant negative impacts related to population health arising directly from the Proposed Development, including those within a bio-physical environment, will be mitigated through secured commitments. Indirect human health effects, which may fall within health-related behaviours, social environment, economic environment and the institutional and built environment, have complex causes pathways where attribution to the Proposed Development design itself would be unlikely to be established and both negative and positive human health impacts are unlikely to be felt at a population health level.

3.5.11 The following assessments would consider indirect and secondary impacts that could have an effect on health and wellbeing and would be included within the wider determinants of health:

- Transport and Access;
- Landscape and Visual Effects;
- Air Quality;
- Noise and Vibration;
- Socio-Economics; and
- Climate Change.

3.5.12 The existing Local Plan for SCDC, South Cambridgeshire Local Plan (2018), provide a direct reference to the requirement for a Health Impact Assessment within Policy SC/2, which states:

'New development will have a positive impact on the health and wellbeing of new and existing residents. Planning applications for developments of 20 or more dwellings or 1,000m2 or more floorspace will be accompanied by a Health Impact Assessment to demonstrate this.

a. For developments of 100 or more dwellings or 5,000m2 or more floorspace a full Health Impact Assessment will be required;

b. For developments between 20 to 100 dwellings or 1,000 to 5,000m2 or more floorspace the Health Impact Assessment will take the form of an extended screening or rapid Health Impact Assessment.'

3.5.13 Further to this, Greater Cambridge Shared Planning have published a Greater Cambridge Health Impact Assessment Supplementary Planning Document (SPD) (April 2025) which restates the policy requirements above.

3.5.14 Therefore, a standalone HIA will be prepared to accompany the forthcoming outline planning application. This will explore the health and wellbeing impacts of the Proposed Development. Consultation will be undertaken with local Public Health Officers to agree a suitable scope and methodology in line with the Greater Cambridge Health Impact Assessment Supplementary Planning Document (SPD) (April 2025).

3.5.15 It is therefore considered that human health can be scoped out of the ES on the basis that any indirect and secondary environmental significant, population level impacts that could affect human health from the topics listed in this scoping chapter will be considered within relevant topic chapters within the ES (e.g., Transport and Access, Air Quality, Noise and Vibration). Additionally, the preparation of a standalone HIA will provide a detailed assessment of potential health and wellbeing impacts arising from the scheme construction or design.

3.6 Wind Microclimate

3.6.1 The Proposed Development will not include any high-rise buildings which could influence wind patterns. As noted above, it is anticipated that the maximum unit height will be 21 m to ridge above ground level. Therefore, significant wind effects are not anticipated, and this topic is proposed to be scoped out of the ES.

3.7 Daylight, Sunlight, and Overshadowing

3.7.1 The scale, massing and location of the Proposed Development is not anticipated to cause changes to daylight or sunlight availability or cause overshadowing for any surrounding existing residents. It is therefore proposed to scope this discipline out of the EIA.

3.8 Waste

3.8.1 The Proposed Development will result in the generation of waste materials during the construction and operational phases. Waste generated during construction would consist of excavated materials not used in site landscaping, damaged and excess construction materials and packaging. As the Proposed Development is predominantly storage and distribution facilities (use Class B8) the main type of waste generated during the operational phase would consist predominantly of Commercial and Industrial Waste (CIW).

3.8.2 The construction phase of the Proposed Development is not anticipated to produce significant amounts of waste to the extent that the creation or disposal of which would give rise to significant effects on the environment. The Construction Environmental Management Plan (CEMP), to be secured by a planning condition following planning approval, would detail the mitigation measures to be implemented during the construction phase to minimise waste and ensure that it is stored, managed, collected and disposed of appropriately. Furthermore, the Client has committed to ensuring that 95% of waste will avoid landfill during the construction period, adopting the waste hierarchy framework.

3.8.3 During operation, the introduction of the Proposed Development will result in an increase in the operational volume of CIW arising from the site. Waste and recycling would be collected, recycled and disposed of. This is anticipated to be predominantly through private waste management companies due to its commercial nature. The design of the Proposed Development will enable sufficient space to meet waste collection requirements.

3.8.4 Due to the waste hierarchy approach to waste to be taken during construction, and the low amounts of wastes anticipated in relation to the Proposed Development for SCDCs management, significant effects are not anticipated, and this topic has been scoped out of the ES.

3.9 Major Accidents and Disasters

3.9.1 The Proposed Development is primarily storage and distribution floorspace (Use Class B8) in nature and none of the Use Classes listed within Section 2.5 are considered to be hazardous, nor is the site in a location which is at risk of disasters such as flooding, land instability or earthquakes.

3.9.2 During construction, which is considered the only element which could be considered as hazardous, all applicable health and safety legislation will be complied with. It is therefore proposed that this topic is scoped out of the ES.

3.10 Environmental Disciplines Scoped In

3.10.1 For each of the topics scoped into the assessment, further information on the details to be included in the assessment and the methodology to be employed are set out in the following sections.

4 Transport and Access

4.1 Introduction

4.1.1 This Chapter of the EIA Scoping Report has been produced by Stantec. It is proposed that Transport and Access matters are scoped into the assessment.

4.1.2 An assessment will be undertaken of the likely significant effects of the Proposed Development in terms of traffic and transport in the context of the Site and surrounding area. In particular, the assessment will consider the effects of changes in traffic flows resulting from the Proposed Development during the Construction, Operational, and Demolition phases.

4.1.3 The assessment will draw on information from the Transport Assessment (TA) and Framework Travel Plan (FTP), which will be submitted separately with the outline planning application:

- The TA will provide a detailed assessment of the peak hour traffic impact and road safety implications of the Proposed Development, and would identify measures to mitigate the impact of the Proposed Development. It will present access arrangements and describe measures to provide access by all modes of transport.
- The FTP will identify measures which reduce car-based travel to a minimum, in accordance with current policy as set out in the Government's Transport Decarbonisation Plan and the Circular 1/2022.

4.1.4 This chapter has been written by Stantec UK Limited (Stantec), in accordance with Regulation 18(5) of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017, as amended, under the supervision of John Hopkins (BEng (Hons), MSc, CMILT, MCIHT). John Hopkins is a Senior Associate within Stantec and has worked in consultancy for over 35 years with experience in the preparation of Environmental Statement Transport Chapters. He contributed to the Institute of Environmental Management and Assessment (IEMA) Guidelines: *Environmental Assessment of Traffic and Movement* (2023) and was credited within this document as a Contributor. The supporting TA and FTP were also prepared with peer review by John Hopkins.

4.2 Baseline Conditions

Baseline Sources

4.2.1 Through pre-application scoping discussions with The Joint Highway Authorities - Cambridgeshire County Council (CCC) and National Highways (NH) it has been agreed that the assessment will follow a manual approach, using traffic survey data, and applying TEMPro Growth Factors and committed development flows to these up to future year scenario of 2039. In scoping, CCC and NH confirmed that the future year assessments should be the anticipated opening year (assumed to be 2029) and 10 years following.

4.2.2 A comprehensive traffic count data collection exercise will be undertaken in June 2025 to obtain junction turning and link count flows throughout the Study Area.

4.2.3 Proposed Development traffic during the operation phase will be calculated using the TRICS database for B8 land uses and an Amenity Hub (consisting of Class E, Class F1 and F2 land uses).These traffic flows will then be distributed across the highway network using a Gravity Model, informed by labour force analysis work undertaken by CBRE, to understand where people are travelling from to reach the proposed employment Site.

will this include the impact of HGVs ?

4.2.4 Personal Injury Collision (PIC) data for the last 5 years will also be obtained from the Local Highway Authority to understand any existing road safety issues on the local highway network relevant to this ES Transport and Access Chapter.

Baseline Description

4.2.5 The chapter will include an assessment of the baseline transport conditions surrounding the Site. This will include:

- A review of the local transport network, informed by a site visit and liaison with appropriate stakeholders;
- Identification of the highway safety record surrounding the Site;
- A summary of sustainable travel, including pedestrian, cycle, and public transport facilities;
- Baseline traffic flows; and
- Identification of sensitive receptors.

Existing Highway Network

4.2.6 The Site is located immediately to the south-west of the A14, located around Junction 24 near Boxworth, Cambridge. The Site would be easily accessible from both directions of the A14, as well as connecting easily to the A1307 via Junction 24.

4.2.7 The strategic highway network near the Site includes:

- A14: a major route in the UK, running from the Port of Felixstowe in Suffolk to the Catthorpe Interchange in Leicestershire. It serves as a key link between the Midlands and East Anglia, facilitating significant freight and passenger traffic. The A14 adjacent the Site was recently the subject of a £1.4bn enhancement scheme, the A14 Cambridge to Huntingdon Enhancement;
- A1307: providing access to local destinations between Huntingdon and Cambridge, including St Ives and Fenstanton. It provides an alternative route to the A14 for traffic heading towards these destinations; and
- M11: with its northern end located on the A14 adjacent Cambridge, this route offers a direct motorway link towards London and connections to the M25 motorway.

4.2.8 In addition to these strategic roads, the local network around the Site includes Boxworth Road, providing direct access to the village of Boxworth, and connections towards the A428 and the villages of Knapwell and Elsworth. The speed limit is generally 30mph in residential areas, increasing to 60mph (national speed limit) in less populated sections.

Existing Pedestrian / Cycle Network

4.2.9 We will review the existing local walking and cycling network, including any active travel facilities and public rights of way.

4.2.10 The Site can easily access the quality walking / cycling network in the northern verge of the A14 - with the A14 footway / cycleway overbridge route connecting to this from the western side of the A14 Cambridge Services access roundabout immediately adjacent the Site. The Transport Assessment prepared by Highways England (now NH) supporting the A14 Cambridge to Huntingdon Enhancement Scheme DCO noted that this bridge, plus a similar

bridge to the east at Bar Hill, would significantly enhance the links between employment opportunities, residential areas and villages in the area.

4.2.11 This A14 northern verge footway / cycleway connects to the A1307 to the north of the A14 which benefits from a footway / cycleway in the northern verge between A14 Swavesey Interchange and A14 Bar Hill to the east, and Fenstanton to the west. Cycle infrastructure is provided beyond these points to facilitate access to existing and forthcoming residential settlements.

Existing Public Transport Network

4.2.12 There is one bus service, Dews Coaches Service 8, which operates on Boxworth Road, immediately adjacent the Site's eastern boundary.

4.2.13 Bus Service 8 provides a connection for Boxworth residents to various destinations in the region. The route includes stops at Elsworth Road and School Lane in Boxworth (approximately 1.5km away from the centre of the Site), with the services passing through the proposed Site Access on route. This service runs from Papworth Everard to Cambridge, passing through Boxworth, Dry Drayton, Bar Hill, and other local areas. Service 8 operates 6 days a week (Monday to Saturday), with services starting at 07:35 and ending at 17:15. The frequency of this service is limited, with three scheduled services in each direction.

4.3 Relevant Policy and Guidance

4.3.1 The Transport Chapter will include a review of relevant transport policy contained in the following documents:

- The National Planning Policy Framework (February 2025 - NPPF)[26];
- Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision Taking (Updated March 2014)[27];
- Department for Transport - Transport Decarbonisation Plan (January 2023)[28];
- Department for Transport - Strategic Road Network and the Delivery of Sustainable Development - Circular 01/2022 (December 2022)[29];
- Department for Transport - Cycle Infrastructure Design Local Transport Note 1/20 (July 2020)[30];
- Cambridgeshire and Peterborough Combined Authority - Local Transport and Connectivity Plan (November 2023)[31]; and
- South Cambridgeshire District Council (SCDC) – Adopted Local Plan (September 2018)[32].

[26] https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf

[27] https://www.gov.uk/guidance/travel-plans-transport-assessments-and-statements

[28] https://assets.publishing.service.gov.uk/media/610d63ffe90e0706d92fa282/decarbonising-transport-a-better-greener-britain.pdf

[29] https://www.gov.uk/government/publications/strategic-road-network-and-the-delivery-of-sustainable-development/strategic-road-network-and-the-delivery-of-sustainable-development

[30] https://assets.publishing.service.gov.uk/media/5ffa1f96d3bf7f65d9e35825/cycle-infrastructure-design-ltn-1-20.pdf

[31] https://cambridgeshirepeterborough-ca.gov.uk/what-we-deliver/transport/local-transport-plan/

[32] https://www.scambs.gov.uk/planning/local-plan-and-neighbourhood-planning/the-adopted-development-plan/south-cambridgeshire-local-plan-2018

4.4 Assessment Methodology

Guidance and Best Practice

4.4.1 The ES chapter will be prepared in accordance with the IEMA Guidelines: *Environmental Assessment of Traffic Movement* (2023)[33]. Reference has also been made to guidance on Severance contained within LA112 *Population and Human Health*, within the National Highways Design Manual for Roads and Bridges (DMRB)[34]. The purpose of these guidance documents is to provide practitioners with good practice advice on how to carry out the assessment of traffic and movement of people as part of a statutory EIA environmental assessment. This is set out in the following text.

Construction, Operation and Demolition Phase Traffic Flow Methodology

4.4.2 The assessment will consider the Transport effects arising from the Construction, Operation, and Demolition of the Proposed Development.

4.4.3 The transport assessment in the ES will refer to the TA and FTP, the scope of which will be agreed with CCC and NH prior to work commencing, following the initial scoping meetings / agreements in October 2022 and updated scoping occurring in May 2025. The October 2022 Transport Scoping Note and the initial responses to both CCC and NH comments are included within Appendix 4.1.

4.4.4 The assessment of Construction and Demolition flows will be based on a first-principles approach, considering the likely necessary construction / demolition operations on Site. This assessment will respond to the assumptions within the Outline Construction Environmental Management Plan (CEMP), applied as primary mitigation.

4.4.5 Through pre-application scoping discussions with CCC and NH, it has been agreed that the Operational flow assessment will follow a manual approach, using for the Do Minimum (Baseline) Assessment:

- Traffic survey data, garnered in 2025, including automatic traffic counters (ATCs) for a 7-day period - to understand the weekly variation in flow – and junction turning counts, to understand the movements through the network;
- Applying agreed TEMPro Growth Factors to reflect increases in background flows to the 2025 Observed flows, to represent future year flow scenarios. In scoping, CCC and NH confirmed that the future year assessments should be the anticipated opening year and 10 years following – i.e., of 2039; and
- Adding specific committed development flows as agreed.

4.4.6 For the Do Something (With Proposed Development) Assessment, the Do Minimum flows would have added the Proposed Development-generated traffic from the operation phase, calculated using the TRICS database for B8 land uses. These will then be distributed across the highway network using a Gravity Model, informed by labour force analysis work undertaken by CBRE, to understand where people are travelling from to reach the proposed employment Site.

[33] https://www.iema.net/media/5mrmquib/iema-report-environmental-assessment-of-traffic-and-movement-rev07-july-2023.pdf
[34] https://www.standardsforhighways.co.uk/search/1e13d6ac-755e-4d60-9735-f976bf64580a

Geographical Scope

4.4.7 The Initial Study Area (including highway links) of the EIA will be consistent with the Traffic Review Area proposed for the TA.

4.4.8 The Study Area will be assessed in accordance with the recommendation of the IEMA Guidelines (July 2023): "Environmental Assessment of Traffic and Movement", that "a 30% change in traffic flows represents a reasonable threshold for including a highway link within the assessment". As such, the Assessment will:

- Include highway links where all vehicle traffic flows, or where heavy vehicles (HVs), will increase by more than 30%; and
- Include any other specifically sensitive areas where all vehicle traffic flows, or HV flows, have increased by 10% or more.

4.4.9 The study area will be divided into discrete 'highway links', with the division of links decided based on changes in traffic flows or changes in sensitivity.

What do the 'highways links' mean?

Temporal Scope

4.4.10 The scope will cover the construction, operational and demolition phases of the Proposed Development.

4.4.11 The assessment of the construction phase will be based on the peak year of the construction programme, which is to be identified.

4.4.12 The Proposed Development will be delivered in phases. Although there will be some overlap between the construction and operational phases, the impact of phases will be considered separately.

4.4.13 The assessment of the full operational phase, development completion, will be undertaken for a future year of 2039, as requested by CCC. This corresponds with 10 years post opening, in 2029.

Receptors

4.4.14 The IEMA Guidelines identifies special interests that should be considered when defining sensitive receptor geographic locations:

- People at home;
- People at work;
- Pedestrians and Cyclists;
- Sensitive and / or vulnerable groups - including young age; older age; income; health status; social disadvantage; and access and geographic factors;
- Locations with concentrations of vulnerable users - e.g., hospitals, places of worship, schools;
- Retail areas;
- Recreational areas;

- Tourist attractions;
- Collision clusters and routes with road safety concerns; and
- Junctions and highway links at (or over) capacity.

4.4.15 The sensitive receptors will be assigned to the nearest highway link, and the relationship with the highway environment examined to understand the sensitivity of those receptors to change. For example, pedestrians are less sensitive to changes in traffic if there are adequate footways and crossing facilities. However, links where there are high concentrations of sensitive locations (such as schools) are likely to be highly sensitive to changes in traffic flow unless there is separation from traffic.

4.4.16 For the purposes of this assessment, the receptor sensitivity criteria are set out in Table 4.1:

Table 4.1: Sensitivity Criteria

Receptor Sensitivity	Definition
High	Receptors of greatest sensitivity to traffic flow – people associated with schools. colleges, retirement / care homes etc, collision blackspots, roads used by pedestrians and cyclists without footways
Medium	Receptors with medium sensitivity to traffic flow – people associated with hospitals, surgeries, parks, shopping areas, etc - and roads used by pedestrians with narrow footways
Low	Receptors with low sensitivity to traffic flow – open spaces, tourist attractions, churches, etc - and residential areas with adequate footway provision
Negligible	Receptors with no sensitivity to traffic flow

4.5 Cumulative Effects

4.5.1 The ES will consider the potential for likely significant effects on the environment resulting from committed developments in the area. The following major developments are located within the general vicinity of the Site and benefit from an extant planning permission;

- Northstowe Phase 2 (3,500 homes), planning reference S/2011/14/OL;
- Northstowe Phase 3A (4,000 homes), planning reference 20/02171/OUT;
- Northstowe Phase 3B (1,000 homes), planning reference 20/02142/OUT;

What about Cambourne North?

4.5.2 The phasing of these developments will be agreed with the planning authority to ensure that appropriate levels of development are incorporated at each future year scenario.

4.6 Likely Significant Effects

4.6.1 As set out in the IEMA Guidelines, an assessment will be made of the likely significance of the following environmental effects from traffic from the Proposed Development, including:

- Severance;
- Driver Delay;

- Pedestrian Delay (incorporating delay to all non-motorised users);
- Non-motorised User Amenity;
- Fear and Intimidation;
- Road Safety; and
- Hazardous / Large Loads.

Severance There is likely to be significant severance impact if the junctions become blocked and access o the A14 and other roads is impacted.

4.6.2 Severance is 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. The effects of severance can be applied to motorists, pedestrians, or residents, these will be based on changes in traffic flows and with consideration to both the thresholds in the IEMA Guidelines, and the DMRB Sustainability and Environment LA 112 *Population and Human Health*[35] guidance on the assessment of new Severance for the trunk road schemes (for which this section of the DMRB was prepared).

Driver Delay

4.6.3 Delays to traffic can occur at several points on the local highway network as a result of the additional traffic that would be generated by a Proposed Development.

4.6.4 The IEMA Guidelines also state that delays are only likely to be significant when the traffic on the network surrounding the Proposed Development is already at, or close to, the capacity of the system.

4.6.5 The TA will include capacity assessment of key junctions within the study area (the scope of which will be subject to consultation with the highway authorities), utilising industry-standard modelling software packages. The software packages provide outputs relating to the capacity of the junction as well as providing values for driver delay. A qualitative statement will be made in relation to the classification of effects on the assessment junctions, with reference to the analysis within the TA.

Pedestrian Delay (incorporating delay to all non-motorised users)

4.6.6 Changes in the volume, composition or speed of traffic may affect the ability of people to go across roads. In general, increases in traffic levels are likely to lead to greater increases in delay. Delays will also depend on the general level of pedestrian activity, visibility and general physical conditions of the Site.

4.6.7 Given the range of local factors and conditions which can influence pedestrian delay, the IEMA Guidelines do not recommend that thresholds be used as a means to establish the significance of pedestrian delay. Instead, it is recommended that the competent traffic and movement expert use their judgement to determine whether pedestrian delay constitutes a significant effect. As such, for the purposes of this assessment, Severance levels will be used a proxy for this assessment.

[35] https://www.standardsforhighways.co.uk/search/1e13d6ac-755e-4d60-9735-f976bf64580a

Non-motorised User Amenity

4.6.8 Pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width / separation from traffic.

4.6.9 The IEMA Guidelines note that changes in pedestrian amenity may be considered significant where the traffic flow is halved or doubled, with the former leading to a beneficial effect and the latter an adverse effect. However, the assessment of amenity should give full regard to specific local conditions. As such, thresholds will be referenced alongside specific local conditions in the classification of effects on the assessment links.

Fear and Intimidation

4.6.10 While the traffic and movement assessment should consider motorcycles, cars, lorries and buses, this scope of consideration is not exclusive – it should also consider other modes of travel, including horses, cycles, mobility scooters, e-scooters, and e-cycles, if appropriate.

4.6.11 The extent of fear and intimidation is dependent on:

- The total volume of traffic;
- The HV composition;
- The speed at which these vehicles are passing; and
- 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 stepping further away from moving vehicles.

4.6.12 There are no commonly agreed thresholds by which to determine the significance of the effect. However, the IEMA Guidelines note previous work that has been undertaken which puts forward thresholds that define the degree of hazard to pedestrians by average traffic flow; HGV flow and average speeds over an 18-hour day (06:00-00:00), these are presented in Tables 3.1 - 3.3 of the IEMA Guidelines, and will be used as the basis of this assessment.

Road Safety

4.6.13 The TA will include analysis of PIC data for the study area (the scope of which will be subject to consultation with the highway authorities). Where appropriate, reference will be made to this analysis and professional judgement applied in relation to the classification of effects for the purposes of this assessment.

Hazardous / Large Loads

4.6.14 Hazardous / large loads are not anticipated, but this will be assessed as part of the Proposed Development.

Magnitude of Effects

4.6.15 The magnitude of potentially significant effects (with the exception of Driver Delay) will generally be directly related to the change in traffic flows as a result of the Proposed Development compared with the baseline. The Guidelines provide details of the thresholds for the classification of each impact which will be applied, and the methodology for how this is calculated will build upon work undertaken to support the TA.

4.6.16 Driver delay will be informed by junction capacity assessments. The junctions to be assessed will be determined as part of the TA.

Significance Criteria

4.6.17 The significance of each effect will be considered against the criteria within the Guidelines, where possible. However, paragraph 3.12 of the Guidelines state:

4.6.18 "…for many effects, there are no simple rules or formulae that define appropriate assessment thresholds and therefore there is a need for interpretation and judgement on the part of the competent traffic and movement expert, backed up by data or quantified information wherever possible. Such judgements will include the assessment of the numbers of people experiencing an impact and the sensitivity of those people, as well as the assessment of the damage to various natural or cultural resources."

4.6.19 The significance of each likely significant effect will be considered and an assessment made as to whether the Proposed Development would result in negligible, minor, moderate, major, or substantial effects – be these adverse or beneficial – based on the criteria summarised in Table 4.2 and Table 4.3.

Table 4.2: Significance Criteria

Sensitivity of Receptor	Magnitude of Impact			
	Major	Moderate	Minor	Negligible
High	Major Adverse / Beneficial	Moderate Adverse / Beneficial	Minor Adverse / Beneficial	Negligible
Medium	Moderate Adverse / Beneficial	Moderate - Minor Adverse / Beneficial	Minor Adverse / Beneficial	Negligible
Low	Minor Adverse / Beneficial	Minor Adverse / Beneficial	Minor - Negligible Adverse / Beneficial	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

Table 4.3: Significance Criteria

Significance	Criteria
Major Beneficial	Large scale or major improvement of resource quality; extensive restoration; major improvement of attribute quality.
Moderate Beneficial	Benefit to, or addition of, key characteristics, features, or elements; improvement of attribute quality.
Minor Beneficial	Minor benefit to, or addition of, one (maybe more) key characteristics, features, or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring.
Negligible	Very minor benefit to or positive addition of one or more characteristics, features, or elements; or Very minor loss or detrimental alteration to one or more characteristics, features, or elements.
Minor Adverse	Some measurable adverse change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements.
Moderate Adverse	Loss of resource, but not adversely affecting the integrity; partial loss of / damage to key characteristics, features or elements.
Major Adverse	Loss of resource and / or quality and integrity of resource; severe damage to key characteristics, features or elements.

Significance

4.6.20 The effects of the Proposed Development with primary mitigation will be considered, and compared to the baseline conditions.

4.6.21 The residual effects of the Proposed Development with primary and secondary mitigation will be reported for the indicators which the development has an impact. These residual effects will be characterised as being beneficial or adverse - and being negligible, minor, moderate, or major. For the purposes of this assessment, moderate and major effects are generally considered significant and any necessary measures are appraised.

Potential Significant Effects

4.6.22 Based on the quantum of development, following the delivery of appropriate levels of proposed / required mitigation, it is anticipated that no significant Transport-related environmental effects as set out above would be likely to occur. Notwithstanding, this can only be confirmed following the completion of the EIA work based upon the data included within the TA. Where significant effects are identified in the EIA, a suitable mitigation scheme would be considered.

Non-significant effects

4.6.23 No elements of Transport-related environmental effects have been scoped out at this stage.

4.7 Likely Mitigation

4.7.1 At scoping stage, the mitigation for the Proposed Development is unknown ahead of the technical assessment work to be undertaken in the transport assessment and Transport ES Chapter.

4.7.2 As well as the Transport Assessment, the Outline Planning Application for the Proposed Development will be supported by a series of documents. These include a Framework Travel Plan to reduce reliance on car journeys, a CEMP to minimise construction / demolition impacts

and a review of walking and cycling infrastructure. These will highlight the need for any necessary mitigation to the transport network.

4.8 Cumulative Effects

4.8.1 At scoping stage, the likely cumulative effects of the Proposed Development are unknown ahead of the technical assessment work to be reported in the Transport Assessment and Transport ES Chapter.

4.9 Summary

4.9.1 Table 4.4 summarises the likely cumulative effects of construction, operational, and demolition and of the Proposed Development. A Glossary of the terms used in this chapter can be found in Appendix 4.2.

Table 4.4: Topic Scope

Discipline	Scoped in Elements	Scoped Out Elements
Transport	Cumulative Construction, Operational, and Demolition movements Vehicles / drivers – potential effects on driver delay, accidents and safety. Occupants / users of existing and future land uses adjacent to the highway Potential effects on severance, driver delay, pedestrian delay, non-motorised amenity, fear and intimidation, road safety, and hazardous / large loads	None at this stage.

5 Noise and Vibration

5.1 Introduction

5.1.1 An assessment will be undertaken of the likely significant effects of the Proposed Development on the environment with respect to Noise and Vibration.

5.1.2 Noise and vibration has been scoped into the ES due to the potential for significant effects. The proposed methodologies and scope of the assessment are provided in the following sections.

5.1.3 The ES chapter will be prepared by Stantec UK Ltd, competent experts in noise and vibration impact assessments. Stantec is a sponsor of the Institute of Acoustics (IOA) and registered member of the Association of Noise Consultants (ANC). The Stantec UK Ltd acoustic team have suitable academic and professional qualifications, including being registered with the IOA where appropriate.

5.2 Baseline Conditions

5.2.1 Based on a desktop review of areas surrounding the Site, the main noise sources around the Proposed Development are expected to include:

- Vehicular movements on the A14, which runs parallel to the north-east of the Site.
- Vehicular movements on Boxworth Road, which runs to the south-east of the Site.

5.2.2 An unattended environmental sound survey was undertaken at the Site at three measurement locations in June 2022 over a 24-hour period.

5.2.3 Due to the survey being undertaken approximately three years ago, it is proposed to undertake a new sound survey. The sound survey is proposed to be undertaken over a minimum 24-hour period at the three locations previously surveyed. Measurements will be taken of the $L_{Aeq,T}$ and $L_{A90,15minutes}$. The data obtained during the survey will be used to assess noise impact from the Proposed Development.

5.2.4 The proposed sound survey locations are indicated in Figure 5.1. Agreement of the survey methodology will be sought with the Local Planning Authority.

Figure 5.1: Proposed Sound Survey Locations

Receptors

5.2.5 The following receptors have been identified surrounding the Site:

- Friesland Farm – residential receptor to the north-west of the Proposed Development.
- Ramada Cambridge A14 – hotel located to the south-east of the Proposed Development within the Cambridge Services.
- Grapevine Cottages – residential receptors to the south of the Proposed Development along Boxworth Road.

5.3 Approach

The National, Local, and Regional Planning Policy Context

5.3.1 The assessment methodology will be informed by the relevant sections of the following documents:

- National Planning Policy Framework (NPPF);
- Planning Practice Guidance (PPG);
- Local Planning Guidance; and
- Noise Policy Statement for England.

5.4 Assessment Methodology

5.4.1 The Lowest Observed Adverse Effect Level (LOAEL) and Significant Observed Adverse Effect Level (SOAEL) for each receptor will be considered based on appropriate guidance and standards.

5.4.2 The LOAEL and SOAEL will form the basis of the assessment of the significance of noise and vibration effects. Based on the IEMA Guidelines for Environmental Noise Assessment and relevant guidance, the relationship between the noise impact, effect, and significance is described in Table 5.1. The overall significance will be determined by professional judgement, with the sensitivity of the receptor taken into account.

Table 5.1: Significance Criteria

Magnitude (Nature of Impact)	Description of Effect (on a specific receptor)	Significance
Major Beneficial	Causes a material change in behaviour and/or attitude, e.g., individuals begin to engage in activities previously avoided due to preceding environmental noise conditions. Quality of life enhanced due to change in character of the area.	More Likely to be Significant
Moderate Beneficial	Improved noise climate resulting in small changes in behaviour and/or attitude, e.g. turning down volume of television; speaking more quietly; opening windows. Affects the character of the areas such that there is a perceived change in the quality of life.	
Minor Beneficial	Noise impact can be heard but does not result in any change in behaviour or attitude. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life.	Less Likely to be Significant
Negligible	No discernible effect on the receptor	Not Significant
LOAEL		Less Likely to be Significant
Minor Adverse	Noise impact can be heard, but does not cause any change in behaviour or attitude, e.g. turning up the volume of television; speaking more loudly; closing windows. Can slightly affect the character of the area but not such that there is a perceived change in the quality of life	
SOAEL		
Moderate Adverse	Noise impact can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television; speaking more loudly; closing windows. Potential for non-awakening sleep disturbance. Affects the character of the area such that there is a perceived change in the quality of life.	
Major Adverse	Causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion. Potential for sleep disturbance resulting in difficulty getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in character of the area.	More Likely to be Significant

Acoustic Modelling

5.4.3 A computer acoustic model of the Site and surrounding areas will be prepared using industry-standard software SoundPLAN. The acoustic model will be used to evaluate the noise climate. The environmental sound survey measurements will be used to validate the acoustic model.

Construction Phase

5.4.4 Construction noise and vibration impacts will be assessed using methodology outlined in BS 5228:2009+A1:2014.

5.4.5 Construction traffic impacts will be considered and will be assessed using CRTN noise prediction procedures as detailed in the 'Department for Transport and Welsh Offices' 'The Calculation of Road Traffic Noise' (CRTN).

Operational Phase

5.4.6 Changes in the number of vehicular movements on the existing road network and the creation of new roads associated with the Proposed Development have the potential to change the noise climate at existing noise-sensitive receptors. The acoustic model will be used to identify these changes using traffic data supplied by the project's transport consultants.

5.4.7 The acoustic model implements the noise prediction procedures as detailed in the 'Department for Transport and Welsh Offices' 'The Calculation of Road Traffic Noise' (CRTN).

5.4.8 The assessment considers both the change in noise level and the absolute noise level at the identified noise-sensitive receptors. The change in noise level is identified based on the difference in noise levels between the future without development and the future with development scenarios.

5.4.9 The assessment of significance will be based primarily on guidance detailed in LA111 of the Design Manual for Roads and Bridges (DMRB).

5.4.10 An assessment of operational noise due to activity on-site will also be undertaken based on guidance provided within BS 4142:2014+A1:2019 (2019). The assessment will take into consideration an indicative masterplan to demonstrate the feasibility of the Proposed Development. Detailed information relating to fixed plant is not expected to be available during the assessment, and therefore the assessment will focus on external activity noise associate with the loading and unloading of goods.

5.4.11 Noise impacts associated with the amenity hub will be considered where it is considered noise impact could occur. The distance between the hub and the nearest noise sensitive receptor will be taken into account when considering whether noise impacts are likely.

Geographical Scope

5.4.12 The assessment of construction activity noise will focus on receptors within 300 m of the Proposed Development, as significant effects are not anticipated to occur at receptors further away than this.

5.4.13 The assessment of construction activity vibration will focus on receptors within 100 m of the Proposed Development, as significant effects are not anticipated to occur at receptors further away than this.

5.4.14 Construction traffic noise will be assessed along local access roads where receptors are within 50 m of the access routes. Significant effects from construction traffic noise are not anticipated on major roads.

5.4.15 The assessment of operational traffic noise will be focussed on local roads providing access to the Proposed Development. Where receptors are within 50 m of access routes to the site, potential impacts and effects will be assessed.

5.4.16 The assessment of operational activity noise will focus on receptors within 300 m of the Proposed Development, as significant effects are not anticipated to occur at receptors further away than this.

Temporal Scope

5.4.17 The assessment of construction traffic noise and operational traffic noise will be based on the 'short-term' assessment criteria presented in DMRB LA 111. On this basis, the preliminary assessment would indicate that where there is an increase in $L_{A10,18hour}$ noise levels of 3 dB or more, significant effects are anticipated. The final assessment of significance will consider the context of the assessment.

5.5 Likely Significant Effects

Construction Phase

5.5.1 The potential sources of noise and vibration which may have an impact on existing sensitive receptors during the construction phase are associated with:

- On-site construction plant.
- Piling and penetrative foundation works.
- Breaking up of existing structures and material.
- Construction vehicles accessing the site using the wider road network.

Operational Phase

5.5.2 The potential sources of noise which may have impact on existing sensitive receptors during the operational phase are associated with:

- Vehicular movements using the current road network and proposed internal road network;
- Industrial and logistics activity within the proposed development; and
- Noise associated with the amenity hub.

5.6 Impacts Scoped Out of the Assessment

5.6.1 Construction traffic vibration is proposed to be scoped out of the assessment. It is expected that roads providing access to the Proposed Development will be free from irregularities and based on guidance provided within DMRB LA 111, roads free from irregularities are not anticipated to give rise to significant effects.

5.6.2 Operational vibration is proposed to be scoped out of the assessment. Based on the proposed use of the Proposed Development, there are not expected to be significant sources of vibration which could give rise to significant effects.

5.7 Likely Mitigation

5.7.1 Noise and vibration measures to reduce noise impacts during the construction phase are expected to be based on the implementation of a Construction and Environmental Management Plan (CEMP) and Best Practicable Means (BPM).

5.7.2 Noise measures to reduce noise impacts during the operational phase are expected to relate to the layout of the Proposed Development, and the use of buildings as noise shields to reduce noise impacts at receptors. The assessment will be based on an illustrative masterplan which could be subject to change. An assessment should therefore be undertaken at the detailed design stage to ensure that noise impacts associated with the finalised layout are taken into account. An assessment of the finalised layout could be required by a planning condition if planning permission is granted for the development.

5.8 Cumulative Effects

5.8.1 Traffic likely to be generated by relevant cumulative developments that are required to be assessed as part of the EIA will be factored into the traffic and acoustic modelling undertaken within the assessment.

5.9 Summary

5.9.1 Table 5.2 summarises the likely construction, operational and cumulative effects of the Proposed Development.

Table 5.2: Noise and Vibration Scope

Receptor	Effects	Scoped In
Friesland Farm Ramada Cambridge A14 Grapevine Cottages	Construction traffic noise Construction activity noise and vibration Operational traffic noise Operational activity noise	✓
Friesland Farm Ramada Cambridge A14 Grapevine Cottages	Construction traffic vibration	x

6 Landscape and Visual Effects

6.1 Introduction

6.1.1 An assessment will be undertaken of the likely significant effects of the Proposed Development on the environment with respect to landscape and visual effects.

6.2 Baseline Conditions

Site Context

6.2.1 The Site is located to the west of Cambridge Services, on the improved Barhill Junction (Junction 24) approximately midway between Cambridge and Huntingdon. The Site location and its immediate context are illustrated on Figure 6.1 Site Context Plan.

6.2.2 Immediately northeast of the Junction 24 lies Buckingway Business Park, comprising large-scale two-storey office units. A suspension pedestrian bridge between the business park and Cambridge Services forms a landmark feature in local views. As such, the Site is influenced by a considerable amount of large-scale infrastructure and built form, including large building units and expansive parking at the existing service station, as well as a depot/junkyard to the southeast of the Site. The majority of land use in the local landscape is agricultural, with large-scale and rectangular field patterns reflecting intensive farming practice and minimal tree cover and vegetation.

6.2.3 The route of the A14, which follows a former Roman Road (Via Devana), broadly marks the transition between two distinct topographical areas within the wider landscape. As illustrated in Figure 6.2 Topography, the landform drops from the more elevated and undulating landscape associated with the clay plateau around Cambourne to the south-west, with flatter lower-lying landscape to the northeast of the A14 leading to the edge of the Fens. Fen Drayton Lakes Nature Reserve, developed on the site of former mineral workings, is an important wetland wildlife feature of recreational value on the southern side of the River Ouse.

6.2.4 Small villages of ancient origin on the elevated plateau to the southwest of the A14, including Boxworth, Lolworth, Elsworth, Dry Drayton and Connington, have retained a compact scale, surrounded by predominantly agricultural land, through which footpaths provide recreational connections between the villages. The settlement of Barr Hill to the north of Dry Drayton, planned and developed in the late 20th century, is the exception to this pattern of scale. To the northeast of the A14, the historic settlements of Fen Stanton, Fen Drayton, Swavesey, Over, Willingham, Longstanton, Oakington and Girton have developed throughout the 20th century into larger settlement areas particularly to the east, closer to Cambridge. These settlements are connected by a guided busway and bridleway which follows the route of the former railway line from Cambridge to St Ives. Public Rights of Way in the vicinity of the Site are minimal but include linear former driveways and footpaths and bridleways between nearby villages.

6.2.5 Vegetation within the study area is minimal, with a greater amount associated with villages and farms, notably surrounding Boxworth. Consequently, tree cover associated with settlements, which are often situated on more elevated areas, frequently become focal features within views across the otherwise open and expansive landscape. Traditional orchards are relatively commonplace within the local landscape, associated with villages and farmsteads.

6.2.6 The nearest designated historic features include a series of grade II listed buildings within Boxworth as well as the grade II* listed Parish Church of St Peter. Many of the villages within the study area also contain listed buildings. Overhall Grove Moated Site and ‘Castle Hill’

Earthworks are the closest scheduled monuments to the Site, but there are none within 1km of the Site.

Landscape Character

6.2.7 Review and analysis of national, regional and district level published landscape character assessments describe a gently undulating, lowland plateau that widens towards the fens to the east, a scattered woodland pattern and an open and intensive arable landscape.

6.2.8 Published landscape character guidance relevant to the study area includes NCA Profile 88 Bedfordshire and Cambridgeshire Claylands at a national level and South Cambridgeshire District Council (SCDC) Design Guide, 2010 at a local level. The areas identified within the study are of the Site are illustrated on Figure 6.3 Landscape Character Plan.

6.2.9 The key messages from the published guidelines include consideration of the following throughout the development of design proposals:

- Integration with local patterns of tree planting, management of existing woodland and creation of new woodland and linkages whilst considering the effects on skylines and landscape patterns;
- Enhancement planting of mature trees, hedgerows and woodlands at village edges;
- Maintenance of distinctive linear features;
- Response to form, scale and proportions of built form in the locality; and
- Sensitive integration of development and ensuring that key long-distance views are unaffected.

Site Description

6.2.10 The Site as illustrated in Figure 6.4 Site Appraisal Plan, comprises four large rectangular field parcels on a gentle north-east facing slope. The fields are expansive and have been subject to considerable hedgerow removal and enlargement. They are currently under arable cultivation bounded by a mixture of low hedgerows and/ or ditches, typical of the local area. The north-eastern corner of the Site is occupied by a large area of hardstanding and parking introduced in 2020.

6.2.11 Vegetation within the Site itself is minimal, comprising low, hedgerows. In places, there are fragments of hedgerows containing grown-out trees, remnants of former boundaries.

6.2.12 There are no PRoW, statutory or cultural heritage designations within the Site.

Visual Context

6.2.13 A visual appraisal has been undertaken, which demonstrates that the Site is visible in near distance to medium distance views from highways, PRoW and farmsteads. These range from open to glimpsed views, often partially filtered and screened by the intervening vegetation and recent topographical interventions associated with the construction of the new route of the A14. Due to a combination of landform and vegetation, views of the Site from the agricultural landscape to the south and west are limited to near distance locations. The Site is always seen in the context of the A14 infrastructure and commercial and industrial built form at Cambridge Services and Buckingway Business Park.

6.2.14 The location of the representative viewpoints to be considered in the LVIA are shown on Figure 6.5 Visual Appraisal Plan.

Receptors

6.2.15 The receptors that are anticipated to have the potential to experience effects as a result of the Proposed Development, and which should therefore be scoped in to any future assessment of landscape and visual effects, are set out below.

Landscape Features

- Agricultural Land; and
- Native hedgerows.

Landscape Character

- NCA 88: Bedfordshire and Cambridgeshire Claylands;
- LCA 4A: Croxton to Conington Wooded Claylands;
- LCA 4B: Lolworth to Longstowe Wooded Claylands;
- LCA 2A: Longstanton Fen Edge Claylands;
- The character of the Site and its immediate surroundings;
- The gateway approach to Cambridge along the A14; and
- The gateway approach to Boxworth along Boxworth Road.

Visual Receptors

- Motorists on the A14 and the J25 interchange (Site Context Photographs 1, 9 and 10);
- Motorists, cyclists and pedestrians on Boxworth Road, the A1037 (Huntingdon Road) and other highways north of the A14 (Site Context Photographs 2, 3, 10 and 12);
- Bus passengers, cyclists, horse riders and pedestrians on PRoW 178/30 (Cycle Route 51/Cambridgeshire Guided Busway NCN51);
- Cyclists, horse riders and pedestrians on bridleways within the study area, including PRoW 27/1, 53/2, 86/2, 86/18, 87/6, 87/14, 150/1, 150/2, 225/7, 225/12, 225/13, 225/14, 225/15, 225/16, 225/19 (Site Context Photographs 4, 5, 7 and 10 to 15);
- Pedestrians using the J24 interchange footbridge (Site Context Photograph 1);
- Users of Cambridge Services;
- Workers at Buckingway Business Park;
- Workers and residents at isolated farmsteads and dwellings within the study area including Friesland Farm, Thorpes Farm, Trinity House, Highfield Farm, Highfield Cottages, St John's College Farm; and
- Residents of dwellings on settlement edges within the study area, including on the northern edge of Boxworth, the south-eastern edge of Fen Drayton, the southern edge of Swavesey, the south-western edge of Longstanton and the western edge of Lolworth.

6.3 Approach

The National, Local, and Regional Planning Policy Context

Data Sources

- Natural England: NCA 88: Bedfordshire and Cambridgeshire Claylands[36];
- East of England Landscape Typology (2010)[37];
- South Cambridgeshire Landscape in New Developments SPD (2010)[38];
- South Cambridgeshire Design Guide SPD (2010)[39];
- Greater Cambridge Landscape Character Assessment (2021)[40];
- National Planning Policy Framework (NPPF), December 2024;
- Planning Practice Guidance (PPG);
- National Design Guide (2021)[41];
- South Cambridgeshire Local Plan (2018);
- Greater Cambridge Local Plan First Proposals Regulation 18 Preferred Options (2023)[42];
- Greater Cambridge Sustainable Design and Construction SPD (2020)[43]; and
- Greater Cambridge Biodiversity SPD (2022)[44].

[36] Natural England (2014) NCA Profile: 88 Bedfordshire and Cambridgeshire Claylands (NE555). Available at: NCA Profile: 88 Bedfordshire and Cambridgeshire Claylands - NE555

[37] Landscape-east (2010) East of England Landscape Typology. Available at: East of England Landscape Typology | Landscape East

[38] South Cambridgeshire District Council (2010) Landscape in New Developments SPD. Available at: Microsoft Word - Adopted Landscape SPD.doc

[39] South Cambridgeshire District Council (2010) District Design Guide: High Quality and Sustainable Development in South Cambridgeshire SPD. Available at: Microsoft Word - Adopted Design Guide SPD MAIN DOC.doc

[40] Chris Blandford Associates (2021) Greater Cambridge Landscape Character Assessment. Available at: Greater Cambridge Landscape Character Assessment

[41] Ministry of Housing, Communities and Local Government (2021) National Design Guide. Available at: National_design_guide.pdf

[42] Greater Cambridge Shared Planning (2023) Greater Cambridge Local Plan: Development Strategy Update (Regulation 18 Preferred Options). Available at: Greater Cambridge Local Plan: Development Strategy Update (Regulation 18 Preferred Options)

[43] Greater Cambridge Shared Planning (2020) Greater Cambridge Sustainable Design and Construction Supplementary Planning Document. Available at: greater-cambridge-sustainable-design-and-construction-spd.pdf

[44] Greater Cambridge Shared Planning (2022) Biodiversity Supplementary Planning Document. Available at: GCSP Biodiversity Supplementary Planning Document