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London Borough of Havering Council

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EAST HAVERING DATA CENTRE CAMPUS HEALTH IMPACT ASSESSMENT

RAMBOLL

Project Name	**East Havering Data Centre Campus**
Project no.	**1620016267**
Recipient	**London Borough of Havering Council**
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1. INTRODUCTION

1.1 Overview

Ramboll UK Limited ('Ramboll') has been commissioned by the Local Planning Authority of the London Borough of Havering (the 'LPA') to undertake a Health Impact Assessment (HIA) for the for a data centre campus (the 'proposed development'), on land located within East Havering, to the north of South Ockendon (the 'site'). The site is wholly within the administrative boundary of the London Borough of Havering.

The proposed development would consist of up to 400,000 m^2 of gross external area (GEA) comprising

The erection of buildings up to a maximum of 400,000 m^2 (GEA) including :

a) Data centre uses up to 340,000 m^2;
b) Indoor horticulture of 50,000 m^2;
c) Visitor Centre up to 600 m^2 (and no less than 300 m^2);
d) District heating centre up to 3,300 m^2;
e) Campus management facilities up to 2,700 m^2; and
f) Campus security facilities (not including local facilities ancillary to individual data centres) up to 3,400 m^2.

Installation of electrical infrastructure and associated plant equipment to serve the development.
Creation of an 'ecology park'.
Any operations or engineering works necessary to enable the delivery of the development including

a) Excavation and earthworks (e.g. 'cut and fill');
b) Formation of compounds for the stockpiling and sorting of excavated materials;
c) Foundations and piling, and any other operations or engineering necessary for site mobilisation and new buildings / structures;
d) Creation of estate roads and associated infrastructure for access for all modes of transport;
e) Site Security measures including fencing, gates and gate houses;
f) Works to install underground services and utilities;
g) Provision of temporary site offices and welfare facilities; and
h) Highway works on Fen Lane and Ockendon Road.

This HIA has been prepared to accompany the consultation documentation for the proposed Local Development Order (LDO) and should be read alongside the Environmental Statement (ES) and supporting technical documentation. Although human health was scoped out of the EIA as significant effects were considered unlikely to arise, the HIA provides a dedicated, integrated assessment of health and wellbeing effects, drawing on the evidence base established in the ES and other supporting submissions, and translating relevant environmental and socio-economic effects into likely health outcomes and distributional effects.

The HIA is intended to aid the LPA in understanding the extent to which the proposed development, as controlled through the LDO parameters and compliance documents, may influence health determinants for local communities, site users and relevant vulnerable groups during both construction and operation.

1.2 Objective of Assessment

Health is defined by the World Health Organisation (WHO)[1] as the state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity.

HIA has been defined by the Department of Health (DoH)[2] as: "*…a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population*".

In HIA, impacts on the health and wellbeing of various people or communities are identified in two main ways by asking the following questions:

- What are the direct effects on health?
- What are the indirect effects mediated through the determinants of health, such as employment, housing conditions, community cohesion and social support, and access to services and amenities?

HIA identifies the positive and negative impacts of a proposed development on human health, and identifies ways to mitigate any negative impacts, and potentially enhance positive impacts to address health inequalities. The HIA provides the context of the site constraints and the aspects of the proposed development that are relevant to health. Descriptions of where the design of the proposed development has considered health are provided within the assessment. Where further measures are required to enhance positive impacts, recommendations have been made. In line with comprehensive HIA practice, this assessment considers:

- direct health effects arising from environmental exposures (e.g. noise, air quality, traffic, water/land quality, climate-related risks); and
- indirect effects via wider determinants of health (e.g. access to nature and physical activity, employment and skills, accessibility and inclusion, community safety and social interaction).

Where the ES identifies significant environmental effects (e.g. major adverse noise effects for receptors within 50 m of Fen Lane), the HIA treats these as important inputs and explicitly considers likely health and wellbeing implications (including annoyance, sleep disturbance risk, stress and reduced amenity), and the extent to which additional health-focused management measures are appropriate even where physical mitigation options are constrained.

This assessment follows a comprehensive HIA process consistent with recognised good practice, structured around the HUDU framework topics to ensure alignment with planning determinants of health. The HIA process comprised:

Screening: Confirmation of the need for a stand-alone HIA in the context of the LDO and the EIA scoping outcome, recognising the scale and duration of construction activity and the potential for effects on environmental determinants and local wellbeing.

Scoping: Identification of determinants likely to be materially influenced by the proposed development and/or capable of being secured through the LDO via compliance documents conditions and legal obligations. The scoping is presented in Table 3.1 and has been refined to focus on determinants with plausible pathways to health outcomes for relevant receptors.

[1] World Health Organization, 2024. World Health Organization Constitution [online]. Available at: https://www.who.int/about/accountability/governance/constitution. Accessed on: 09/04/2024.

[2] Department of Health, 2010. Health Impact Assessment of Government Policy: A Guide to carrying out a Health Impact Assessment of new policy as part of the Impact Assessment Process [online]. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216009/dh_120110.pdf

Baseline profiling: Establishment of demographic, health and socio-economic baseline conditions (Section 6), drawing on Census and published public health datasets, supplemented by spatial context and receptor sensitivity information captured in the ES.

Impact appraisal: Qualitative appraisal of health effects for construction and operation, drawing on ES topic assessments and other consultation documents. Effects are described in terms of nature, duration, reversibility, likely magnitude and the sensitivity/vulnerability of affected populations. Distributional effects are considered explicitly where relevant.

Mitigation and enhancement: Identification of embedded measures (secured through LDO compliance documents and legal obligations) and additional measures recommended to further minimise adverse effects or enhance benefits, including the monitoring and governance recommendations appropriate to an LDO delivery approach. The report has been informed by the environmental assessments, including the Environmental Impact Assessment (EIA), that have been undertaken of the proposed development and other supporting reports that accompany the consultation documentation for the potential Local Development Order (LDO).

2. POLICY CONTEXT

2.1 National Policy

The following documents have been used to inform the assessment:

- National Planning Policy Framework (NPPF)[3];
- Planning Practice Guidance (PPG)[4].

The National Planning Policy Framework (NPPF) establishes the overarching planning policy framework for England and places strong emphasis on the role of the planning system in supporting health and wellbeing. Promoting healthy and safe communities is a central theme of the NPPF, with Chapter 8 setting out the expectation that planning policies and decisions should aim to achieve healthy, inclusive and safe places. This includes environments that promote social interaction, are safe and accessible for all users, and support active and healthy lifestyles. The NPPF also recognises the importance of high-quality design, access to green infrastructure, sustainable transport and environmental protection as key contributors to improved health outcomes.

Planning Practice Guidance (PPG) supplements the NPPF by providing further detail on how health considerations should be integrated into planning and decision-making. The PPG emphasises that planning can influence health outcomes through two primary pathways: firstly, by creating environments that support and encourage healthier lifestyles, and secondly, by ensuring that development is supported by appropriate infrastructure and services, including healthcare provision where relevant. The guidance highlights the importance of early engagement with public health stakeholders and local communities to ensure that health needs, vulnerabilities and potential inequalities are understood and addressed. This HIA has been prepared in accordance with these principles, assessing both environmental and social determinants of health associated with the proposed development.

2.2 Regional Policy

2.2.1 The London Plan

The London Plan[5] is the Spatial Development Strategy for London. As the overall strategic plan for London, it sets out an integrated economic, environmental, transport and social framework for the development of London over a 20-25 year period.

Policy 'GG3 – Creating a Healthy City' states that development proposals should *"ensure that the wider determinants of health are addressed in an integrated and co-ordinated way''* and *"promote more active and healthy lives for all Londoners and enable them to make healthy choices''*.

Policy 'D5 – Inclusive Design' states that development proposals *"should achieve the highest standards of accessible and inclusive design''*.

Accordingly, and in line with these policies, a HIA is required to consider the potential health and wellbeing effects of the proposed development and to assess how it addresses the wider determinants of health and promotes healthy outcomes.

[3] Ministry of Housing, Communities and Local Government, 2024. The National Planning Policy Framework. Available at: https://assets.publishing.service.gov.uk/media/67aafe8f3b41f783cca46251/NPPF_December_2024.pdf

[4] Planning Practice Guidance: Healthy and Safe Communities, and Department for Levelling Up, Housing and Communities, 2022. Planning Practice Guidance: Healthy and Safe Communities.

[5] Greater London Authority, 2021. The London Plan. The Spatial Development Strategy for Greater London. London. GLA. https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf

2.3 Local Policy

2.3.1 Havering Local Plan 2016-2031[6]

The Havering Local Plan outlines the vision and strategy for Havering's future growth and sustainable development up to 2031. As part of this vision, the Havering Local Plan states that "*Health will continue to be a key focus for the borough building on the strengthened role and responsibility that the Council has for public health. The overall health of residents will have improved and new developments will have increased opportunities for people to pursue healthier and more active lifestyles"*.

Strategic objectives have been identified for the Local Plan, to allow the London Borough of Havering Council (LBH) to achieve its vision and aims. In addition to a number of strategic objectives that relate to the determinants of health, the Havering Local Plan identifies the strategic objective to *"Enable healthier lifestyles to improve the health and well-being of Havering's population and reduce health inequalities"*.

The Havering Local Plan recognises the importance of designing places that "*encourage social interaction and promote health lifestyles"* and designing out environments that "*can contribute to obesity and that provide opportunities for crime and antisocial behaviour"*. Accordingly, the Havering Local Plan emphasises the importance of maximising the potential health gains from development proposals and ensuring that any negative impacts are mitigated, and the role of HIAs to ensure and demonstrate full consideration of health and wellbeing and the principles of active design. All major development proposals must be supported by a HIA.

Within the Havering Local Plan, 'Policy 12: Healthy Communities' states that health and wellbeing will be promoted by:

i. Directing new development to well connected locations to enable active travel (refer to Policy 3);
ii. Promoting well designed and safe places (refer to Policy 26);
iii. Promoting the diversification of uses within town centres and managing the overconcentration of uses that can have a negative health impacts (refer to Policy 13);
iv. Supporting the delivery of essential community services (refer to Policies 16 and 17);
v. Providing and protecting open space, leisure and recreation facilities (refer to Policy 18);
vi. Supporting measures to promote walking and cycling (refer to Policy 23);
vii. Supporting the provision of multifunctional green infrastructure (refer to Policy 29);
viii. Seeking environmental improvements, minimising exposure to pollutants and improving air quality (refer to Policies 33 and 34); and
ix. Avoiding contributing to factors that affect climate change, and contribute to prevention measures that mitigate against the effects of climate change (refer to Policies 32 and 36).

As such, other policies within the Havering Local Plan that indirectly relate to health and wellbeing include those referred to within Policy 12:

- Policy 3: Housing supply;
- Policy 26: Urban design;
- Policy 13: Town centre development;
- Policy 16: Social infrastructure;

[6] London Borough of Havering, 2021. Havering Local Plan 2016-2031 Adopted November 2021. Available at: https://www.havering.gov.uk/download/downloads/id/5300/havering_local_plan_2016_-_2031.pdf.

- Policy 17: Education;
- Policy 18: Open space, sports and recreation;
- Policy 23: Transport connections;
- Policy 29: Green infrastructure;
- Policy 33: Air quality;
- Policy 34: Managing pollution;
- Policy 32: Flood management; and
- Policy 36: Low carbon design and renewable energy.

Additionally, Policy 12 specifically details that *''All major development proposals must be supported by a Health Impact (HIA) to demonstrate that full consideration has been given to health and wellbeing and the principles of active design''*.

3. SCOPE AND STRUCTURE OF ASSESSMENT

3.1 Approach

The NHS London Healthy Urban Development Unit (HUDU) has produced an HIA framework and checklist that provides a standardised and transparent structure for assessing how development proposals may influence health and wellbeing through planning-related determinants. The HUDU framework supports the integration of health into planning decision-making by bringing together relevant policy requirements and built environment standards that influence health outcomes.

LBH's HIA template (August 2022) adopts the HUDU framework topics and checklist format. The wording of the questions in this HIA follows that of the LBH template, consistent with the Havering Local Plan 2016–2031.

The use of the HUDU HIA assessment matrix aims to promote healthy urban planning by ensuring that the health and wellbeing implications of local plans and major planning applications are consistently taken into account. By bringing together planning policy requirements and standards that influence health and wellbeing, the checklist seeks to mainstream health into the planning system.

The assessment matrix does not identify all issues related to health and wellbeing but focuses on the built environment and issues directly or indirectly influenced by planning decisions. It is generic and should be localised for specific use. Not all the issues or assessment criteria may be relevant, and the user is encouraged to prioritise specific actions which focus on key impacts.

As the proposed development is larger than 9,999 m^2 and above a comprehensive HIA has been undertaken[7]. However, LBH's HIA template for rapid HIAs (August 2022)[8] which adopts the matrix/questions has served as the basis for the report structure of this assessment.

The scope of this HIA included a desktop appraisal, a document analysis and an appraisal of the proposed development.

The desktop appraisal involved establishing the policy context and the current health baseline from a range of publicly available on-line resources. Baseline conditions have been established using published databases, maps, technical assessment reports and other planning submission documents.

The document analysis involved a review of topic specific LDO submission documents to understand how health and wellbeing have been considered and designed within the proposed development. These documents include, but are not limited to:

- The Local Development Order[9];
- Environmental Statement (ES), Ramboll, February 2026[10];
- East Havering Data Centre Campus, S106 Heads of Terms[11];
- East Havering Data Centre Campus Code of Construction Practice, February 2026[12];

[7] London Borough of Havering, 2022. Further Information for Developers on Health Impact Assessment July 2022 - Health Impact Assessments (HIA) for major developments.
[8] London Borough of Havering, 2022. Rapid Health Impact Assessment (HIA). Template for Development of Major Development Projects. Size range: 10 to 99 Units (1,000 to 9,999 sqm). Available at: https://www.havering.gov.uk/download/downloads/id/5524/havering_health_impact_assessment_10-99_units_template.pdf

[10] Ramboll, 2026. East Havering Data Centre Campus Environmental Statement. Revision Feb 2026.
[11] London Borough of Havering, 2026. East Havering Data Centre Campus, Draft Heads of Terms for a S106 Relating to the Proposed LDO. Revision Feb 2026.
[12] Adams Hendry, 2026. East Havering Data Centre Campus Code of Construction Practice. Revision Feb 2026.

- East Havering Data Centre Campus Design Code, February 2026[13];
- East Havering Data Centre Campus Landscape and Ecological Management and Monitoring Plan[14];
- Sustainability and Energy Statement, Mitie, November 2025[15]; and
- East Havering Data Centre Campus Travel Plan, Ramboll, February 2026[16].

This was followed by an appraisal of the potential human health impacts likely to arise from the proposed development.

3.2 Technical Scope

The HIA has considered a range of lifestyle, social, community, environmental, economic, access and service determinants of health. A scoping exercise was undertaken to identify the determinants of health that would have the potential for likely significant population health effects. The scoping exercise was informed by the nature of the proposed development and what could realistically and reasonably be secured, delivered or influenced as part of the proposed development by the LPA. In this respect, it should be noted that many determinants of health, particularly in relation to quality of housing, education and access to social infrastructure such as healthcare services and community facilities, are not considered relevant to the proposed development.

The determinants of health were based upon the list of wider determinants of health set out in IEMA Guidance 2022[17], which have been derived from and based upon the WHO definition of health. These are presented in Table 3.1.

Table 3.1: Scoping of Health Determinants

Categories	Determinants of health	Scoped in/out
Health related behaviours	physical activity	In
	risk taking behaviour	Out
	diet and nutrition	Out
Social environment	housing	Out
	relocation	Out
	open space, leisure and play	In
	transport modes, access and connections	In
	community safety	In
	community identity, culture, resilience and influence	Out
	social participation, interaction and support	In
Economic environment	education and training	In
	employment and income	In
Bio-physical environment	climate change mitigation and adaptation	In
	air quality	In

[13] Adams Hendry, 2026. East Havering Data Centre Campus LDO Design Code. Revision Feb 2026.
[14] Adams Hendry, 2026. East Havering Data Centre Campus Landscape and Ecological Management and Monitoring Plan. Revision Feb 2026.
[15] Mitie, 2025. East Havering Centre Campus: Sustainability and Energy Statement. Revision Nov 2025.
[16] Ramboll 2026. East Havering Data Centre Campus Travel Plan. Revision Feb 2026.
[17] Institute of Environmental Management and Assessment, 2022. Guide to: Effective Scoping of Human Health in Environmental Impact Assessment.

Table 3.1: Scoping of Health Determinants		
	water quality	In
	land quality	In
	noise and vibration	In
	radiation	In
Institutional and built environment	health and social care services	Out
	built environment	In
	wider societal infrastructure and resources	In

3.3 Spatial Scope

Key demographic and health related statistics have been obtained at a ward or local authority level, depending on the availability of data.

The HIA draws upon and considers the impacts in relation to a range of environmental aspects including (but not limited to) air quality, noise, traffic, and climate change. Accordingly, the HIA does not adopt a defined study area as it considers potential impacts across different spatial scales depending on the health determinant being assessed, from the site level to a global level. For example, impacts associated with noise and vibration are limited to noise sensitive receptors in close proximity to the site, impacts associated with employment opportunities are considered on a local and district level, and impacts relating to climate change and sustainable design are considered on a national and transboundary level. The study areas are consistent with those adopted within the technical chapters of the ES and other environmental assessments that accompany the consultation documentation for the potential LDO.

3.4 Temporal Scope

The lifespan of the LDO is proposed to be 20 years and construction would be permitted throughout this period. However, it is considered that the proposed development would be delivered within 17 years assuming the fastest reasonable programme. The approach to construction and sequencing of the proposed development would be unchanged if the construction were to take longer. On this basis, the assessment has considered impacts and effects arising during the construction stage of the proposed development which is anticipated to take place over a 17 year period. Although the construction stage would take place over the full lifecycle of the LDO, the enabling works and construction in each build zone individually would be delivered in shorter time frames. Therefore, effects would be expected to be temporary/permanent (reversable or irreversible) in nature and short-, medium-term and long-term in duration.

The assessment has considered impacts arising during the completed development stage which would be permanent in nature and long-term in duration.

3.5 Consultations

An EIA Scoping Request Report was submitted to the LPA in February 2024 in support of a request for a formal EIA Scoping Opinion pursuant to Regulation 15(2) of the EIA Regulations.

The LPA adopted an EIA Scoping Opinion on 23 May 2024 having consulted consultation bodies on the emerging development proposals.

It was agreed through this scoping process that a discrete human health technical assessment chapter would be scoped out of the ES on the basis that the proposed development would not give

rise to significant environmental effects regarding human health. Nevertheless, several technical assessments within the ES do provide consideration of human health.

However, a HIA is required in accordance with the policy requirements of the London Plan and the relevant policies of the Havering Local Plan.

The LDO submission material (including this HIA) will be issued for public consultation and consultation responses will be considered during that stage of the process.

3.6 Structure of Report

The report comprises the following key sections:

- Section 4: Site Description;
- Section 5: Proposed Development;
- Section 6: Key Health Statistics;
- Section 7: Healthy Urban Development Unit Assessment;
- Section 8: Impact Assessment; and
- Section 9: Conclusion.

3.7 Assumptions and Limitations

The assessment of health effects has been undertaken against the most recent, publicly available data; the progress of emerging data was tracked throughout to ensure an up-to-date assessment is presented.

The spatial levels have been assessed where data is available and/or where it is considered most informative based on professional judgement.

Where data has not been available at the identified levels, alternative spatial data deemed relevant and appropriate has been used.

Publicly available information has been relied upon in undertaking the assessment. It has been assumed that the information is up-to-date.

- The assessment is dependent on the parameter-based nature of the LDO. Certain detailed design elements (e.g. final plant configurations, building-specific operational noise characteristics, detailed routing of fibre connections) would be finalised at later stages within the LDO process. The HIA therefore, places emphasis on the effectiveness of the proposed LDO controls and compliance mechanisms (e.g. CoCP, Framework for Managing Operational Noise, Travel Plan requirements, and LEMMP) to ensure that health outcomes are managed consistently as individual build zones come forward.

4. SITE DESCRIPTION

4.1 Site Description and Context

The site is located within an area of open agricultural land, close to the village of North Ockendon, and located between the settlements of Upminster to the west, South Ockendon to the south, Bulphan to the east and West Horndon to the north-east. The site location is shown on Figure 4.1.

As illustrated on Figure 4.1, the site comprises approximately 218.8 hectares (ha) and is a shape and configuration that allows for its practical development for the purposes proposed. The site is currently in agricultural use, comprising four working farms used for arable farming, with associated field boundaries, ditches and vehicular access tracks/roads.

The site is bordered by the following:

- An unnamed road to the north;
- Bury Farm Sewage Works to the far north-east;
- Agricultural fields to the east, beyond which is Dunnings Lane and a small cluster of industrial buildings to the south-east;
- Home Farm and Fen Lane along the southern site boundary. Top Meadow Golf Course and two farms with associated cottages (Fen Farm, Corner Farm) are located adjacent to Fen Lane, south and south-east of the site boundary, respectively. Home Farm Estate is accessed via an unnamed road off Fen Lane;
- Agricultural fields and woodlands along the south-western boundary, beyond which is a small cluster of residential properties, Ladyville Lodge Care Home and Fenlands Nursery;
- Ockendon Road/Clay Tye Road (B186) along the far western boundary, with residential properties beyond;
- Agricultural fields, Fairplay farm and an unnamed access road to Fairplay farm adjacent to the north-western boundary, beyond which is Warley substation, Clay Tye Road (B186) and residential properties; and
- Bury Farm to the far north-west.

From a health and wellbeing perspective, the site's current agricultural use and Green Belt context contribute to a baseline of low ambient activity and a generally tranquil rural setting for nearby receptors. Public access is currently limited primarily to the existing PRoW network. The proposed development would change this context through:

- introduction of long-duration construction activities and associated traffic on local routes (as assessed in the ES); and
- creation of a large publicly accessible ecology park with enhanced and new routes, which would increase opportunities for recreation and contact with nature for the local population.

These contextual factors are relevant to assessing both potential adverse amenity impacts (particularly for receptors closest to Fen Lane and Ockendon Road) and the potential long-term health benefits associated with increased access to green and blue infrastructure.

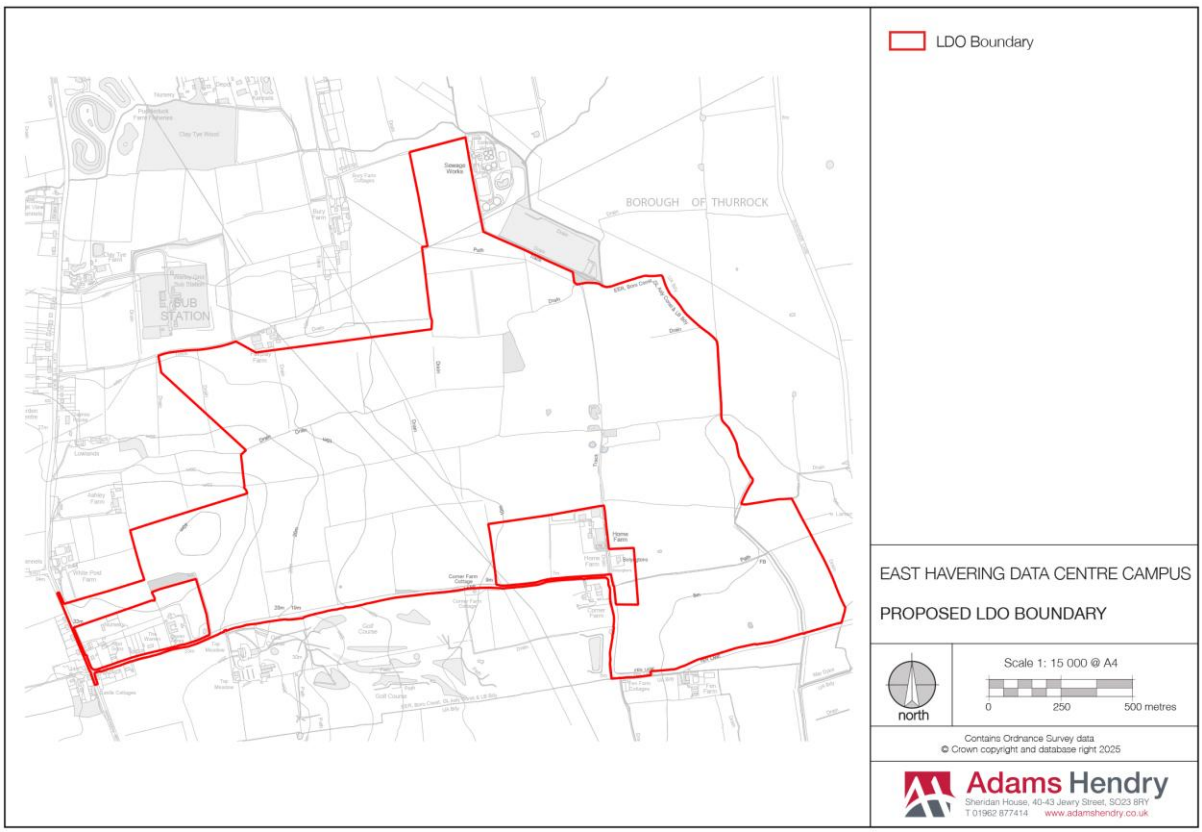

Figure 4.1: Site Location Plan

5. PROPOSED DEVELOPMENT

5.1 Proposed Development Overview

The proposed development would consist of up to 400,000 m^2 of gross external area (GEA) comprising the following:

- Erection of buildings up to a maximum of 400,000 m^2 (GEA) including the following:
  - Data centre uses up to 340,000 m^2;
  - Indoor horticulture of 50,000 m^2;
  - Visitor centre up to 600 m^2 (and no less than 300 m^2);
  - District heating centre up to 3,300 m^2;
  - Campus management facilities up to 2,700 m^2; and
  - Campus security facilities (not including local facilities ancillary to individual data centres) up to 3,400 m^2.
- Installation of electrical infrastructure and associated plant equipment to serve the proposed development.
- Creation of an 'ecology park'.
- Any operations or engineering works necessary to enable the delivery of the proposed development including the following:
  - Excavation and earthworks (e.g. 'cut and fill');
  - Formation of compounds for the stockpiling and sorting of excavated materials;
  - Foundations and piling, and any other operations or engineering necessary for site mobilisation and new buildings / structures;
  - Creation of estate roads and associated infrastructure for access for all modes of transport;
  - Site security measures including fencing, gates and gate houses;
  - Works to install underground services and utilities;
  - Provision of temporary site offices and welfare facilities; and
  - Highway works on Fen Lane and Ockendon Road.

The proposed data centre campus would be constructed in a series of build zones (Build Zones A – G) and enclosed within a steel security fence, as illustrated on **Figure 5.1**. The main entrance to the campus would be from Fen Lane via a security check point.

The primary infrastructure corridor would serve Build Zones A - F and would accommodate the main spine road, a shared cycleway and footpath, drainage swales and associated landscaping. The swale would discharge into three attenuation ponds in the east of the site. Build Zone G would be served by an access road including a shared pedestrian and cycleway to the west of the main entrance on Fen Lane. Access to Build Zone G would be via a separate security check point.

Build Zone H would comprise indoor horticulture uses, a visitor centre and a district heating centre. An eastern access road including a shared pedestrian and cycleway to the east of the main entrance on Fen Lane would serve Build Zone H and provide access to a network of footpaths and cycleways within the ecology park. A proposed reservoir south of Build Zone H would store water for irrigation purposes within the indoor horticulture uses.

The ecology park would extend around the whole of the secure data centre campus.

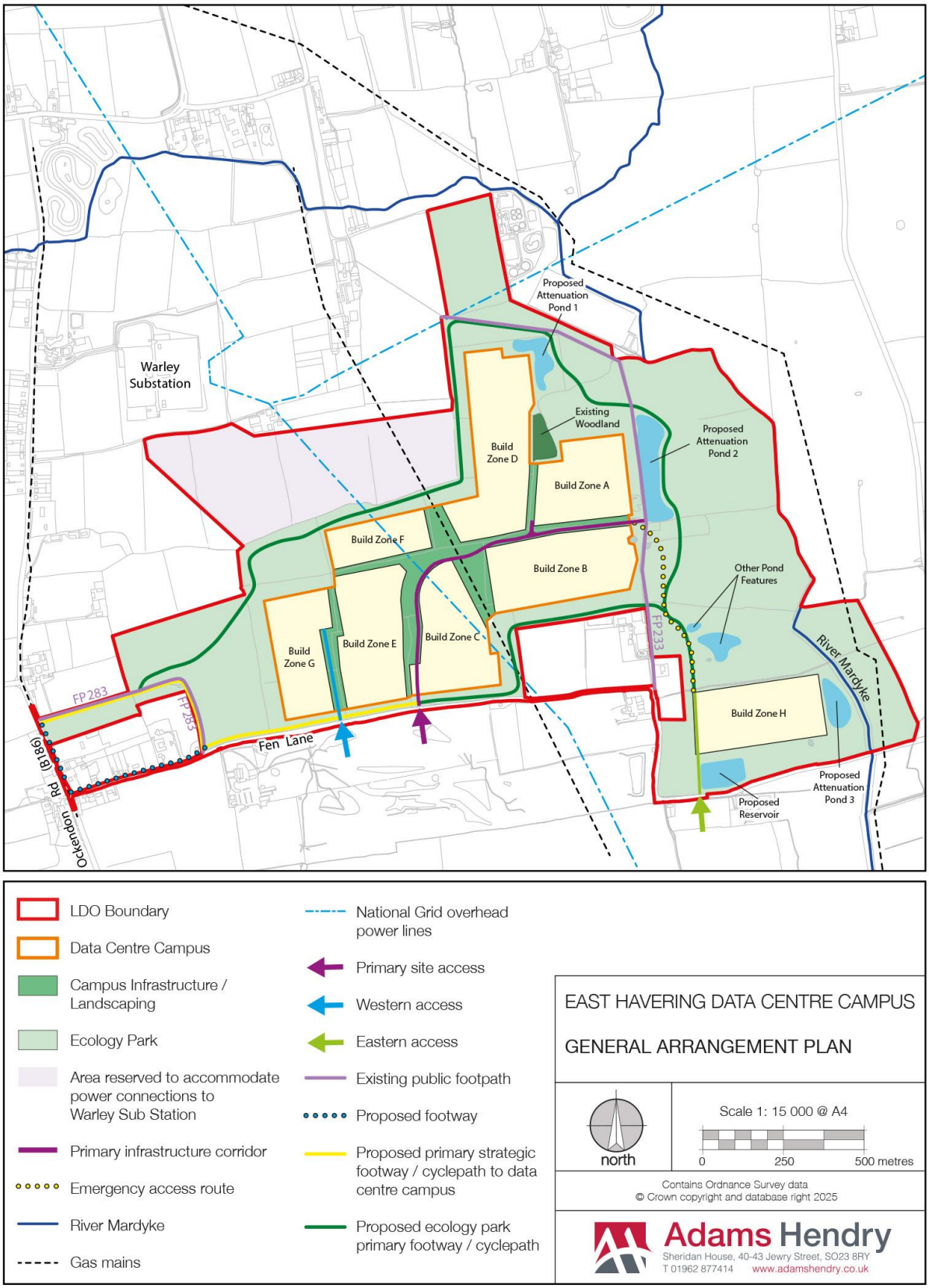

Figure 5.1: Build Zone Plan

Conditions would be attached to the LDO requiring the proposed development to accord with the design parameters, standards, limitations and control measures which would be set out in the following compliance documents:

- East Havering Data Centre Campus LDO Design Code;
- East Havering Data Centre Campus Code of Construction Practice (CoCP);
- East Havering Data Centre Campus Landscape and Ecological Management and Monitoring Plan (LEMMP); and
- East Havering Data Centre Campus Travel Plan.

6. KEY HEALTH STATISTICS

The site is located in the Upminster ward, wholly within the administrative boundary of the London Borough of Havering (hereafter referred to as Havering). The site lies immediately adjacent to (and shares a boundary with) the borough of Thurrock, Essex.

This section provides a high-level summary of the key health statistics for the local ward (Upminster), where available. Where relevant, statistics are provided at the local authority level (Havering and Thurrock), relative to the national level (England).

6.1 Demographic Information

According to the ONS Census 2021[18], Upminster has a total population of 13,347, which represents 5.09 % of the total population of Havering, which has a population 262,052.

Upminster's age distribution profile of those aged 0-15, 16-64 and 65+ is 17.3 %, 58.1% and 24.5 % respectively. Comparatively, Upminster has a notably older population than the areas it sits within. Its 65+ share of 24.5 % is significantly higher than Havering (17.7 %), London (11.9 %), and England as a whole (18.3 %), making it one of the older wards in the region. Conversely, its working-age population (16-64) of 58.1 % falls below all three comparators, particularly London's 68.8 %, reflecting the ward's more retirement-age demographic. The proportion of children and young people (0-15) at 17.3 %, is also slightly lower than Havering, London, and England, further reinforcing Upminster's profile as an area with a comparatively older age structure.

The population density of Upminster is 592.2 usual residents per square kilometre (km^2), which is significantly lower than the population densities of Havering, Thurrock and London (2,332.3 residents, 1,074.2 residents, and 5,597.6 residents per km^2 respectively) but greater than the national average (433.5 people per km^2)[19].

Population projections released by the Office of National Statistics (ONS)[20] estimate the population of Havering to increase by 12.02 % from 2022 to 2043 (expected year of completion)[21].

6.2 Health Statistics

Upminster (Ward Level)

Fingertips data[22] relating to the ward of Upminster shows a mixed health profile for the smallest spatial scale relevant to the proposed development:

- The prevalence of Year 6 (ages 10–11) obesity (including severe obesity) in Upminster is 16.5 % (2021 data, 3-year combined rate), which is notably lower than the Havering rate of 24.5 %, the Thurrock rate of 25.2 %, and the national average of 22.1 %.
- Overall cancer incidence in Upminster is broadly at the national average level (standardised ratio of 100.4, 2015). Prostate cancer incidence is notably elevated at a standardised ratio of 156.5, and colorectal cancer incidence is also above average at 120.0, whilst lung cancer incidence (76.6) and breast cancer incidence (91.7) are below the national average. This contrasts with Thurrock, where the estimated percentage of cancers diagnosed at stages 1 and 2 is 51.6 %,

[18] Office for National Statistics, 2021. Nomis. Official Census and Labour Market Statistics. Census 2021. Available at: https://www.nomisweb.co.uk/query/select/getdatasetbytheme.asp?theme=93&subgrp=-. Accessed on: 09/10/2025.

[20] Office for National Statistics, 2025. Subnational population projections for England: 2022-based. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/bulletins/subnationalpopulationprojectionsforengland/latest. Accessed on 14/10/2025.

[21] Office for National Statistics, 2020. Population projections for local authorities: Table 2. 2018 based edition of this dataset. Available at: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandtable2. Accessed on: 08/04/2024.

[22] Public Health England, 2025. Fingertips: Local health, public health data for small geographic areas - Ward data (October 2025). Available at: https://fingertips.phe.org.uk/profile/local-health. Accessed on 18/02/2025

below the national average of 54.4 %, suggesting later-stage diagnosis remains a concern in the wider area.
- Life expectancy at birth in Upminster is 80.2 years for males and 85.2 years for females (2016), which is above the national average (79.3 and 83.2 years respectively) and comparable to Havering's figures of 80.4 and 84.4 years. Both areas perform notably better than Thurrock on this indicator.
- Under-75 mortality from all causes in Upminster shows a standardised ratio of 68.1 (2016), significantly below the national average, consistent with Havering's under-75 mortality rate of 299.9 per 100,000, which is also lower than the national average of 341.6 per 100,000.
- Mortality from preventable causes (under 75) in Upminster also shows a ratio of 64.1, further indicating a lower burden of premature avoidable death compared to the national average
- Emergency hospital admissions for coronary heart disease (ratio 54.4), stroke (72.8), heart attack (60.4), and COPD (38.0) in Upminster are all well below the national average, suggesting relatively good cardiovascular and respiratory health outcomes at the ward level — a picture broadly consistent with Havering's stronger performance across major disease categories compared to both Thurrock and national benchmarks.

At ward level, Fingertips ward-level health data for Upminster presents a broadly positive picture compared to Havering, Thurrock, and national benchmarks. Life expectancy exceeds the national average and is comparable to Havering, with both areas outperforming Thurrock, reflected in Upminster's well below-average under-75 and preventable mortality ratios. Emergency admissions for major cardiovascular and respiratory conditions are similarly below the national average. Year 6 obesity prevalence (16.5 %) is markedly lower than in Havering (24.5 %), Thurrock (25.2 %), and nationally (22.1 %). The principal area of concern is elevated prostate and colorectal cancer incidence, though overall cancer incidence remains broadly at the national average.

Havering (District Level)

In terms of Havering's general health, the 2021 Census revealed that 48.2 % and 34.8 % of all usual residents have very good health and good health, respectively, whilst 12.3 % have fair health, 3.6 % have bad health and 1.1 % have very bad health.

The 2021 Census also reported that 15.3 % of Havering's residents identify as disabled under the Equality Act. 6.6 % of Havering residents' day-to-day activities are limited a lot, whilst 8.7 % of Havering residents' day-to-day activities are limited a little.

The Havering Local Authority Health Profile[23] indicates that health in Havering is better than the national average for the majority of health indicators, but is worse for some indicators.

In 2023, life expectancy at birth for males and females in Havering was 80.4 and 84.4 years respectively, slightly greater than the national average of 79.3 and 83.2 years respectively. This is reflected in the fact that Havering's under 75 mortality rate (from all causes) in 2023 is lower than the national average (299.9 per 100,000 in comparison to the national average of 341.6 per 100,000).

From the Havering Local Authority Health Profile, the following indicators have been identified, as being worse than the national average:

- Hip fractures in people aged 65 and over (2023/2024) in Havering is 582 per 100,000, which is higher than the national average of 547 per 100,000.
- The percentage of physically fit adults (2023/2024) in Havering is 57.0 %, significantly lower than the national average of 67.4 %.

[23] Office for Health Improvement & Disparities, online. Local Authority Health Profiles. Havering. Available at: https://fingertips.phe.org.uk/profile/health-profiles/data#page/1/gid/1938132701/pat/6/par/E12000007/ati/501/are/E09000016/yrr/3/cid/4/tbm/1. Accessed on: 09/04/2024.

- Overweight (including obesity) prevalence in adults, (using adjusted self-reported height and weight, 18+ years) (2023/2024) is 65.8 % in Havering, compared to a national average of 64.5 %.
- The prevalence of Year 6 (ages 10-11 years) obesity (including severe obesity) (2023/2024) in Havering is 24.5 %, significantly higher than the national average of 22.1 %.
- The indicator for homelessness (households owed a duty under the Homelessness Reduction Act) (2023/2024) is 17.0 per 1,000 in Havering, higher than the national average of 13.4 per 1,000.

However, the Havering Local Authority Health Profile[23] shows that Havering's health is better than the national average for the other recorded indicators, including but not limited to percentage of cancers diagnosed at stages 1 and 2, smoking prevalence in adults, infant mortality rate, inequality in life expectancy at birth, percentage of children in relative and absolute low-income families, percentage of people in employment, Average Attainment 8 score and (emergency) hospital admissions for intentional self-harm, alcohol-related conditions and violence (including sexual violence).

Thurrock (District Level)

In terms of Thurrock's general health, the 2021 Census revealed that 46.4 % of residents have very good health, 34.7 % have good health, 13.6 % have fair health, 4.1 % have bad health and 1.2 % have very bad health.

The 2021 Census also reported that 16.7 % of Thurrock's residents identify as disabled under the Equality Act. 7.2 % of Thurrock residents' day-to-day activities are limited a lot, whilst 9.5 % of Thurrock residents' day-to-day activities are limited a little.

The Thurrock Local Authority Health Profile[24] indicates that health in Thurrock is varied in comparison to England, as Thurrock is shown to be better than the national average for some health indicators, but worse for others.

In 2023, life expectancy at birth for males and females in Thurrock was 78.1 and 83.1 years respectively, slightly less than the national average of 79.1 for males and 83.2 years respectively. In accordance with this, the under 75 mortality rate (from all causes, 2023) in Thurrock is higher than the national average (351.9 per 100,000 in comparison to the national average of 341.6 per 100,000). Specifically, the under 75 mortality rate from cancer (2023) is 146.8 per 100,000, which is significantly higher than the national average of 120.8 per 100,000.

The Thurrock Local Authority Health Profile shows that Thurrock's health is worse than the national average for some indicators, including:

- The estimated percentage of cancers diagnosed at stages 1 and 2 (2021) in Thurrock is 51.6 %, below the national average of 54.4 %.
- Hip fractures in people aged 65 and over (2023/2024) in Thurrock is 710 per 100,000, which is significantly higher than the national average of 547 per 100,000.
- The estimated dementia diagnosis rate (aged 65 and older, in 2025) is 66.7 per 100, compared to the national rate of 65.5 per 100.
- The smoking prevalence in adults (18+, in 2023) in Thurrock is 14.6 %, higher than the national average of 11.6 %.
- The percentage of physically fit adults (2023/2024) in Thurrock is 57.2 %, significantly lower than the national average of 67.4 %.
- The prevalence of adults classified as overweight or obese (using adjusted self-reported height and weight, 18+, in 2023/2024) in Thurrock is 68.7 %, higher than the national average of 64.5

[24] Office for Health Improvement & Disparities, online. Local Authority Health Profiles. Thurrock. Available at: https://fingertips.phe.org.uk/profile/health-profiles/data#page/1/gid/1938132701/pat/6/ati/501/are/E06000034/iid/90366/age/1/sex/1/cat/-1/ctp/-1/yrr/3/cid/4/tbm/1. Accessed on: 10/10/2024.

%; similarly, the prevalence of Year 6 (ages 10-11 years, in 2023/2024) obesity (including severe obesity) in Thurrock is 25.2 %, significantly higher than the national average of 22.1 %.
- The infant mortality rate (2021 to 2023) in Thurrock is 6.0 per 1,000, higher than the national average of 4.1 per 1,000.
- Smoking status at the time of delivery (2024/2025) is 8.1 % in Thurrock, which is significantly greater than 6.1 % nationally.
- The indicator for violent crime (hospital admissions for violence, including sexual violence, in 2021/2022 - 2023/2024) is 43.8 per 100,000 in Thurrock is significantly greater than the national average of 34.2 per 100,000.
- The winter mortality index (Aug 2021 - Jul 2022) in Thurrock is 12.9 %, worse than the national average of 8.1 %.

Like Havering, Thurrock's health is better than the national average for some indicators, such as inequality in life expectancy at birth (male and female), percentage of children in relative and absolute low-income families, percentage of people in employment, suicide rate, emergency hospital admissions for intentional self-harm and admission episodes for alcohol-specific conditions (under 18 years).

Summary

At ward level, Fingertips data for Upminster presents a broadly positive health profile relative to Havering, Thurrock, and national benchmarks. Life expectancy at birth (80.2 years for males and 85.2 years for females) exceeds the national average, and is comparable to Havering, with both areas outperforming Thurrock, where life expectancy falls marginally below the national average. This is reflected in Upminster's well below-average under-75 mortality ratio of 68.1 and preventable mortality ratio of 64.1, and is consistent with Havering's under-75 mortality rate of 299.9 per 100,000, which also compares favourably to the national average of 341.6 per 100,000.

Emergency hospital admissions for major cardiovascular and respiratory conditions - including coronary heart disease, stroke, heart attack, and COPD - are all well below the national average at ward level. Year 6 obesity prevalence in Upminster (16.5 %) is markedly lower than in Havering (24.5 %), Thurrock (25.2 %), and nationally (22.1 %), though adult overweight and obesity prevalence is elevated in both local authority areas. The principal area of concern within Upminster's otherwise favourable profile is elevated prostate and colorectal cancer incidence, though overall cancer incidence remains broadly at the national average.

Both Havering and Thurrock face challenges around physical inactivity, with physically fit adult prevalence (57.0 % and 57.2 % respectively) significantly below the national average of 67.4 %. Thurrock presents a more concerning picture across a broader range of indicators, including higher rates of smoking, infant mortality, hip fractures, and winter mortality, alongside a below-average rate of early-stage cancer diagnosis. Taken together, the baseline health profile underscores the relative advantage of the Upminster ward area, whilst highlighting wider public health challenges across the broader locality.

6.3 Socio-Economic and Employment Information

The 2019 Index of Multiple Deprivation (IMD)[25] shows that the Lower Super Output Area (LSOA) within which the site is located (Havering 018E) is ranked 23,815 out of the 32,844 LSOAs in England (where 1 is the most deprived LSOA), meaning it is amongst the 30% least deprived neighbourhoods nationally. Havering local authority district consists of 150 LSOAs and ranked 179 out of 317 local authorities in 2019.

The 2021 Census[19] recorded that there were 163,627 working age residents in Havering. Of these working age residents at borough level, 84.5% were economically active, which is a higher rate than

[25] Ministry of Housing, Communities and Local Government, 2019. Indices of Deprivation 2019 Explorer. Available at: https://dclgapps.communities.gov.uk/imd/iod_index.html. Accessed on: 08/04/2024.

the economic activity at regional (80.0%) and national (78.8 %) levels. According to data from the Annual Population Survey (Oct 2023 – Sep 2024)[26], Havering also had the lowest unemployment rate for the working age population at 2.4 % and lowest proportion of economically inactive who want a job at 12.2 % of the different spatial scales. Comparatively, London had the highest unemployment rate for the working age population at 5.2 % and the highest proportion of economically inactive who want a job at 21.0 %.

Claimant count data[27] provides the most recent information on the number of people claiming unemployment-related benefits in a particular spatial area, which includes Jobseekers' Allowance and Universal Credit. This dataset is unable to capture all unemployed individuals as some local residents may not claim these benefits or may be ineligible. Claimant count data from December 2024 indicates that, of the different spatial levels, London has the highest proportion of Claimants (16+) as a proportion of the working age population at 5.9 %. Comparatively, Havering has the lowest proportion at 4.2 %.

6.4 Baseline Summary and Vulnerable Groups Identification

Overall, the baseline health profile for the Upminster ward indicates a generally favourable picture when compared to Havering, Thurrock and national benchmarks, although several wider determinants of health remain relevant to the assessment.

Upminster demonstrates comparatively positive health outcomes, including life expectancy above national averages, lower rates of premature mortality and preventable deaths, and lower emergency hospital admissions for major cardiovascular and respiratory conditions. Childhood obesity prevalence is notably lower than borough and national averages, suggesting relatively favourable early-life health outcomes within the ward.

However, the demographic profile indicates a significantly older population structure compared to both London and national averages, with residents aged 65 and over accounting for approximately 24.5 % of the population. This has important implications for health planning, as older populations are more sensitive to environmental changes, mobility barriers, accessibility issues and environmental stressors such as noise or temperature extremes. Elevated incidence rates for certain cancers, particularly prostate and colorectal cancers, further highlight the importance of maintaining accessible healthcare, supportive environments and opportunities for healthy living.

At the borough level, Havering demonstrates generally strong health outcomes relative to national averages, including higher life expectancy and lower premature mortality rates. However, several public health challenges remain, particularly relating to physical inactivity, overweight and obesity prevalence, and higher rates of hip fractures among older adults. These indicators suggest that improving opportunities for everyday physical activity, safe movement and age-friendly environments remains an important local priority.

The adjacent borough of Thurrock presents a more mixed and, in some areas, less favourable health profile, including lower life expectancy, higher premature mortality and higher prevalence of risk factors such as smoking and obesity. Given the site's proximity to Thurrock and potential cross-boundary use of the ecology park and employment opportunities, these wider health inequalities are relevant to the assessment.

Socio-economic data indicates relatively low deprivation levels within the immediate locality and strong economic activity rates within Havering. However, public health evidence demonstrates that

[26] Office for National Statistics, Annual Population Survey from Oct 2023 - September 2024. Available at: https://www.nomisweb.co.uk/datasets/apsnew. Accessed on: 10/10/2025.
[27] Office for National Statistics, Claimant Count 2024. Available at: https://www.ons.gov.uk/explore-local-statistics/indicators/claimant-count. Accessed on: 10/10/2025.

even areas with relatively good health outcomes may contain vulnerable sub-groups whose needs require consideration within development design and mitigation strategies.

Taken together, the baseline health profile indicates a population with generally positive health outcomes but with identifiable vulnerabilities linked to ageing demographics, physical inactivity, and wider regional health inequalities.

Vulnerable Population Groups

Based on demographic characteristics, health indicators and wider determinants of health identified through baseline analysis, the following groups are considered particularly relevant for assessment within this HIA:

- **Older adults (65+ years)**: Upminster has a significantly older age profile than London and national averages. Older adults may be more sensitive to environmental changes including noise, accessibility barriers, temperature extremes and safety perceptions. Age-friendly design, accessible routes and safe public spaces are therefore important considerations.
- **People with disabilities or mobility limitations**: Approximately 15–17 % of residents in Havering and Thurrock identify as disabled under the Equality Act. Ensuring inclusive design, step-free access and accessible natural environments is important to reduce health inequalities and support independent participation.
- **Children and young people**: Although the proportion of younger residents is slightly lower than comparator areas, opportunities for play, outdoor recreation and safe active travel remain important determinants of long-term health outcomes. Nature-based play and accessible green space can support physical activity, cognitive development and mental wellbeing.
- **Individuals with existing long-term health conditions**: Elevated cancer incidence and broader chronic disease considerations highlight the importance of environments that support healthy behaviours, access to nature, clean air and opportunities for physical activity.
- **People experiencing health inequalities across the wider area (including Thurrock)**: Given the site's location near the borough boundary, users may include individuals from neighbouring areas with poorer health outcomes, including higher rates of smoking, obesity and premature mortality. Accessible green infrastructure and employment opportunities may therefore contribute positively to addressing wider health inequalities.
- **Shift workers and employees**: Operational characteristics of the proposed development introduce a workforce with potentially non-standard working hours. Access to safe routes, public transport connectivity and outdoor environments may support wellbeing and reduce risks associated with shift-based working patterns.

Overall Interpretation for the HIA

The baseline health profile indicates that while the local population experiences relatively good overall health outcomes, there remain identifiable vulnerabilities linked to ageing demographics, physical inactivity and wider regional inequalities. The proposed development therefore has an opportunity to support positive health outcomes through improvements to access to nature, active travel infrastructure, inclusive design and employment opportunities, while ensuring that potential adverse environmental effects are carefully managed for sensitive population groups.

7. HEALTHY URBAN DEVELOPMENT UNIT ASSESSMENT

The HUDU framework identifies 11 topics representing broad planning-related determinants of health. Under each topic, the framework sets out assessment criteria relevant to how development proposals may influence health and wellbeing. The HUDU framework is used in this HIA as a comprehensive structure for assessing health determinants relevant to the proposed LDO, integrating evidence from the ES and supporting submissions, and identifying mitigation and enhancement measures that can be embedded through the LDO compliance framework.

Health impacts may arise during construction (short-term/temporary or repeated over time) and during operation (long-term/permanent). The assessment considers receptor sensitivity and distributional effects, particularly where impacts may affect vulnerable groups or those living closest to the site and associated highway works.

The HUDU checklist enables the proposed development to be assessed against the following broad range of disciplines:

- Housing quality and design;
- Access to healthcare services and other social infrastructure;
- Access to open space and nature;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Crime reduction and community safety;
- Access to healthy food;
- Access to work and training;
- Social cohesion and lifetime neighbourhoods;
- Minimising the use of resources; and
- Climate change.

The HUDU checklist has been completed for the proposed development and is presented in Section 8 of this report.

Where criteria are not considered relevant, the concluding potential health effect is stated as Neutral.

The potential impact on health and wellbeing column is colour coded as follows:

- positive = green;
- negative = red;
- neutral = grey; and
- uncertain = white.

The assessment draws information from the various assessments and reports that support the consultation documentation for the potential LDO. While relevant sections from these reports have been summarised within the assessment, further detailed information is provided within these accompanying reports and should be referred to where necessary.

8. HUDU HIA FRAMEWORK:

Tables 8.1 to 8.11 present the results for each of the 11 broad health determinants that have been examined as part of the HIA assessment.

Table 8.1: Housing Quality and Design

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal seek to suitable housing standards, such as BRE's Home Quality Mark, or Building Regulation requirement M4(2) 'Accessible and Adaptable Dwellings'?	Yes **No** N/A	**Construction Impact:** N/A **Operational Impact:** No housing would be delivered as part of the proposed development.	N/A	None required.
Does the proposal address the housing needs of older people, i.e. extra care housing, sheltered housing, and wheelchair accessible homes?	Yes **No** N/A		N/A	None required.
Does the proposal include homes that can be adapted to support independent living for older and disabled people?	Yes **No** N/A		N/A	None required.
Does the proposal promote good design through layout and orientation, meeting internal space standards and consider the risk of falling from height?	Yes **No** N/A		N/A	None required.
Does the proposal meet the housing mix requirements set out in the local plan?	Yes **No** N/A		N/A	None required.
Does the proposal contain homes that are highly energy efficient (e.g. a high SAP rating)?	Yes **No** N/A		N/A	None required.

Table 8.2: Access to Healthcare Services and Other Social Infrastructure

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal lose, retain or re-provide existing social infrastructure?	Yes **No** N/A	**Construction Impact:** N/A **Operational Impact:** No existing social and/or healthcare infrastructure would be lost as a result of the proposed development and no new facilities would be delivered. No new residential population would be introduced that would increase demand on existing social infrastructure, healthcare or educational services.	N/A	None required.
Does the proposal assess the impact on health and social care services and have NHS organisations been contacted regarding existing and planned healthcare capacity?	Yes **No** N/A		N/A	None required.
Does the proposal include the provision, or replacement of a healthcare facility and does the facility meet NHS requirements?	Yes **No** N/A		N/A	None required.
Does the proposal assess the capacity, location and accessibility of other social infrastructure, e.g. schools, social care and community facilities?	Yes **No** N/A		N/A	None required.
Does the proposal explore opportunities for shared community use and co-location of services?	Yes **No** N/A		N/A	None required.
Does the proposal contribute to meeting education needs, including early years, primary, secondary and post 19 education needs?	Yes **No** N/A		N/A	None required.
Does the proposal influence people's ability to live healthy lifestyles?	Yes **No** N/A		N/A	None required.
Will the proposal have any impact on mental health and wellbeing?	Yes **No** N/A		N/A	None required.

Table 8.3: Access to Open Space and Nature

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal retain and enhance existing open and natural spaces?	**Yes** No N/A	The site comprises an area of open agricultural land in arable use, associated with four operational farms. The majority of the site is therefore not publicly accessible, however two Public Rights of Way (PRoW) cross the site: Footpath 233 from Fen Lane to Bury Farm which crosses through the centre of the site; and Footpath 283 from Fen Lane to Ockendon Road which crosses the western most confines of the site. The site is within the London Metropolitan Green Belt, a Countryside Conservation Area and also within the Thames Chase Community Forest designated in the Havering Local Plan 2016-2031 (November 2021). The site is not located in an area of open space deficiency[28]. Consideration of the effects of the proposed development on the London Metropolitan Green Belt are beyond the scope of the HIA and therefore, an assessment has not been undertaken here. This has however been addressed in other consultation documents. **Construction Impact:** The majority of the site is not publicly accessible open space. It is anticipated that the existing PRoWs would be retained throughout the majority of the construction period. **Operational Impact:** Much of the existing agricultural land would be lost to new development. However, a substantial proportion of the site would also be enhanced with strategic landscaping zones in the west and north of the site a dedicated ecology park of at least 113 ha surrounding the data centre campus. The existing PRoWs would be enhanced as part of the proposed development and a new network of pedestrian and cycle routes established to improve access to and within the site, encouraging visitors to the area and to take advantage of the enhanced landscape and natural space. The design proposes newly established woodlands, wetlands and meadows that would encompass the data centre campus. The key focus for the landscaping strategy is to create a mosaic of habitat typologies that would significantly boost local biodiversity, encourage human engagement and promote sustainable landscape management practices, moving away from the current unsustainable practices associated with intensive arable farming. The landscaping strategy for the site comprises several landscape and ecology focused character zones including strategic edge and mounds, Ponds, Neutral Grassland and Woodlands (including wet woodlands) to provide a diverse range of habitats. The open space brought forward by the proposed development would be publicly accessible and served by improved and new pedestrian and cycle access. The proposed development would therefore increase public access to green spaces and blue infrastructure within the site to promote health and wellbeing by providing attractive opportunities for recreation including the promotion of walking /running circuits. Amenity areas such as lookouts and picnic areas would also be delivered for public and local community enjoyment. The ecology park's health benefits would depend on equitable access, perceived safety, and the usability of routes for people with disabilities, older residents and families. The inclusive design commitments set out in the Design Code and the management commitments in the LEMMP are therefore important health delivery mechanisms. Where routes intersect with access controls (e.g. locked gates at night), careful design of opening hours, signage and wayfinding would be important to support safe use while maintaining security.	**Positive** Negative Neutral Uncertain	None required.
In areas of deficiency, does the proposal provide new open or natural space, or improve access to existing spaces?	Yes No **N/A**		**Positive** Negative Neutral Uncertain	None required.
Does the proposal provide a range of play spaces for children and young people?	**Yes** No N/A	**Construction Impact:** N/A. No play spaces would be affected during the construction period. **Operational Impact:** A visitor centre would be delivered which provides an opportunity to include a small play area within any external amenity areas. The visitor centre would function as the main recreational hub of the Ecology Park that can be used by families and educational / youth groups. The focal point to the area is the central pond, with rest and play opportunities provide to the southern edge. Play is to be provided through a combination of natural, informal materials and formal equipment and to use the form of the landscape. Extensive shared access routes and informal nature trails would also grant year round access to the site for both recreational and educational purposes with engagement enhanced through features such as: • Interpretation Boards; • Pond Dipping Stations; • View Points; • Bird Hides / Observation Towers;	**Positive** Negative Neutral Uncertain	None required.

[28] London Borough of Havering, 2024. Open Space Assessment. June 2024.

Table 8.3: Access to Open Space and Nature				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		• Nature Trails & Informal Play; and • Picnic Spots & Seating Areas. From a health perspective, the provision of play opportunities supports physical, social and cognitive development for children and young people, contributing to increased physical activity, improved mental wellbeing and opportunities for social interaction. Access to safe and engaging outdoor play environments is particularly important in supporting healthy childhood development and encouraging lifelong active behaviours. The integration of play opportunities within the visitor centre and the proposed Locally Equipped Area for Play (LEAP) within ecology park, including both formal play equipment and informal nature-based play features, provides a varied play environment that can appeal to a range of age groups and abilities. Nature-based play elements, such as pond dipping areas, nature trails and observation points, can support exploratory learning and engagement with the natural environment, which has been associated with improved attention, creativity and emotional wellbeing in children. In a rural context where dedicated play provision may be limited or dispersed, the creation of a new recreational destination that is accessible to families and youth groups represents a positive contribution to local community infrastructure. The combination of seating areas, picnic spaces and educational features may also encourage intergenerational use, supporting family-based recreation and social cohesion. The availability of accessible routes and inclusive public realm design supports participation by children with disabilities and families with pushchairs, contributing to equitable access to play and recreation opportunities. Opportunities for educational engagement through interpretation boards and ecological features may further enhance health benefits by promoting outdoor learning and environmental awareness. Overall, the proposal is likely to result in positive health outcomes for children and young people by providing opportunities for active play, nature engagement and social interaction. No additional mitigation is considered necessary beyond the embedded design measures.		
Does the proposal provide links between open and natural spaces and the public realm?	**Yes** No N/A	**Construction Impact:** N/A. There are no existing links associated with public realm within the site or surrounding area that would be impacted during the construction period. **Operational Impact:** The proposed development would deliver a new ecology park incorporating new and enhanced access routes throughout. One of the primary aims of the landscape strategy is to improve the public accessibility of the green space network and use the landscape to link sustainable transport routes within and surrounding the site together. The hard landscape strategy proposes a network of path types that would provide accessible public routes throughout the site outside of the main development area of the data campus with entrance points at a number of locations to allow ease of access from the surrounding area. From a health perspective, the integration of open and natural spaces with the wider public realm is an important determinant influencing physical activity, mental wellbeing and social interaction. Providing clear, accessible links between green infrastructure and surrounding routes encourages regular use of outdoor environments, supporting opportunities for walking, cycling and informal recreation. Improved permeability across the site may also reduce barriers to movement and enhance connectivity between surrounding communities and natural spaces. Access to connected green spaces is associated with a range of positive health outcomes, including reduced stress, improved mood and increased opportunities for social engagement. The proposed ecology park, together with enhanced public access routes, creates a coherent network that allows users to move seamlessly between natural landscapes and the wider public realm, supporting both recreational and functional journeys. This integration may encourage greater use of green infrastructure as part of everyday activities rather than solely as a destination. In a rural context, where existing access to natural environments may be limited by land ownership or lack of formal routes, the creation of accessible and well-connected paths represents a meaningful enhancement to local green infrastructure. The provision of multiple entrance points and varied path types supports inclusive access for a wide range of users, including families, older people and individuals with mobility impairments. Overall, the proposal is likely to result in positive health outcomes by strengthening connections between natural spaces and the public realm, encouraging physical activity, supporting mental wellbeing and enhancing accessibility to green infrastructure. No additional mitigation is considered necessary beyond the embedded landscape and access strategy.	**Positive** Negative Neutral Uncertain	None required.

Table 8.3: Access to Open Space and Nature				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
Are the open and natural spaces welcoming and safe and accessible for all?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The ecology park is designed to be inviting and accessible to all, where people from the local surrounding area are encouraged to spend time, be active and connect with nature. A visitor centre would be provided which would be community and educational facility providing access to the Ecology park. Table 8.5 and 8.6 provides further information on inclusive design and safety. From a health perspective, perceptions of safety, accessibility and inclusivity are key determinants influencing whether people choose to use public open spaces. Environments that are legible, well-connected and welcoming are more likely to encourage regular use for recreation, walking and social interaction, supporting both physical and mental wellbeing. The provision of accessible routes, inclusive design measures and clear access points helps reduce physical barriers to participation for older people, individuals with disabilities and families with young children, supporting equitable access to green space. Design features such as clear sightlines, appropriate lighting along key routes, defined entrances and wayfinding signage contribute to perceived and actual safety, which is particularly important in rural or semi-rural settings where lower natural surveillance could otherwise discourage use. The visitor centre provides an identifiable focal point and activity hub, which may increase footfall and enhance natural surveillance, supporting a sense of safety and encouraging community engagement. Welcoming and inclusive natural environments can support social cohesion by providing shared spaces where people of different ages and backgrounds can interact informally. Access to safe and attractive natural spaces is also associated with reduced stress, improved mood and opportunities for restorative experiences. Overall, the design approach is likely to result in positive health outcomes by creating open and natural spaces that are welcoming, safe and accessible, supporting regular use and encouraging engagement with nature. No additional mitigation is considered necessary beyond the embedded design and management measures.	**Positive** Negative Neutral Uncertain	None required.
Does the proposal set out how new open space would be managed and maintained?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** Details of the management and maintenance of the Ecology Park are set out within the Landscape and Ecological Management and Monitoring Plan (LEMMP). The LEMMP identifies: • when and how monitoring shall be undertaken to track progress toward meeting target habitat conditions; • when and how monitoring results shall be reported to the Local Planning Authority (LPA); and • the mechanism for agreeing any necessary changes to management practices with the LPA to ensure that agreed outcomes are met. • The LEMMP provides a coherent, strategic and integrated approach to the management and maintenance of the ecology park to ensure the successful establishment and integration of new planting and habitats with the surrounding landscaping and to maximise its biodiversity value. LEMMP ensures long-term health benefit through sustained quality and biodiversity.	**Positive** Negative Neutral Uncertain	None required.

Table 8.4: Air Quality, Noise and Neighbourhood Amenity				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
Does the proposal minimise impacts such as dust, noise, vibration, odours, soil and water pollution?	**Yes** No N/A	**Construction Impact:** An overview of construction works is provided within ES Chapter 4: Proposed Development and Construction. Construction works would extend over a long programme and would give rise to noise and dust emissions from both on-site activities and construction traffic accessing the site via the M25 (junction 29), the A127 Southend Arterial Road and B186 Ockendon Road onto Fen Lane. Conditions attached to the LDO would require the proposed development to accord with defined design parameters, standards, limitations and control measures set out within the LDO compliance documents. Construction mitigation measures would be secured through the East Havering Data Centre Campus Code of Construction Practice (CoCP), which establishes the framework for managing potential impacts relating to dust, noise, vibration, odours, soil and water pollution during construction. With regard to dust, good site management and mitigation techniques would be implemented to reduce emissions and limit dispersion. These include the desirable and highly recommended mitigation measures for high-risk sites identified within IAQM guidance. A Framework Dust Management Plan (DMP) forms part of the CoCP, setting out suppression measures such as damping down, use of temporary screens and covering of stockpiles. In addition, a detailed DMP would be required via condition prior to the commencement of works. Dust flux or real-time PM10 continuous monitoring would be undertaken during baseline conditions (minimum three months prior to construction) and throughout earthworks activities within 250 m of sensitive receptors. These requirements would be secured through the LDO compliance documents. With implementation of these measures, construction-stage dust effects are assessed within ES Chapter 9: Air Quality as temporary, reversible, long-term, direct, adverse and not significant (minor). An assessment of construction noise effects is presented within ES Chapter 10: Noise and Vibration. The assessment identifies that, even with standard mitigation measures and best practice construction methods, residential receptors within 50 m of Fen Lane highway works (13 dwellings) and within 50 m of Ockendon Road highway works (19 dwellings) would experience a major adverse effect arising from construction activity noise. These effects are predicted to be temporary and short- to medium-term in duration. Additional mitigation secured through the LDO compliance documents would include restrictions on piling methods, temporary acoustic screening at specific build zones, restrictions on on-site steel cutting, temporary screening for earthworks near sensitive receptors, and real-time noise monitoring with alert systems. Residential receptors within 50 m of Fen Lane would also experience major adverse effects associated with construction-stage road traffic noise and completed development road traffic noise. The ES concludes that no additional physical mitigation for these effects is feasible. From a health perspective, the primary pathways of relevance relate to potential disturbance of residential amenity, annoyance and temporary stress responses associated with increased noise levels, particularly within the existing rural context where baseline sound levels are comparatively low and changes may therefore be more perceptible. The long duration of the construction programme means that predictability and effective management of construction activities are important in minimising the extent to which temporary disturbance translates into wider wellbeing effects. Dust exposure pathways are primarily associated with short-term respiratory irritation and nuisance effects; however, the embedded IAQM-aligned mitigation and monitoring regime provides a structured mechanism for maintaining acceptable environmental conditions. Taking account of the secured mitigation measures within the CoCP and the control framework embedded within the LDO, the overall health implications associated with dust, noise and vibration are expected to remain localised, temporary and appropriately managed. Accordingly, while some receptors would experience temporary adverse effects, residual health impacts are considered to be limited and the overall conclusion of minor and not significant effects is supported. **Operational Impact:** The proposed development would not give rise to dust, vibration, odours or pollution during operation. Impacts relating to operational noise are discussed below.	Positive **Negative** Neutral Uncertain	CoCP including the 'desirable and highly recommended dust mitigation measures for high-risk sites' recommended in the IAQM Guidance.
Does the proposal minimise air pollution caused by traffic and energy facilities?	**Yes** No N/A	**Construction Impact:** An assessment of air pollution effects associated with traffic and operational emissions has been undertaken as part of the air quality assessment accompanying the LDO submission. Construction traffic emissions generated by Heavy Goods Vehicles (HGVs) and Light Goods Vehicles (LGVs) have been evaluated, with the largest increases occurring on road links west and east of the proposed main site entrance on Fen Lane. These locations represent the only areas exceeding the EPUK/IAQM screening thresholds for further assessment outside of areas of existing poor air quality. During the worst-case construction year, increases of up to 696 construction vehicle daily movements (583 LGVs and 113 HGVs) are predicted west of the proposed site entrance on Fen Lane, with additional increases of up to 310 LGV daily movements along	Positive Negative **Neutral** Uncertain	None required.

Table 8.4: Air Quality, Noise and Neighbourhood Amenity

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		B186 North Lane. Baseline air quality modelling demonstrates that pollutant concentrations within the study area are currently well below National Air Quality Objectives (NAQOs), reflecting the relatively rural setting and low existing traffic volumes. From a health perspective, this low baseline exposure is an important contextual factor, as incremental increases in emissions are less likely to result in meaningful changes in population health risk where existing concentrations are well within health-based thresholds. Future baseline traffic flows on Fen Lane without development are predicted to remain low (approximately 1,139 AADT), and even with construction traffic included, total traffic flows would remain below 2,000 AADT. Consequently, construction-related traffic emissions are assessed as unlikely to result in significant deterioration of local air quality. In health terms, this suggests limited potential for measurable changes in respiratory or cardiovascular risk among nearby residents, although temporary perceptual effects such as increased vehicle presence may influence perceived environmental quality and residential amenity, particularly for receptors located close to Fen Lane. **Operational Impact:** Operational traffic increases are similarly concentrated around Fen Lane, with a maximum increase of approximately 768 daily vehicle movements (721 LGVs and 47 HGVs). Despite these increases, overall traffic flows would remain relatively low, and modelling concludes that operational traffic emissions would not give rise to significant air quality effects. Embedded mitigation measures within the Travel Plan aim to encourage sustainable travel behaviours, which supports long-term health outcomes by reducing reliance on private car use and promoting active and public transport modes where feasible. Operational emissions from energy infrastructure have also been assessed. The enclosed district heating centre would house plant and machinery associated with heat recovery and distribution, contributing to energy efficiency and climate mitigation benefits which have indirect positive health implications through reduced greenhouse gas emissions. Backup emergency generators have been modelled using a conservative worst-case scenario assuming operation of up to 288 generators at full load. In practice, such operation is highly unlikely, as sustained operation at full capacity would risk damaging equipment. Dispersion modelling considered emissions of Nitrogen Oxides, particulate matter, sulphur dioxide and carbon monoxide, identifying receptors to the south of the proposed development as experiencing the highest predicted impacts. However, predicted concentrations remain within acceptable limits, and overall effects during both testing and emergency scenarios are assessed as minor and not significant. In health terms, the main exposure pathways relate to potential respiratory irritation from particulate matter and nitrogen oxides, particularly among sensitive groups such as older residents, children, or those with pre-existing respiratory conditions. However, given the low baseline pollutant levels, limited duration of generator testing, and modelling results demonstrating compliance with health-based standards, the likelihood of meaningful adverse health outcomes is considered low. The rural baseline context further reduces the risk of cumulative exposure compared to urban environments with existing air quality pressures. Taking account of the embedded mitigation measures, modelling assumptions, and baseline environmental conditions, the proposed development is considered to minimise air pollution impacts associated with traffic and energy facilities. Residual health effects are therefore expected to be neutral to minor, and no additional mitigation beyond that secured through the LDO compliance framework is required.		
Does the proposal minimise noise pollution caused by traffic and commercial uses?	**Yes** No N/A	**Construction Impact:** The construction traffic noise assessment is set out in ES Chapter 10: Noise and Vibration. The assessment demonstrates that effects would be negligible for most receptors, with the exception of dwellings located within approximately 50 m of Fen Lane, where resulting effects are predicted to be major adverse (significant). These receptors are located immediately adjacent to the carriageway, which also functions as the sole access route to properties, limiting the feasibility of conventional mitigation measures such as acoustic barriers without compromising access and highway safety. Similarly, the use of low-noise road surfacing would be unlikely to provide meaningful benefit due to relatively low traffic speeds, and internal insulation measures would not address external amenity impacts where outdoor noise exposure is the primary pathway. From a health perspective, noise exposure represents a potential pathway influencing wellbeing through mechanisms such as annoyance, sleep disturbance, stress responses and reduced residential amenity. The rural baseline character of the surrounding area is likely to be associated with relatively low existing background noise levels, meaning that perceptible increases in traffic noise may be more noticeable to residents even where absolute noise levels remain below thresholds typically associated with significant physiological health outcomes. This may contribute to subjective impacts on quality of life, particularly for those spending extended periods at home, including older residents or individuals working from home. During the construction phase, increased traffic associated with development activity may therefore result in temporary adverse effects on nearby residents' acoustic environment, particularly along Fen Lane. However, the ES indicates that indoor noise levels	Positive Negative **Neutral** Uncertain	None required.

Table 8.4: Air Quality, Noise and Neighbourhood Amenity				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		would remain acceptable where typical double glazing is present, suggesting that risks relating to sleep disturbance or prolonged exposure within internal environments are likely to remain limited. The absence of feasible additional mitigation reflects the physical constraints of the local highway environment rather than a lack of mitigation consideration. **Operational Impact:** Operational traffic noise effects are similarly predicted to be negligible across the wider road network, with the exception of receptors within 50 m of Fen Lane where perceptible changes in road traffic noise are predicted and classified as permanent major adverse effects. From a health perspective, long-term exposure to increased environmental noise has the potential to influence wellbeing through chronic annoyance or reduced enjoyment of outdoor amenity space, although the ES findings indicate that indoor environments would continue to achieve acceptable noise conditions. The relatively small number of affected dwellings and the rural context reduce the scale of potential population-level health effects. With regard to operational noise from commercial uses, including mechanical and electrical plant and backup generators, the proposed development incorporates a framework approach to noise control due to the inherent flexibility of future data centre configurations. Operational noise limits have been established for the overall development and will be allocated as an "operational noise budget" across individual build zones. The Framework for Managing Operational Noise (FMON), secured through the LDO compliance documents, requires detailed assessment at the design stage, verification during construction, and monitoring during commissioning to ensure that operational noise remains within acceptable limits. From a health perspective, this adaptive management approach is important in reducing uncertainty associated with long-term operational noise exposure, ensuring that cumulative noise emissions from multiple facilities do not result in unintended increases in community exposure. Continuous monitoring and staged assessment support early identification of potential issues, thereby reducing the risk of prolonged exposure to noise levels that could adversely affect wellbeing. Overall, while significant effects are predicted for a small number of receptors close to Fen Lane, the combination of acceptable indoor noise environments, embedded management controls secured through the LDO, and ongoing monitoring means that broader community health risks associated with noise are expected to remain limited. No additional mitigation beyond that already secured through the LDO compliance framework is considered necessary.		

Table 8.5: Accessibility and Active Travel

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal address TfL's ten Healthy Streets Indicators?	**Yes** No N/A	**Construction Impact:** N/A **Operational Impact:** The Healthy Streets Approach puts people and their health at the centre of decisions about how we design, manage and use public spaces. It aims to make our streets healthy, safe and welcoming for everyone. The Approach is based on ten indicators of a Healthy Street which focus on the experience of people using streets. The proposed development responds to the Approach as follows: • Pedestrians from all walks of life: Provision of a network of walking and cycling routes within the proposed ecology park, which would be suitably graded (maximum gradient of 1:21), surfaced and lit where appropriate, to maximise accessibility on foot for all and widen the catchment area for pedestrians. • Easy to cross: Informal crossings are proposed on Ockendon Road and Fen Lane. The Ockendon Road crossing is to be adjacent to the proposed walk/cycle entrance, achieved through extension of the existing footway, re-provision of the existing chicane to the north to serve as a pedestrian refuge, and appropriate signage and road markings. The crossing on Fen Len would be provided at Top Meadow Golf club and would be achieved through the provision of the new footway on the northern side. • Shade and shelter: Tree cover on pedestrian and cycle routes within the proposed ecology park. • Places to stop and rest: Seating to be provided within the proposed ecology park, including on the proposed walk/cycle route connecting to Ockendon Road. • Not too noisy: Provision of an ecology park (including walk/cycle routes) provides opportunity for exposure to a quiet environment. • People choose to walk, cycle and use public transport: Provision of a network of walking and cycling routes within the proposed ecology park, including a dedicated walk/cycle route to Ockendon Road where the nearest bus stops are located, and would increase propensity for people to walk, cycle and use public transport. Provision of a shuttle bus service for data centre staff connecting the proposed development to Upminster railway and London Underground station would further enable and encourage public transport use. • People feel safe: Dedicated accesses and internal routes for people walking and cycling would provide segregation from motorised traffic. Suitable lighting on walk/cycle and vehicle routes within the site, including the walk/cycle route connecting to Ockendon Road, would be provided to increase sense of safety. • Things to see and do: Provision of an ecology park (including walk/cycle routes) and visitor centre provides a leisure facility, capitalising on the attractive local landscape and biodiversity. • People feel relaxed: Dedicated accesses and internal routes for people walking and cycling would provide segregation from motorised traffic; and provision of an ecology park (including walk/cycle routes) and visitor centre would provide a leisure facility. • Clean Air: Provision of an ecology park (including walk/cycle routes) would provide opportunity for exposure to a clean air environment; and provision of charging facilities for electric vehicles maximises opportunity for access by ultra-low emission vehicles.	**Positive** Negative Neutral Uncertain	None required.
Does the proposal encourage walking (such as through the use of shared spaces?)	**Yes** No N/A	**Construction Impact:** N/A **Operational Impact:** Four site accesses are provided for pedestrians and cyclists (including public transport users) as follows: • Dedicated pedestrian/cycle access off Ockendon Road through the Ecology Park to the Data Centre Campus; • Dedicated pedestrian/cycle access via a new footway on the northern side of Fen Lane from Ockendon Road; • Dedicated pedestrian/cycle access from the access road to Bury Farm to the north of the site; and • Shared pedestrian/cycle and vehicle access off Fen Lane via the eastern access road.	**Positive** Negative Neutral Uncertain	None required.
Does the proposal prioritise and encourage cycling (for example by providing secure cycle parking, showers and cycle lanes)?	**Yes** No N/A		**Positive** Negative Neutral Uncertain	None required.

Table 8.5: Accessibility and Active Travel				
		The compliance documents include a Travel Plan. One of the main objectives of the plan is to ensure safe, comfortable and convenient access to the site by non-car modes; removing barriers, both perceived and actual, to walking, cycling and public transport. The following measures have been incorporated into the design of the development to encourage walking and cycling: • Provision of a primary, strategic segregated walk/cycle path connecting Ockendon Road to the main entrance of the data centre campus; • Provision of a.1.5 m wide footway on the northern side of Fen Lane between Ockendon Road and east of the Ladyville Lodge Care Home, where tie-in to the primary, strategy walk/cycle path is achieved; • Provision of continuous footway on eastern side of Ockendon Road providing a continuous footpath connection to the southbound bus stop on Ockendon Road. A new informal crossing on Ockendon Road with associated dropped kerbs and tactile paving would also provide safe access to the northbound bus stop on Ockendon Road; • Provision of internal walk/cycle routes (minimum of 3.0 m wide) within the data centre campus and to the visitors centre and horticultural uses to provide safe and convenient access to building entrances and cycle parking facilities; • Safe, secure and convenient staff cycle parking and facilities (such as lockers, showers and changing rooms) provided from the outset. Cycle parking for data centre employees would be provided at a minimum or 1 space per 10 staff (based on the anticipated maximum number of staff per shift) for long stay parking, and 1 space per 20 staff for short stay parking; and • Provision of seating, lighting, things to see/do (e.g. play areas), and attractive landscaping along walk/cycle routes throughout the proposed Ecology Park as appropriate, particularly for leisure use. From a health perspective, the proposed walking and cycling infrastructure has the potential to support increased levels of physical activity among both employees and visitors by improving accessibility, safety and environmental quality of active travel routes. Baseline health indicators for Havering and neighbouring Thurrock identify lower-than-average levels of physical activity and higher prevalence of overweight and obesity compared to national averages. Improvements to walkability and connectivity therefore represent an important opportunity to address underlying determinants of health by enabling routine physical activity through everyday travel behaviours. The rural context of the site presents both opportunities and constraints in relation to active travel uptake. Existing pedestrian and cycle infrastructure in the surrounding area is relatively limited, and distances between settlements may discourage walking without safe and attractive routes. The provision of dedicated, segregated paths linking Ockendon Road to the site and through the ecology park therefore represents a meaningful enhancement to local connectivity, potentially supporting both utilitarian walking (e.g. access to work or public transport) and recreational activity. The inclusion of seating, landscaping, lighting and features that create visual interest may positively influence perceptions of safety and attractiveness, which are key determinants of whether people choose to walk or cycle. Integration with public transport through improved pedestrian connections and informal crossings may also support multimodal travel, enabling staff to combine walking with bus or rail journeys. This may contribute to wider health benefits through reduced reliance on private car use, improved air quality and increased incidental physical activity. However, given the operational characteristics of a data centre campus, including shift-based working patterns and a potentially dispersed workforce, there may be practical limits on the proportion of journeys made by active modes. The Travel Plan therefore plays an important role in supporting behavioural change by addressing perceived barriers and promoting sustainable travel options. Overall, the design approach demonstrates a clear intention to encourage walking and cycling through infrastructure provision and environmental quality improvements. While uptake will depend on behavioural factors beyond the control of the development, the proposed measures are likely to have a positive effect on opportunities for physical activity and access to green space, supporting mental wellbeing and healthy lifestyles within the surrounding community.		
Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** From a health perspective, connectivity between internal routes and wider strategic walking and cycling networks is a key determinant of whether infrastructure translates into meaningful behaviour change. The integration of upgraded Public Rights of Way (PRoWs) with new strategic routes linking to Ockendon Road, North Ockendon village and surrounding settlements improves permeability across the site and reduces physical barriers to movement. This has the potential to support increased levels of	**Positive** Negative Neutral Uncertain	None required.

Table 8.5: Accessibility and Active Travel				
		everyday physical activity by enabling walking and cycling for both recreational and functional purposes, including access to public transport, employment opportunities and local destinations. Baseline health data for Havering and neighbouring Thurrock indicate lower levels of physical activity and higher rates of overweight and obesity compared to national averages. Enhancing connectivity through safe, continuous and legible routes therefore contributes positively to addressing these wider determinants of health. The upgrading of existing PRoWs and provision of family-friendly accessible paths may also broaden access for a wider range of users, including older people, individuals with reduced mobility, and families with children, supporting inclusive access to outdoor environments and nature. The creation of a coherent network linking green infrastructure within the ecology park to surrounding communities also has potential mental health and wellbeing benefits. Evidence indicates that accessible natural environments can support stress reduction, improved mood and opportunities for social interaction. By creating a new publicly accessible destination, the development may encourage increased use of walking and cycling routes beyond purely transport-related journeys, supporting leisure activity and social cohesion. In the rural context, connectivity is particularly important given existing gaps in pedestrian and cycling infrastructure and the potential for severance created by agricultural land and dispersed settlement patterns. The proposed improvements therefore represent a meaningful enhancement to local active travel networks. However, uptake may still be influenced by distance to residential areas and individual travel behaviour patterns, meaning that the health benefits are likely to be moderate rather than transformative at a population scale. Overall, the integration of internal routes with existing and strategic walking and cycling networks is likely to result in positive health outcomes by improving access to green space, enabling physical activity and supporting active travel choices, without introducing identifiable adverse health effects.		
Does the proposal include traffic management and calming measures to help reduce and minimise road injuries?	**Yes** No N/A	**Construction Impact:** An Outline Construction Logistics Plan (CLP) has been prepared and would be secured through the CoCP as part of the potential LDO. One of the objectives of the CLP is to prioritise the safety of vulnerable road users in the management of construction vehicle movements in line with the Construction Logistics and Community Safety (CLOCS) Standard[29]. All reasonably practicable measures shall be taken to mitigate the risks and impacts to vulnerable road users from construction logistics activities through adherence to: • CLOCS standard; • FORS (Fleet Operator Recognition Scheme) Silver accreditation; • Work Related Road Risk (WRRR) - managed through requirements of FORS; and • Direct Vision Standard (DVS). **Operational Impact:** Proposed vehicle routes would serve the Visitor Centre car park and data centre campus car parks and accordingly there would be no through-traffic through the site. At this stage specific measures to reduce traffic speeds are not known. However, all new access roads and junctions' geometry would be agreed with the Highways Authority and would follow modern design standards to prioritise pedestrians and cyclists.	**Positive** Negative Neutral Uncertain	None required.
Is the proposal well connected to public transport, local services and facilities?	**Yes** No N/A	The site is served by local bus which connect to the wider transport network and railway (national rail, underground and overground) services. The closest bus stops to the site are on B186 Ockendon Road in North Ockendon. The closest railway stations are South Ockendon, approximately a 15-minute cycle from the site, and West Horndon, approximately a 20-minute cycle from the site, both of which provide services to London Fenchurch Street, Basildon, Stanford-le-Hope, Southend Central, and Shoeburyness. The journey time from Ockendon/West Horndon to London Fenchurch Street is approximately 30-minutes. The closest London Underground station to the development site is Upminster, served by the District Line trains towards Barking, Ealing Broadway and Richmond. Upminster is also served by Overground services to Romford providing connectivity to the Elizabeth Line and by rail services on the line between London Fenchurch Street and both Southend and Shoeburyness. **Construction Impact:** As set out in the Outline CLP, the Contractor would implement a staff travel plan to enable and encourage all construction staff (employed by the Contractor and their subcontractors) to travel to the site by non-car modes. This would include provision of shuttle bus services operated by 60-seater bus/coaches between the site and both South Ockendon and Upminster stations, to	**Positive** Negative Neutral Uncertain	None required.

[29] CLOCS Construction Logistics Planning Guidance, April 2021. Available at: https://content.tfl.gov.uk/clp-guidance-clocs.pdf

Table 8.5: Accessibility and Active Travel				
		enable access by public transport. In line with requirements of the employment and skills plan, 20% of the construction workforce would be recruited locally, further strengthening propensity for access by non-car modes. **Operational Impact:** It is noted that data centre shift changeovers are scheduled such that all staff would be able to use rail services from Ockendon and Upminster, including those working the night shift (beginning at 23:00). In order to encourage the use of public transport to and from the site, a number of measures are proposed in the Travel Plan: • Accessible last-mile transport would be available to staff from the first day of data centre operation at shift change-over times. This would operate between the main site entrance and a safe and convenient collection / drop-off location near to the Ockendon Road bus stops, with drop-off and pick-up to be coordinated with rail service timetabling. The route, mode and location of pick-up / drop-off facilities for this transport would be agreed be LBH Highways ahead of site occupation. • To support first/last-mile accessibility to National Rail and London Underground services, a complimentary shuttle bus should be provided during shift changeover times, for use by data centre staff. This is to be a legal obligation from the first day of data centre operation and is secured within the Section 106 agreement. The continued operation of the shuttle bus would be the responsibility of the developer via the Estate Management Team. The service is to be provided for the duration of the LDO. Dedicated parking and charging facilities are provided on-site for these vehicles. The shuttle bus services should be scheduled to align with rail service timetabling and kept under review accordingly. • Demand for, and utilisation of, the proposed shuttle bus service should be monitored through the Travel Plan. Any amendments to the service would be reviewed and agreed by a Travel Plan Steering Group. This would require formal approval from the LPA to any proposed variation to the Section 106 agreement. Staff associated with the indoor horticulture facility would be produce workers and management staff. All produce workers would be transported to/from the site via assigned coaches which would be provided by the occupier. Only management staff would travel to/from the site by private means. With the above measures in place, the proposed development actively seeks to encourage use of public transport to access the site and reduce reliance on private car usage. From a health perspective, connectivity to public transport is an important determinant of both physical and mental wellbeing, influencing access to employment opportunities, services, social networks and opportunities for active travel. The provision of bus and rail connections within cycling distance of the site, together with planned last-mile transport measures, supports accessibility to the development for a wider range of users, including those without access to private vehicles. This is particularly relevant in addressing health inequalities by enabling equitable access to employment and reducing barriers for lower-income groups who may be more reliant on public transport. Baseline socio-economic and health data indicate that although Havering generally performs well on some indicators, physical inactivity and obesity rates are higher than national averages. Improved integration with public transport may support incidental physical activity through walking or cycling to stations and stops, contributing to healthier daily routines. The inclusion of shuttle bus services aligned with shift changeovers is particularly important given the operational characteristics of a data centre campus, where atypical working hours could otherwise limit access to public transport and increase reliance on private cars. In the rural context surrounding the site, distance from settlements and relatively limited existing public transport accessibility present potential constraints to sustainable travel behaviour. The introduction of dedicated last-mile connections and staff shuttle services therefore represents a key mitigation measure, reducing transport-related exclusion and supporting accessibility during early morning, evening or night shifts. These measures may also contribute indirectly to improved air quality and reduced traffic-related noise exposure by encouraging modal shift away from private vehicle use. The use of assigned coach transport for indoor horticulture workers further supports sustainable travel by reducing the number of individual car journeys associated with workforce access. However, the overall success of public transport integration will depend on continued monitoring and adaptation of services through the Travel Plan and Travel Plan Steering Group to ensure services remain responsive to demand and operational needs over the lifetime of the LDO. Overall, the proposed development demonstrates a proactive approach to integrating public transport connectivity within a rural development context. While inherent spatial constraints may limit high levels of modal shift, the embedded measures are likely to result in positive health outcomes through improved access to employment, reduced transport inequalities and increased opportunities for active travel.		
Does the proposal seek to reduce car use by reducing car parking provision, supported by the controlled parking	**Yes** No	**Construction Impact:**	**Positive** Negative	None required.

Table 8.5: Accessibility and Active Travel				
zones, car clubs and travel plans measures?	N/A	As set out above a staff travel plan would be implemented by the Contractor to enable and encourage all construction staff to travel to the site by non-car modes. This would include provision of shuttle bus services between the site and both South Ockendon and Upminster stations, to enable access by public transport. **Operational Impact:** Car parking would be provided in accordance with Havering Local Plan 2016-31 (2021) and London Plan 2021 parking standards. The Public Transport Accessibility Level (PTAL) is a TfL-approved quantitative measure of public transport accessibility, based on distance to public transport stops and the number and frequency of public transport services from those stops. The index produces a score that ranges between 0 (worst) to 6b (best). The site has a PTAL of 0, representing the lowest possible PTAL score. The village of North Ockendon has a PTAL score of 1a to 1b. Therefore, the site is in an area of very poor public transport accessibility. The site is also on the boundary of Greater London, beyond which PTAL scores are not calculated. A Travel Plan accompanies the LDO submission. The primary aim of the plan is to reduce the reduce the proportion of users travelling to the site by single-occupancy private car. A Travel Plan specific to each occupier (consistent with the overarching Travel Plan) would be produced. These would be informed by a baseline staff/visitor Travel Survey, compliant with the TRICS Standard Assessment Methodology (SAM) and covering both staff and visitors. The survey would include the following data: • Mode of travel (i.e. the ways in which people travel to and from the site (e.g. by car, bus, cycle), including use of the dedicated shuttle bus for data centre staff; • Attitudes to travel; • Trip origin and distance travelled; • Typical time of arrival and departure; and • Feedback on travel measures provided on the site (e.g. staff shuttle bus, vehicle and cycle parking provision, walking/cycling routes, and other incentives). An individual Travel Plan specific to each occupier would then be produced and submitted to the LPA within 3 months of completion of the Travel Survey. Numerous measures are proposed in the Travel Plan to reduce car use: • Provision of a primary, strategic segregated walk/cycle path connecting with Ockendon Road; • Provision of footways on Ockendon Road and Fen Lan to provide a continuous footpath connection from within the site to bus stops on Ockendon Road • Provision of internal walk/cycle routes (minimum of 3.0m wide) within the data centre campus and to the visitors centre and horticultural uses to provide safe and convenient access to building entrances and cycle parking facilities; • Safe, secure and convenient staff cycle parking and facilities; • Implementation of a car sharing database to identify opportunities for staff on similar shift patterns and travelling similar routes to travel together; • Provide dedicated parking spaces for those who are car sharing; • Consider providing incentives for those who car share, e.g. gift vouchers; • Implementation of a Car Parking Management Plan to ensure that the car parking spaces within the development are available for intended employees and visitors only; and • Measures to encourage walking, cycling and public transport use, as discussed above. One of the key aims of the Travel Plan is to increase understanding among site users of the travel options that are available to them, providing information to allow site users to understand the benefits of and opportunities for sustainable transport, actively promoting non-car travel choices and car sharing, and marketing and raising awareness of the Travel Plan and its purpose.	Neutral Uncertain	
Does the proposal allow people with mobility problems or a disability to access buildings and places?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** Each build zone within the proposed development would be designed in accordance with BS8300-1:2018 (BS8300: 2018 'Design of an accessible and inclusive built environment – Code of Practice'). All primary strategic pedestrian and cyclepaths through the site would be wheelchair accessible. Accessible setting down and pick-up points would be provided as close to the principal entrances of buildings as is reasonably feasible. All building entrances would	**Positive** Negative Neutral Uncertain	None required.

Table 8.5: Accessibility and Active Travel				
		be suitable for wheelchair users and step free access would be provided to all floors. Accessible WCs would be provided on all floors, lifts would be suitable for wheelchairs and accessible showers would also be provided. A minimum of 5 % of total staff/visitor parking provision for data centres (including campus management facilities) and indoor horticulture would be disabled parking. A minimum of 6 % of total staff/visitor parking provision for the visitor centre / ecology park would be disabled parking. Step-free and safe routes to entrances would be provided from external accessible parking bays. Within the public realm, seating with space at the side for a wheelchair user to sidle and transfer onto the seat, or simply sit and not obstruct the pavement, would be provided. External tables would also be provided with full access for wheelchair user and prams etc. From a health and wellbeing perspective, inclusive and accessible design plays an important role in reducing health inequalities by enabling people with mobility impairments, disabilities or reduced physical capacity to access employment opportunities, public spaces and natural environments independently. Census data indicates that approximately 15–17 % of residents in Havering and neighbouring Thurrock identify as disabled under the Equality Act, highlighting the importance of designing environments that are accessible to a wide range of users. The commitment to BS8300 inclusive design standards, provision of step-free routes, accessible parking, wheelchair-friendly entrances and accessible internal facilities supports equitable access across the development. Accessible pedestrian and cycle routes within the ecology park are particularly significant from a health perspective, as access to outdoor green space and opportunities for physical activity are often disproportionately limited for individuals with mobility impairments. Enabling inclusive access to nature can support both physical and mental wellbeing, contributing to improved social participation, reduced isolation and enhanced quality of life. The rural context of the site presents potential challenges for accessibility due to greater distances between destinations and limited existing infrastructure. The provision of accessible drop-off points, seating opportunities, and inclusive public realm design therefore represents an important mitigation against potential exclusion, supporting rest opportunities and enabling longer journeys to be broken into manageable stages. Inclusive design measures may also benefit a broader range of users beyond those with formal disabilities, including older people, parents with pushchairs and individuals with temporary injuries, supporting a “lifetime neighbourhood” approach. By embedding accessibility within the design of buildings, routes and open spaces, the proposed development contributes positively to health outcomes through increased independence, improved access to employment and recreation, and enhanced social inclusion. Overall, the proposal demonstrates strong alignment with inclusive design principles and is likely to result in positive health outcomes by reducing physical barriers to participation and supporting equitable access to the site’s facilities and green infrastructure.		

Table 8.6: Crime Reduction and Community Safety				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
Does the proposal meet Secure by Design to reduce crime?	**Yes** No N/A	**Construction Impact:** All reasonably practicable measures shall be taken to mitigate the risks and impacts to the community from construction activities through adherence to the CLOCS standard. **Operational Impact:** The data centre campus would be accessed via a new site access road from Fen Lane and would include management, maintenance and security accommodation together with security check point barriers and gates and a perimeter steel security fence to restrict public access to the area, with access controlled at main entrance points. The vehicle gates to the data centre campus would have rising arm barriers overlocked by a manned guarding position. The perimeter fence would be of a minimum height of 2.4 m and should have a 2 m minimum standoff between the fence and any trees and tree canopies, video surveillance columns, light columns, etc. Individual plot tenants would be responsible for their own security on the individual building plots. The wider ecology park site would have boundary treatments in the form of timber post and rail fencing, hedge rows and ditches to provide natural impassable boundaries. More formal vertical bar fencing and gates are proposed at all site pedestrian and cycle entrances and to the visitor centre and horticulture centre to be locked at night. Video surveillance would be provided throughout cycle store areas, whether internal or external. Cycle store areas would comply with Secure by Design requirements. Suitable lighting on all pedestrian/cycle and vehicle routes within the site would be provided, including the pedestrian/cycle route connecting to Ockendon Road, ensuring a sense of safety throughout the site during the hours of darkness. Additionally, the Designing out crime officer has been engaged during the development of the proposed development From a health and wellbeing perspective, perceptions of safety and security within the built environment are key determinants influencing mental wellbeing, social interaction and willingness to use public spaces and active travel routes. The incorporation of Secure by Design principles, including controlled access points, perimeter security, lighting and surveillance, may contribute positively to reducing opportunities for crime and antisocial behaviour, thereby supporting a safer environment for staff and visitors. Within the ecology park and public access areas, the combination of defined boundaries, clear access points, appropriate lighting and natural surveillance through well-designed routes is likely to enhance users' sense of safety. Perceived safety is particularly important in encouraging use of walking and cycling infrastructure, especially during early morning or evening hours associated with shift-based working patterns. Improved perceptions of safety may therefore indirectly support increased physical activity and social interaction, contributing to broader health benefits. The rural context of the site means that isolation and low natural footfall could otherwise contribute to feelings of vulnerability or reduced use of public spaces. The proposed measures, including lighting, managed entrances and monitored cycle storage areas, help address these potential barriers by providing reassurance and clear wayfinding. This may be particularly beneficial for groups who are more sensitive to perceived safety risks, such as women, older people or individuals travelling alone. While the data centre campus itself requires higher levels of security due to operational requirements, the separation between secure operational areas and publicly accessible ecology park spaces helps maintain openness and accessibility, avoiding the creation of environments perceived as exclusionary. Balancing robust security with inclusive public realm design is important in supporting positive community perceptions and encouraging engagement with the site. Overall, the proposed development demonstrates a proactive approach to designing out crime and promoting safety through environmental design. These measures are likely to have positive health outcomes by supporting mental wellbeing, encouraging use of public spaces and enabling safe active travel, without introducing identifiable adverse health effects. No additional mitigation is considered necessary beyond the embedded design measures.	**Positive** Negative Neutral Uncertain	
Does the proposal incorporate elements to help design out crime?	**Yes** No N/A		**Positive** Negative Neutral Uncertain	None required.
Does the proposal incorporate design techniques to help people feel secure and avoid creating 'gated communities'?	Yes **No** N/A	The concept of gated communities is not considered relevant given the nature of the proposed development. There are no existing or proposed residents or communities on-site.	N/A	None required.
Does the proposal include attractive, multi-use public spaces and buildings?	Yes No **N/A**	**Construction Impact:** N/A. **Operational Impact:**	N/A	None required.

Table 8.6: Crime Reduction and Community Safety				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		The proposed development includes an extensive ecology park with extensive landscaping and a visitor centre (minimum 300 m^2) which would include external amenity areas and further landscaping. The remainder of the proposed development would comprise data centre buildings, data centre campus management and security facilities, and indoor horticulture facilities, none of which would include public spaces. The ecology park would include a network of path types to provide accessible public pedestrian and cycle routes throughout the site and allow ease of access from the surrounding area. A series of informal paths are also proposed in the form of natural trails and mown strips. The visitor centre would provide the main hub for people actively visiting and managing the site, however, the site should also provide for passive recreation and those who are passing through.		
Has engagement and consultation been carried out with the local community and voluntary sector?	Yes **No** N/A	At this stage of the planning process, no formal consultation with the local community has been undertaken in relation to the proposed development. There has been some informal engagement undertaken by the developer, an overview of which is contained in the Equalities Impact Assessment. For the purposes of this HHIA, these informal engagement activities are not relevant. Additionally, the LDO process includes a consultation stage during which both consultees and members of the public can provide comments on the proposed development. **Construction Impact:** In accordance with the CoCP, a Project Environmental Manager (PEM) shall be named and contact telephone number provided at all entrances to the construction site. The PEM shall have primary responsibility for liaising with the LPA and other stakeholders on environmental matters and shall keep neighbours, and other relevant parties informed of the nature of the on-going works, their duration and programme. The PEM will deal with enquiries from the general public, including any complaints. Any complaints shall be logged and reported to the LPA as soon as practicable. The PEM will coordinate responses to queries and address issues in a timely and satisfactory manner. **Operational Impact:** N/A	Positive Negative **Neutral** Uncertain	
Have the local community identified any particular issues (positive or negative) about the scheme?	Yes **No** N/A		Positive Negative **Neutral** Uncertain	

Table 8.7: Access to Healthy Food				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
Does the proposal facilitate the supply of local food, e.g. allotments?	Yes **No** N/A	**Construction Impact:** N/A. **Operational Impact:** The proposed development would result in the loss of agricultural land however, it would also include a maximum of 50,000 m^2 GEA of indoor horticultural facilities, however it is not anticipated that this would be publicly accessible or necessarily contribute to the availability of 'local' food within the context of this assessment.	N/A	None required.
Does the proposal include a range of retail uses, including food stores and smaller affordable shops for social enterprises?	Yes **No** N/A	**Construction Impact:** N/A. **Operational Impact:** There are no existing or proposed retail uses that would impact upon the local availability or consumption of healthy or unhealthy food.	N/A	None required.
Does the proposal avoid contributing towards an over-concentration of hot food takeaways in the local area?	Yes **No** N/A		N/A	None required.

Table 8.8: Access to Work and Training

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal provide access to local employment and training opportunities, including temporary construction and permanent 'end-use' jobs?	**Yes** No N/A	The site is currently under agricultural use from four existing arable farms. The construction, and subsequent operation of the completed development, would not result in the closure of those farms but would result in the loss of productive land area and reduced yields which could have a knock on effect on employment requirements. There are currently 3.5 permanent employees at the plant nursery and associated small holdings, and 200 days of seasonal agricultural employment (approximately 0.5FTE) which would be impacted. From a health perspective, access to stable employment is a key social determinant influencing physical and mental wellbeing through pathways including income security, reduced financial stress, improved housing stability and enhanced social participation. The provision of both temporary construction employment and long-term operational jobs therefore represents an important positive health outcome associated with the proposed development. Baseline socio-economic data indicates relatively strong employment rates within Havering; however, local health indicators highlight issues such as lower physical activity levels and higher prevalence of overweight and obesity, which may be indirectly influenced by wider socio-economic conditions. Increased employment opportunities, particularly where local recruitment is prioritised, may contribute to reducing health inequalities by improving economic resilience and supporting access to healthier lifestyles. **Construction Impact:** The construction stage of the proposed development would generate employment within the construction industry over the construction period, generating direct and indirect social and economic impacts, with temporary, long-term effects. During construction, the proposed development is estimated to generate 1,340 job years of employment in the UK, and 330 job years of employment (per year) at the borough level. According to the 2023 Business Register and Employment Survey (BRES), there were 8,000 people employed in the construction sector in Havering in 2021. The 330 jobs created or sustained as a result of the construction stage, represents a 4 % increase, if all employment was realised in that sector, or 0.4 % across the whole local economy. In order to maximise the retention of employment within Havering, an employment and skills strategy would be secured through a s106 agreement. Chapter 7: Socio-Economics of the ES concludes that construction employment and associated GVA would generate a temporary, long-term direct moderate Beneficial (significant) effect at the borough level. The construction stage is predicted to generate significant temporary employment opportunities, including roles across a range of skill levels. This diversity of roles may allow access to employment for individuals with different qualifications and experience levels, supporting inclusive economic participation. However, construction employment is inherently temporary, and associated health benefits may therefore be time-limited unless supported by skills development and training opportunities that enhance longer-term employability. The proposed employment and skills strategy secured through the Section 106 agreement is therefore an important mitigation measure, supporting pathways into sustained employment and maximising local benefits. **Operational Impact:** Once completed, the proposed development is predicted to give rise to approximately 350 direct jobs at the Borough level together with a further 260 jobs supported via indirect or induced spending at the borough level. Employment generated is expected to be dispersed across a variety of sectors in Havering with over half the total created or sustained employment in the Information & Communication sector. Once fully operational in 2045, it is estimated that the completed development could generate 2.3 % increase in Havering's total GVA, and a 0.5 % uplift to employment across the local economy by that time. Chapter 7: Socio-Economics of the ES concludes that the operational effect on the local economy is considered to be a permanent, long-term, direct, major beneficial (significant) effect at the borough level. The transition from agricultural land use to a data centre campus may result in limited displacement effects for existing agricultural workers, including the loss of approximately 3.5 permanent roles and seasonal employment. While relatively small in scale, this represents a potential localised negative impact, particularly where agricultural employment may provide accessible opportunities for individuals without specialist technical skills. Ensuring that training and recruitment initiatives support local workforce transition into new roles may help mitigate this risk. Operational employment associated with the completed development is predicted to provide long-term economic benefits, particularly within the Information and Communication sector. These roles may contribute positively to local economic growth and health outcomes through increased income opportunities and job stability. However, higher-skilled employment roles may require specialist training or qualifications, and the extent to which local residents benefit will depend on the effectiveness of recruitment and training programmes in enabling local access. Overall, the proposed development is likely to result in positive health outcomes through increased employment opportunities, economic growth and associated social benefits. The secured employment and skills strategy is particularly important in ensuring	**Positive** Negative Neutral Uncertain	Development of a employment and skills strategy should be secured through a s106 agreement.
Will the proposal affect local employment levels?	**Yes** No N/A		**Positive** Negative Neutral Uncertain	

Table 8.8: Access to Work and Training

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		that these benefits are equitably distributed and that potential negative effects associated with land use change are appropriately mitigated.		
Does the proposal provide for childcare or assist parents in seeking childcare facilities?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** Due to the nature of the proposed development, there are no existing or proposed childcare facilities.	N/A	None required.
Does the proposal include managed and affordable workspace for local businesses?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** Due to the nature of the proposed development, there are no existing or proposed workspaces.	N/A	None required.
Does the proposal include opportunities for work for local people via local procurement arrangements?	**Yes** No N/A	The proposed development would result in a net increase in the number of local jobs across a range of occupation types, as set out above. **Construction Impact:** The jobs likely to be created during construction of the proposed development would be varied, from low-skilled labouring through a range of skilled construction trades to technical and professional work. It is likely that the principal contracts would be put out to tender on a regional or national basis although there may be sub-contract opportunities for local firms and skills. Opportunities for local people to access jobs would depend on both successful bidding for contracts by local contractors and local people with appropriate skills and experience applying for the small proportion of jobs that may be advertised locally. The LPA would seek to maximise local recruitment through enhancement measures through, for example, advertising job vacancies in local job agencies and newspapers in accordance with 'local and relevant postcodes' to maximise those employed locally. Development of an employment and skills strategy would be secured through a s106 agreement. From a health perspective, local procurement and recruitment practices influence the extent to which economic benefits are distributed within the surrounding community. Access to employment opportunities for local residents supports wider determinants of health by improving income stability, reducing financial stress and enhancing social inclusion. Where procurement arrangements prioritise local labour and supply chains, economic benefits are more likely to remain within the local area, contributing to community resilience and potentially reducing health inequalities. The range of roles anticipated during construction, spanning from entry-level labouring positions to skilled and professional occupations, presents opportunities for individuals with different levels of experience and qualifications. However, the extent to which local residents benefit would depend on accessibility to recruitment processes, awareness of opportunities and alignment between workforce skills and job requirements. Without targeted measures, there is a risk that employment benefits may be captured primarily by regional or national labour markets rather than local communities. The proposed employment and skills strategy secured through the Section 106 agreement is therefore important from a health perspective, as it may help ensure that local residents are supported in accessing employment opportunities through targeted advertising, skills development and engagement with local job agencies. Supporting local participation in the workforce may also have indirect health benefits by strengthening social cohesion and community identity through shared economic participation. Local procurement opportunities for subcontractors and local businesses may further contribute to positive health outcomes by supporting local economic activity, sustaining small and medium enterprises and enhancing community wealth building. These indirect economic effects can influence health through improved local economic stability and increased opportunities for local employment across supply chains. Overall, the proposed development demonstrates potential to generate positive health outcomes through local employment and procurement pathways. The effectiveness of these benefits would depend on the implementation of the employment and skills strategy and ongoing monitoring to ensure that opportunities are accessible to local residents. **Operational Impact:**	Positive Negative **Neutral** Uncertain	Development of a employment and skills strategy should be secured through a s106 agreement.

Table 8.8: Access to Work and Training				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		As with the construction phase, development of an employment and skills strategy would be secured through a s106 agreement to encourage local training and procurement opportunities. The extent of any benefits would depend on the implementation of the strategy and ongoing monitoring to ensure that opportunities are accessible to local residents.		

Table 8.9: Social Cohesion and Lifetime Neighbourhoods

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal consider health inequalities by addressing local needs through community engagement?	Yes **No** N/A	At this stage of the planning process, no formal consultation with the local community has been undertaken in relation to the proposed development. There has been some informal engagement undertaken by the developer, an overview of which is contained in the Equalities Impact Assessment. For the purposes of this HHIA, these informal engagement activities are not relevant. Additionally, the LDO process includes a consultation stage during which both consultees and members of the public can provide comments on the proposed development.	N/A	
Does the proposal connect with existing communities, i.e. layout and movement which avoids physical barriers and severance and land uses and spaces which encourage social interaction?	**Yes** No N/A	**Construction Impact:** Given the existing use of the site, it is not considered that construction activities of the proposed development would result in severance between existing communities or physical barriers. **Operational Impact:** Strategic Cycle and Pedestrian routes are proposed across the site creating and promoting sustainable transport and connecting to routes into the surrounding roads and communities. The primary cycle and pedestrian access routes on to and across the site would be provided to link the proposed development with surrounding communities and public transport links, as discussed further in Table 8.5. Other dedicated pedestrian routes and nature walking tracks would be incorporated into the ecology park which would extend around the whole of the secure data centre campus and a network of footpaths and cycleways through the ecology park would be provided including a primary strategic footway/cycleway link to the Data Centre Campus from the B186 Ockendon Road in North Ockendon. Existing public footpath FP233 through the site would be upgraded and run through the new ecology park from Bury Farm Walk entrance to the Discovery Zone Link on Fen Lane. Existing public footpath FP283 would also be upgraded with an upgraded entrance on Ockendon Road though new meadows and the West Lookout all the way to Fen Lane on the south where a completely new route would run parallel to the road. This footpath would also branch off at the West lookout to continue towards the further Bury Farm Walk. All existing footpaths on site would be maintained to be more accessible and family friendly. The proposed development would be a catalyst to the enhancement of pedestrian and cycle route connections from north to south and from east to west and would contribute to a good network of access routes for public use which encourages movements through the site and local area and avoids severance. Highway works would be carried out to provide a footway on the northern side of Fen Lane between the junction with Ockendon Road and east of the Ladyville Lodge Care Home. The new footpath would tie-in to the proposed primary strategic footway/cycleway through the ecology park. The development of the visitor centre and ecology park would also provide a new publicly accessible destination which would be open to all and encourage visitors to the site and social interaction. From a health and wellbeing perspective, the extent to which development connects with existing communities and avoids physical or social severance is an important determinant influencing social cohesion, accessibility and opportunities for everyday physical activity. The enhancement of existing Public Rights of Way and provision of new strategic pedestrian and cycle connections linking surrounding settlements to the site reduces potential barriers to movement and helps integrate the development within the wider landscape rather than creating an isolated or inaccessible destination. In rural contexts such as this, dispersed settlement patterns and limited pedestrian infrastructure can contribute to reduced social interaction and increased reliance on private vehicles. The proposed network of upgraded footpaths and cycle routes therefore represents a meaningful enhancement to local connectivity, enabling more direct and safer access between communities, public transport nodes and recreational spaces. By facilitating movement through the site from north to south and east to west, the development reduces the risk of physical severance that can arise from large-scale infrastructure projects. The ecology park and visitor centre provide opportunities for shared public space and social interaction, which may support mental wellbeing through increased opportunities for outdoor recreation, informal social contact and engagement with nature. Accessible natural environments are associated with improved mood, reduced stress and enhanced community cohesion. The creation of a new destination that is publicly accessible may also encourage wider community use of the site, supporting a sense of ownership and place. However, the presence of a secure data centre campus within the wider landscape introduces a degree of spatial separation between operational areas and publicly accessible spaces. While necessary for operational and security reasons, the design	**Positive** Negative Neutral Uncertain	None required.

Table 8.9: Social Cohesion and Lifetime Neighbourhoods

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		approach, including clear routes around and through the ecology park, helps ensure that public movement is maintained and that the development does not create a barrier within the local movement network. Overall, the proposed development is likely to result in positive health outcomes by improving connectivity, enhancing opportunities for social interaction and supporting access to green space, while avoiding significant severance effects. No additional mitigation is considered necessary beyond the embedded design measures.		
Does the proposal include a mix of uses and a range of community facilities?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** A visitor's centre would be delivered which be located in Build Zone H and would include: • a flexible/multi-purpose room or space that can accommodate 25-50 people (a minimum GIA of 70 m^2) suitable for educational purposes; • a dedicated area for educational exhibits; • ancillary office space and food/beverage provision (vending machines as a minimum); • storage space; and • staff restroom including kitchen facilities. The visitor centre and ecology park would provide opportunities for education and community engagement, through features including information and interpretation boards, viewpoints and observation towers, and through the maintenance and management of the park. It is anticipated that local wildlife groups would be engaged to aid in implementation and management of the site, with volunteer programmes providing local community support and a sense of local ownership. Suitable facilities could also be provided for schools and youth groups, enhancing the educational function of the ecology park. From a health perspective, the inclusion of community-oriented facilities within the visitor centre and ecology park supports important social determinants of health by creating opportunities for education, community engagement and social interaction. Access to shared spaces that facilitate learning, volunteering and recreational activities can contribute positively to mental wellbeing by reducing social isolation, promoting community participation and strengthening local identity. The provision of a flexible multi-purpose space capable of hosting educational activities, community events or small gatherings introduces an element of social infrastructure within an otherwise employment-focused development. This may be particularly beneficial within a rural context where community facilities are often limited and dispersed, and where new accessible spaces can encourage wider participation across different age groups and interests. Engagement opportunities with local wildlife groups and volunteer programmes may further enhance community ownership of the ecology park, supporting a sense of belonging and collective stewardship that has been associated with improved wellbeing outcomes. Educational features, interpretation boards and opportunities for school and youth group engagement also provide indirect health benefits by encouraging outdoor learning and contact with nature. Exposure to natural environments has been shown to support cognitive development in younger populations and reduce stress levels among all age groups. The integration of these functions within the ecology park may therefore broaden the appeal of the site beyond its primary operational function, contributing to inclusive access and social interaction. Opportunities for voluntary sector involvement may also enhance social capital by enabling collaboration between local organisations, community groups and site management. Increased social capital is associated with improved resilience, stronger support networks and positive mental health outcomes. Overall, while the proposed development is not primarily focused on delivering traditional community infrastructure, the inclusion of the visitor centre and associated educational and engagement features represents a positive contribution to community wellbeing and social cohesion. No additional mitigation is considered necessary beyond the embedded design and management measures.	**Positive** Negative Neutral Uncertain	None required.
Does the proposal provide opportunities for the voluntary and community sectors?	**Yes** No N/A		**Positive** Negative Neutral Uncertain	None required.
Does the proposal take into account issues and principles of inclusive and age-friendly design?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The development of the visitor centre, ecology park and strategic landscaping would ensure free and easy access for all users and would be an inviting destination for all.	**Positive** Negative Neutral Uncertain	None required.

Table 8.9: Social Cohesion and Lifetime Neighbourhoods				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		All buildings and new infrastructure would be designed to be inclusive in respect of providing access and facilities for wheelchair users and people with limited mobility. An accessible bird hide would be provided near to the Visitor Centre that can accommodate a minimum of six people including wheelchair users. From a health and wellbeing perspective, inclusive and age-friendly design supports equitable access to environments and services across the life course, enabling individuals of different ages and abilities to participate fully in work, recreation and community life. Havering has a relatively older population profile compared to the London average, and inclusive design principles are therefore particularly important in supporting healthy ageing, independence and continued social participation. The commitment to accessible infrastructure throughout the visitor centre, ecology park and wider development, including step-free access, inclusive routes and facilities designed for wheelchair users and individuals with reduced mobility, supports physical accessibility and reduces barriers that can otherwise contribute to social isolation or reduced physical activity among older people and those with mobility impairments. Age-friendly design features such as accessible seating, clear routes and rest opportunities within the landscape can enable users to engage with the environment at their own pace, supporting both physical and mental wellbeing. Access to natural environments has been associated with improved mental health outcomes, reduced stress and increased opportunities for low-impact physical activity, which may be particularly beneficial for older adults or individuals with chronic health conditions. The provision of an accessible bird hide and inclusive public realm features supports meaningful engagement with nature and enhances opportunities for inclusive outdoor recreation. Inclusive design measures also benefit a wider range of users beyond older adults or those with disabilities, including families with young children, individuals with temporary injuries and those using mobility aids or pushchairs. By embedding age-friendly and inclusive principles within the design of buildings and public spaces, the proposal contributes positively to creating a welcoming environment that supports wellbeing and accessibility for all. Overall, the proposed development demonstrates a positive approach to inclusive and age-friendly design that is likely to support health outcomes through increased accessibility, social participation and opportunities for engagement with nature. No additional mitigation is considered necessary beyond the embedded design measures.		

Table 8.10: Minimising the use of Resources

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal make best use of existing land?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The site currently comprises four agricultural farms. The land has a character of open agricultural land interspersed by trees, field boundaries, hedgerows and ditches. There is a significant need for additional data centre capacity in the UK and London. Whilst data centres continue to be developed throughout Greater London, Knight Frank[30]notes that 95 % of the end user demand is from cloud customers who require interconnectivity within pre-defined 'Availability Zones'. Therefore, the proximity of any new data centre to the public cloud region and its users is a key consideration in evaluation site suitability. The London Cloud market is now experiencing severe supply constraints within its core AZs as demand continues to outpace available supply. While the London market has secured substantial power for future development, there is a shortage of readily available and confirmed power to meet cloud demand over the next five years. Savills was appointed by Digital Reef to provide advice based on their knowledge of the data centre market in the UK. The data relied upon in the Woodlands Park appeal, which originated from JLL, more closely reflects Savills view of the underlying market requirement driven by strong structural factors which are primarily cloud migration and digital infrastructure adoption. Savills state that there is currently 1,289 MW[31] of secured data centre capacity within the principal sub-markets in London i.e. where the site has been acquired, planning permission obtained and power secured. A significant portion of this power depends on the new Iver B substation at Uxbridge Moor which has faced significant delays and is not anticipated to be completed until 2029. Delays in power delivery are limiting the ability to meet the current need for public cloud services in London. It is clear that even if the current amount of secured data centre capacity in London was doubled (based on the quantum of need accepted in the Abbots Langley case) there would still be a significant shortfall at 2029. There is therefore an urgent need for additional data centre capacity to meet demand in the London cloud region and to ensure that the UK retains its competitive edge in attracting data centre investment and maintaining its leading position in Europe's digital economy. Data centres are built in specific locations based on factors like connectivity, accessibility to end users, and access to power. Power and fibre are the two fundamental prerequisites necessary for data centre functionality. The Savillls UK Data Centre Need and Supply Assessment identified a general area of search based on the existing West London Availability Zone, and the assessment of available power identified only one suitable location at the Warley Grid Supply Point ('GSP'). Warley GSP which is the only GSP with sufficient power that can be delivered within the required timescales for the proposed development. An extensive site search exercise was undertaken and a comprehensive assessment completed for seven different site options which could reasonably receive power from the Warley GSP and accommodate the need for a 'hyperscale' data centre campus and associated key infrastructure (electricity and back-up generators). The chosen site for the proposed development was deemed most suitable for a number of reasons but fundamentally its proximity to the GSP was a key determining factor. From a health perspective, land use decisions influence a range of environmental and social determinants of health, including access to green space, environmental quality, employment opportunities and climate resilience. The transition from agricultural land to a data centre campus represents a significant change in land function; however, the proposal incorporates extensive ecological landscaping and publicly accessible open space, which may enhance opportunities for recreation, physical activity and contact with nature compared to the existing private agricultural use where public access is currently limited. The provision of a large-scale ecology park surrounding the secure operational areas has the potential to deliver positive health outcomes by increasing access to natural environments, supporting mental wellbeing and encouraging physical activity. Evidence suggests that accessible green infrastructure contributes to reduced stress levels, improved mood and increased opportunities for social interaction. The enhancement of biodiversity and natural habitats may further contribute to environmental quality and long-term ecosystem resilience, which indirectly supports population health. At a wider strategic level, the proposed development responds to increasing demand for digital infrastructure, which has indirect health implications through supporting economic growth, technological connectivity and access to digital services. Digital infrastructure underpins	**Positive** Negative Neutral Uncertain	None required.

[30] Data Centre Development Report – Land to the East of South Mimms Service Station – Knight Frank (September 2024)
[31] East Havering Data Centre Campus – UK Data Centre Need and Supply Assessment (August 2025)

Table 8.10: Minimising the use of Resources

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		modern healthcare delivery, remote working and social connectivity, all of which can influence health outcomes and resilience, particularly following shifts toward digital services and hybrid working patterns. However, the change from agricultural land use may result in the loss of certain landscape characteristics and agricultural productivity, which can influence local identity and perceptions of place. The design approach, including strategic landscaping, habitat creation and retention of natural features, helps mitigate potential negative effects by maintaining elements of rural character and integrating the development within the surrounding landscape. Overall, the proposed development demonstrates a balanced approach to land use by responding to strategic infrastructure needs while incorporating significant ecological and public access enhancements. From a health perspective, the resulting effects are considered positive, particularly through improved access to green space, economic opportunities and climate-resilient deign measures. No additional mitigation is considered necessary beyond the embedded design and landscape strategies.		
Does the proposal encourage recycling (including building materials)?	**Yes** No N/A	**Construction Impact:** All waste material generated on-site during the construction process would be handled and disposed of in accordance with Waste Management legislation. The following measures would be considered to ensure that waste is minimised: • Avoidance of waste at the design stage; • Use of materials with recycled content; • Provision of construction material cut to size to reduce waste generated on-site; • Just-in-time deliveries; • Safe and secure storage of materials; • Minimisation of packaging; • Reuse or recycling of unwanted packaging e.g. pallets; and • Reuse of waste on-site. All waste produced on-site would be appropriately stored to prevent escape or leakage whilst on-site or in transit. Waste storage facilities would be suitable to contain waste and labelled. Vehicles used for transporting waste shall be suitable to prevent escape during transit. No wastes would be burnt or disposed on-site. At this stage it is anticipated that approximately 29,326 m^3 of recyclable construction waste would arise from the data centre campus and associated buildings, and approximately 2,405 m^3 of recyclable construction waste would arise from the ecology park. As set out in the Whole Life Carbon Assessment (WLCA)[32] there is a commitment for 100 % excavation material to be diverted from landfill. There are also intentions to divert 95% of construction waste from landfill for reuse, recycling or recovery. **Operational Impact:** Operational waste from the proposed development would include a mixture of waste streams from the data centre, horticultural use, and visitor centre uses, as well as municipal waste streams from publicly accessible areas. Dedicated bin storage areas would ensure the separate storage and collection of waste, reusable items, recyclable materials, compostable waste and green waste from the horticulture uses. Bin storage areas would be located internally or externally in fenced or screened compounds for private refuse collection and management. Green waste (such as grass and wood clippings, pruning, branches, twigs, leaves, tree trimmings) from the routine long-term management of the ecology park would be collected and disposed at the time the maintenance works were undertaken and would not be stored on-site. From a health perspective, effective waste management and recycling practices contribute to maintaining environmental quality by reducing risks associated with pollution, odour, vermin and visual nuisance, all of which can influence community wellbeing and residential amenity. The implementation of waste minimisation measures during construction, including avoidance of waste at the design stage, reuse of materials and recycling of packaging, supports a reduction in environmental impacts that could otherwise affect local air quality, soil and water conditions.	**Positive** Negative Neutral Uncertain	None required.

[32] Mainer Associates, 2025. Digital Reef Limited: East Havering Data Centre Campus: Local Development Order – Whole Life Carbon Assessment. Revision N.

Table 8.10: Minimising the use of Resources

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		Proper storage, segregation and handling of waste materials reduce the risk of accidental release or contamination, helping to protect both environmental receptors and human health. The commitment to preventing on-site burning of waste is particularly relevant in avoiding localised air quality impacts and associated respiratory health risks. Operational waste management arrangements that provide dedicated storage and separation of waste streams, including recyclable and compostable materials, support sustainable waste practices and reduce reliance on landfill. From a health perspective, this contributes indirectly to climate mitigation and environmental sustainability, which are recognised determinants of long-term population health. The management of green waste associated with the ecology park also supports good environmental stewardship by ensuring that maintenance activities do not create nuisance or hygiene issues. Well-managed waste systems within publicly accessible areas are important in maintaining perceptions of cleanliness and safety, which may influence the willingness of visitors to use and enjoy outdoor spaces. Overall, the proposed development demonstrates a comprehensive approach to waste minimisation and recycling that supports environmental protection and contributes positively to health outcomes by reducing potential exposure to pollutants and maintaining high-quality public environments. No additional mitigation is considered necessary beyond the embedded waste management measures.		
Does the proposal incorporate sustainable design and construction techniques?	**Yes** No N/A	Each data centre building would be required to achieve at least BREEAM Excellent rating. All data centre buildings would aim to be net zero carbon Where this is not possible, buildings would achieve an on-site carbon reduction of at least 40 per cent beyond Building Regulations. Where it is clearly demonstrated that it is not possible to achieve the zero-carbon target on site, any shortfall would be provided through a cash in lieu contribution to the borough's carbon offset fund to be secured through a planning obligation. The proposed data centre buildings would have relatively low heat demand requirements, but high cooling demands due to the server equipment present; they are typically a net generator of heat rather than a net consumer. There are no opportunities for the proposed development to import district heat, however there are opportunities to export waste heat from site. Accordingly, the proposed development would be served by an enclosed district heating centre which would both collect some of the waste heat from all of the data centre buildings on the campus and distribute it to on-site and potential offsite uses. The district heating energy centre would utilise the surplus heat being generated from the on-site electrical infrastructure and data buildings. The main district heating pipes would deliver the bulk of collected heat to an energy centre. The proposed energy centre would provide plant equipment to allow the surplus heat to be reused on-site in the heated indoor horticulture, visitor centre and other accommodation requiring heating. As detailed in the Sustainability and Energy Statement, horticultural buildings would be provided with waste heat from the data centres through underground pipework and a heat pump would be utilised to lift heat from 28 °C to required pipe temperatures of between 35 and 45°C. Building fabric insulation levels and U values would exceed current part L standards of the Building Regulations (2021) to minimise heating and cooling requirements. Energy efficient lighting and controls are specified throughout the development and passive building fabric design measures have been specified to reduce energy consumption. As set out in the WLCA, sustainable material sourcing and waste management would be considered throughout the life of the proposed development to ensure the it's environmental footprint is minimised as far as possible. The proposed development aims to rely on locally manufactured products where this meets the necessary quality standards. The visitor centre building would achieve a BREEAM rating of outstanding and be net zero carbon in line with the definition included in Policy SI 2 of The London Plan (2021) achieving an on-site carbon reduction of at least 100 per cent beyond Building Regulations, with at least 10 % of this carbon reduction being achieved via energy efficiency measures alone. Modular construction design would be explored to reduce building waste and embodied carbon. Systems in the building would be specified to have low energy and low water usage. The materials in the building would be as environmentally responsible as possible; all timber from managed sources, paint/varnish finishes kept to a minimum and are to a green specification. Rainwater harvesting measures would be adopted across the site to reduce potable water consumption. Water consumption across the site is estimated to be 62.5 million litres per annum due to process cooling requirements for the data centres, 41.4 million litres per annum irrigation requirements of the horticulture and 17.4 million litres per annum domestic water use in the administrative areas. Rainwater from all the available roof areas of the buildings would be channelled into above or below ground rainwater storage tanks situated close to the plant gantry. The water from the tanks would be filtered and treated prior to use for the data centre adiabatic cooling process. Rainwater	**Positive** Negative Neutral Uncertain	None required.

Table 8.10: Minimising the use of Resources

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		harvesting is estimated to yield up to between 43,786,752[33] and 51,094,800[34] l/annum and is therefore predicted to meet up to 53 %[35] of annual cooling process water demand. Rainwater harvesting for horticultural uses is estimated to yield between 30,000,000 l/annum)[36] and 25,700,952 l/annum[37] and is therefore predicted to meet up to 85%[38] of annual water demand with the remaining demand met from utility potable water. To minimise the consumption of utility potable water for the data centre cooling process, rainwater harvesting would be prioritised and potable water would only be used to meet any shortfall in water demand. Measures million litres per annum also be incorporated into the welfare areas to improve efficiencies, including the use of water meters and reporting software to enable effective monitoring, leak detection systems and alarms, minimum water efficiency standards for all fixtures and fittings, dual flush WCs with a flush volume of 4.5 litres or less and electronic sensor taps. From a health perspective, sustainable design and construction techniques contribute to both immediate environmental health protection and long-term population wellbeing through reduced greenhouse gas emissions, improved resource efficiency and enhanced climate resilience. The commitment to achieving BREEAM Excellent ratings and targeting net zero carbon performance reflects a design approach aligned with reducing environmental impacts that are increasingly recognised as determinants of public health, including air quality, climate change and resource security. Energy efficiency measures, including enhanced building fabric performance, passive design strategies and efficient lighting systems, support reduced operational energy demand and associated emissions. Although data centres have inherently high energy requirements, the integration of waste heat recovery and reuse within the district heating system represents a significant sustainability feature. By capturing and redistributing surplus heat to horticultural buildings and other on-site uses, the development reduces wasted energy and contributes to more efficient resource use, which indirectly supports environmental conditions linked to improved health outcomes. Climate change mitigation measures have wider health implications by contributing to reduced carbon emissions and supporting adaptation to future climate risks. Energy-efficient buildings and infrastructure can also support thermal comfort and reduce exposure to extreme temperatures for building users. Rainwater harvesting and water efficiency measures enhance resource resilience by reducing reliance on potable water supplies, which is particularly relevant in the context of increasing climate variability and water scarcity pressures. From a community perspective, sustainable construction practices, including modular construction approaches, responsible material sourcing and waste reduction strategies, may reduce construction-related environmental impacts such as noise, dust and emissions, thereby supporting local environmental quality during development phases. The integration of sustainability principles throughout the scheme therefore contributes positively to environmental determinants of health. Overall, the proposed development demonstrates a comprehensive approach to sustainable design and construction, incorporating energy efficiency, carbon reduction, water management and resource reuse measures that support both environmental sustainability and long-term health outcomes. No additional mitigation is considered necessary beyond the embedded sustainability strategy.		

33 Publicly available calculator provided by Rainwater Harvesting.co.uk.
34 Standard Average Annual Rainfall (SAAR) for the period 1941 to 1970 in mm.
35 Actual % is subject to data centre load and ambient conditions and actual rainfall coinciding with water demand.
36 Standard Average Annual Rainfall (SAAR) for the period 1941 to 1970 in mm.
37 Publicly available calculator provided by Rainwater Harvesting.co.uk.
38 Actual % is subject to daylight hours and actual rainfall coinciding with water demand.

Table 8.11: Climate Change

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
Does the proposal incorporate renewable energy?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The proposed development would provide for a variety of green energy technology to support the proposed data use and achieve on-site renewable energy and future Zero carbon targets. As discussed in Table 8.10, each data centre building would be required to achieve at least BREEAM Excellent rating. All data centre buildings would aim to be net zero carbon but as a minimum would achieve 40 % improvement over Building Regulations Part L 2021 Target Emission Rates and a 20 % reduction through renewable energy and other low carbon technologies and/or energy efficiency measures. The proposed development would be served by an enclosed district heating centre. This would both collect some of the waste heat from all of the data centre buildings on the campus and distribute it to on-site and potential offsite uses. Waste heat would be exported for use in the proposed indoor horticulture facilities. The district heating centre would have the potential to export surplus waste heat to serve off-site heat networks should a third party user be identified in the future. Low-carbon adiabatic cooling systems are proposed. These would comprise a high-temperature chilled water system with free-cooling adiabatic coolers to optimise both efficiency and heat export potential. Solar PV renewable energy is also proposed. Analysis of available roof top space on the data centres identifies that they could accommodate in total 11.4 MWp of roof mounted PV, this would generate 11,428 MWh per annum of electricity and substantially reduce emissions. From a health perspective, the incorporation of renewable and low-carbon energy technologies supports improved environmental conditions through reduced greenhouse gas emissions and decreased reliance on fossil fuel energy sources. Climate change is increasingly recognised as a significant determinant of population health, influencing risks associated with heat stress, air pollution, extreme weather events and resource security. Measures that reduce operational carbon emissions therefore contribute indirectly to protecting long-term community health and resilience. The integration of solar photovoltaic generation and low-carbon cooling technologies supports reduced operational emissions and improved energy efficiency, which may also contribute to wider air quality benefits at a regional scale. The reuse and export of waste heat through the district heating system represents an efficient use of energy that would otherwise be lost, potentially supporting decarbonisation of heating demand both on-site and in the surrounding area. From a health perspective, more efficient energy systems can contribute to reduced environmental impacts associated with energy generation and support sustainable urban infrastructure. Energy resilience is also relevant to health outcomes, as reliable energy infrastructure underpins essential services, digital connectivity and economic stability. The inclusion of renewable energy and low-carbon technologies strengthens the resilience of the development's energy strategy and supports broader sustainability objectives aligned with public health priorities. While the direct health benefits of renewable energy integration may not be immediately perceptible at a local level, the cumulative effects of reduced emissions, improved environmental performance and contribution to climate mitigation represent positive determinants of health at both local and wider scales. Overall, the proposed development demonstrates a strong commitment to incorporating renewable energy and low-carbon technologies, contributing positively to environmental sustainability and long-term health outcomes. No additional mitigation is considered necessary beyond the embedded design measures.	**Positive** Negative Neutral Uncertain	None required.
Does the proposal ensure that buildings and public spaces are designed to respond to winter and summer temperatures, i.e. ventilation, shading and landscaping?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The proposed development would incorporate the following: • Adiabatic Air-Cooled Chillers with dry air coolers have been selected as the preferred cooling technology, representing the 'Best Available Technology" (BAT) for cooling coupled with close controlled air distribution (Fan Wall) and Hot Isle Containment; • A diverse mains water would be supplied for cooling purposes that would be supplemented by rainwater harvesting; • An enclosed district heating centre would house plant and machinery to collect waste heat from the data centre buildings on the campus and redistribute it to the on-site horticulture and other off-site heat networks; and	**Positive** Negative Neutral Uncertain	None required.

Table 8.11: Climate Change

Assessment Criteria	Relevant?	Details/Evidence	Potential Health Impact?	Recommended Mitigation or Enhancement Actions
		• Each data centre building would be required to achieve at least BREEAM 'Excellent' rating, which would require designers to address heating, cooling and ventilation through the ''energy' and 'health and wellbeing' credits in the BREEAM manual. There are minimum standards to achieve for BREEAM Excellent (for example six credits in Energy 01 reduction of energy use and carbon emissions). With regard to landscaping, tree planting would be provided along cycle and pedestrian walkways where appropriate through the Ecology Park to provide shade to users. The LDO Landscape Proposal includes a variety of proposed tree planting species including climate resilient and native UK tree and grassland species. Detailed planting lists are set out within the Design Code and Habitat Strategy. From a health perspective, building and landscape design that responds effectively to seasonal temperature variation supports thermal comfort, reduces risks associated with overheating or cold exposure and enhances usability of both indoor and outdoor environments. Climate change projections indicate increasing frequency and intensity of hot weather events in London, making passive cooling, shading and climate-resilient design important considerations for protecting health and wellbeing. The incorporation of energy-efficient cooling technologies, ventilation strategies and waste heat recovery systems contributes to maintaining stable indoor environmental conditions for building occupants. Maintaining appropriate thermal comfort can reduce risks associated with heat stress, fatigue and reduced productivity, while also supporting overall wellbeing. The requirement to achieve BREEAM Excellent ratings ensures that heating, cooling and ventilation performance is addressed through recognised health and wellbeing standards. Landscape design measures, including tree planting along pedestrian and cycle routes, play an important role in moderating microclimate conditions by providing shade, reducing surface temperatures and improving outdoor thermal comfort during warmer periods. Comfortable outdoor environments are more likely to encourage walking, cycling and use of public spaces, supporting physical activity and social interaction. Climate-resilient planting strategies also contribute to long-term environmental sustainability and resilience to changing weather patterns. The integration of rainwater harvesting and sustainable cooling systems supports resource efficiency and resilience during periods of water stress, indirectly supporting environmental conditions linked to population health. The reuse of waste heat within the district heating system further enhances overall energy efficiency, reducing unnecessary energy loss and supporting sustainable temperature management across the site. Overall, the proposed development demonstrates a comprehensive approach to responding to seasonal temperature variation through building design and landscape strategies. These measures are likely to result in positive health outcomes by supporting thermal comfort, encouraging use of outdoor spaces and enhancing climate resilience. No additional mitigation is considered necessary beyond the embedded design measures.		
Does the proposal maintain or enhance biodiversity?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** The proposed data centre campus would be set in an ecology park, which would provide benefits to local biodiversity. Where possible, important habitats have been retained and incorporated into the design, with the woodland, with the majority of hedgerows retained. Where habitats cannot be retained, the landscape strategy includes provision of new habitat of similar and better quality in adjacent areas. A mosaic of habitat typologies would be created incorporating existing/retained and proposed broadleaf woodland, wet woodland, existing/retained and new mixed native hedgerows, seasonally wet grasslands, meadow and natural grassland, permanent water bodies and new ditches and reed beds to provide a diverse range of habitats for national key target species such as: • Curlew and other wetland bird species; • Snakes; • Bats; • Hedgehog; • Water vole; • Dormouse; and • Great Crested Newts. The eastern part of the Ecology Park would feature wetlands within the existing Mardyke tributary floodplain and would incorporate existing ditches and a proposed new network of ditches to help manage flooding through water retention. The wetland area would incorporate several permanent water bodies which would incorporate shallow margins and wetland scrapes creating new habitat for a range of species.	**Positive** Negative Neutral Uncertain	None required.

Table 8.11: Climate Change				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		Species rich seasonally wet grassland and meadows would be created adjacent to the ponds providing suitable habitats for reptiles and insects. Existing and proposed broadleaf woodland would help to filter views from the surrounding area reducing water runoff and improving soil quality. The outer perimeter boundary of the ecology park would comprise mixed native hedgerows. A number of ecological enhancements features are also proposed including invertebrate boxes, hotels and bee banks, artificial refugia for amphibians, bird boxes and bat boxes. These enhancements together with the retention of existing ditches and hedgerows and the provision of new habitat suitable for a range of species would enhance ecological connectivity through the wider landscape. From a health perspective, the maintenance and enhancement of biodiversity contributes positively to environmental quality, mental wellbeing and opportunities for nature-based recreation. Access to biodiverse natural environments has been associated with reduced stress, improved mood and increased opportunities for restorative experiences, which can support overall mental health. The integration of the data centre campus within a surrounding ecology park therefore represents a significant opportunity to deliver health benefits alongside ecological enhancement. The retention of existing habitats and creation of a diverse mosaic of woodland, wetland and grassland environments increases ecological richness and visual interest, which may encourage greater use of outdoor spaces for walking, cycling and informal recreation. Increased engagement with nature is associated with higher levels of physical activity and improved wellbeing outcomes. The provision of varied habitat types also supports seasonal variation and educational opportunities, which may enhance community engagement with the environment through volunteering, learning and stewardship activities. Wetland habitats and natural drainage features contribute to climate resilience by supporting natural flood management and improving water quality, which indirectly benefits human health by reducing environmental risks associated with flooding and supporting sustainable landscape management. Tree planting and vegetation also contribute to improved air quality, shade provision and microclimate regulation, enhancing environmental comfort for users of the site. From a community perspective, biodiversity enhancements may strengthen local identity and sense of place by retaining elements of the rural landscape while introducing new ecological features. The inclusion of habitat features such as bird boxes, bat boxes and pollinator habitats may also encourage wildlife observation and nature connection, which can support wellbeing across different age groups. Overall, the proposed development is likely to result in significant positive health outcomes through enhanced biodiversity, improved access to nature and strengthened environmental resilience. No additional mitigation is considered necessary beyond the embedded ecological design and management measures.		
Does the proposal incorporate sustainable urban drainage techniques?	**Yes** No N/A	**Construction Impact:** The construction activities on-site would include the removal of vegetation and compaction of the ground leading to an increase in surface water runoff. However, any increases in surface water volumes would be managed through the drainage infrastructure works to be implemented as the first phase of works. As part of the enabling works, temporary drainage arrangements/measures, flow control devices and attenuation features would be installed in accordance with the principles of the drainage strategy. These arrangements/measures would restrict flow into the sitewide drainage network, which would enable the site to operate at peak efficiency and discharge surface water into the Mardyke, as discussed further below. **Operational Impact:** The proposed development would introduce permanent impermeable surfaces and accordingly has the potential to increase surface water run off rates associated with the site. A drainage strategy for the proposed development comprises two proposed levels of water storage: • Build zone attenuation (excluding rainwater harvesting) – on plot attenuation tanks within the build zones which would release water at a fixed maximum discharge rate into the site wide drainage system which would ultimately flow into the attenuation ponds. • Site-wide attenuation – three attenuation ponds which would manage surface water runoff from the build zones, highways and footpaths controlling both restricted and unrestricted flows. Rainwater from all the available roof areas of the buildings would be channelled into above or below ground rainwater storage tanks situated close to the plant gantry. The design flood event is based on a 1-in-100-year rainfall event with a 40 % climate change allowance, which the surface water network and its attenuation measures have been specifically designed to accommodate. Various SuDS features have been employed in the site wide network to manage surface water volume and quality. Swales have been proposed to manage surface water from the highways and	**Positive** Negative Neutral Uncertain	None required.

Table 8.11: Climate Change				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		hardstanding, discharging into the three attenuation basins which would be located within the wetland area to the east of the data centre campus. Water would then be discharged to the Mardyke along the eastern boundary of the site. The eastern area of the site would feature wetlands within the existing Mardyke tributary floodplain and in additional to the three permanent attenuation basins, would incorporate the existing and proposed new ditch network to help manage flooding through water retention. A riparian woodland corridor would be established along the eastern boundary that would be planted either side of the Mardyke tributary, to further enhance water management whilst improving soil quality and creating a buffer to the site. Drainage in the ecology park would be managed naturally, using permeable surfaces and the site topography to direct water to nearby ditches and swales. From a health perspective, sustainable urban drainage systems (SuDS) play an important role in reducing risks associated with flooding, protecting water quality and supporting climate resilience. Flooding can have significant direct and indirect health impacts, including injury risk, stress, disruption to daily life and damage to homes and infrastructure. The incorporation of attenuation ponds, swales and wetland-based drainage features therefore contributes positively to health outcomes by reducing surface water runoff and managing stormwater effectively, particularly in the context of increasing rainfall intensity associated with climate change. The design approach, including attenuation designed for a 1-in-100-year rainfall event with climate change allowance, provides resilience against future extreme weather conditions, helping to protect surrounding communities and infrastructure from flood-related risks. Naturalistic drainage features within the ecology park, including wetlands and riparian woodland corridors, also support improved water quality by filtering pollutants and reducing sediment transport, which contributes to wider environmental health. Beyond functional drainage performance, SuDS features integrated into landscaped environments can provide additional health benefits by enhancing biodiversity, improving visual amenity and creating attractive natural environments that support wellbeing. The incorporation of wetlands and natural drainage within publicly accessible areas may therefore contribute to improved mental wellbeing through increased opportunities for contact with nature. Rainwater harvesting and permeable surface strategies further support sustainable water management by reducing pressure on potable water supplies and improving resource efficiency, which contributes to long-term environmental sustainability and population health resilience. Overall, the proposed development demonstrates a comprehensive approach to sustainable drainage that supports flood risk management, environmental protection and climate resilience, with associated positive health outcomes. No additional mitigation is considered necessary beyond the embedded SuDS strategy.		
Does the proposal seek to minimise potential to spread infection through adequate ventilation and open spaces?	**Yes** No N/A	**Construction Impact:** N/A. **Operational Impact:** As discussed previously, all buildings would be designed to achieve BREEAM Excellent rating or above. As part of this goal, natural ventilation would be provided to offices and other workspaces via openable windows, trickle vents or other forms of natural ventilation where appropriate. The ecology park and open space delivered by the proposed development would provide an inviting and natural space for both employees of the proposed development and wider community to benefit from time outdoors and with nature. From a health perspective, building design that incorporates adequate ventilation and access to open space can help reduce the risk of airborne infection transmission by improving indoor air quality and reducing concentrations of airborne pathogens. The commitment to achieving BREEAM Excellent ratings ensures that indoor environmental quality, including ventilation performance and occupant comfort, is addressed through recognised standards. Provision of natural ventilation where appropriate supports air exchange and may contribute to improved respiratory health and overall wellbeing for building users. The inclusion of extensive outdoor spaces within the ecology park also provides opportunities for employees and visitors to spend time outdoors, where infection risks associated with airborne transmission are generally lower compared to enclosed indoor environments. Access to high-quality open space can support flexible working and recreational opportunities, enabling informal meetings, breaks and social interaction in well-ventilated outdoor settings. This may contribute to both infection risk reduction and improved mental wellbeing. The availability of generous open space and landscape areas may also reduce perceptions of crowding, which is associated with stress and discomfort and can influence how people use shared environments. Designing routes and public spaces that allow for adequate movement and dispersal of users supports safer use during periods of heightened infection risk.	**Positive** Negative Neutral Uncertain	None required.

Table 8.11: Climate Change				
Assessment Criteria	**Relevant?**	**Details/Evidence**	**Potential Health Impact?**	**Recommended Mitigation or Enhancement Actions**
		Overall, the proposed development incorporates design features that support healthy indoor environments and access to open space, which together may contribute to reduced infection transmission risk and improved wellbeing. No additional mitigation is considered necessary beyond the embedded design and landscape measures.		

9. CONCLUSION

What are your key findings from the HIA?

The Health Impact Assessment (HIA) has evaluated the potential health and wellbeing implications of the proposed development across a range of environmental, social and economic determinants of health, drawing on the Environmental Statement (ES), LDO compliance framework and supporting technical documents. The assessment identifies that the proposed development is likely to result in a range of positive health outcomes, alongside some localised adverse effects that are appropriately mitigated through embedded design and management measures.

Environmental health

The primary environmental health considerations relate to construction and operational impacts including noise, air quality, traffic and changes to the existing landscape. The ES concludes that air quality effects associated with both construction and operation are not significant, reflecting low baseline pollutant concentrations and relatively modest traffic increases. From a health perspective, this suggests limited potential for measurable respiratory or cardiovascular impacts.

Construction noise and road traffic noise along Fen Lane may result in temporary and, for a small number of receptors, locally significant adverse effects. These impacts primarily relate to disturbance and potential annoyance rather than long-term health risks. The implementation of mitigation measures through the Code of Construction Practice (CoCP) is expected to minimise exposure and maintain acceptable living conditions.

Sustainable drainage strategies, climate-responsive design and energy efficiency measures contribute to environmental resilience and support long-term health outcomes by reducing flood risk, improving environmental quality and responding to future climate pressures.

Active environments and accessibility

The proposed development introduces extensive new walking and cycling infrastructure integrated with surrounding public rights of way and public transport connections. These measures improve connectivity within a rural context where active travel infrastructure is currently limited, creating opportunities for increased physical activity, improved access to green space and reduced reliance on private vehicles.

Inclusive and age-friendly design principles embedded throughout the development, including accessible routes, facilities and public spaces, support equitable access for people with mobility impairments, older adults and families, contributing positively to independence, participation and wellbeing.

Social cohesion and community infrastructure

The creation of a publicly accessible ecology park and visitor centre introduces new opportunities for community engagement, recreation, education and volunteering. These elements support mental wellbeing through increased access to nature, social interaction and community participation. Design approaches that minimise severance and enhance connectivity ensure that the development integrates with surrounding communities rather than creating physical or social barriers.

Secure by Design principles and appropriate lighting, surveillance and access arrangements are expected to enhance perceptions of safety, which may encourage use of public spaces and active travel routes.

Economic and wider determinants of health

The proposed development is predicted to deliver significant employment and economic benefits at both borough and regional levels, including temporary construction employment and long-term operational jobs. Access to stable employment is a key determinant of health, contributing to improved income security and social wellbeing. The proposed employment and skills strategy secured through planning obligations is important in ensuring that local communities are able to access these opportunities and that benefits are distributed equitably.

Sustainability, climate and long-term health resilience

The incorporation of renewable energy, waste heat recovery, sustainable construction practices and biodiversity enhancement contributes to climate mitigation and environmental sustainability. These measures support long-term population health by reducing greenhouse gas emissions, improving environmental quality and enhancing resilience to climate change. The ecology park and associated habitat creation represent significant positive contributions to biodiversity, nature access and environmental wellbeing.

Overall conclusion

Taking account of embedded mitigation measures, design features and operational management frameworks secured through the LDO, the overall health effects of the proposed development are considered to be predominantly positive. Adverse effects are expected to be localised, temporary or appropriately managed, with no significant residual health risks identified.

The proposed development demonstrates a comprehensive approach to integrating health considerations within design, environmental management and community infrastructure, supporting positive outcomes across multiple determinants of health including environmental quality, physical activity, social cohesion, economic opportunity and climate resilience.