




**NORTH CRAY ROAD ENERGY
STORAGE SYSTEM
SIDCUP
HEALTH IMPACT ASSESSMENT**

APRIL 2025



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CONTENTS

1. Introduction	1
2. Policy Context and Approach	3
3. Site Context and Proposed Development	9
4. Screening Checklist	11
5. Conclusion	32

APPENDICES

Appendix 1 – Site Location Plan

1.0 INTRODUCTION

- 1.1 This Health Impact Assessment (HIA) has been prepared by Nimbus Environmental Consulting Ltd to support a planning application for full planning permission to the London Borough of Bexley (LBB) in respect of a proposed Energy Storage System (ESS) facility and associated infrastructure (hereafter the 'Proposed Development'). It has been prepared on behalf of Net Zero Thirty Two Limited (the 'Applicant') with the application being managed by Firstway Energy.
- 1.2 HIA is a multidisciplinary process and potential impacts have been informed through analysis of relevant technical assessments submitted as part of the planning application, including the Planning Design and Access Statement (PDAS), Noise Assessment and Geo-Environmental Desk Study. Reference has been made to relevant technical assessments throughout and the HIA should be read in conjunction with these documents.
- 1.3 The HIA seeks to identify and assess the potential health effects of the Proposed Development and provide recommendations that maximise health gains and remove or mitigate potential adverse impacts on health and wellbeing.
- 1.4 The structure of this report is set out in the table below.

Table 1.1 – HIA Structure

CHAPTER	CONTENT
Chapter 1	Introduction Overview and structure.
Chapter 2	Policy Context and Approach Provides the planning policy context at national, regional and local level and sets out the approach and methodology taken for the HIA.
Chapter 3	Site Context and Proposed Development Describes the site, surrounds and Proposed Development.
Chapter 4	Screening Checklist Describes and assesses potential impacts of the Proposed Development against the 23 issues across the four identified health and wellbeing themes as identified in the NHS London Healthy Urban

CHAPTER	CONTENT
	Development Unit (HUDU) Healthy Urban Planning Checklist ¹ . Recommended mitigation or enhancement measures are also provided where relevant.
Chapter 5	Conclusion Summarises the key findings of the HIA.

¹ NHS London Healthy Urban Development Unit (HUDU) (April 2017). *Healthy Urban Planning Checklist (Third Edition)*. Available online: <https://www.healthyurbandevelopment.nhs.uk/wp-content/uploads/2017/05/Healthy-Urban-Planning-Checklist-3rd-edition-April-2017.pdf>

2.0 POLICY CONTEXT AND APPROACH

National Planning Policy and Legislation (2024)

- 2.1 The National Planning Policy Framework (NPPF)² was originally published in March 2012 and was recently revised following consultation on 12 December 2024.
- 2.2 Chapter 8, paragraph 96 of the NPPF ‘Promoting healthy and safe communities’ states that decisions should aim to achieve the following key features to a healthy and safe community:
- a) *“promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;*
 - b) *are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas; and*
 - c) *enable and support healthy lives, through both promoting good health and preventing ill-health, especially where this would address identified local health and well-being needs and reduce health inequalities between the most and least deprived communities – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.”*
- 2.3 Paragraph 98 goes on to set out the requirements of planning policies and decisions to provide social, recreational, and cultural facilities, including a need to plan positively for the provision and use of shared spaces, community facilities and other local services to enhance the sustainability of communities and residential environments.
- 2.4 Paragraph 103 highlights the need for “access to a network of high-quality open spaces and opportunities for sport and physical activity” and the importance for the health and well-being of communities.
- 2.5 Other NPPF policies support the broader determinants of health and well-being in development including:

² Ministry of Housing, Communities and Local Government. (December, 2024). *National Planning Policy Framework*. Available online at: <https://assets.publishing.service.gov.uk/media/675abd214cbda57cacd3476e/NPPF-December-2024.pdf>

- 2.6 Promoting sustainable transport (Chapter 9) supports sustainable development locations where congestion and emissions are reduced and improvements are made to air quality and public health;
- 2.7 Supporting high quality communications (Chapter 10) to enable social connectivity and social well-being; and
- 2.8 Achieving well-designed places (Chapter 12) sets out good design practices as a key aspect of sustainable development in creating better places in which to live and work and to help make development acceptable to communities.

The London Plan (2021)

- 2.9 London Plan (2021)³ Policy GG3 ‘Creating a Healthy City’ outlines the requirements of those involved in planning and development in order to improve the health of Londoner’s and to reduce health inequalities. The Policy proposes that planning applications assess the potential impacts of development proposals on the mental and physical health and wellbeing of communities, in order to mitigate any negative impacts, maximise potential positive impacts, and help reduce health inequalities, for example through the use of HIAs.
- 2.10 Policy GG3 goes on to state that those involved in planning and development must “Assess the potential impacts of development proposals and Development Plans on the mental and physical health and wellbeing of communities, in order to mitigate any potential negative impacts, maximise potential positive impacts, and help reduce health inequalities, for example through the use of Health Impact Assessments”. For the purposes of HIA, a ‘major development’ is defined as “10 or more residential units (or a site of 0.5 ha or more), or 1,000 square metres or more of non-residential floorspace (or a site area of 1 ha or more)”.
- 2.11 The London Plan also states that “HIA should be undertaken as early as possible in the plan making or design process to identify opportunities for maximising potential health gains, minimising harm, and addressing health inequalities”.

London Borough of Bexley Local Plan (2023)

- 2.12 The 2023 Adopted Local Plan⁴ of the London Borough of Bexley states in Policy DP16 ‘Health Impact Assessments’ that “major applications are required to complete and submit a desktop health impact assessment checklist as part of the planning application.” The policy does not prescribe a specific approach or method to the HIA, and instead refers to guidance from the London Health Urban Development Unit (HUDU) Healthy Urban Planning Checklist¹.

³ GLA (2021). *The London Plan 2021*. Available online: <https://www.london.gov.uk/programmes-strategies/planning/london-plan/new-london-plan/london-plan-2021>

⁴ London Borough of Bexley (2023). *Bexley Local Plan*. Available online: <https://www.bexley.gov.uk/sites/default/files/2023-07/bexley-local-plan-adopted-26-april-2023.pdf>

Planning Practice Guidance: Healthy and Safe Communities (2022)

- 2.13 Planning Practice Guidance (PPG)⁵ provides detailed guidance on the government's planning policies in England and how these are expected to be implemented.
- 2.14 The PPG outlines ways in which planning and the built environment can contribute to healthy and safe communities. It highlights that planning and health need to be considered together in two ways: by creating environments that support and encourage healthy lifestyles, and by identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system (taking into account the changing needs of the population).
- 2.15 The PPG defines healthy places as those which support and promote healthy behaviours and environments and where there is a reduction in health inequalities for people of all ages. A healthy place also provides the community with opportunities to improve their physical and mental health, and support community engagement and wellbeing. It also meets the needs of children and young people to thrive as well as being adaptable to the needs of an increasingly elderly population and those with dementia and other sensory or mobility impairments.

Greater London Authority Social Infrastructure Supplementary Planning Guidance (2015)

- 2.16 The Greater London Authority's (GLA) Social Infrastructure Supplementary Planning Guidance (SPG) (2015)⁶ sets out three types of HIA; a 'full' HIA involves comprehensive analysis of all potential health and wellbeing impacts; a 'rapid' HIA is a less resource intensive process, involving a more focused investigation of health impacts; and a 'desktop' assessment which draws on existing knowledge and evidence, often using published checklists. The SPG states that for major planning applications not subject to an EIA, a 'desktop' HIA is considered sufficient.

NHS London HUDU Healthy Urban Planning Checklist (2017)

- 2.17 The checklist¹ 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.
- 2.18 The checklist aims to ensure a development proposal is as 'healthy' as possible, by achieving as many 'Yes' ticks and avoiding 'No' ticks. A 'No' gives a warning that an aspect of a

⁵ Ministry of Housing, Communities and Local Government (2022). *Guidance Healthy and Safe Communities*. Available online: <https://www.gov.uk/guidance/health-and-wellbeing>

⁶ GLA (2015). *Social Infrastructure Supplementary Planning Guidance*. Available online: <https://www.london.gov.uk/programmes-strategies/planning/implementing-london-plan/london-plan-guidance-and-spgs/social-infrastructure#the-document--32623-title>

development may need to be reconsidered. Further to this, actions should be identified to enhance the positive impacts and mitigate the negative impacts

Approach and Methodology

- 2.19 In accordance with the NHS London HUDU Healthy Urban Planning Checklist⁷ this desktop HIA explores and appraises the 23 issues identified as part of the four health and wellbeing themes. The relevant themes have been prioritised and scoped accordingly (see Section 4.0 of this report).
- 2.20 The Checklist provides guidance on the planning issues that may impact health, asks key questions linked to policy requirements and standards and sets out why each issue is important. This guidance has been used to inform the method for this desktop assessment.
- 2.21 This desktop HIA has also been informed by the following national best practice guidance.
- Institute of Environmental Impact Assessment (IEMA) (September 2024). Impact Assessment Outlook Journal, Volume 22. Competency and Certification in Impact Assessment⁸;
 - IEMA (May 2024). Network Advice Note. Competent Expert for Health Impact Assessment⁹;
 - IEMA (July 2024). Impact Assessment Outlook Journal, Volume 21. Impact Assessment Frontiers, Part 2: People, Health and Equality¹⁰;
 - Institute of Environmental Impact and Assessment (IEMA) (November 2022). Determining Significance for Human Health in Environmental Impact Assessment¹¹;
 - IEMA (November 2022). Effective Scoping of Human Health in Environmental Impact Assessment¹²;

⁷ Central Lincolnshire (April 2023). *Central Lincolnshire Healthy Planning Checklist*. Available online at: <https://www.n-kesteven.gov.uk/sites/default/files/2023-08/Central%20Lincolnshire%20Healthy%20Planning%20Checklist.pdf>

⁸ IEMA (2024). *Impact Assessment Outlook Journal, Volume 22: Competency and Certification in Impact Assessment*. Available online at: https://www.iema.net/media/2i5g2fgh/iema_iaoj_vol_22_final.pdf

⁹ IEMA (2024). *Competent Expert for Health Impact Assessment Advice Note*. Available online at: <https://www.iema.net/resources/blogs/2024/05/competent-expert-for-health-impact-assessment-including-health-in-environmental-assessments-may-2024/>

¹⁰ IEMA (2024). IEMA (2024). *Impact Assessment Outlook Journal, Volume 21. Impact Assessment Frontiers, Part 2: People, Health and Equality*. Available online at: https://s3.eu-west-2.amazonaws.com/iema.net/documents/J55928_IEMA_IAOJ_Vol_21_FINAL.pdf

¹¹ IEMA (2022). *Launch of the EIA guidance for considering impacts on human health – November 2022*/ Available online at: <https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-for-considering-impacts-on-human-health>

¹² IEMA (2022). *Launch of the EIA guidance for considering impacts on human health – November 2022*/ Available online at: <https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-for-considering-impacts-on-human-health>. Available online at: <https://www.iema.net/resources/blog/2022/11/17/launch-of-the-eia-guidance-for-considering-impacts-on-human-health>

- IEMA (October 2020). Impact Assessment Outlook Journal; Volume 8: Health Impact Assessment in Planning¹³;
- Public Health England, Health Impact Assessment in Spatial Planning: A Guide for Local Authority Public Health and Planning Teams (October 2020)¹⁴;
- NHS London Healthy Urban Development Unit (October 2019). HUDU Rapid Health Impact Assessment Tool – online resource¹⁵;
- NHS England (2019) Putting Health into Place: Principles 1-8; Plan Assess and Involve and Design, Deliver and Manage. pub. collaboratively by TCPA, The King's Fund, The Young Foundation Public Health England NHS England¹⁶;
- Public Health England (July 2017) Spatial Planning for Health, pub. PHE Publications¹⁷;
- NHS London Healthy Urban Development Unit (April 2017) Healthy Urban Planning Checklist – online resource¹⁸; and
- The Marmot Review (February 2010). 'Fair Society Healthy Lives' The Marmot Review Strategic Review of Health Inequalities in England post 2010¹⁹.

Data Sources

2.22 This desktop HIA is based on the best and most up-to-date information available from a range of sources, including the following documents which support the planning application.

- PDAS;
- Landscape, Townscape and Visual Impact Assessment;
- Flood Risk Assessment and Drainage Strategy;
- Noise Impact Assessment;
- Geo-Environmental Desk Study;
- An Ecological Appraisal (EcIA) and BNG Assessment;
- Sustainable Design Template;

¹³ IEMA (2020) *Health Impact Assessment in Planning*, Impact Assessment Outlook Journal. Available online at: <https://www.iema.net/resources/news/2020/10/27/health-impact-assessment-in-planning>

¹⁴ PHE (2020). *Health Impact Assessment in Spatial Planning*. Available online at: <https://www.gov.uk/government/publications/health-impact-assessment-in-spatial-planning>

¹⁵ NHS London (2019). *Healthy Urban Development Unit (HUDU) Planning for Health Rapid Health Impact Assessment Tool*. Available online at: <https://www.healthyrurbandevelopment.nhs.uk/wp-content/uploads/2019/10/HUDU-Rapid-HIA-Tool-October-2019.pdf>

¹⁶ NHS England and TCPA (2019). *Putting Health into Place: Principles 1-8*.

¹⁷ PHE (2017) *Spatial Planning for Health*, PHE Publications.

¹⁸ NHS London HUDU (2017). *Healthy Urban Planning Checklist* (available online). <https://www.healthyrurbandevelopment.nhs.uk/wp-content/uploads/2017/05/Healthy-Urban-Planning-Checklist-3rd-edition-April-2017.pdf>

¹⁹ M, Marmot *et al* (2010). *Fair Society Healthy Lives* (The Marmot Review).

- Outline Energy Storage Safety Management Plan;
- Fire Strategy Plan; and
- Outline Construction Traffic Management Plan (CTMP).

Limitations to Approach

- 2.23 Inputs to this HIA have been informed by members of the project team where relevant and the evidence used to inform consider the potential health impacts of the Proposed Development.
- 2.24 Inevitably data is often 'out of date' by the time it reaches the public domain, however the most recent available information has been used to inform this assessment. For clarity and quick verification, references are provided as footnotes in the relevant section of this report.

3.0 SITE CONTEXT AND PROPOSED DEVELOPMENT

Site Context

- 3.1 The Site covers approximately 9.44 hectares (ha) within the London Green Belt, located approximately 2.6 kilometre (km) east of Sidcup, 1 km south of North Cray and 700 metres (m) north-east of Ruxley within LBB. The main site where the ESS would be located covers approximately 7.0 ha of agricultural land.
- 3.2 The existing Site comprises agricultural land, with hedgerows and trees bordering the arable fields. It is located to the south of North Cray Road and to the east of the A223 (hereafter 'the Site'). A Site location plan is provided in Appendix 1 of this report.

Proposed Development

- 3.3 It is envisaged that the electrical capacity of the Proposed Development would be up to 200 Megawatts (MW). The proposed ESS will store electricity from the National Grid that can be released when required along with critical balancing services.
- 3.4 The Proposed Development comprises the following key components:
- Up to 200 energy storage units each comprising lithium-ion battery cells complete with an energy storage management system, mechanical ventilation, and transformers;
 - Underground electrical cabling and electrical connection corridor to 132kV switchyard;
 - 25no. Twin Skid TX units which would be situated between 2no. Inverter Units;
 - 50no. ESS Interface cabinets;
 - 2no. Customer Switchrooms;
 - 1no. Storage container;
 - 2no. Welfare containers;
 - 132kV substation compound with associated equipment and District Network Operator (DNO) control room structure;
 - Site security (including fencing, security gates and CCTV);
 - customer control room;
 - water hydrants and 2 x 240,000 litre water tanks;
 - Internal access tracks; and

Landscaping scheme, including new hedgerow and tree planting.

Construction Programme

- 3.5 The Proposed Development is anticipated to take up to approximately 12 months to construct.
- 3.6 The Proposed Development has an agreed grid connection with the DNO anticipated for 2027-2030 connection. A connection is available to the National Grid to the north of the Site then onto the existing National Grid substation.
- 3.7 An Outline CTMP has been submitted with the planning application. Note, this would be updated prior to commencement of construction works, as appropriate, to reflect the final agreed strategy and any associated measures.
- 3.8 A finalised Construction and Environmental Plan (CEMP) would be agreed with LBB prior to commencement of construction works and would be secured by planning condition.

4.0 SCREENING CHECKLIST

- 4.1 The assessment explores the following four health themes and 23 associated planning issues within Tables 4.1 to 4.3, as identified by NHS London's Healthy Urban Planning Checklist (April 2017). Where relevant, actions have been identified to enhance the positive impacts and mitigate the negative impacts.
- 4.2 Note, not all themes/ planning issues are relevant and as such, have been discounted as needed and the scope of this desktop HIA amended accordingly. Further to this, an additional planning issue has been included for 'ground conditions' as this topic did not obviously sit elsewhere in the HUDU Healthy Urban Planning Checklist, however it is an important health consideration.
- **Theme 1: Healthy housing** – this has been scoped out because the Proposed Development does not provide new dwellings;
 - **Theme 2: Active travel;**
 - **Theme 3: Healthy environment** (scope expanded to include 'ground conditions' as an issue); and
 - **Theme 4: Vibrant neighbourhoods.**

Table 4.1: Theme 2: Active Travel

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
a) Promoting walking and cycling	Does the proposal promote cycling and walking through measures in a travel plan, including adequate cycle parking and cycle storage?	<p>Not relevant.</p> <p>Owing to the type and nature of the Proposed Development, cycle and pedestrian routes are not provided.</p> <p>There are no Public Rights of Way (PRoW) within the Site nor on the boundaries of the Site that would be affected in terms of access and safety during construction and operation.</p> <p>On this basis a Travel Plan was not a requirement as part of the application.</p>	N/A	N/A
b) Safety	Does the proposal include traffic management and calming measures, and safe and well lit pedestrian and cycle crossings and routes?	<p>Yes.</p> <p>Site access during the construction and operation will be via an existing agricultural/ farm access track approximately 350m west of Manor Farm, which would be retained and improved (including localised widening).</p> <p>An Outline CTMP has been provided as part of the planning application.</p>	<p>London Plan Policy T5 Cycling London Plan Policies S5 and GG2 Walking.</p> <p>London Plan Policy D11 Safety, security and resilience to emergency;</p> <p>London Plan Policy D12 Fire safety NFCC's (2023) guidance note titled</p>	Traffic management and calming measures and safe crossings can reduce road accidents involving cyclists and pedestrians and increase levels of walking and cycling.

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>Whilst considered unlikely, the Proposed Development could be a target for criminal activity. There may also be perceptions of crime and fears around safety which could impact on the mental wellbeing of local residents.</p> <p>Access to the operational Proposed Development will be strictly controlled, incorporating motion sensor lighting, a 2.4m high palisade fence around the ESS compound and a secure access gate. Site security will be monitored remotely continuously via CCTV/ security cameras with infra-red (invisible) lighting (attached to emergency lighting columns, approximately 3.0m above ground level (AGL) in height).</p> <p>The Proposed Development will be designed in line with appropriate fire-preventative measures. As part of this, an Outline Energy Storage System Safety Management Plan (OESMP) has been submitted with the planning application. As set out in the OESMP, access routes within the Site have been designed to accommodate the relevant emergency vehicles (including fire and rescue service vehicles) for abnormal situations, including secondary access/ exit point as advised by the National Fire Chiefs Council ('NFCC') 2023 guidance note entitled 'Grid Scale Battery Energy Storage System planning – Guidance for FRS'.</p>	<p>'Grid Scale Battery Energy Storage System planning – Guidance for FRS'.</p>	

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>Water tanks and water hydrants have been incorporated into the layout at two locations and around the ESS compound respectively, in accordance with the NFCC Fire Safety Guidance, and to ensure maximum access to water in the event of a fire.</p> <p>Safety management measures and criteria are provided in the submitted OESMP and measures for surface water are set out in the Drainage Strategy.</p> <p>Furthermore, a Detailed Energy Storage System Safety Management Plan (DESMP) will be secured by planning condition which will be submitted to LBB for approval, in consultation with the London Fire Brigade, prior to the operation of the development.</p>		
c) Connectivity	Does the proposal connect public realm and internal routes to local and strategic cycle and walking networks and public transport?	<p>Not relevant.</p> <p>There are no PRoW or cycle routes within the Site nor on the boundaries of the Site that would be affected in terms of access and safety during construction and operation.</p> <p>On this basis, substantial changes to traffic flows on the local community, including road users,</p>	N/A	N/A

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>pedestrians and cyclists, and therefore opportunities for active travel for local residents, are not anticipated.</p> <p>Site access during the construction and operation will be via an existing agricultural/ farm access track approximately 350m west of Manor Farm, which would be retained and improved (including localised widening).</p> <p>Construction traffic movements over the 12 month construction period are anticipated to be minimal and therefore potential adverse traffic-related impacts on the safety and operation of the local highway network are anticipated to be minimal. Further detail on construction traffic is provided at Table 4.2, a) construction, of this report.</p> <p>The Proposed Development does not introduce new residents or a substantial number of new employees and as such, there will not be an increased demand on public transport.</p> <p>In summary, the Proposed Development will have no impact on active travel opportunities for the local community.</p>		

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
d) Minimising car use	Does the proposal seek to minimise car use by reducing car parking provision, supported by the controlled parking zones, car free development and car clubs?	<p>Not relevant.</p> <p>Construction traffic movements over the 12 month construction period are anticipated to be minimal. At peak times, there will be up to 50 construction staff / contractors travelling to the Site each day, and where possible, will travel together in a mini-bus or via car share.</p> <p>During operation, by its nature and use the Proposed Development will generate limited traffic (and therefore emissions). Approximately two light good vehicles (LGV) maintenance visits are anticipated per month and in the event that new or replacement equipment is required, one Heavy Goods Vehicles (HGVs) may occur per annum. Overall, it is anticipated that the frequency of the operational traffic movements would be similar to that of the existing agricultural uses.</p> <p>Furthermore, the Proposed Development does not introduce new residents or a substantial number of new employees.</p> <p>A recommendation for the selected construction contractor to provide staff with information on public transport options to/ from the Site and</p>	N/A	N/A

North Cray Road ESS, Sidcup

Health Impact Assessment – April 2025

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		potential car share options to minimise car trips on the local highway network.		

Table 4.2: Theme 3: Healthy Environment

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
a) Construction	Does the proposal minimise construction impacts, such as dust, noise, vibration and odours?	<p>Yes.</p> <p>During construction of the Proposed Development, there is potential for noise, vibration, air quality (dust, particulate matter and nitrogen oxides) associated with construction activities, including traffic. However, such emissions will be short-term and temporary over approximately 12 months.</p> <p>Over the 12 month construction period, two HGVs will typically access the Site per day comprising one rigid bodied HGV (up to 10 m in length) and one articulated HGV. It is anticipated this will generally be equivalent to 10 HGVs per week, and would not exceed 10 HGVs on any single day. No abnormal loads are anticipated in relation to the Proposed Development. However, if considered necessary, appropriate arrangements would be made and the Highways Authority notified accordingly. There will be up to 50 construction staff/ contractors at peak times travelling to the Site each day.</p> <p>The closest existing residential properties are located approximately 230m west of the Main</p>	<p>London Plan Policy SI 7 Reducing waste and supporting the circular economy.</p> <p>The Control of Dust and Emissions During Construction and Demolition SPG (July 2014).</p>	<p>Construction sites can have a negative impact on an area and can be perceived to be unsafe. Construction activity can cause disturbance and stress, which can have an adverse effect on physical and mental health. Mechanisms should be put in place to control hours of construction, vehicle movements and pollution. Community engagement before and during construction can help alleviate fears and concerns.</p>

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>Site, off of the A223 and on Cornell Close. Further residential areas are located approximately 300m north of the Site on North Cray Road and approximately 400m to the east.</p> <p>Measures to manage and minimise construction impacts in accordance with appropriate guidance will be provided in a Construction Environmental Management Plan (CEMP) to be secured by planning condition. Measures are anticipated to include:</p> <ul style="list-style-type: none"> • Providing screening for dust generating activities and covering any material stockpiles; • Implementation of a wheel washing system; • Location of all stationary plant away from nearby receptors, wherever feasible, and ensuring shut down of plant during intermittent use, where practicable; and • Regular Site inspections and liaison with the local community. <p>An Outline CTMP has been submitted with the planning application and includes:</p> <ul style="list-style-type: none"> • Proposed routes for and management of all construction-related traffic, including HGVs and delivery of large plant/ machinery; 		

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<ul style="list-style-type: none"> Construction vehicle types and timing; and Vehicular parking on Site. 		
b) Air Quality	Does the proposal minimise air pollution caused by traffic and energy facilities?	<p>Yes.</p> <p>The whole of LBB is located within an Air Quality Management Area (AQMA) for particulate matter (PM10) and nitrogen dioxide (NO2) primarily from transport and industrial sources.</p> <p>During construction there is potential for localised dust, particulate matter and nitrogen oxides associated with construction activities. However, owing to the limited traffic and low levels of existing air pollution on Site, emissions will be short-term and temporary over the 12 month construction period. As such, impacts are therefore considered to be low and limited in impact. Furthermore, traffic will be very limited during operation, and therefore adverse impacts are not anticipated on air quality.</p> <p>By the nature of the Proposed Development, it is considered that any traffic-related emissions would be offset several times over by the significant contribution of the Proposed Development to supporting a renewable energy</p>	<p>London Plan Policy SI 1 Improving air quality.</p> <p>Policy SI 2 Minimising greenhouse gas emissions</p> <p>London Plan Policy G5 Urban greening</p>	The long-term impact of poor air quality has been linked to life-shortening lung and heart conditions, cancer and diabetes.

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>supply (and transition away from burning fossil fuels).</p> <p>An CEMP will be secured by planning condition.</p> <p>Further to this, measures to minimise construction impacts have been included within the Outline CTMP as submitted with the planning application.</p>		
c) Noise	Does the proposal minimise the impact of noise caused by traffic and commercial uses through insulation, site layout and landscaping?	<p>Yes.</p> <p>During construction there is potential for noise and vibration associated with construction activities. However, owing to the limited traffic and temporary construction period, adverse impacts are considered to be low, temporary and therefore limited in impact.</p> <p>Operational vehicle movements will be limited to maintenance trips and therefore the additional noise generated will be temporary and of low impact.</p> <p>A Noise Assessment has been undertaken by Tetra Tech (April 2025) submitted with the planning application. The nearest noise sensitive receptors are identified approximately 230m west of the</p>	London Plan Policy D14 Noise	Reducing noise pollution helps improve the quality of urban life.

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>Site.</p> <p>The assessment compared the predicted cumulative noise levels from the Proposed Development with existing background noise at the noise sensitive receptors. It concluded that the operational noise from the Proposed Development will not have a significant impact on the surrounding environment with the change in noise levels having No Observed Adverse Effect during both the daytime and night-time periods. Note, the assessment presents a worst-case as it assumes operation during the daytime and night-time periods, however the Proposed Development is not anticipated to operate continuously.</p> <p>On this basis, the noise intrusion levels at noise sensitive receptors is predicted to be below the BS8233/World Health Organisation (WHO) criteria for noise intrusion.</p> <p>The measures to minimise noise during construction will be set out in the CEMP to be secured by planning condition.</p>		

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		Further to this, measures to minimise construction impacts have been included within the Outline CTMP as submitted with the planning application.		
d) Open space	Does the proposal retain or replace existing open space and in areas of deficiency, provide new open or natural space, or improve access to existing spaces? Does the proposal set out how new open space will be managed and maintained?	<p>Not relevant.</p> <p>Owing to the nature of the Proposed Development, open space is not provided and no open spaces or recreational areas will be lost.</p> <p>A Landscape, Townscape and Visual Impact Appraisal (LTVIA) has been prepared and submitted by RHLA (April 2025) with the planning application.</p> <p>During construction, major and moderate adverse effects would be localised to receptors in close proximity to the ESS on Site, including recreational receptors along public footpath (ref: FP141) and residents in an elevated position within landscape to the north and south. In all instances, visual effects would be temporary and worst during the winter months.</p> <p>The proposed ESS compound would be rendered a dark green to integrate with the tonal colours of the landscape.</p>	N/A	N/A

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>During operation, the overall visual effects of the Proposed Development are expected to be low owing to the limited locations from which the ESS would be visible, alongside its low-lying position and intervening topography, the density of the intervening vegetation, and intervening development. Where the ESS Site is partly visible from certain receptors, it is generally seen in the context of polytunnels and agricultural buildings.</p> <p>A Landscape Strategy Plan has been prepared and submitted for approval with the planning application, including:</p> <ul style="list-style-type: none"> • Retaining boundary trees and hedgerows, where possible, and enhancing hedgerows with additional native tree planting; • A new 3m wide strip of native mixed shrub planting; • A new linear woodland feature (10m wide); • A species rich meadow mix within and outside of the ESS compound; and • New native tree planting particularly to screen views from PRow. 		
e) Play space	Does the proposal provide a range of play	Not relevant.	N/A	N/A

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
	spaces for children and young people?			
f) Biodiversity	Does the proposal contribute to nature conservation and biodiversity?	<p>Yes.</p> <p>The Site is not located within or adjacent to the boundary of a statutory designated site for nature conservation.</p> <p>An EcIA and BNG Assessment (Engain, April 2025) has been submitted as part of the planning application. The EcIA concludes that subject to the inbuilt mitigation measures, there would be no adverse ecological impacts or effects during construction and operation.</p> <p>The Proposed Development contributes to nature conservation and biodiversity by incorporating the following into its design:</p> <ul style="list-style-type: none"> • Retaining boundary trees and hedgerows, where possible, and enhancing hedgerows with additional native tree planting; • Incorporating appropriate buffers to ecological features, including a minimum 30m buffer around the outlier badger sett from the ESS and the construction footprint; 	London Plan Policy G6 Biodiversity and access to nature.	Access to nature and biodiversity contributes to mental health and wellbeing. New development can improve existing, or create new, habitats or use design solutions to enhance biodiversity.

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<ul style="list-style-type: none"> Planting fruit trees to provide an enhanced badger foraging resource; and Biodiversity protection zones along retained notable habitats and hedgerows. <p>The Proposed Development would deliver a Biodiversity Net Gain (BNG) of over +80% in habitat units and +20% hedgerow units, through landscape planting and retained/ enhanced habitats on Site. BNG will be secured via a suitably worded planning condition.</p>		
g) Local food growing	Does the proposal provide opportunities for food growing, for example by providing allotments, private and community gardens and green roofs?	Not relevant.	N/A	N/A
h) Flood risk	Does the proposal reduce surface water flood risk through sustainable urban drainage techniques, including storing rainwater, use of permeable surfaces and	<p>Yes.</p> <p>The entire Site lies within Flood Risk Zone 1, and the risk of flooding from surface water, groundwater, sewers or artificial sources is low. Parts of the Site are mapped as at risk of surface water flooding, however, with the exception of</p>	<p>London Plan Policy G1 Green infrastructure</p> <p>London Plan Policy SI 12 Flood Risk Management</p> <p>London Plan Policy SI 13 Sustainable Drainage</p>	<p>Flooding can result in risks to physical and mental health. The stress of being flooded and cleaning up can have a significant impact on mental health and wellbeing.</p> <p>It is likely that increasing development densities and</p>

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
	green roofs?	<p>access tracks, no development is proposed in these areas.</p> <p>A Flood Risk Assessment and Drainage Strategy has been prepared by Calibro (April, 2025) and submitted with the planning application.</p> <p>Runoff from the proposed ESS compound will be contained in a sealed gravel base beneath the infrastructure, in order to detain contaminated water in the unlikely event of a fire.</p> <p>The runoff from the more isolated infrastructure would mimic existing conditions by directing runoff to the gravel bases before soaking into the ground, designed to accommodate runoff arising from a 1 in 100 year rainfall event, include a 25% allowance, and a 12 hour duration storm to account for further effects of climate change.</p> <p>Adherence to the submitted Drainage Strategy is required to ensure resilience to future climate change.</p>		building coverage coupled with more frequent extreme weather events will increase urban flood risk.
i) Overheating	Does the design of buildings and spaces avoid internal and	Yes.	London Plan Policy G1 Green infrastructure	Climate change with higher average summer temperatures is likely to

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
	external overheating, through use of passive cooling techniques and urban greening?	<p>Whilst climate change has the potential to increase summer temperatures, the Proposed Development incorporates cooling systems designed to accommodate increasing annual temperatures.</p> <p>As previously mentioned, the Proposed Development will be designed in accordance with appropriate fire-preventative measures. As part of this, an OESMP has been submitted with the planning application.</p>		<p>intensify the urban heat island effect and result in discomfort and excess summer deaths amongst vulnerable people.</p> <p>Urban greening - tree planting, green roofs and walls and soft landscaping can help prevent summer overheating.</p>
j) Ground Conditions (additional issue – scope expanded)	Is contamination likely on the site? Does the proposal seek to minimise impacts on soil/ ground conditions and avoid potential contamination pathways?	<p>Yes.</p> <p>A Geo-Environmental Report by Red Rock Geoscience (April 2025) has been prepared and submitted in support of the planning application, which includes a Phase 1 Contamination study and land quality desk study.</p> <p>Mapping indicates the Site has been in agricultural use historically. Owing to this, substantial or complex contamination is considered unlikely on Site and therefore is at low risk of harm to Site users/ staff, future Site users or local residents. On this basis, an intrusive investigation and</p>	<p>London Plan Policy D11 Safety, security and resilience to emergency;</p> <p>London Plan Policy D12 Fire safety</p> <p>NFCC's (2023) guidance note titled 'Grid Scale Battery Energy Storage System planning – Guidance for FRS'.</p>	<p>Contamination of soils, drinking water supplies and ecosystems can pose a risk to human health through inhalation, ingestion or skin contact.</p>

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
		<p>assessment is not required with respect to risks human health or the environment.</p> <p>The design has incorporated a sealed gravel base beneath the ESS infrastructure in order to detain contaminated water in the unlikely event of a fire.</p> <p>The Geo-Environmental Report highlights the potential for natural subsidence hazards as a result of dissolution features in the chalk bedrock. The desk study recommends that a geophysical study is undertaken for the main ESS site. This will be secured prior to commencement of works on Site by a planning condition.</p>		

Table 4.3: Theme 4: Vibrant Neighbourhoods

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
a) Health services	Has the impact on healthcare services been addressed?	Not relevant.	N/A	N/A
b) Education	Has the impact on primary, secondary and post-19 education been addressed?	Not relevant.	N/A	N/A
c) Access to social infrastructure	Does the proposal contribute to new social infrastructure provision that is accessible, affordable and timely? Have opportunities for multi-use and the colocation of services been explored?	Not relevant.	N/A	N/A
d) Local employment and healthy workplaces	Does the proposal include commercial uses and provide opportunities for local employment and training, including temporary construction and permanent 'end-use' jobs? Does the proposal promote the health and	<p>Yes.</p> <p>The construction of the Proposed Development will, where possible, generate job opportunities for local people in LBB.</p> <p>During operation, it is anticipated there will be limited job opportunities owing to the nature of the Proposed Development.</p>	London Plan Policy E11 Skills and opportunities for all	Unemployment generally leads to poverty, illness and a reduction in personal and social esteem. Employment can aid recovery from physical and mental illnesses. Creating healthier workplaces can reduce ill health and employee sickness absence.

ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
	wellbeing of future employees by achieving BREEAM health and wellbeing credits?	<p>The Applicant/ developer/ operator would consider opportunities for local procurement strategies, including apprenticeships, to be explored prior to construction.</p> <p>Engagement with local community to be explored through a local engagement programme, including development of links with nearby schools and colleges to raise awareness around the need for renewable energy and ESS technology and how it operates.</p>		
e) Access to local food shops	<p>Does the proposal provide opportunities for local food shops?</p> <p>Does the proposal avoid an over concentration or clustering of hot food takeaways in the local area?</p>	Not relevant.	N/A	N/A
f) Public realm	<p>Does the design of the public realm maximise opportunities for social interaction and connect the proposal with neighbouring communities?</p> <p>Does the proposal allow</p>	Not relevant.	N/A	N/A

North Cray Road ESS, Sidcup

Health Impact Assessment – April 2025

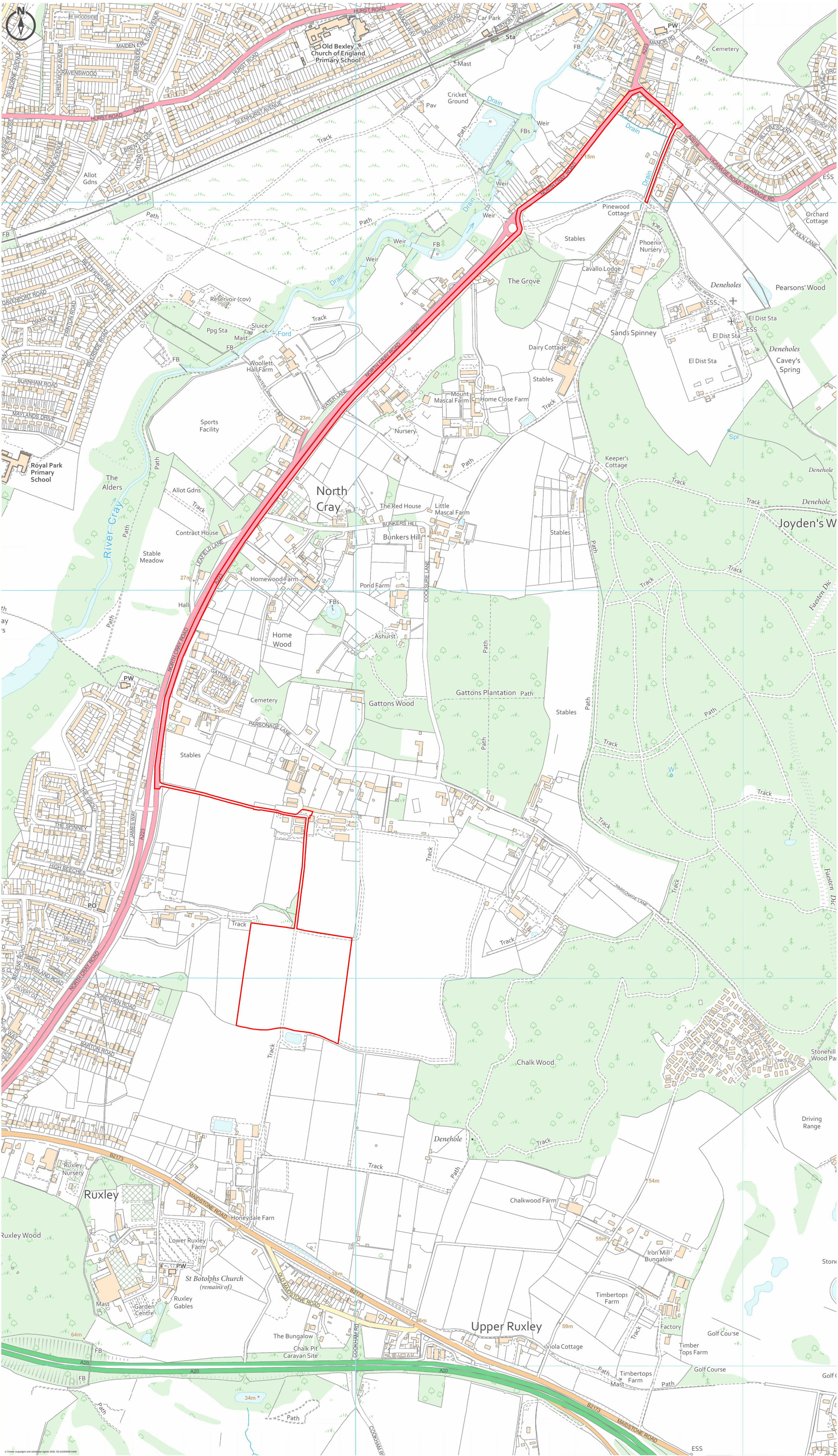
ISSUE	KEY QUESTIONS	YES/ NO/ NOT RELEVANT COMMENT, INCLUDING ANY MITIGATION AND/ OR ENHANCEMENT MEASURES	POLICY REQUIREMENTS AND STANDARDS	WHY IS IT IMPORTANT?
	people with mobility problems or a disability to access buildings and places?			

5.0 CONCLUSION

- 5.1 The UK Government has committed to meeting a legally binding target of net-zero carbon emissions by 2050, which now includes an accelerated political target of 2030 for a net zero electricity system, known as Clean Power 2030.
- 5.2 To meet this target major investment is required in renewable energy and energy storage. ESS projects such as the Proposed Development help to support the development of and reliance on renewable energy, which is intermittent by its nature.
- 5.3 Following grid connection anticipated in 2027-2030, the proposed ESS will enable electricity to be stored from the National Grid so that it can be released when required.
- 5.4 By its nature, any emissions to the air during construction and operation of the Proposed Development, would be offset several times over by the significant contribution of the Proposed Development to supporting a flexible renewable energy supply (and transition away from burning fossil fuels).
- 5.5 Following implementation of the recommended mitigation and enhancement measures as outlined in Tables 4.1 to 4.3 in this report, the Proposed Development is anticipated to have neutral to positive impacts on the four health themes and 23 associated planning issues (as identified by NHS London's Healthy Urban Planning Checklist (April 2017)). On this basis, no further changes are required to the Proposed Development and no further mitigation is required. Further to this, no further health impact assessment work is required.

APPENDIX 1

Site Location Plan

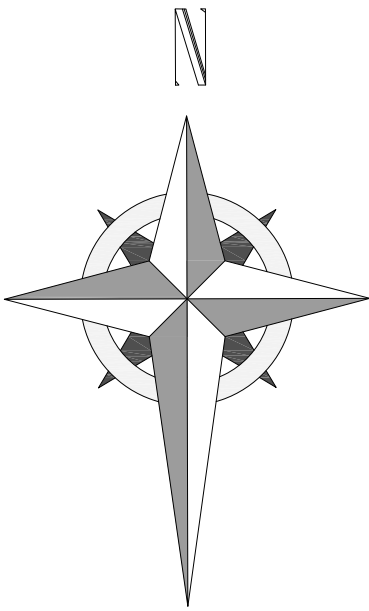


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Revisions:				
Revision	Date	Revision Notes	Drawn	Inspected
01	10.01.25	First Issue	CS	JH
02	16.01.25	Cable Route Added	CS	JH
03	27.02.25	RLB Amended	CS	JH
04	26.03.25	RLB Amended	CS	JH
05	31.03.25	RLB Amended	CS	JH

LEGEND:

PLANNING APPLICATION BOUNDARY



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