Bramford – Twinstead:

Local Impact Report

Braintree District Council &

Essex County Council

PINS REFERENCE: **EN020002**

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2 Glossary of acronyms and abbreviations

AONB – Area of Outstanding Natural Beauty

ACL - Agricultural Land Classification

AIL - Abnormal Indivisible Loads

ANGSt - Accessible Natural Green Space Standards

AW – Ancient Woodland

BDC – Braintree District Council

B&MSDC - Babergh District Council, Mid Suffolk District Council

BEIS – Department of Business, Energy and Industrial Strategy

BMV – Best and Most Versatile

BNG – Biodiversity Net Gain

BPM – Best Practicable Means

B2T – Bramford to Twinstead

CIT – Carbon Interface Tool

CO2e – Carbon Dioxide Emissions

CSE Compound – Cable Sealing End Compound

CEMP – Construction Environmental Management Plan

CFA - Climate Focus Area

CoCP – Code of Construction Practice

DEFRA - Department for Environment, Food and Rural Affairs

DLUHC – Department for Levelling Up, Housing and Communities

DCO – Development Consent Order

dDCO – Draft Development Consent Order

EA – Environment Agency

ECAC - Essex Climate Action Commission

ECC – Essex County Council

EIA – Environmental Impact Assessment

ES – Environmental Statement

ECAC - Essex Climate Action Commission

ExA – Examining Authority

FRA – Flood Risk Assessment

GLENRS - Greater Essex Local Nature Recovery Strategy

GHG – Greenhouse Gas Emissions

GI – Green Infrastructure

GSP – Grid Supply Point

HA – Hectares

IEMA – Institute of Environmental Management and Assessment

IPC – Instructure Planning Commission

LEMP – Landscape and Ecological Management Plan

LIR – Local Impact Report

LLFA – Lead Local Flood Authority

LOD – Limits of Deviation

LNP - Local Nature Partnership

LPA – Local Planning Authority

LWS - Local Wildlife Site

LVIA – Landscape and Visual Impact Assessment

MAR – Minerals Assessment Reports

MLP - Minerals Local Plan

MRA – Minerals Resource Assessment

MSA – Minerals Safeguarding Assessment

MWPA – Minerals and Waste Planning Authority

NG – National Grid

NLS - National Library of Scotland

NPPF – National Planning Policy Framework

NPS – National Policy Statement

NPSNN – National Policy Statement for National Networks

NSR – Noise Sensitive Receptors

OS - Ordnance Survey

OWSI – Outline Written Scheme of Investigation

PA – Planning Act

PFRA - Essex Preliminary Flood Risk Assessment

PINS – Planning Inspectorate

PWS - Private Water Supplies

PRoW – Public Right of Way

REAC - Register of Environmental Actions and Commitments

SCC – Suffolk County Council

SoCG – Statement of Common Ground

SoS - Secretary of State

SSSI – Site of Special Scientific Interest

SVPA - Stour Valley Project Area

SuDS – Sustainable Drainage System

SWMP – Surface Water Management Plan

TA – Transport Assessment

TCPA – Town and Country Planning Act

3 Terms of Reference

3.1 Introduction

3.1.1 This report comprises the Local Impact Report (LIR) of Braintree District Council (BDC) and Essex County Council (ECC).

3.1.2 The Councils have had regard to the purpose of LIR's as set out in s60(3) of the Planning Act 2008 (as amended), DLUHC (then DCLG) Guidance for the Examination of Applications for Development Consent, the Planning Inspectorate's Advice Note One, Local Impact Reports and the Planning Inspectorates 'Example Documents', in preparing this LIR.

3.1.3 National Grid Electricity Transmission has submitted a DCO application for 400kV grid reinforcement between Bramford substation and Twinstead Tee. This LIR seeks to address the local impact of the proposals.

3.1.4 The LIR relates primarily to the impacts of the proposed development as a whole but with a particular focus on Braintree District in Essex.

3.1.5 The proposed development can be summarised as:

> *The removal of existing 132kV UKPN lattice towers and overhead lines;*
>
> *The construction and operation of a 400kV grid reinforcement including lattice towers, overhead lines, sealing end compounds, underground cables and directional drilling;*
>
> *A Grid Supply Point Substation at land Adjacent Butlers Wood and Waldergrave Wood West of A131 (In The Parishes Of Bulmer And Twinstead);*
>
> *Connection to Bramford substation;*
>
> *Temporary construction consolidation sites for the project and;*

Other construction activities and temporary works associated with the above works.

3.1.6 The LIR does not describe the proposed development any further, relying on the Applicant's detailed description as set out in [APP-069] - Document 6.2.1 Chapter 1 of the Environmental Statement, Heading 1.2.

3.1.7 There is little planning history in the areas affected in Braintree District. There is however the Town and Country Planning Act (TCPA) planning permission for the new Grid Supply Point (GSP) substation on the land between Waldergrave Wood and Butlers Wood (Application reference 22/01147/FUL). This is the same GSP substation which is also included as associated development within the application description.

3.1.8 The description of development for the GSP substation at the time of application 22/01147/FUL was as follows:

"A new 400/132 kilovolt (kV) Grid Supply Point (GSP) substation including two supergrid transformers, associated buildings, equipment and switchgear, a single circuit cable sealing end compound, a new permanent vehicular access to the public highway, associated landscaping (including boundary fencing, an area for Biodiversity Net Gain, and landscape mounding) and drainage".

3.1.9 There has also been a further TCPA, Section 73 Variation of Condition Application (reference 23/01488/VAR) to modify the design of the original consent (Application 22/01147/FUL). This design change was required following the appointment of a mains works contractor.

3.1.10 The LIR will discuss the GSP substation in relevant sections of the report. The GSP substation works for the DCO application submission are set out on 6.2.4 Chapter 4 of the Environmental Statement, Heading 4.8.

3.2 <u>Purpose and Structure of the LIR</u>

3.2.1 S60 (3) of the 2008 Planning Act defines Local Impact Reports as:

"a report in writing giving details of the likely impact of the proposed development on the authority's area."

3.2.2 The LIR identifies relevant policies within BDC and ECC's Adopted Development Plan and the extent to which the proposed development accords with these policies. Topic based headings are used as a framework to set this assessment of the impacts within and key issues are identified along with commentary on the applicant's approach to mitigating these impacts.

3.2.3 It should be noted that BDC and ECC as Host Authorities are aligned on their views about the environmental impacts of this DCO application. However, where there are any small differences of opinion between BDC and ECC, these are clearly stated within the report.

4 Description of the Area

4.1 Project Boundaries & Sections

4.1.1 The development is in the administrative areas of Babergh District Council, Mid Suffolk District Council (B&MSDC), Suffolk County Council (SCC), Braintree District Council (BDC) and Essex County Council (ECC).

4.1.2 The new 400kV line spans from the Bramford substation in Suffolk and finishes with a Cable Sealing End (CSE) Compound to the south of Twinstead in Essex. The proposed GSP substation is located to the west of the A131 in the parishes of Bulmer and Twinstead, approximately 3km northwest from the Cable Sealing End Compound south of Twinstead.

4.1.3 The project route has been broken up into seven sections as set out in [APP-160] Document 7.1 section 4.3:

Section AB: Bramford/Hintlesham

Section C: Brett Valley

Section D: Polestead

Section E: Dedham Vale Area of Outstanding Natural Beauty (AONB)

Section F: Leavenheath/Assington

Section G: Stour Valley

Section H: GSP Substation

4.1.4 Sections A-F are located within Suffolk and Sections G and H are located in Essex. The route is predominantly rural crossing several villages, farmsteads and protected landscapes.

4.1.5 While it is pertinent to consider the cumulative impacts of the whole development across all sections, this Local Impact Report primarily focuses on the development in Sections G-H to which BDC and ECC are the Host

Authorities. In addition, it should be noted that for this DCO both BDC and ECC have engaged with the applicants in a wider Authority group including SCC and Babergh & Mid Suffolk & to ensure, wherever practical, that advice given is measured and consistent where possible, from a wider Authority group.

4.2 Context of Section G (Stour Valley)

4.2.1 Section G comprises the Stour Valley and is made up of scattered villages and farmsteads. The proposed cable route would go near the villages of Lamarsh (to the north), Twinstead (to the south) and Alphamstone (north & west).

4.2.2 The whole of Section G lies within the Stour Valley Project Area (SVPA). This area has similar picturesque landscape qualities to the Dedham Vale Area of Outstanding Natural Beauty (AONB), being valued for its similar gently undulating river valley topography, medieval settlement pattern and rural characteristics.

4.2.3 The eastern and western parts of Section G: Stour Valley lie within the Suffolk Ancient Rolling Farmlands and the central area lies within the Suffolk Rolling Valley Farmlands. The western part of Section G is also characterised as Blackwater and Stour Farmlands.

4.2.4 The local road network is intrinsically rural in nature with local roads being of restricted width, weight restrictions, and subject to narrow turns, with properties standing close to the highway edge.

4.3 Context of Section H (GSP Substation)

4.3.1 Section H comprises the land proposed for the new GSP Substation. The land in question is bounded on two sides by ancient woodland (Butlers Wood and Waldergrave Wood), the A131 to the east and agricultural fields beyond to the west.

4.3.2 Although the site can be accessed from the A131, it is still located in a sensitive rural location.

5 Policy Context

5.1 National Policy

5.1.1 When deciding DCO submissions s104(2)(d) of the Planning Act (PA) 2008 requires the Secretary of State (SoS) to have regard to any other matters considered both important and relevant. The National Policy Statements for National Networks (NPSNN) requires consideration to be given to policies and information in the development plan to matters including other developments which may give rise to cumulative impacts, non - designated heritage assets, impacts on land use and the preclusion of other development.

5.1.2 The national policy governing the principle of development for Electricity Network proposals is the National Policy Statement (NPS) EN-5, which should be read together with the overarching NPS for Energy, EN-1. It is understood that these policies are in the process of being updated, however and at this time it is the current policies which apply at the time of writing this LiR.

5.1.3 The National Planning Policy Framework (NPPF) (as amended) has a presumption in favour of sustainable development and this document is what the Statutory Development Policies are required to be in conformity with.

5.2 Statutory Development Plan (BDC and ECC)

5.2.1 The Council's statutory Development Plan consists of the Braintree District Local Plan 2013 – 2033 (herein referred to as the 'Adopted Local Plan'). Section 1 of the Local Plan was adopted on 22nd February 2021, and Section 2 of the Local Plan was adopted on 25th July 2022. As such, the Local Plan is therefore considered to be up to date. The specific relevant policies in the Development Plan will be referred to within the relevant section in the LIR.

5.2.2 There are also several Neighbourhood Plans within the District and where applicable these also form an important part of the Development Plan. There are however no Neighbourhood Plans within the development areas.

5.2.3 At the County level, the Essex Minerals Local Plan (MLP) (2014) and the Essex and Southend on Sea Waste Local Plan (2017) are also material considerations in terms of Development Plan considerations. The MLP is currently undergoing a review. This review has not yet reached Regulation 19 stage and therefore the Minerals and Waste Planning Authority (MWPA) currently places no weight on any proposed amendments to relevant policies.

5.2.4 Local Highway - Development Management (February 2011) policies have been the subject of a full public consultation exercise, together with a Sustainability Appraisal and Strategic Environmental Assessment. They have been approved by ECC cabinet members for Highways and Transportation and for Communities and Planning and as such have been formally adopted as ECC Supplementary Guidance.

5.2.5 Further Local policies documents considered within the Order limits to manage flood risk and surface runoff are:

5.2.6 The Sustainable Drainage Systems Design Guide for Essex, 2020 The Design Guide provides information to developers involved in the design and development of SUDS in Essex. It promotes an integrated approach to SUDS and landscape design.

5.2.7 Essex Preliminary Flood Risk Assessment (PFRA) 2011, Amended 2018 The Essex PFRA provides a high-level overview of flood risk from surface water, groundwater and ordinary watercourses across the Lead Local Flood Authority (LLFA) study area.

5.2.8 Net Zero: Making Essex Carbon Neutral – Essex Climate Action Commission. The Essex Climate Action Commission has set out recommendations for Essex County Council on tackling the climate change crisis across six core themes, with a trajectory of targets and milestones that need to be met for Essex to become a net zero county by 2050. The six core themes are: Land Use and Green Infrastructure, Energy, the Built Environment, Transport, Waste and Community Engagement.

5.2.9 The Developer's Guide to Infrastructure Contributions, Revised 2020 Essex County Council has produced a developer's guide to infrastructure contributions which details the scope and range of contributions towards infrastructure which ECC may seek from developers and landowners in order to mitigate the impact and make development acceptable in planning terms.

5.2.10 Essex Sector Development Strategy. The strategy has identified five economic sectors with significant growth potential that could be realised in Essex. They cover construction and retrofit, clean energy, advanced manufacturing and engineering, Digi-tech and life sciences.

5.2.11 Green Skills Infrastructure Review for Essex County Council, March 2022. A review of green skills and related infrastructure has been undertaken to identify skills gaps and business needs, the capacity of existing providers and growth plans and to identify how existing or improved skills infrastructure can support the Essex Climate Change Commission's ambition to mitigate the effects of climate change.

5.3 Other Relevant Local Policy

5.3.1 The Council also has a number of Supplementary Planning Documents. The Essex Parking Standards (2009); the External Artificial Lighting SPD (2009) and the Essex Coast RAMS SPD (2020) are of relevance here.

6 Principle of Development

6.1 National Policy

6.1.1 National Policy Statement (NPS) EN-1, part 3 sets out the Governments position that there is a significant need for new major infrastructure. NPS EN-5 sets out the relevant considerations for Electricity Networks Infrastructure in particular and is heavily linked to the criteria set out in NPS EN1.

6.2 Local BDC Development Plan Policies

6.2.1 Policy SP1 (*Presumption in Favour of Sustainable Development*) of the Adopted Local Plan states that the Local Planning Authorities '*will take a positive approach that reflects the presumption in favour of sustainable development contained within the National Planning Policy Framework.'*

6.2.2 Policy SP3 (*Spatial Strategy for North Essex*) of the Adopted Local Plan addresses the spatial strategy for North Essex, identifying that existing settlements will be the principal focus for additional growth with a settlement hierarchy to be identified. Beyond the main settlements the diversification of the rural economy and conservation and enhancement of the natural environment will be supported.

6.2.3 Policy SP6 (*Infrastructure and Connectivity*) of the Adopted Local Plan identifies the need for all development to be supported by the provision of infrastructure, services and facilities.

6.2.4 Policy LPP1 (*Development Boundaries*) of the Adopted Local Plan states that development outside development boundaries will be confined to uses appropriate to the countryside to protect the intrinsic character and beauty of the countryside.

6.2.5 Policy LPP71 (*Climate Change)* of the Adopted Local Plan sets out inter alia the Council's approach to climate change with the intention that the District will meet part of its future energy needs through renewable or low carbon energy sources.

6.3 Local ECC Development Plan Policies

6.3.1 The following Policies within the current Essex Minerals Local Plan 2014 (MLP) apply:

6.3.2 Policy S8 (*Mineral Safeguarding Area*) which seeks to protect land which has an underlying mineral reserve from development without prior extraction taking place.

6.4 Commentary

6.4.1 The need to reinforce the electricity network in East Anglia is set out in [APP-069] Document 6.2.1 Environmental Chapter 1 Paragraphs 1.1.15-1.1.20. In short, the development is required to be able to accommodate increased electricity generation on the eastern coast to meet the Government targets of net zero. The current electricity network is reported to be inadequate to be able to accommodate this additional electricity generation.

6.4.2 Braintree District Council (BDC) and Essex County Council (ECC) have no reason to doubt the credibility or authenticity of the statements made above and accept the need for the project in principle. In terms of BDC's policies, in principle there is no conflict with the proposed development, with the recognition that grid reinforcement is necessary to enable the decarbonisation of the UK's energy supply and help deliver the Government targets of net zero. However, the development should not come forward at any environmental cost. The impact of the proposal must be fully assessed in order to complete a full, fair and detailed planning balance assessment and provide mitigation to minimise environmental impact and provide a project legacy going forward.

6.4.3 In terms of wider context, BDC declared a climate emergency in 2019 and committed to reducing its own carbon emissions to zero by 2030 and supporting the wider district to do the same by 2030. The Council subsequently produced a new climate change strategy in 2021, contained within which is a general ambition to increase the generation of renewable energy in the district. Taking that into account, in general terms, the Council

encourages the generation of appropriate green energy infrastructure in the District aligning with the national net zero target.

6.4.4 The Council also supports the protection of existing woodland and hedging and the proposed new woodland and hedging as long-term carbon sinks, as well as the creation of new grassland for biodiversity enhancement.

6.4.5 For ECC The Essex Climate Action Commission was set up to advise us about tackling climate change. It was launched in May 2020 for an initial term of two years and has since been extended for a further three years. The commission will run until 2025. The initial purpose of the Essex Climate Action Commission was to set out recommendations on tackling the climate crisis. This included devising a roadmap to get Essex to net zero by 2050.

7 Landscape and visual

7.1 National Policy

7.1.1 NPS EN-1 2011 sets out numerous key principles for mitigating the visual and landscape effects of a proposed project. Draft NPS EN-1 2023 goes further.

7.1.2 Paragraph 5.9.22 of NPS EN-1 states that Paragraph 5.9.22 states that mitigation of landscape and visual is possible with careful consideration of design, colour etc of materials and buildings. Paragraph 5.9.23 states that landscaping off-site may be appropriate in order to assist in minimising the impact of a development. Paragraph 5.9.21 states that there could be occasions where the mitigation to reduce the impact of the development outweighs any resulting marginal loss of function. The above paragraphs are echoed in Draft NPS EN-1 Paragraphs 5.10.25-5.10.27.

7.1.3 Other relevant paragraphs in Draft NPS EN1 include; Paragraph 4.2.4 - likely significant effects, Paragraph 4.6.6 - opportunities for good design, Paragraph 5.4.21 - opportunities for wider environmental gains, Paragraph 5.4.32 - mitigation for ancient woodland and veteran trees, Paragraph 5.4.54 - wholly exceptional circumstances and compensation for loss of ancient woodland, and ancient or veteran trees, Paragraph 5.10.4 - landscape effects and the nature and magnitude of change, Paragraph 5.10.5 - adverse effects on the landscape, Paragraph 5.10.6 - minimising of harm to the landscape, Paragraph 5.10.8 - nationally designated areas and projects outside their boundaries, Paragraph 5.10.12 - proposed energy infrastructure and visual effects, Paragraph 5.10.13 - visual effects and sensitive receptors, Paragraph 5.10.15 - landscape and visual impact assessment including cumulative effects, Paragraph 5.10.18 - landscape and visual matters in siting and design, and opportunities for enhancement, Paragraph 5.10.23 - landscape enhancement using landscape management plans, Paragraph 5.11.7 - role of Green and blue infrastructure, Paragraph 5.11.24 - ensuring functionality, connectivity and enhancement, Paragraph 5.11.25 - mitigating

or compensating adverse effects through planning obligations, management and maintenance agreements, Paragraph 5.11.27 - retaining existing trees and woodlands, assessing impacts, mitigation, compensation, and long-term management and maintenance, Paragraph 5.11.30 - mitigation measures for adverse effects on rights of way and open access land and opportunities to improve or create new access.

7.1.4 Although not fully adopted, the Council's also considers that it would be appropriate for the Examining Authority to give significant weight to draft NPS EN-5 in respect of this development, as the draft policy provides important clarification in relation to landscape and visual issues, in respect of appropriate and reasonable mitigation measures for both protected landscapes, and those landscapes outside them.

7.1.5 Of particular note in draft NPS EN-5; Paragraph 2.2.3 - proposed new electricity lines need not go via the most direct route, Paragraph 2.2.4 - substations and their placement in the local landscape, Paragraph 2.2.5 - having regard to the desirability of preserving natural beauty, Paragraph 2.8.1 - opportunities for green corridors and/or connecting people to the environment, Paragraph 2.11.2 - overhead lines give rise to adverse landscape and visual impacts, Paragraph 2.11.3 - substations, sealing end compounds, above-ground installations and adverse landscape and visual impacts, Paragraph 2.11.4 - Cumulative adverse landscape and visual impacts, Paragraph 2.11.5 - Landscape and visual benefits through reconfiguration, rationalisation, or undergrounding of existing electricity network infrastructure, Paragraph 2.11.8 - significant landscape and/or visual impacts and underground or subsea cables. Paragraphs 2.11.9 & 2.11.11 - The Holford Rules and Paragraph 2.11.14 - widespread and significant adverse landscape and/or visual impacts and undergrounding the relevant segments of the line.

7.1.6 The NPPF (2021) in Paragraph 174 sets out that planning policies and decisions should contribute to and enhance the natural and local environment by inter alia:

"(a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);

(b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;"

7.1.7 Paragraph 175 of the NPPF encourages a strategic approach to maintaining and enhancing networks of habitats and green infrastructure, and the enhancement of natural capital at a catchment scale.

7.2 Local BDC Development Plan Policies

7.2.1 Policy SP7 (*Place Shaping Principles*) of the Adopted Local Plan states inter alia that all new development must meet high standards of urban and architectural design, respond positively to local character and context and protect and enhance assets of historical or natural value.

7.2.2 Policy LPP67 (*Landscape Character and Features*) of the Adopted Local Plan states that BDC will take into account the different roles and character of the various landscape areas within the District and recognise the intrinsic character and beauty of the countryside in order to ensure that development is suitable for its context. The Council's Landscape Character Assessments are identified as being central to this assessment. Development which would not successfully integrate into the local landscape will not be supported. Additional landscape planting is identified as being required. The restoration and enhancement of the natural environment is encouraged, in particular through creation of new green infrastructure and through creating and enhancing the biodiversity of wildlife corridors.

7.2.3 Policy LPP69 *(Protected Lanes)* of the Adopted Local Plan seeks to conserve the 'traditional landscape and nature conservation character of roads designated on the Proposals Map as Protected Lanes, including their verges, banks, ditches and natural features such as hedgerows, hedgerow trees and other structural elements contributing to the historic features of the lanes'.

7.2.4 Policy LPP65 *(Tree Protection)* of the Adopted Local Plan seeks to protect trees in the District, stating that 'trees which make a significant positive contribution to the character and appearance of their surroundings will be retained unless there is a good arboricultural reason for their removal for example, they are considered to be dangerous or in poor condition'.

7.2.5 Policy LPP52 *(Layout and Design of Development)* of the Adopted Local Plan requires a high standard of design and layout in all development. It is a lengthy policy and includes 19 criteria which development should meet. Relevant criteria include:

- Designs to be sensitive to local features of historic and landscape importance

- Proposals to incorporate measures for environmental sustainability throughout the construction, occupation and demolition of the development

- Layouts to promote a safe and secure environment, crime reduction and prevention, and shall encourage the related objective of enhancing personal safety with the maximum amount of natural surveillance of roads, paths and all other open areas and all open spaces incorporated into schemes

- Landscape proposals should consist of native plant species and their design shall promote and enhance local biodiversity and historic environmental assets

- Lighting proposals need to be sensitively designed and appropriate for their locality

- Long term maintenance of landscaping and public areas required

7.3 Key Local Context

7.3.1 This LIR is focused on the Landscape context of Section G (Stour Valley) and Section H (GSP Substation). The Landscape context of sections outside of BDC's/ECC administrative area not specified in this report, however some of the recommendations can be applied to the project as a whole. The comments in this section are informed by the Council's appointed Landscape Consultant at Essex Place Services.

7.3.2 Submission Document [APP-074] 6.2.6, Paragraphs 6.5.7 - 6.5.24, set out the landscape character of the area. In summary, the proposed route crosses the Stour Valley Project Area, a landscape of high quality and value, which is recognised as having "*similar picturesque landscape qualities to Dedham Vale"* - Paragraph 6.5.23. The route also intersects with the Blackwater and Stour Farmlands, a defined Landscape Character Area.

7.4 Adequacy of Application Submission

7.4.1 BDC generally consider that the methodology used to assess landscape harm is appropriate, however there are some further refinements required to the overall assessment.

7.4.2 It is unclear why the viewpoint assessment and photomontage [APP-062] Document 5.8, View Point H07/G18 from Rectory Lane on the edge of Wickham St Paul, has been taken from c800m away as there are closer PRoWs (Bridleway 14 Bulmer, Footpath 16 Bulmer, Footpath 18 Bulmer and Wickham St Pauls 13 plus a single-track lane) which are around 200-400m distance from the proposed installation and from which the assessment could have been carried out. Further justification should be provided on the viewpoint selection.

7.4.3 There is also no landscape and visual assessment taken from the PRoW network east of the PRoW network east of the A131 (Twinstead 23, Twinstead 1 and Great Henny 18). This assessment should be carried out to determine the impacts from these PROW's from the development.

7.4.4 It is unclear from the information submitted (e.g., design and layout plans of the Grid Supply Point substation and Cable End Sealing Compound and View Point H07/G18 (Document 5.8) (APP-PDA001) View from Rectory Lane on the edge of Wickham St Paul), what the full extent and character of the planting is, designed to mitigate these adverse impacts, or the potential effectiveness of this mitigating planting. Further clarity should be provided.

7.5 Local Impact of Development

7.5.1 **Construction Phase Impacts -** There would be significant negative impacts upon the Stour Valley landscape at the construction stage, most of which, within the project area, is part of a proposed extension to the AONB due to the quality and value of the landscape. The direct impacts involve an 80m wide swathe of construction activity where trees and hedgerows would be pruned, coppiced or removed due to the construction of underground cables. This is notable north of Henny Back Road northwest of Alphamstone which includes the coppice of potential ancient woodland.

7.5.2 There are however landscape and visual benefits from removing redundant sections of the UKPN 132kV network and undergrounding substantial sections of the cable route as it crosses the Stour Valley Project Area.

7.5.3 Due to the sensitivity of occupants of residential properties and recreational footpath users both within and close to the construction pathway in the Stour Valley, there are likely significant visual impacts upon these receptors whilst works are in progress. However, viewpoint assessments are taken from 2Km and 1.4Km respectively so the near effects are not tested. Additional assessments should be carried out close to the construction pathway, such as from St Edmund's Way, where it crosses the underground cable route

close to the junction with the Stour Valley Path, west of Henny Road and east of Hill House Farm.

7.5.4 The proposed Grid Supply Point Substation and Sealing End Compound at Waldegrave Wood, represents a significant negative feature in the local landscape during construction and in the early years post-construction, being above 12m in places.

7.5.5 The Stour Valley West Cable Sealing End Compound at Alphamstone also inserts a structure up to 11.7m high into the landscape close to a PRoW. From the viewpoint Year 1 photomontage (G07 View from PRoW near Mabb's Corner Document 5.8) the extent and nature of the planting, designed to mitigate these impacts, is unclear. Whilst removal of the 132kV cable line gives substantial landscape and visual benefits, the new structure creates an adverse impact during construction and Year 1.

7.5.6 **Operational Phase Impacts -** Proposals to underground the cables largely remove the significant landscape and visual impacts during the operational phase of the development. However, replacement planting of removed vegetation will take years to become effective and, in some areas, it will not be possible to re-establish trees where cables are present, and the character of the landscape will change locally as a result in those areas. Compensatory planting, in keeping with local character, is needed to offset these proposed losses.

7.5.7 Surface infrastructure would remain highly visible locally within the landscape. Due to their size and industrial character, the Grid Supply Point Substation and Sealing End Compounds would give rise to significant residual adverse impacts, particularly on sensitive recreational users of footpaths.

7.5.8 The selected viewpoint for the Grid Supply Point Substation and Sealing End Compound at Waldegrave Wood (VPH07/G18 View from Rectory Lane on the edge of Wickham St Paul – Document 5.8) is so far away from the site (c800m) that it is not possible to assess the Year 15 impacts from this

distance. An additional viewpoint assessment and photomontage should be carried out closer to the proposed site.

7.5.9 The Stour Valley West Cable Sealing End Compound at Alphamstone Year 15 photomontage (G07 View from PRoW near Mabb's Corner – Document 5.8) demonstrates how limited the mitigation effect of the planting is at Year 15 with most of the structure still highly visible and the local effects still significantly adverse.

7.5.10 **Decommissioning Impacts** – These impacts would likely be similar to that of the construction phase impacts and will not be repeated again.

7.6 Required Mitigation and Compensation

7.6.1 A comprehensive mitigation and compensation plan should be provided that includes both off-site mitigation and a fully funded compensation plan to offset the permanent adverse effects of the surface infrastructure and of the cable route should be provided.

7.6.2 BDC and ECC also endorse the Design Principles Document which was completed by Suffolk County Council and is included in Appendix 1 of this report.

7.6.3 Further removal of 132kv line should be included between the Twinstead Tee and the proposed GSP substation. This section of line is approximately 2.7km long between Pylons PCB89 and PCB97 and would become redundant as a result of this development. This is because the development removes the connecting 132kv line at the Twinstead Tee. This was effectively confirmed in a letter from UKPN to BDC and is included in Appendix 2. It is also noted that a 400kv line shown is shown on a plan in PDA-002, but correctly, a 132kV line is shown on APP-018 – general arrangement plans – Sheet 23. While this is likely a referencing error only, it should be corrected.

7.6.4 The landscape between the Twinstead Tee and the proposed GSP substation at Butlers Wood/Waldergrave Wood lies partly within the Stour Valley Project Area. Figure 6.2 Landform and Drainage (APP-146)

Document 6.4.1: Environmental Statement Figures (Part 1) shows a landscape of mixed topography of mainly flat and gently undulating landscape west of Twinstead but then the more steeply sloping landscape east of Twinstead into the Stour Valley.

7.6.5 The flatter, plateau landscape falls within the Essex B3 Blackwater/Stour Farmland landscape character type. The Essex landscape character assessment describes this landscape as of moderate sensitivity to developments such as pylons and tall mast construction due to the moderate to high intervisibility. It is criss-crossed by several PRoW. The character of this landscape can be seen from Viewpoint H-06: View from the PRoW to the South-East of Wickham St Paul (APP-107 - Document 6.3.6.4.7: ES Appendix 6.4 – Viewpoint Assessment Section H (Part 7)). This viewpoint shows a large arable field typical of this landscape type in the foreground bordered by hedgerows with trees through which there are glimpses of gently rolling fields and trees. The existing 132kV and more distant 400kV overhead lines cross the view. It can be seen that the retention of the 132Kv pylon run even when redundant detracts from the rural character of the existing landscape.

7.6.6 The sloping valley landscape east of Twinstead falls within Essex landscape character type C8 Stour Valley. It is described as having undulating rounded or gentle sloping valley sides, with narrow moderate to steep sided tributary valleys, and many small deciduous and mixed woodlands and hedgerowed trees. Its sensitivity to utility developments such as pylons is described as high in the Essex Landscape character Assessment due to the intimate character of the valley. This typical character can be seen in the middle distance from viewpoint G35 on the outskirts of Twinstead. (APP-065 - Document 5.8.3: Photomontages: Appendix 3 Photomontage Figures (Part 3)). The photomontages also demonstrate the advantages to both the landscape and visual receptors of removal of existing pylons, particularly when viewed against the skyline. This character can also be seen from viewpoint G34 north of the 132Kv line lying within the Stour Valley Project

area (APP – 106 - Document 6.3.6.4.6: ES Appendix 6.4 – Viewpoint Assessment Section G (Part 6.)

7.6.7 The viewpoint looks over pasture sloping into a distinctly wooded small tributary valley of the River Stour. The proposals would remove the section of existing 132kV overhead line east of Twinstead Tee and the existing 400kV overhead line resulting in a beneficial change to the view, but the remainder of the 132kV overhead line on the distant skyline would still be present. Additional visual as well as landscape benefits could be gained by removal of the remainder of the redundant 132Kv line within the sensitive Stour Valley Project area.

7.6.8 While BDC appreciate the removal of this line is outside of NG control (as it is owned by UKPN), owing to the above, BDC and ECC consider that NG should enter further discussions with UKPN to see if this redundant piece of line can be removed, whether that be within the scope of the DCO or something which could be agreed outside of the DCO process. This would serve to increase the overall benefit of the development by improving the local landscape character in this area. It would also be appropriate given that the line would only become redundant because of the proposed development.

7.7 Summary

7.7.1 The proposed route crosses the Stour Valley Project Area, a landscape of high quality and value. There are likely significant adverse landscape impacts along the route during construction.

7.7.2 Due to the sensitivity of occupants of residential properties and recreational footpath users there are likely significant visual impacts upon these receptors during construction.

7.7.3 Proposals to underground the cables where the route crosses the Stour Valley Project Area removes the significant landscape and visual impacts during the operational phase of the development. However, replacement

planting will take years to become effective and, where cables are present, it will not be possible to re-establish trees.

7.7.4 There are likely significant residual adverse landscape and visual impacts from the Grid Supply Point Substation and Sealing End Compounds due to their scale.

7.7.5 Additional viewpoints are needed close to the Grid Supply Point Substation and to the construction pathway in the Stour Valley.

7.7.6 A comprehensive mitigation and compensation plan should be provided.

7.7.7 Further removal of redundant 132kv line between the Twinstead Tee and the GSP substation should be explored further.

8 Biodiversity

8.1 National Policy

8.1.1 NPS EN-1 sets out a number of key principles; Paragraph 5.3.18 states that applicant should include appropriate mitigation measures as an integral part of the proposed development. In particular, the applicant should demonstrate that:

- during construction, they will seek to ensure that activities will be confined to the minimum areas required for the works;

- during construction and operation best practice will be followed to ensure that risk of disturbance or damage to species or habitats is minimised, including as a consequence of transport access arrangements;

- habitats will, where practicable, be restored after construction works have finished; and

- opportunities will be taken to enhance existing habitats and, where practicable, to create new habitats of value within the site landscaping proposals.

8.1.2 Paragraph 5.3.19 of EN-1 states that where the applicant cannot demonstrate that appropriate mitigation measures will be put in place the IPC should consider what appropriate requirements should be attached to any consent and/or planning obligations entered into.

8.1.3 Paragraph 5.3.20 of EN-1 states that the IPC will need to take account of what mitigation measures may have been agreed between the applicant and Natural England (or the Countryside Council for Wales) or the Marine Management Organisation (MMO), and whether Natural England (or the Countryside Council for Wales) or the MMO has granted or refused or intends to grant or refuse, any relevant licences, including protected species mitigation licences.

8.1.4 Paragraph 174 of the NPPF states inter alia that d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.

8.1.5 Paragraph 180 of the NPPF states inter alia that d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

8.1.6 Paragraph 131 of the NPPF also outlines the importance of trees in contributing towards local character and their role in mitigating against and adapting to climate change. This applies to the planting of new trees and the retention of existing trees.

8.2 Local BDC Development Plan Policies

8.2.1 Policy SP2 *(Recreational Disturbance Avoidance and Mitigation Strategy RAMS)* of the Adopted Local Plan secures financial contributions from relevant developments toward mitigation measures in accordance with the Essex Coast Recreational Disturbance Avoidance and Mitigation Strategy 2018-2023 (RAMS) (although the requirement for such contributions relates only to residential schemes).

8.2.2 Policy SP7 *(Place Shaping Principles)* of the Local Plan requires all new developments to protect and enhance assets of natural value and to incorporate biodiversity creation and enhancement measures. It also requires an integrated and connected network of green and blue infrastructure.

8.2.3 Policy LPP63 *(Natural Environment and Green Infrastructure)* of the Adopted Local Plan states that development must take available measures to ensure the protection and enhancement of the natural environment, habitats, biodiversity and geodiversity of the District. All developments are expected, where appropriate, to contribute towards the delivery of new Green

Infrastructure to develop a network of multi-functional green spaces and natural features throughout the District.

8.2.4 Policy LPP64 *(Protected Sites)* of the Adopted Local Plan is a lengthy and detailed policy which seeks to protect protected species, priority species and priority habitat. It states that in relation to sites of national or international designation *'sites designated for their international importance to nature conservation; including Ramsar sites, Special Protection Areas, Special Areas of Conservation, should be protected from development likely to have an adverse effect on their integrity whether they are inside or outside the District. Proposals which are considered to have a likely significant effect on these sites will require an Appropriate Assessment in line with European and domestic legislation'*.

8.2.5 In relation to Protected Species, Priority Species and Priority Habitat, Policy LPP64 of the Adopted Local Plan also states that proposals which result in a net gain in priority habitat will in principle be supported, subject to other policies in the Development Plan. It goes on to state that *'Where priority habitats are likely to be adversely impacted by the proposal, the developer must demonstrate that adverse impacts will be avoided and impacts that cannot be avoided are mitigated on-site. Where residual impacts remain, off-site compensation will be required so that there is no net loss in quantity and quality of priority habitat in Braintree District'.* It also requires Ecological Surveys to be submitted by Developers to demonstrate that an adequate mitigation plan is in place.

8.2.6 Policy LPP64 of the Adopted Local Plan also states that 'proposals resulting in the loss, deterioration or fragmentation of irreplaceable habitats such as ancient woodland or veteran trees will not normally be acceptable unless the need for, and benefits of the development in that location clearly outweigh the loss'. Finally, the Policy seeks to protect Local Wildlife Sites, Local Nature Reserves and Special Roadside Verges.

8.2.7 Policy LPP65 *(Tree Protection)* of the Adopted Local Plan covers Tree Protection. Preservation Orders may be placed on prominent trees which

contribute to the character of the local landscape and have a reasonable life expectancy and trees which make a significant positive contribution to the character and appearance of their surroundings should in general be retained unless there is a good arboricultural reason for their removal. It also states that when considering the impact of development on good quality trees the Council will expect developers to reflect the best practice guidance set out in BS5837:2012 (as amended). Trees of higher quality are also identified as being a material consideration in the planning process. Overall, the Policy seeks to retain and protect trees and to ensure that unnecessary, poorly considered or excessive tree loss is prevented.

8.2.8 Policy LPP66 *(Protection, Enhancement, Management and Monitoring of Biodiversity)* of the Adopted Local Plan addresses the protection, enhancement, management and monitoring of Biodiversity. It states that *'Development proposals shall provide for the protection of biodiversity and the mitigation or compensation of any adverse impacts. Additionally, enhancement of biodiversity should be included in all proposals, commensurate with the scale of the development'.* Some examples of enhancement are given such as watercourse improvements to benefit biodiversity and water quality, habitat creation and wildlife links.

8.3 Key Local Context

8.3.1 This LIR is focused on the biodiversity context of Section G (Stour Valley) and Section H (GSP Substation). The biodiversity context of sections outside of BDC's/ECC administrative are not specified in this report, however some of the recommendations can be applied to the project as a whole. The comments in this section are informed by the Council's appointed Ecological Consultant at Essex Place Services.

8.3.2 The development does not fall within the buffer zone of any Site of Scientific Interest (SSI) within the BDC administrative area. There are however multiple non-statutory Local Wildlife Sites (LWS) and Ancient Woodlands (AWs) which either cross, or are within a reasonable proximity of, the Order

Limits of the development. These sites are specified in Table 7.5 of [APP-075] Document 6.2.7 Chapter 7 Biodiversity with a breakdown of their respective habitat. In summary the sites are:

Moat Farm/Burnt House Marsh (LWS)

Alphamstone Meadows (LWS)

Alphamstone Complex (LWS)

Loshes Meadow Complex (LWS)

Ansell's Grove/Ash Ground (LWS)

Twinstead Marsh (LWS)

Waldergrave Wood (LWS and AWs)

Butlers Wood (LWS and AWs)

8.3.3 There are other sites which may also be affected by the development which are not listed in Table 7.5; these include:

Parkhill Wood (LWS and AWs)

Pebmarsh House (LWS)

Daws Hall (LWS)

8.3.4 As set out in Paragraph 7.5.13 of Document 6.2.7, these LWS's are to be excluded from the assessment of impact, as the ES report considers that there are no pathways to affect. This is because of the embedded mitigation measures, including horizontal directional drilling, which are in line with published ecological impact assessment methodology.

8.4 Adequacy of Application Submission

8.4.1 The application is supported by suitable surveys for the majority of the route which are accepted. However, as set out in Paragraph 11.4.7 of [APP-079]

Document 6.2.11, soil sampling and other surveys, could not be carried out in the haul route section from the A131 to the Stour Valley West CSE Compound due to an outbreak of avian influenza at the time soil surveys were to take place.

8.4.2 It is noted that in the absence of this survey information, following the submission of the DCO application, the Inspector issued a Rule 9 Letter dated 24th July 2023 requesting a timetable for further surveys to be completed to inform the examination proceedings. Following the Inspector's Rule 9 letter NG submitted [PD-001] Document 8.1, dated August 2023. NG confirmed that they were due to complete these further surveys in August 2023 in relation to biodiversity, agriculture and soil (to inform ACL classification) and the Arboricultural Impact Assessment (Table 3,1 of Document 8.1).

8.4.3 As such, it is noted that there is a deficiency with the survey data supplied for the proposed Haul Route from the A131 to the Stour Valley West CSE Compound regarding impacts on hedgerows, trees and biodiversity, including protected species. BDC and ECC would expect that these surveys are provided and sufficient time is given to review these by the Councils Ecological Consultant at Place Services.

8.5 Local Impact of Development

8.5.1 **Construction Phase Impacts** - during construction, there would be negative impacts upon ecological features (designated sites, protected and priority species and habitats). This would include an 80m wide swathe that would be disturbed due to the construction of underground cable sections of the route. Surface infrastructure construction would represent an intrusive feature that would impact ecology during construction. Moreover, Woodland areas within the new overhead transmission line sections would have a 20m wide swathe felled to ground level (no removal of roots) to facilitate construction activities. The trees would be graduated cut for an additional 12.5m on either side of the 20m swathe to accommodate construction activities. It would also involve

horizontal directional drilling, which is the best method for avoiding ecological impacts on sensitive habitats, subject to the appropriate restoration of habitats at either end. While no detailed Arboricultural surveys have been completed for the haul route section from the A131 (at the time of preparing this LIR), there is an abundance of trees along the A131 which would likely be required to be removed to facilitate access and suitable visibility on a national speed limit road. As such, there could be significant environmental effects if a large number of trees are required to be removed, especially veteran trees.

8.5.2 **Operational Phase Impacts** – there would be a positive operational phase impact with ecological enhancements designed to achieve Biodiversity Net Gain (BNG) and other Natural Capital benefits would be in place and would over the operational life of the development increasingly enrich the area. This is a requirement included in the Ofgem RIIO- 2 determination.

8.5.3 **Decommissioning Phase Impacts** - there would be negative material impacts upon ecology. This would include parts of the 80m wide swathe that would be disturbed due to the removal of underground cable sections of the route. Removal of vegetation to ground level would represent an intrusive feature that would impact ecology during decommissioning.

8.5.4 For the removal of the 132kV overhead line, there would be limited woodland lost. This would lie within the existing area used for maintenance of the 132kV overhead line underneath the current overhead line so is within the existing operational maintained swathe. It is therefore regularly maintained by trimming the height of the trees for operational electrical safety clearances. Opportunities could be taken to maximise the biodiversity benefits from traditional coppicing.

8.5.5 For the removal of the 400kV overhead line, a 20m working area would be required where trees would be cut to ground level (no root disturbance). This would lie within the existing operational maintenance swathe beneath the overhead lines, where the vegetation is currently regularly maintained to trim the height of the trees for operational electrical safety clearances.

Opportunities could be taken to maximise the biodiversity benefits from traditional coppicing.

8.6 Required Mitigation and Enhancements

8.6.1 Ecological mitigation designed to avoid, minimise and compensate for impacts from the surface infrastructure and of the cable route and enhancements to achieve BNG will be required. There is a need to demonstrate avoidance of impacts particularly for veteran trees and ancient woodland which are irreplaceable habitat. (APP-178) Document 7.8, Sections 6.3.7 - 6.3.8 and Table 6.2 detail the mitigation and buffers for veteran trees located within the Order Limits, to protect their roots from impacts.

8.6.2 The same mitigation also needs to be provided for ancient trees and candidate veteran trees and potential ancient woodland. Table 6.4 of (APP-178) Document 7.8 includes Ecological Mitigation measures to avoid impacts on ancient woodland; EM-G11 which requires the temporary construction works to remove the existing 400kV overhead line at Ansell's Grove (PoAWS10) to be limited to the existing operational maintained swathe within the woodland. There will be no temporary access route installed and no vehicle access will be required within the woodland. It should be ensured that this remains the case at all times.

8.6.3 EM-H03: The proposed GSP substation has been located away from the southern edge of Butler's Wood. Construction works will not encroach into or beyond the ditch that runs east west along the northern and southern edges of the GSP substation. It should be ensured that this remains the case at all times.

8.6.4 Such protection measures should also be extended into protecting any other ancient trees, candidate veteran/veteran trees and potential ancient woodland in areas which have yet to be surveyed along the proposed Haul Route from the A131 to the Stour Valley West CSE Compound.

8.6.5 Biodiversity Net Gain; whilst the principle of Net Gain within the Order Limits is strongly supported, BDC considers more detailed information will be required within the relevant management plans to deliver the promised gains within the time period for achieving the required condition and ecological function. Mechanisms for securing BNG are discussed in the dDCO section of the LIR, paragraph 21.5.8.

8.7 Biodiversity Net Gain and Supporting Documents/Evidence

8.7.1 Draft documents have been submitted (Construction Environment Management Plan (CEMP)) including Appendix A - Code of Construction Practice (CoCP) and Landscape and Ecological Management Plan (LEMP). These should continue to be updated taking into account consultee feedback and ongoing design refinement and environmental assessment.

8.7.2 Statements in Section 7 of the CEMP provide details of management measures for biodiversity during the construction phase of this NSIP project. All of the construction phase management measures in relation to biodiversity are contained in the Project Description (embedded design), CoCP (good practice measures) and Environmental Statement mitigation (yet to be finalised). All of these mitigation measures in relation to biodiversity are set out in the LEMP.

8.7.3 The structure of the draft LEMP will enable it to set out project specific measures for embedded design, good practice and mitigation on how ecological features such as watercourses, vegetation (including trees) and habitats will be protected and managed during the construction phase. Retained trees will be protected during construction in accordance with the measures set out in BS 5837:2012 and BS 3998:2010 Recommendations for Tree Work. Works to trees and the agreement of relevant protection measures will be undertaken under the supervision of an arboriculturalist and/or the EnvCoW.

8.7.4 The LEMP will need to also set out how land, vegetation and habitats will be reinstated following construction together with the subsequent aftercare and,

where applicable, monitoring arrangements, particularly in relation to any licences issued by Natural England. The LEMP provides a mechanism to deliver all the construction phase measures relating to landscape and ecology which are secured by other documents e.g., CEMP and does not duplicate the measures set out within European Protected Species licences.

8.7.5 Further control mechanisms should be added into the CEMP and LEMP, so that when the contractor is appointed, all technical details can be finalised. See Section 21 (dDCO), Article 57 and Schedule 17 for further detail.

8.7.6 Whilst the applicant is committed to delivering at least 10% Biodiversity Net Gain on this project, the BNG (enhancements i.e., not mitigation or compensation) would be only shown in the Environmental Gain Report - alongside other elements of Environmental Net Gain - and not in the LEMP. This will all be delivered within the Order Limits should secured via Requirement 13.

8.7.7 It is considered appropriate that an Advisory Group is set up to help inform decision making throughout the implementation of the LEMP with LPA representatives invited as appropriate.

8.8 Summary

8.8.1 Significant detrimental ecological impacts are inevitable during the construction and decommissioning of the proposals. However, embedded mitigation designed to avoid, minimise and compensate for adverse impacts and to achieve Biodiversity Net Gain (BNG) are included with the Order Limits. However, further information is required in relation to ecological and arboricultural surveys for the un-surveyed areas (at the time of writing).

8.8.2 Furthermore, whilst avoidance and mitigation measures for veteran trees and ancient woodland (irreplaceable habitats) are documented where they have been surveyed, additional consideration should be given to demonstrating avoidance of tree felling / works (through locating on an alternative site with less harmful impacts). This is needed for the application of the mitigation

hierarchy by confining activities to the minimum areas required for the works as required by Policy EN1 5.3.18 and NPPF Para 180 a).

9 Green Infrastructure

9.1 Overview

9.1.1 ECC currently provides advice on Green Infrastructure (GI) schemes for major developments. ECC have been consultees on GI since 2018. Although there are no statutory requirements for GI, the 25 Year Environment Plan and Environment Act 2021 will place significant importance on protecting and enhancing GI, accessibility and biodiversity net gain.

9.1.2 In providing advice we look to ensure that adequate provision, protection and improvements of high-quality GI comply with the objectives and planning principles set out in the following documents:

Local Planning Authorities (LPA) Green Infrastructure Strategy/ SPD or equivalent green and open space strategies provides further guidance on the LPA's Local Development Plan policies regarding the Council's approach to green infrastructure provision in the local authority area.

Essex Green Infrastructure Strategy, 2020, aims to enhance the urban and rural environment, through creating connected multi-functional GI that delivers multiple benefits to people and wildlife. It meets the County Council's aspirations to improve GI and green spaces in our towns, city and villages, especially close to areas of deprivation.

Essex Green Infrastructure Standards, 2022, aims to provide clear guidance on the requirements on both planning policy and planning application and processes.

9.2 ECC GI Comments in Relation to Environment Statement

9.2.1 It is noted that the Environment Statement (APP-068 to APP-085) does not refer to Green Infrastructure (GI) per say, but it is noted under local policy it has taken into consideration Braintree's GI Policy with the Local Plan other

neighbouring LPAs GI policies. It is recommended that the Design Principles for this proposal consider green infrastructure objectives to reduce and mitigate significant effects on green infrastructure assets. GI is multifunctional (such as flood management, climate change mitigation and adaptation) at a range of scales that collectively deliver a range of environmental, social and economic benefits. It is important that the diversity of these functions and benefits is recognised as part of the landscape led design.

9.2.2 Local Policy Context (ES Chapter 2 Regulatory and Planning Policy Context (APP-070) and ES Appendix 2.2 Local Planning Policy (APP-089)). Despite not being official policy, the ECC's GI Team recommend that the following Local Development guidance's be taken into consideration, applied, and referenced:

Essex Green Infrastructure Strategy, 2020,

Essex Green Infrastructure Standards, 2022,

9.2.3 These documents, which should be used as part of the Plan's evidence base in securing multifunctional green infrastructure, advocate for the improvement, protection, and creation of an inclusive and integrated network of green spaces.

9.2.4 By applying Essex's nine GI principles and standards it will help to ensure quality and consistency in the provision, protection, enhancement, management, and stewardship of GI, an essential part of place-making and place-keeping for the benefit of people and wildlife.

9.2.5 Natural England has given its support to the Essex Green Infrastructure Standards (2022) and Building with Nature Policy accreditation has been awarded to both documents.

9.3 <u>Essex Local Nature Partnership and Local Nature Recovery Strategy</u>

9.3.1 ECC has also established a Local Nature Partnership (LNP) covering Greater Essex. The Essex LNP has committed to the delivery of four key targets:

> *1. 25 per cent of all land in Essex will enhance biodiversity and the natural environment by creating natural green infrastructure. (This is an Essex Climate Action Commission Target that has been adopted by the LNP)*
>
> *2. 50 per cent of all farmlands in Essex will adopt sustainable land stewardship practices by 2030 (This is an Essex Climate Action Commission Target that has been adopted by the LNP)*
>
> *3. For the LNP adopt the Wildlife Trust's 1-in-4 programme to engage residents with Nature and achieve a 25% engagement level.*
>
> *4. Accessible Natural Green Space Standards (ANGSt) target for everyone to have access to high quality natural space close to home and work.*

9.3.2 The Essex LNP will be working closely with ECC (who is the 'Responsible Authority') for delivering the Greater Essex Local Nature Recovery Strategy (GELNRS). The GELNRS is being prepared for completion by early 2024. The GELNRS will form the baseline for habitat information, which in turn will generate action to promote biodiversity management and improvement.

9.4 <u>ES Chapter 7 Biodiversity (APP-075)</u>

9.4.1 ECC welcomes National Grid 's commitment to 'deliver net gain by at least 10% or greater in environmental value (including biodiversity) on all construction projects' (National Grid,2021d) and where practicable link to wider environmental gains.

9.4.2 While it is positive to see that the scheme will aim to deliver 10% BNG we recommend that further consideration is given to where possible aim beyond

this. LPAs have the discretion to go beyond 10% and require a higher percentage BNG if they so choose). The Essex Local Nature Partnership (LNP) supports going for higher than the mandatory 10% BNG requirement and encourages Essex LPAs to go for 20% BNG in local policy. The Essex LNP have been investigating the provision of a 20% BNG viability study, to evidence and support reasoning behind going for higher than the 10% mandatory requirement. Progress on the LNP's work can be found at: www.essexnaturepartnership.co.uk .

9.5 ECC GI Comments in Relation to 7.4 Environment Net Gain Report

9.5.1 ECC welcomes that a wider Environment Net Gain (ENG) report has been produced.

9.5.2 The Environment Net Gain Report (APP-176) emphasises that the metric 3.1 forecast should be treated with caution due to the preliminary nature of the design and the assumptions made that means a change in the initial BNG calculation. ECCs GI team recommends using the latest Biodiversity Metric 4 and that the BNG Report is updated once the final design and landscape/GI provision for both on-site and off-site is known and fixed. However, the Planning and Advisory Service advise that Metric 3.1 can still be used before mandatory BNG is in place, where the latest version of the metric will be required.

9.5.3 It is noted on page 32 Para 7.3,2 of the Environment Net Gain Report that a Net Gain Management and Maintenance Plan will be produced after the first monitoring visit. However, a BNG Plan or ENG Plan will need to be submitted to and approved in writing by the local planning authority. The Environment Act sets out that the biodiversity gain plan should cover:

How adverse impacts on habitats have been minimised.

The pre-development biodiversity value of the onsite habitat.

The post-development biodiversity value of the onsite habitat.

The biodiversity value of any offsite habitat provided in relation to the development.

Any statutory biodiversity credits purchased; plus.

Any further requirements as set out in secondary legislation.

9.5.4 The reason for this is that Biodiversity Gain Plans (subject to guidance made available) sets out the key ecological considerations relevant to the development proposals, the biodiversity management principles for new habitat creation areas and the enhancements that are likely to be achieved through such management. Like the Landscape and Ecology Management Plan, it aims to:

Verify the ecological baseline features of interest.

Identify ecological mitigation requirements; and,

Identify management and enhancement requirements relevant to the application area.

To enhance Protected and Priority Species/habitats and allow the LPA to discharge its duties under the s40 of the NERC Act 2006 (Priority habitats & species).

9.6 <u>GI Comments in Relation to 7.5 Construction Environment Management Plan (APP-177)</u>

9.6.1 The proposal, by its nature, will require construction which will impact existing GI Assets such as trees, hedges and vegetation, as well as any nature designated sites (e.g., Dedham AONB, Stour Valley and Local Wildlife Sites etc.). It is noted that the Construction Environmental Management Plan (CEMP) (APP-177) states that all construction phase measures in relation to biodiversity and landscaping vegetation retention, loss and reinstatement are set out in the Landscape Environmental Management Plan (LEMP) (APP-182).

9.6.2 The LEMP and CEMP Appendix B Register of Environmental Actions and Commitments (APP-179) should also include any new GI features. Ideally, strategic elements of the GI framework are brought forward in phase one of the development, to create a landscape structure or evidence is shown that substantive GI is secured as early as possible in initial phases of delivery to allow early establishment.

9.6.3 The CEMP should make it clear that construction phase measures within the LEMP and REAC is adhered too and that these measures incorporate the recommendations within the Environment Statement and Environmental / Biodiversity Net Gain plan. This is because the phased implementation of new GI of the development construction will allow for the GI to mature, and it will provide further benefit of reducing/buffering the aesthetic impact from the construction work.

9.7 <u>GI Comments in Relation to 7.8 Landscape and Ecology Management Plan (APP-182)</u>

9.7.1 The CEMP refers to the mitigation measures which would be maintained and managed through the proposed Landscape and Ecological Management Plan (LEMP), which is welcomed. The LEMP provides measures on how the retained landscape and ecological features would be protected during construction, and reinstatement of vegetation. It should also include and align to the measures set out in the Environmental (Biodiversity) Net Gain Plan and any new landscape/ GI planting.

9.7.2 The LEMP sets out the roles and responsibility for overseeing the delivery of the LEMP, but there is no reference to who will monitor the after care and longer-term management and maintenance? Clarification should be provided.

9.7.3 On page 43 and 49 the LEMP refers to a 5-year aftercare period that will be established for the mitigation and reinstatement planting. However, ECC GI Team suggest that the LEMP includes a maintenance plan and work schedule for a minimum of 15 years to allow this vegetation to be installed

and maintained/replaced as necessary, to ensure it matures and is retained to successfully mitigate against the scheme's impact. However, through mandatory biodiversity net gain it will be expected for the habitat to be secured for at least 30 years via obligations/ conservation covenant.

9.7.4 Details should include who is responsible for GI assets (including any surface water drainage system) and the maintenance activities / frequencies.

9.7.5 We would also expect details on how the maintenance of GI assets and green spaces (whether through a management company service) shall be funded and managed for the lifetime of the development to be included. The reason for this is to ensure appropriate management and maintenance arrangements and funding mechanisms are put in place to maintain high-quality value and benefits of the GI assets.

9.7.6 Failure to provide the above required information before commencement of works may result in increased impacts from climate change, such as flood risk or air pollution from the site.

9.8 <u>Alignment with Norwich to Tilbury (N2T) Nationally Significant Infrastructure Project (NSIP)</u>

9.8.1 Bramford to Twinstead proposal should take into consideration the Norwich to Tilbury proposal, since both routes affect similar habitats and designated sites such as Dedham Vale AONB. ECCs GI Team welcomes the mitigation measures for the underground cables and the preferred approach as set out in the ES, CEMP and LEMP which runs through the Dedham Vale AONB and Stour Valley.

9.8.2 As mentioned in previous comments, Essex County Council is a partner in the Dedham Vale AONB and Stour Valley Partnership and supports the Dedham Vale AONB and Stour Valley Management Plan 2016 to 2021. This is a statutory document which should be afforded significant weight in decision making including when the applicant is developing proposals for their application. ECCs GI team recognise the importance of this development proposal however, construction and development within the

AONB should be kept to a minimum. Paragraph 5.9.11 of the Overarching National Policy Statement for Energy (EN-1) states that “any projects [in AONB] designated areas should be carried out to a high environmental standard, including through the application of appropriate requirements where necessary”. ECCs GI team supports this and expects the protection of biodiversity, plants and wildlife to be a top priority.

9.9 Regarding the Landscape Character Area (LCA) 7 – Essex C8 Stour Valley; and LCA 8 – Essex B3 Blackwater and Stour Farmlands. (Stour Valley, Twinstead, Wickham St Paul area) for underground cables and Substation.

9.9.1 The proposed scheme for the underground cable through Stour Valley and Substation within Twinstead and Wickham St Paul in Braintree is situated within the Essex Climate Action Commission’s (ECAC) recommended Climate Focus Area (CFA), which is formed of the Blackwater and Colne River catchment areas (please see Figure 1 on Appendix 3 for further details).

9.9.2 The objective of this recommendation is for the CFA to *“accelerate [climate] action and provide exemplars, for learning and innovation: adopting Sustainable Land stewardship practices: 100% by 2030 and Natural Green Infrastructure: 30% by 2030”* (ECAC, 2021). Among the objectives of the CFA are to achieve net zero carbon, biodiversity net gain, improve soil health and air quality, reduce flooding and urban heat island effect, and enhance amenity, liveability and wellbeing of Essex communities. It will achieve this by wholesale landscape change in rural areas and urban areas and it will look to major developments such as are proposed here to contribute to these targets.

9.9.3 CFA require developments to consider the following requirements in line with meeting the requirements outlined in NPPF:

> *Biodiversity net gain to enhance biodiversity and the natural environment by creating Natural Green Infrastructure contributing*

to the CFA 30% by 2030 target and the wider Local Nature Recovery Network/Strategy.

Flood and water management, for those properties at risk of flooding to include Integrated Water Management and Natural Flood Management techniques.

New developments to improve urban greening of our towns, and villages through the provision of street trees for example. New developments are necessary in terms of increasing greenspace creation, naturalizing existing green spaces, greening the public realm, and implementing sustainable drainage systems (SuDS).

9.10 Access & Public Rights of Way

9.10.1 ECCs GI team supports the retention of existing and the provision of new access networks which encourages and supports active travel. Green infrastructure can be integrated along the network to enhance nature through the delivery of biodiversity net-gain, habitats, and green corridors. Therefore, ECCs GI team recommends that routes are designed to include wildlife corridors and stepping-stones GI features along sustainable transport routes such as paths, cycle, and bridleways. Furthermore, with the provision of new access networks, it would be desirable to join up existing PROWs and new access routes to create circular walking routes. This should be something that is actively considered by NG.

9.10.2 Mitigating and adapting to a changing climate is a national and Essex County Council priority. The Climate Change Act 2008 (amended in 2019) commits the UK to achieving net-zero by 2050. In Essex, the Essex Climate Action Commission proposed 160+ recommendations for climate action. Essex County Council is working with partners to achieve specific goals by 2030, including net zero carbon development. All those active in the development sector should have regard to these goals and applicants are invited to sign up to the Essex Developers' Group Climate Charter [2022] and to view the

advice contained in the Essex Design Guide. Climate Action Advice guides for residents, businesses and schools are also available.

10 Climate Change

10.1 Local Policy

10.1.1 The Scheme has been assessed against current and emerging Local Policy documents of the relevant local authorities in Essex. Table 1.1 of APP-088, application Document 6.3.2.1 (Legislation, Policy and Guidance) sets out the environmental legislation and policy, with Table 1.2 informing environmental guidance relevant to the project. APP-088, application document 6.3.2.2 covers Local Planning Policy with reference to Essex County Council policy in section 2.2 as well as section 3.2 in relation to the Braintree Local Plan.

10.1.2 Additional policy documents provide local policy on key topics of relevance to this development. For example, Essex County Council's (ECC) scoping comments highlighted the work of the Essex Climate Action Commission (ECAC) and its emerging Report "Net Zero: Making Essex Carbon Neutral". The report was published in July 2021. Also, the ECC Climate Action Plan has been published (November 2022) and sets out the immediate actions being taken by ECC in response to the ECAC report.

10.2 Local Issues

10.2.1 The ECAC Net Zero: Making Essex Carbon Neutral Report (July 2021) sets out a plan for Essex to tackle climate change and the key steps needed for Essex to reach net zero by 2050.

10.2.2 Specifically, for energy, the document sets out a series of recommendations. The recommendation to embrace large-scale renewable energy installations, such as solar and wind farms, aligns with the projects ambition to connect the county to new offshore wind farms and other clean sources of energy in a way that benefits the local community and supports developments that offer community ownership, and improvements to biodiversity.

10.2.3 The report highlights the realisation however that energy produced from renewable sources is often variable and it is inefficient to transmit energy over long distances, favouring local generation and storing.

10.2.4 The impact of the proposed scheme on emissions within the county and potential impact on the target for Essex to be net zero by 2050 should be included in the assessment and the importance of reducing the impact of the proposed scheme to as close to 'net zero' as possible should be acknowledged.

10.2.5 To reduce the impact of the proposed scheme, provision should be made for the reduction of greenhouse gas emissions, in both construction and operational phases, in order to minimise the development's carbon footprint and mitigate the effects of climate change. Only once all avenues of reduction have been explored should offsetting be utilised. Opportunities for the scheme to implement the recommendations set out in the ECAC Report (2021) should be taken too.

10.3 Assessment Against Targets

10.3.1 The Environmental Statement considers the impact of the proposed scheme on climate (for example the nature and magnitude of greenhouse gas (GHG) emissions (APP-092 - Application Document 6.3.4.3).

10.3.2 To do this, the applicant has set out a methodology of assessment utilising key data sets such as BEIS Carbon Factors for reporting GHG emissions, the 'Cost Book', E-Hub database, Carbon Interface Tool (CIT) to create the carbon asset database used for the project. The sources drawn from are Inventory of Carbon and Energy database (Circular Ecology, 2019), plus Department for Environment, Food and Rural Affairs (Defra) emission factors (updated annually) and main equipment supplier data.

10.3.3 At present, the applicant appears to have drawn from the most basic data set available to estimate the associated CO2e for the project, with detailed calculation data withheld for commercial reasons.

10.3.4 In order to ensure a clarity in the CO2e implications of the project, it is necessary for the applicant to carry out a detailed calculation of emissions utilising the most thorough data collection methods, drawing from direct

supply chain EPD relevant data, transport and on-site emissions to calculate the upfront emissions caused by the development.

10.3.5 The scheme has been assessed in terms of its impact on climate and the effects of climate on the scheme itself during both construction and operation. The design life of the project is 40 years and therefore this period has been used for the purposes of the assessment. All opportunities to extend the design life should be explored to avoid short term retrofit. Decommissioning has not been assessed, however design principles to ensure reuse of materials at end of life should be implemented where possible.

10.3.6 The applicant assesses the potential likely significant effect of the schemes' carbon emissions against the national level legally binding targets on climate as set out in the Climate Change Act 2008. The applicant has not carried out a similar assessment against locally set targets. For example, the target for the County to achieve net zero by 2050 as set out in the ECAC Report (July 2021) and re-stated in the ECC Climate Action Plan (Nov 2022).

10.3.7 Broadly, the assessment methodology and approach set out in the Environmental Statement is satisfactory, but ECC is disappointed that the effect of the schemes' carbon emissions is not assessed against the local target set for the County.

10.3.8 ECC believes that the target of achieving net zero by 2050 on a County level in Essex is an important local aim and a key component of the legally binding UK net zero target for 2050. This is supported by the data presented in the chapter, for example:

10.3.9 Estimated CO2 emissions within Essex in 2019 totalled 6,834 kilo-tonnes (kt), representing approximately 20.1% of total estimated CO2 emissions within the East of England and 2.5% of total estimated CO2 emissions within England.

10.3.10 It is important to understand the impact of the scheme on the County net zero target. ECC therefore request that the impact of the scheme on the County target is assessed and reported.

10.4 Ambition for Net Zero

10.4.1 The applicant intends to further reduce its carbon emissions, reduce its resource use, improve the natural environment and demonstrate leadership for change with firm targets, including delivering carbon neutral construction by 2025/26, achieving zero-waste to landfill across key areas of waste.

10.4.2 The development exceeds thresholds put in place within the Minerals Local Plan, and thus APP-132 Application Document 6.3.10.3 Mineral Resource Assessment outlines the potential effects on minerals.

10.4.3 The Materials and Waste Management Plan (MWMP) (APP-181 Application Document 7.7) outlines the measures that are proposed for reducing the use of raw materials through reuse and recycling.

10.4.4 The CEMP (APP-177 Application Document 7.5) includes details of the measures proposed to reduce effects from emissions.

10.4.5 Throughout the Environmental Statement, the applicant has not directly acknowledged the importance of reducing the impact of the scheme to as close to net zero as possible. The applicant focusses more on the energy net zero target is set for the UK, than the requirement for the proposed scheme to have net zero GHG emissions. The ambition of the applicant is should direct attention to appreciate that for the UK target to be met then every development that occurs in the country must be aiming to be as close to net zero as possible, and therefore radically reduce upfront and operational GHG emissions. The applicant states that GHG emissions will be baselined and compared to periodically, there is no scale or quantified commitment indicated from the outset to reduce the value.

10.4.6 The proposed scheme, which will be carbon heavy in its construction, needs to show a commitment and methodology to first reduce and lastly offset the carbon footprint of the development and aim for net zero. The reality is that for the UK to achieve net zero in practice, all sectors need to play their part and reduce emissions to as close to zero as possible for all emissions created through development.

10.5 GHG Emission mitigation measures

10.5.1 The assessment of GHG emissions from the proposed scheme is as follows:

10.5.2 The total CO2e estimated on the project is 111,484 tCO2e. This is split into 84,050 tCO2e for capital (construction) carbon (which would be spread over the whole construction duration), 26,133 tCO2e for transmission losses during 40 years of operation and 1,301 tCO2e for SF6.

10.5.3 The direct breakdown of the carbon emission data has not been provided. This should be sought to ensure clarity and transparency of the process emissions, and to ensure satisfactory GHG performance alignment with similar projects, materials, and supply chain impacts.

10.5.4 The applicant has detailed embedded mitigation measures that aim to reduce GHG emissions, outlining where material, water, energy and waste efficiencies can be explored throughout the Materials and Waste Management Plan (APP-181 Application document 7.7). They mainly relate to scoping out works, and modifying works, to avoid the need for construction and demolition activity. The mitigation methods in place are encouraging and should be adhered to in a strict manner at all times to avoid unnecessary emissions being caused through lack of thoroughness.

10.5.5 Material efficiencies should focus on: local procurement, low carbon materials prioritising reused materials where possible, lean design and waste minimisation during fabrication.

10.5.6 Other embedded measures taken should seek to reduce carbon losses from existing carbon stores (soil and vegetation) and improve carbon sequestration, for example through planting of new areas of woodland and vegetation.

10.5.7 In terms of the standard mitigation measures, there are, however, several matters to highlight:

10.5.8 **Construction Traffic Management Plan -** Embedded mitigation measures have also been included to support low emission travel methods to encourage a modal shift away from the use of the private vehicle for those traveling to and from site.

10.5.9 The applicant highlights that the contractor will set targets around increasing the number of staff using sustainable travel options and a general reduction of travel movements over the duration of the project. ECC welcomes this approach and suggests that 'lessons learnt' be produced to better understand access to site.

10.5.10 The CTMP does not directly refer to the measures in place to improve efficiency of likely transport journeys to site associated with material transportation. Significant targets could be introduced to limit certain journeys to within an appropriate distance from the site, encouraging local supply chain interaction and reducing road-based emissions from vehicles.

10.5.11 **Site Waste Management Plan** - This applicant should specifically link into the storage and re-use of 'waste' materials and how they are defining waste – this could include ensuring that reuse of materials is prioritised or making a publicly available register of 'waste materials' that may be useful to other development contractors within the local area. This could be beneficial in ensuring that materials are re-used locally, which has other environmental benefits. Materials currently devised for demolition on the existing sites should be explored for feasibility of reuse and should integrate a 'deconstruct over demolition' approach to aim to keep materials in a state that keeps them at their highest possible value.

10.5.12 This is in keeping with well-established Circular Economy principles; deconstructing an asset and retain its constituent elements, systems and components as much as possible. Reusing each system, component or material again through checks, cleaning and repair, and with minimal reprocessing or remanufacture.

10.5.13 The Site Waste Management Plan is to become the responsibility of the Principal Contractor but there are no details about how this contractor will be identified and their experience in the management of waste and circular economy principles and what the expectations are. The inclusion of measurable targets would be advisable.

10.5.14 **Materiality:** As aforementioned material efficiencies should focus on: local procurement, low carbon materials (prioritising reused materials where possible, lean design and waste minimisation during fabrication. Table 4.4 of application document 6.2.4: Project Description, sets out the approximate quantities of key materials anticipated on the project.

10.5.15 The applicant states their existing processes in place to source materials from sustainable sources and to use recycled materials where these do not compromise the required design standards and operational life of the project.

10.5.16 The key materials listed suggests typical materials such as concrete, steel, and aluminium are to be used. The materials sourced should be the lowest feasible embodied carbon to meet design requirements as possible. Current opportunities within the construction industry could allow significant reductions in CO2e through the use of novel, but well tested materials such as low carbon concretes and steel alternatives (including steel reuse). These avenues must be explored when procuring the project materials.

10.6 Enhancement Measures

10.6.1 The Applicant has identified several opportunities for enhancement measures to be incorporated into the scheme to reduce GHG emissions. However, the Applicant states that these are not currently feasible due to technical restrictions.

10.6.2 ECC would expect typical measures to be taken to demonstrate how to reduce and avoid GHG emissions on an infrastructure project of this scale. These enhancement measures relate to:

- reducing or avoiding GHG emissions during construction stage by using electric or low carbon construction equipment, making use of telematics and start/stop technology, generating renewable energy on-site, using low energy solutions for onsite offices / site compound etc.

- reducing or avoiding GHG emissions associated with the consumption of raw materials, including carbon intensive materials (e.g., concrete, steel, aluminium and cement). Setting ambitious reduction targets for embodied carbon against early assumptions and adopting low carbon solutions throughout.

- further reducing the magnitude of GHG emissions associated with the use of materials and waste disposal, through for example, undertaking pre-demolition assessments which make recommendations for materials re-use, recycling and other recovery or final disposal.

10.6.3 The applicant should aim to be leading the construction industry by example and striving to achieve and play their part in contributing to the national goal of achieving net zero by 2050. Therefore, ECC would urge the applicant to commit to these measures and seek to implement them in full.

10.6.4 As a significant infrastructure provider, the applicant has a unique opportunity to share resources, knowledge and data nationally, in order to achieve best practice in respect of mitigating the effects of construction, operation and maintenance of energy network infrastructure. However, a limited amount of this is drawn out in the Environmental Statement and ECC finds this lack of ambition disappointing, and a missed opportunity to drive forward and demonstrate leadership in the construction industry in respect of climate mitigation. It is recommended that it should be addressed, and as a minimum the enhancement opportunities identified fully committed to.

10.7 Significance of Effects on Receptors

10.7.1 The impact of the GHG emissions (from both construction and operation phases) from the proposed scheme has been assessed against the identified climate receptors. For assessing the impact of the scheme on climate, the receptors identified are the UK Carbon budgets. The Scheme extends over several carbon budgets and the impacts have been reported against each.

10.7.2 There is no significance threshold set for carbon in terms of Environmental Assessments. The Institute of Environmental Management and Assessment (IEMA) guidance explains that the key significance is whether the scheme emits GHGs and does it reduce GHG emissions in line with the trajectory to net zero 2050?

10.7.3 The project's construction phase is assumed to span the UK's fourth (2023 to 2027) and fifth (2028 to 2032) Carbon Budgets. The net change in GHG emissions with proposed scheme within the relevant carbon budget are summarised as:

10.7.4 The total carbon for construction of the project (84,050 tCO2e) is the equivalent of 0.02% of the 427 MtCO2e emitted by the UK as a whole in 2021 and also the equivalent of 0.02% for the average annual amount in the fifth carbon budget of 345 MtCO2e (1,725 MtCO2e divided by a five-year period).

10.7.5 The operation stage carbon has been estimated to be 26,133 tCO2e. Using the 2021 carbon emissions, during each year of operation, the transmission losses are estimated to be average CO2e equivalent emissions of 653 CO2e (26,133 tonnes divided by an estimated 40-year design life), representing 0.0002% of the UK 2021 CO2e emissions.

10.7.6 The applicant has made the judgement that the construction and operational CO2e numbers are not considered to have a material impact on the ability of the Government to meet its carbon reduction targets and therefore are deemed to be 'not significant', in line the NNNPS. The applicant argues the UK Carbon Budget would not be affected by embodied carbon from imported materials as the Carbon Budget only applies to domestic emissions, therefore should steel and other material be imported, the contribution would be significantly lower, however, the applicant must show caution in seeing this as a reduction in the GHG impacts of the project. The sustainable procurement of the materials used on the project should be take into account all considerations, from CO2e impacts through the socio-economic impacts on local supply chain.

10.7.7 The applicant follows the principles of PAS 2080 throughout the project development process and require this of its contractors. This framework looks at the whole value chain, aiming to reduce carbon and reduce cost through more intelligent design, construction and use. The applicant would request the tendering contractors to propose low carbon alternative materials as part of their response to the main works package. ECC welcomes this approach.

10.7.8 The calculated CIT demonstrated by the successful contractor would outline the impacts of materials, assets, equipment and energy that they propose to use in construction of the project. The CIT also considers the origin of materials, the transport distances, opportunities for reuse of materials and low carbon alternatives. This should be at the forefront of the applicant's selection process to ensure the least impactful solution as feasible is achieved.

10.7.9 The applicant has outlined that the successful contractor is incentivised to demonstrate a reduction in capital carbon over the duration of construction of the project. The CIT and carbon footprint is reviewed on a monthly basis and there would be key performance indicators in place that incentivise the contractor to reduce the carbon footprint against the initial baseline.

10.7.10 Whilst ECC understands how the judgement has been made and that it accords with the relevant guidance, it is considered important to highlight the shortcomings of the assessment process in relation to achieving the UK net zero target. If every project of this nature is considered in isolation, then in practice it becomes more unlikely that the UK will meet its net zero target by 2050. It is the cumulative impact of such projects that needs to be assessed and a judgement made on the significance of the effects of all the projects together on the ability of the UK to meet the net zero target. It is understood that the applicant stresses the implications of the scheme to the decarbonisation of the energy network to achieve net zero, however the construction and operation implications must be considered in isolation, as direct implications between the two are immeasurable at the inception stage.

10.7.11 It is acknowledged that residual emissions of all projects within the applicant's portfolio at the end of 2025/26 (and future years) would be aggregated and offsets delivered, however the importance of material efficiency and reducing the direct emissions of the project must far outweigh the reliance on offsetting at the end of the stated period.

10.8 Monitoring

10.8.1 The regular reporting of GHG emissions from the scheme throughout its life cycle is necessary to support monitoring, reducing, mitigating, as well as offsetting GHG emissions associated with the construction and operation of the development. To achieve national and county climate targets, the need to decarbonise large infrastructure developments in Essex is significant.

10.8.2 The applicant proposes monthly reviews of GHG emissions reporting which would be informed by actual materials, and fuel and energy consumption data during the construction stages and would facilitate reviewing the performance of the proposed scheme against the carbon estimates in the Environmental Statement and the stated 'carbon baseline' to be implemented once a contractor is in place, allowing the identification of further GHG emissions reduction opportunities.

10.8.3 The County Council is satisfied with this approach, however, we stress the importance of monitoring the in-use performance of the asset, to ensure that GHG emissions throughout the assets design life are being met, and future efficiencies are taken when they present themselves to ensure the lowest possible impact from the development.

10.9 Summary

10.9.1 Essex County Council welcomes the wider benefit that the proposed scheme brings to Essex and the contribution to the national progression to a net zero energy, but ECC is equally eager to see that provisions are made and carried out in the development proposal to mitigate the GHG emissions generated from the construction and operation of the proposal and its associated development.

10.9.2 ECC recognises that the assessment presented in the Environmental Statement has been carried out in accordance with the NNNPS and that it has concluded that the effects are not significant in a national context. However, ECC would highlight the limitations of the assessment system in that infrastructure projects of national importance are assessed on a piecemeal basis in terms of climate impact and are considered in isolation when evaluated against the carbon budgets set at a national level.

10.9.3 For an ambitious County like Essex, ECC is disappointed that the applicant hasn't assessed the impact of the proposed scheme against local County level targets. It is important to be open and transparent in assessing progress towards climate targets, and that includes making assessments of schemes that might potentially show that climate targets are more difficult to reach. Such circumstances might trigger the need for greater action to be taken to try to minimise the climate impacts of a scheme and make it more acceptable, or at least be honest about the difficult decisions that must be made to achieve a balance between the costs and benefits of the scheme. As part of this, ECC considers it is important to recognise and assess the climate impacts of the scheme on the local County level climate target from the outset, with thorough analysis of the impacts caused through procurement.

10.9.4 ECC is optimistic about the climate mitigation measures demonstrated through the proposed scheme from the perspective of mitigating climate change in construction and operation. The applicant must address the identified series of 'enhancements measures' that would deliver greater mitigation of the climate impact of the development. Although the project aspires to contribute to the national drive to net zero through enhancing grid capability for renewable energy transfer, the project must be strongly reviewed in isolation based on the impacts seen through construction and operation to ensure the best feasible development is achieved.

10.9.5 On balance, although ECC supports the scheme and its wider benefits for Essex and the growth of renewable energy, the County Council encourages

the applicant to: assess and report the climate impact of the scheme in the most detailed manner available against the County level net zero target; reduce the climate impact as much as possible by committing to fully implement the identified enhancement measures, including a significant reduction target for embodied carbon; and demonstrate leadership and innovation in this sector. Together this will help secure greater reductions in GHG emissions and help keep the County and UK within reach of net zero by 2050.

11 Historic Environment

11.1 National Policy

11.1.1 Paragraph 5.8.2 of EN-1 states that the historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, landscaped and planted or managed flora. Those elements of the historic environment that hold value to this and future generations because of their historic, archaeological, architectural or artistic interest are called ”heritage assets”. A heritage asset may be any building, monument, site, place, area or landscape, or any combination of these. The sum of the heritage interests that a heritage asset holds is referred to as its significance.

11.1.2 Paragraph 5.8.1 of EN-1 states the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment.

11.1.3 The NPPF (2021) places significant weight on the protection of heritage assets; Paragraph 199 of the NPPF states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset’s conservation (and the more important the asset, the greater the weight should be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance.

11.1.4 Paragraph 200 of the NPPF states that any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Substantial harm to or loss of: a) grade II listed buildings, or grade II registered parks or gardens, should be exceptional; b) assets of the highest significance, notably scheduled monuments, protected wreck sites, registered battlefields, grade I and II* listed buildings, grade I and II*

registered parks and gardens, and World Heritage Sites, should be wholly exceptional.

11.1.5 Paragraph 201 of the NPPF states that where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss, or all of the following apply: a) the nature of the heritage asset prevents all reasonable uses of the site; and b) no viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and c) conservation by grant-funding or some form of not for profit, charitable or public ownership is demonstrably not possible; and d) the harm or loss is outweighed by the benefit of bringing the site back into use.

11.1.6 Paragraph 202 of the NPPF states that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

11.2 Local BDC Development Plan Policies

11.2.1 Policy SP7 (*Place Shaping Principles*) of the Adopted Local Plan requires all new development to protect and enhance assets of historical value.

11.2.2 Policy LPP47 *(Built and Historic Environment)* of the Adopted Local Plan states that the Council will promote and secure a high standard of design and layout and the protection and enhancement of the historic environment in order to respect and respond to local context, especially in the District's historic areas where development may affect the setting of listed buildings and other heritage assets.

11.2.3 Policy LPP57 *(Heritage Assets and their Settings)* of the Adopted Local Plan seeks to protect heritage assets and their settings stating that the Council 'will seek to preserve and enhance the immediate settings of heritage assets

by appropriate control over the development, design and use of adjoining land'.

11.2.4 Policy LPP59 *(Archaeological Evaluation, Excavation and Recording)* of the Adopted Local Plan addresses archaeological matters and seeks to ensure that sites of archaeological importance are appropriately investigated.

11.3 Key Local Context

11.3.1 This LIR is primarily focused on the historic environment of Section G (Stour Valley) and Section H (GSP Substation). The comments in this section are informed by the Council's Historic Buildings Consultant and Archaeological Consultant at Essex Place Services.

11.3.2 In terms of **Designated Heritage Assets**, [APP-076] Document 6.2.8 Paragraph 8.5.20 sets out that there are 103 designated built heritage assets (listed buildings) within 250m of the Order Limits, and 1,235 designated built heritage assets within the 3km study area across the entirety of the project. There are however no designated built heritage assets within the Order Limits in Braintree District.

11.3.3 While no breakdown is provided explicitly between the numbers of listed buildings in each administrative area, [APP-126] Document 6.3.8.1.1 Appendix 8.1 Annex A lists the affected Listed Buildings across the route within the 3km search area. [APP-151] Document 6.4.6, Part 6, Figure 8.2 shows the locations of the Listed Buildings on a map, with the corresponding number to the listing in Document 6.3.8.1.1 Appendix 8.1 Annexe A. Furthermore, Sheet 4 of Figure 8.2 sets out a holistic map view of the heritage assets in the Braintree/Essex District at a larger scale. It is evident that there are a large number of designated built heritage assets which could be affected by the development.

11.3.4 In terms of **non-designated heritage assets**, a 250m buffer zone was utilised and found three within the Braintree District; two Pillbox's in Edgars Farm Lamarsh and a Cast Iron Water Pump near Cripple Corner in

Pebmarsh. Further details can be found on [APP-126] Document 6.3.8.1.1 Appendix 8.1 Annexe A Table 3.3.

11.3.5 In terms of **Historic Landscapes** (**Protected Lanes),** these are set out in [APP-076] Document 6.2.8 Paragraph 8.5.33; there are 25 Protected Lanes within the 3km study area, with nine lying within or immediately adjacent to the Order Limits as shown on Figure 8.3: Historic Landscape [APP-145] (Application Document 6.4). Paragraph 8.5.34 sets out that Protected Lanes have been identified as having a particular historic and landscape value for the character of the countryside (Essex County Council, 2013).

11.3.6 There are no registered historic parks and gardens within the affected areas of Braintree District.

11.3.7 In terms of **Designated Archaeological Remains**, Paragraph 8.5.3 of [APP-076] Document 6.2.8 sets out that there are 11 scheduled monuments within the 3km study area, but none within the Order Limits. In terms of **Non-Designated Archaeological Remains**, Table 8.2 of [APP-076] Document 6.2.8 sets out a summary of the non-designated archaeological sites of which there are 271 in the entire study area (Paragraph 8.5.5). No breakdown has specifically been provided of these sites for the Braintree District, although Figure 8.1 Sheets 10-14 of [APP-151] Document 6.4.6 Environmental Statement Figures Part 6 show the distribution of non-designated archaeological assets in the BDC/Essex area, with corresponding numbers to Table 2.2 of [APP-126] Document 6.3.8.1.1 ES Appendix 8.1 Annexe A. The proposed cable route bisects the important Stour Valley which has extensive cropmark complexes in a relatively undisturbed valley.

11.4 <u>Adequacy of Application Submission</u>

11.4.1 **Built Heritage -** The methodology and scope of the assessments conducted to date are considered to be appropriate, identifying the relevant heritage assets which will be affected by the line upgrade. However, however further work will need to be done to understand the full impact of the proposals once the route has been finalised, and limits of deviation agreed.

11.4.2 **Protected Lanes** – BDC have no objection in principle to the assessments used to review protected lanes, however further review is required of their reinstatement following construction. This is explored further in the construction impact section below.

11.4.3 **Archaeology** - NG have identified that they have undertaken desk-based assessment, some geophysics and limited trial trenching, and it is clear they have undertaken an aerial photographic assessment although this is not identified in {APP-076] Document 6.2.8, Table 8.1. The sources used for the desk-based assessment are appropriate and BDC support the use of these. The use of the non-intrusive geophysics and aerial is also supported.

11.4.4 However, there is concern that throughout the consultation process, since the earlier proposal in 2012, it has been recommended that NG would need to undertake intrusive archaeological evaluation on those areas where ground disturbance would occur. This has now occurred in limited areas and is continuing at present but the results of these will be difficult to be integrated into the documentation already submitted as part of the application and the full impact of the scheme on the historic environment will not be fully defined.

11.4.5 Similarly, with the paleoenvironmental report, the lack of ground truthing has resulted in the failure to accurately identify the areas significance. Due to the limited level of intrusive evaluation, the level of post determination field work is likely to need to be more detailed to ensure that there is an accurate record of the archaeological deposits impacted by the scheme.

11.4.6 A programme of investigation and recording does not provide a full record of the surviving archaeology unless there is total excavation. Section 8.8.3 of [APP-076] Document 6.2.8 should accept that the recording of an archaeological site in advance of development can only be partially mitigated by the record and damage is therefore sustained.

11.5 <u>Construction Phase Impacts</u>

11.5.1 **Built Heritage –** In terms of Built Heritage, the impacts of construction were scoped out of the main Environmental Assessment. This is because as set

out in Paragraph 8.3.3 of [APP-076] Document 6.2.8, no historic buildings have been identified as being directly at risk of physical damage from construction activities. BDC are in agreement that there would be no physical impact on built heritage from construction activities within the proposed order limits in the Braintree District. There may however be some temporary harm to the setting of these buildings during construction, albeit at a low level and of course this would be temporary.

11.5.2 **Protected Lanes** – In terms of Protected Lanes, these will be affected during construction, both from required alterations (e.g., removal of hedgerow to facilitate access or underground cabling) and indirectly from use by construction traffic more generally. [APP-127] Document 6.3.8.2, Table 5.2 sets out the impacts on seven protected lanes in Braintree/Essex, concluding that the magnitude of impact would be medium adverse, but the significance of effect would be minor adverse, owing to the reinstatement of any lost trees and hedgerow etc following the completion of construction.

11.5.3 BDC support the re-instatement of any trees/hedgerow or other aspects of the protected lane which are to be altered. BDC are however concerned that the protected lanes contain many old hedgerows; these old hedgerows will be difficult to replace, and any replacement may not be able to match the character of such old hedgerows, leading to an interruption of the historic integrity of the lanes. Given their age, some of the road banks may also have some archaeological interest.

11.5.4 Taking into account the above, BDC request that the necessary works to the protected lanes are located in the lower quality sections of the lanes wherever possible. It is not apparent from the documentation whether this has been explored and alternative access / underground cabling locations considered. It is also requested that a suitable management plan of any replacement planting be made through the requirements to ensure that any replacement planting survives. While it is stated that good practice measures will be applied in the CoCP (application document 7.5.1 APP-178), BDC

request further requirements for effective management of any replacement hedgerows/trees to ensure their survival.

11.5.5 **Non-Designated Archaeological Remains** – in terms of archaeological impacts during construction, the proposed route has the potential to cause damage or destroy archaeological deposits in Essex. Although the required groundworks are limited around new and existing towers, the construction of new accesses, haul routes and compounds have the potential to disturb below ground deposits. The undergrounding of sections of the proposed route also has the potential to cause significant impact due to the width (80m) of the working corridor required for the burial of the cables.

11.5.6 Within section 8.8.2 of [APP-076] Document 6.2.8, it is difficult to assess that the buried archaeology will be of low value as there has only been limited intrusive evaluation to confirm the significance of the deposits. Any archaeological field work undertaken post consent on those areas without trial trenching would have to be in the form of a programme of strip map and sample to appropriately deal with the archaeological potential. As such the figure 1 in the Outline Written Scheme of Investigation (OWSI) (Document 7.10 APP-187) would need to be updated.

11.5.7 Although the approach identified within the OWSI is acceptable, the argument that there would be no significant effect on the historic environment is misleading (Paragraph 8.12.1), in that although a record will have been made of the below ground heritage assets these would have been destroyed by the development. BDC/ECC ask that this is at least recognised in the documentation.

11.5.8 Within paragraph 8.5.16 of APP-076 there is concern that the interpretation of no value is given to sites where artifacts have been removed from their original context. It is our view that these provide an indication of the potential for sites of that period being present within that area and thus should be seen as an indicator of occupation rather than being given no value. For instance, MSF5670 in [APP-126] Document 6.3.8.1.1 Appendix 8.1 pg. 16, is described as many black patches with pottery, this is given a ‘No Value’ as

assigned value. However, this is as likely indicative of settlement activity and potentially significant. There are a number of examples like this which BDC/ECC would recommend should be reassessed.

11.6 Operational Phase impacts

11.6.1 **Built Heritage** – While there are no designated built heritage assets within the order limits, their settings still have the potential to be impacted by the completion and operation of the development. Indeed, an assessment has been carried out of the magnitude of effect and significance of effect for each of the Listed Buildings on Table 4.2 on [APP-127] Document 6.3.8.2. Having assessed the report for BDC, the Historic Buildings Consultant was largely in agreement with the findings in Table 4.2. Furthermore, there are no additional built heritage assets which BDC consider need to be added to the list of potential heritage impacts.

11.6.2 However, as this application progresses, further detail must be given regarding the heritage assets which have been identified as affected by the proposals, with a targeted landscape and heritage led scheme implemented to minimise any visual or other affects to the setting of heritage assets along the route.

11.6.3 **Protected Lanes –** It is not anticipated that there would be any significant effects on the protected lanes once development is operational, other than the occasional maintenance vehicle being used to service relevant sections of the development during its operational life.

11.6.4 **Non-Designated Archaeological Remains –** No significant effects are anticipated on archaeology during the operation of the development.

11.7 Decommissioning Impacts

11.7.1 **Built Heritage –** It is not anticipated that there will be significant negative effects on built heritage during any future decommissioning of the equipment / works.

11.7.2 **Protected Lanes –** It is likely that there would be negative impacts on the protected lanes during any decommissioning, as access will likely be

required as before, to be able to remove the equipment, which will likely require the removal of further trees and hedgerows.

11.7.3 **Non-Designated Archaeological Remains –** It is not anticipated that there will be any archaeological impacts from the decommissioning phase of the development, as deposits will already have been disturbed, unless new areas of ground are required to be worked on.

11.8 Required Mitigation / Enhancements

11.8.1 **Built Heritage –** BDC consider that mitigation measures will have an impact upon the setting of numerous heritage assets, as well as the line upgrade itself, as elements such as increased planting, landscaping and access routes can all have an effect on how a heritage asset is appreciated and understood. The loss or diminishment of the ability to appreciate an asset's significance can be considered harmful, and care must be taken to ensure any necessary mitigation measures are measured and well thought out, to cause minimal disruption to existing positive settings. Opportunities to enhance the settings of listed buildings must also be taken, in line with the statutory duty outlined in section 16(2) of the Planning (Listed Buildings and Conservation Areas) Act 1990.

11.8.2 **Protected Lanes** - A commitment should be made not only to restore any affected vegetation as part of the restoration programme following construction, but also a commitment to improving the overall historic character of the lanes where appropriate by including additional hedgerow infilling etc across the whole lane.

11.8.3 **Archaeology -** It is recommended that within [APP-179] Document (7.5.2) CEMP Appendix B – Register of Environmental Actions and Commitments (REAC) (7.5.2), a further mitigation measure is included so that there is a commitment that all the archaeological field work would require sign off from local authority archaeological advisors, prior to the commencement of development as identified in section 2.2.2 of the OWSI [APP-187] document

7.10. This will integrate the archaeological process into the overall programme of environmental mitigation.

11.9 Outline Written Scheme of Investigation APP-187 (Document 7.10)

11.9.1 While the OWSI is generally supported by BDC/ECC, there are some changes recommended and these are set out below.

11.9.2 Under 5.1.1 - it should state that strip map and sample has the potential to lead onto open area excavation (section 4 of 7.10) of smaller areas.

11.9.3 Section 5.2 - It is recommended that this should include all of those areas where top soil removal is required and that trial trenching has not occurred. These areas will not have been fully assessed and as such their potential has not been defined.

11.9.4 Section 6.2 - identifies watching briefs taking place in areas where trial trenching has occurred. BDC/ECC do not see this as required unless as a specific result of the trial trenching showing very limited archaeological deposits present as within the new substation area. BDC/ECC would also recommend that this is not used in areas where no previous intrusive evaluation has occurred as this will likely cause considerable delay to the construction programme if deposits are identified.

11.9.5 Within Section 7.2.4 of the Geoarchaeological and Paleoenvironmental Mitigation proposed mitigation is very general considering this is a very targeted location. It has been recommended in earlier meetings by the Host Authorities that these drill pits needed to be assessed in advance of submission by bore holes or other assessment methods to fully understand the significance of the deposits on site.

11.9.6 Under Section 8.5.3, only providing the Local Authority Advisors a period of 10 days to read the publication report is inadequate, considering the scale and potential significance of the archaeological publication report. Time will need to be available to liaise with appropriate academic or scientific specialists. At no point elsewhere in the document is time identified for

responses, it is unclear why it appears here. It would be more appropriate to give 3 months for this considering the likely size of this report.

11.10 Summary

11.10.1 In terms of **Built Heritage**, negative impacts on the setting of listed buildings are anticipated from the operation phase of the development; both from the equipment itself and also the required mitigation from additional screening and landscaping. Further detail must be given regarding the heritage assets which have been identified as affected by the proposals, with a targeted landscape and heritage led scheme implemented to minimise any visual or other affects to the setting of heritage assets along the route. Opportunities to enhance the settings of listed buildings must also be taken, in line with the statutory duty outlined in section 16(2) of the Planning (Listed Buildings and Conservation Areas) Act 1990.

11.10.2 In terms of **Protected Lanes,** negative impacts are anticipated on their historic and landscape value from construction; requiring multiple incursions through established and often historic vegetation in order to provide vehicular access through, or for underground cabling. While reinstatement of any lost trees/hedgerow following the completion of construction will assist in offsetting this negative impact, more needs to be done to explore different incursion options that would have less impact on historic vegetation. More certainty is also required about the management of any reinstatement planting to ensure survival, while opportunities to enhance the character of the affected protected lanes needs further exploration.

11.10.3 In terms of **Non-Designated Archaeological Remains,** significant negative impacts are anticipated from the construction phase of the development, both from access tracks to equipment and large swathes of underground cabling. Further surveys are required where ground disturbance is to occur in order to fully understand the archaeological impact of the development, while a number of clarifications / changes are required both to the assessment methodology, as well as the submitted OWSI (Document 7.10).

12 Flood Risk & Water Quality

12.1 National Policy

12.1.1 Paragraph 5.7.4 of EN-1 states that applications for energy projects of 1 hectare or greater in Flood Zone 1 in England or Zone A in Wales and all proposals for energy projects located in Flood Zones 2 and 3 in England or Zones B and C in Wales should be accompanied by a Flood Risk Assessment (FRA).

12.1.2 Paragraph 167 of the NPPF states when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere. Where appropriate, applications should be supported by a site-specific flood-risk assessment.

12.1.3 Paragraph 174 of the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by: *e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;*

12.2 Local BDC Development Plan Policies

12.2.1 Policy SP7 (*Place Shaping Principles*) of the Adopted Local Plan requires all development to include flood mitigation measures. It also requires development to include measures to promote environmental sustainability including addressing water efficiency and provision of appropriate water and waste water measures.

12.2.2 Policy LPP70 *(Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards)* of the Adopted Local Plan addresses the protection and enhancement of natural resources and states that development will not be permitted where there are unacceptable impacts upon surface and groundwater quality.

12.2.3 Policy LPP74 (*Flooding Risk and Surface Water Drainage*) of the Adopted Local Plan addresses flood risk and surface water drainage in detail. It requires development wherever possible to avoid areas at risk of flooding and to be located within Flood Zone 1. Where it must lie within higher risk areas sequential and exception tests are required and development should be designed appropriately.

12.2.4 Policy LPP76 (*Sustainable Urban Drainage Systems*) of the Adopted Local Plan requires development to incorporate SUDs systems where appropriate and to the County Council's requirements.

12.3 Local ECC Development Plan Policies

12.3.1 Essex County Council as Lead Local Flood Authority (LLFA) is responsible for managing risk of flooding from Surface water, ground water and from ordinary watercourses.

12.3.2 ECC as LLFA is a statutory consultee on all major developments regarding surface water drainage design. ECC supports major planning applications to meet the increasing demand for housing and infrastructure and aim to protect and maintain the existing natural features with the provision of additional green and blue infrastructure, best practices guidance, and multifunctional project design to mitigate any increase in flood risk due to proposed development.

12.3.3 The proposed development has been assessed in relation to, national planning policies, local standards and guidance documents and industry best practice standards (NPPF 2021, Suds Design Guide 2020, Ciria SuDS Manual C753).

12.3.4 The proposed B2T associated works consists of greenfield and brownfield catchments which require appropriate flood mitigation and surface runoff management throughout the development site. The management of surface runoff from these sites should mitigate the increased risk of flooding.

12.3.5 ECC as LLFA has engaged collaboratively with National Grid and their commissioned drainage consultants to scope the detail required to assess

the proposed surface water drainage strategy and other supporting documents including Flood Risk Assessment, Ground Investigation Report, water quality assessment, flood management during construction phase of the Bramford to Twinstead DCO. Essex County Council as Lead Local Flood Authority for the county of Essex supports the proposed scheme.

12.4 Key Local Issues

12.4.1 Essex County Council as Lead Local Flood Authority (LLFA) is responsible for managing risk of flooding from Surface water, ground water and from ordinary watercourses.

12.4.2 ECC as LLFA is a statutory consultee on all major developments regarding surface water drainage design. ECC supports major planning applications to meet the increasing demand for housing and infrastructure and we aim to protect and maintain the existing natural features with the provision of additional green and blue infrastructure, best practices guidance, and multifunctional project design to mitigate any increase in flood risk due to proposed development.

12.4.3 The development as here proposed has been assessed in relation to, national planning policies, local standards and guidance documents and industry best practice standards (NPPF 2021, Suds Design Guide 2020, Ciria SuDS Manual C753, Flood and Water Management Act 2010).

12.4.4 The proposed Bramford to Twinstead works consists of largely greenfield land which requires appropriate flood mitigation and surface runoff management throughout the development site. The management of surface runoff from these sites should mitigate the increased risk of flooding. The Flood Risk Assessment details how good practises will be employed during the construction phase to mitigate surface water run and how pollution will be managed.

12.4.5 ECC as LLFA has engaged collaboratively with National Grid commissioned drainage consultants to scope the detail required to assess the proposed Surface Water Drainage Strategy and other supporting documents including

Flood Risk Assessment, Ground Investigation Report, Water Quality Assessment and flood management during the construction phase of the scheme. Essex County Council as Lead Local Flood Authority for the county of Essex supports the proposed scheme.

12.5 Local Issue Flood Risk

12.5.1 The Flood Risk Assessment (FRA) (APP-059) has been produced to support the Bramford to Twinstead development. Field survey, desk-based assessments and modelling have been undertaken to assess the risk. The FRA has assessed flood risk from all sources including existing risk of flooding and any flood risk increased due to the proposed scheme, further the document has addressed the impact of flood risk elsewhere and have proposed mitigation to this. The FRA has considered the risk of flooding for the construction and operational phases of the proposed scheme.

12.5.2 Essex County Council as LLFA is satisfied with the level of information provided to support that the proposed scheme would not increase risk of flooding from surface water, ground water and from ordinary watercourses during the operational phase of the development.

12.6 Surface Water Drainage Strategy Proposal

12.6.1 National Grid has developed the Surface Water Drainage Strategy to support the application for the Bramford to Twinstead project in accordance with the SuDS Guide. There is one compound within the Essex County Council boundary and discussions have taken place to ensure that the development complies with the Essex Design Guide and best practises. Surface water drainage system (SuDS) have been developed in accordance with local standards (SuDS Design Guide) and national planning policies (NPPF) and industrial best practice guidance (CIRIA SuDS Manual C753) to minimize the impact from the proposed scheme to quantity and quality of the surface water runoff and to maximise the amenity and biodiversity opportunities along the length of the proposed scheme where possible.

13 Geology and Hydrogeology

13.1 National Policy

13.1.1 Paragraph 5.10.9 of EN-1 states that applicants should safeguard any mineral resources on the proposed site as far as possible, taking into account the long-term potential of the land use after any future decommissioning has taken place.

13.1.2 Paragraph 5.10.22 of EN-1 states that where a proposed development has an impact upon a Mineral Safeguarding Area (MSA), the IPC should ensure that appropriate mitigation measures have been put in place to safeguard mineral resources.

13.1.3 Paragraph 5.11.5 of Draft EN-1 states that where pre-existing land contamination is being considered within a development, the objective is to ensure that the site is suitable for its intended use. Risks would require consideration in accordance with the contaminated land statutory guidance as a minimum. Furthermore, Paragraph 5.11.14 of Draft EN-1 states that *applicants are encouraged to develop and implement a Soil Management Plan which could help minimise potential land contamination.*

13.1.4 Paragraph 5.11.17 of EN-1 states that applicants should ensure that a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination.

13.2 Local BDC Development Plan Policies

13.2.1 Policy LPP70 *(Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards)* of the Adopted Local Plan states that Proposals for all new developments should prevent unacceptable risks from all emissions and other forms of pollution (including light and noise pollution) and ensure no deterioration to either air or water quality.

13.2.2 Policy LPP70 of the Adopted Local Plan further states that Development will not be permitted where, individually or cumulatively and after mitigation, there are likely to be unacceptable impacts arising from the development on Inter alia: *The natural environment, general amenity and the tranquillity of*

the wider rural area; surface water and groundwater quality, groundwater source protection areas, drinking water protected zones and compliance with statutory environmental quality standards.

13.2.3 Policy LPP70 of the Adopted Local Plan also states that development will be permitted if there is no unacceptable risk to: siting on known or suspected unstable land; siting on land which is known to be or potentially affected by contamination or where the land may have a particularly sensitive end use and the storage or use of hazardous substances.

13.3 Key Local Context

13.3.1 This LIR is primarily focused on the geology and hydrogeology environment of Section G (Stour Valley) and Section H (GSP Substation), including private water supplies (PWS). The comments in this section are informed by the Council's Environmental Health Consultants at Wardell Armstrong. The structure of this section is informed by the relevant representation issues, as many of the impacts are very focused on the construction phase impact of the development.

13.4 Impacts from construction activities including directional drilling, and surface water run off during construction

13.4.1 Application [APP177] - Document 7.5 explains the measures that will be taken to protect Private Water Supplies (PWS). These measures are generally reactive rather than protective, other than where works will take place for more than 100 days within 500m of a PWS. It is not clear however where this criterion has come from to protect PWS's. Further clarification should be provided.

13.4.2 Clarification should also be provided about how the approach relates specifically to the PWS well at Ansell's Farm. This appears to be around 60m from the trenchless crossing corridor to the south of Ansell's Grove (although this distance is approximate, as the location of the corridor is only available in pdf format). Could there be hydraulic continuity between the strata that would be intersected by the indicative trenchless crossing profile shown on

Figure 10.8 of [APP-153] Document 6.4.8 (e.g., shallow sand and gravel) and this PWS well? Are any protective measures / monitoring required in relation to this PWS during construction, given the proximity of the proposed trenchless crossing activities? It is noted that [APP-131] Document 6.3.10.2 provides an assessment of the effects of this trenchless crossing, which refers to a private water supply at Caldecott (assumed to be the spring named 'Caldecott' in Table 2.7 of that document) but not to the well at Ansell's Farm.

13.4.3 Annex A of [APP-130] Document 6.3.10.1 lists the sites that are scoped out of the land contamination assessment, on the basis of a low / very low potential for contamination. These include an area of 'unknown infill' stated to be within the Order Limits at co-ordinates '58764, 237139'. There appears to be a missing digit in the first co-ordinate (i.e., only five digits) so it is not clear whether this feature is within BDC/ECC's geographical boundary. If it is, then further information on why this has been scoped out would be helpful as 'unknown infill' cannot necessarily be considered low risk without further explanation.

13.5 <u>Completeness of The Baseline Assessment of Historical Mapping.</u>

13.5.1 Paragraph 10.4.2 of [APP-078] Document 6.2.10 and Paragraph 3.2 of [APP-130] Document 6.3.10.1 indicate that historical mapping has been assessed using the National Library of Scotland's (NLS) online resource and Google Earth imagery. However, the NLS mapping typically only extends to the 1960s/70s and Google Earth imagery typically from 2000 onwards. There is therefore the possibility that any potentially contaminative land use that has occurred between these dates may have been missed. It is noted that there is reference to the use of *"readily available historical Ordnance Survey (OS) maps supplemented by reference to earlier maps where available and historical aerial photography"* (paragraph 1.2.1 of [APP-130] Document 6.3.10.1) but it is not clear whether this is a reference to the NLS and Google Earth information or to any additional data sources.

13.5.2 This question has been raised previously and it is noted that Document 6.5.3.2 provides information on how this feedback has been addressed, signposting to Document 6.3.10.1. However, from a review of Document 6.3.10.1, BDC remain unclear about precisely what historical mapping information has been used to define the baseline for the land contamination desk study. It would be helpful if NG could provide a list of the mapping editions and dates that have been reviewed within the BDC area.

13.6 Unforeseen Contamination

13.6.1 The mechanism for dealing with unforeseen contamination appears to be Requirement 4 of the draft DCO [APP-034] (Document 3.1), which requires construction work to be carried out in accordance with the Construction Environmental Management Plan [APP-177] (Document 7.5), which in turn specifies the procedure that will be followed if unexpected contamination is encountered.

13.6.2 Document 7.5 states that "*if unexpected contaminated ground is identified, it should be excavated, segregated and stockpiled in an appropriate manner prior to being sampled".* However, this may not necessarily be the correct sequence of operations, as for some suspected contaminated materials (e.g., those that may contain asbestos) it is necessary to sample them prior to excavation and stockpiling to ensure that the excavation can be carried out safely. As such, it is suggested that further refinements to [APP-177] Document 7.5 are made to resolve this.

13.7 Regulatory Mechanism to Approve the Post Consent Assessment of the Effects of Directional Drilling on Ground Water

13.7.1 Paragraph 10.6.15 of [APP-078] Document 6.2.10 explains that additional, post-consent, hydrogeological risk assessment work will be carried out at each trenchless crossing location once the trenchless crossing construction methods and associated details have been determined. This is to be delivered through the CEMP, which is secured through draft DCO Requirement 4. However, it is not clear whether there is any regulatory

mechanism for approving or questioning this post-consent assessment, because [APP-131] Document 6.3.10.2 states that it will be submitted to the Environment Agency “for information” (paragraph 3.4.13). This wording is also used in [APP-178] Document 7.5.1 (Table 1.1, Measure reference GH07). Further clarification should be provided in this regard.

13.8 Summary

13.8.1 Chapter 10 of the Environmental Statement concludes that there are no likely significant effects in relation to geology and hydrogeology receptors expected during the construction or operation of the Project. This is contingent upon the Project being carried out in accordance with the Application documents, including the CEMP.

13.8.2 The Application documents generally take into account the consultation feedback provided by BDC on the Preliminary Environmental Information Report in 2022. Overall, the conclusions of Chapter 10 appear reasonable. However, further clarification is required from NG on the points discussed within this section including; the cut off criteria for PWS, unknown infill site, what historical mapping has been used to define the baseline, amendments to dealing with unexpected contamination and clarity on the regulatory mechanism to approve post consent effects on ground water.

14 Agriculture and Soils

14.1 National Policy

14.1.1 Paragraph 5.10.8 of EN-1 states that applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5) except where this would be inconsistent with other sustainability considerations. Applicants should also identify any effects and seek to minimise impacts on soil quality taking into account any mitigation measures proposed.

14.1.2 The consultation draft EN-1 (Department for Business, Energy and Industrial Strategy (BEIS), 2021a) has similar text to noted above. The consultation draft of EN-5 (BEIS, 2021b) states in paragraph 2.11.14, that projects should include a commitment for appropriate handling of soil, backfilling, and return of the land to the baseline ALC, to ensure no loss or degradation of agricultural land. It also states that such a commitment should be based on soil and ALC surveys in line with the 1988 ALC criteria and due consideration of the Defra Construction Code.

14.1.3 Paragraph 174 of the NPPF 2021 states that planning decision should enhance the natural environment by; a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan); b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland.

14.2 Local BDC Development Plan Policies

14.2.1 Policy LPP70 *(Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards)* of the Adopted Local Plan states inter alia that soil quality must be protected during development to protect

good quality land and to protect the ability of soil to allow water penetration by avoiding compaction.

14.2.2 In addition, while not a policy in its own right, Paragraph 6.28 of the Adopted Local Plan states that the majority of land in the Braintree District is Best and Most versatile, with 65.8% classified as Grade 2. Paragraph 6.29 goes on to state that *whilst the Council will seek to develop poorer quality agricultural land, it is inevitable that due to the significant increased housing provision requirement, this will lead to unavoidable development on 'best and most versatile agricultural land', as there are insufficient brownfield sites to meet this demand.*

14.3 Key Local Context

14.3.1 This LIR is focused on the Agriculture and Soils context of Section G (Stour Valley) and Section H (GSP Substation). The Noise and Vibration context of sections outside of BDC's/ECC administrative are not explored in detail in this section.

14.3.2 [APP-079] Document 6.2.11, Paragraph 11.5.7, sets out the whole extent of agricultural land affected by the proposal; 644 Hectares (ha) within the Order Limits. Of this approximately 244ha is mapped (provisional mapping) as Grade 2 and approximately 340ha is mapped as Grade 3a or 3b. The individual breakdown of the land classification results is set out in [APP-133] Document 6.3.11.1 and by Figure 11.2, Sheet 3 on [APP-153] Document 6.4.8. However, it is noted from the first Issue Specific Hearing that there was a conflict in some documents about the amount of agricultural land affected by the project. Clarification should be provided by NG.

14.3.3 Figure 11.2 Sheet 3 shows that in the Braintree District, that there is a mix of Grade 3 and Grade 4 Agricultural Land Classification (ACL) across the Stour Valley towards the Stour Valley West Cable Sealing End Compound. The proposed Haul Route to the Stour Valley West Cable Sealing End Compound crosses across a mixture of Grade 2 and Grade 3 ACL.

14.3.4 However, it is understood that the majority of the ACL for the haul route was derived from geo-physical maps, with only detailed site-specific soil sampling carried out on land proposed for the Cable Sealing End (CSE) Compounds and Grid Supply Point (GSP) in Braintree District. Paragraph 11.4.7 of [APP-079] Document 6.2.11 sets out that further soil sampling could not be carried out in other areas which are to be affected by other parts of the development, due to an outbreak of avian influenza at the time soil surveys were to take place. As such, in those unsampled areas, the maps did not allow for Grade 3 to be distinguished between 3a and 3b (Paragraph 11.5.3), so between Best and Most Versatile (BMV) (3a) ACL or not (3b).

14.3.5 In the absence of this survey information, following the submission of the DCO application, the Inspector issued a Rule 9 Letter dated 24th July 2023 requesting a timetable for further surveys to be completed to inform the examination proceedings. Following the Inspector's Rule 9 letter NG submitted [PD-001] Document 8.1, dated August 2023. NG confirmed that they were due to complete these further surveys in August 2023 in relation to biodiversity, agriculture and soil (to inform ACL classification) and the Arboricultural Impact Assessment (Table 3,1 of Document 8.1). At the time of writing these surveys should now be complete but no further evidence has been received.

14.3.6 In any case, in terms of the GSP, this is set out to have an ACL of 3A (Table 11.4 of [APP-079] Document 6.2.11), while the four CSE Compounds would be made up of 33.3% Grade 1, 46.4% Grade 2, 17.3% Grade 3a and 3% Grade 3b (Table 11.3 of Document 6.2.11). Across the development as a whole, of those sites which were fully surveyed, 88% of the land (40ha) was deemed to be BMV - Paragraph 11.5.8 of Document 6.2.11).

14.4 Local Impact of Development

14.4.1 **Construction Phase Impacts** – [APP-079] Document 6.2.11, Paragraph 11.1.2 confirms that during construction, the project would affect agriculture and soils. It states that the development would affect *"land holdings through*

introducing potential fragmentation, biosecurity risks and impacts on any land under agri-environmental, woodland or forestry schemes," as well as soil stripping which *"can affect soil quality and associated soil functions".*

14.4.2 [APP-079] Document 6.2.11, Paragraph 11.6.20 states that there would be a cumulative temporary loss of 6.95ha of land from arable production. This is a significant amount of land, with operation of the development not planned until around Autum 2028 while construction is completed (Appendix B, Paragraph 2.3.4 of [APP-160] Document 7.1). This does not likely take into account any remediation to restore the land where appropriate, especially including any replacement / new planting which may not be in the appropriate season to be undertaken when the development is completed.

14.4.3 In the Braintree District, there would be a considerable loss of ACL, some of which will be BMV (although this will be confirmed with ongoing surveys from the erection of the haul road from the A131 to the Stour Valley West Cable Sealing End (CSE) Compound.

14.4.4 The proposed haul route from the A131 was first put forward at the Targeted Consultation between September and October 2022. The justification, as set out in Paragraph 2.2.2 of [PD-001] Document 8.1 (Rule 9 Letter Response) was to avoid the need for works to the local road network to widen and straighten corners, such as at Cripple Corner, where numerous alterations would be required with associated historic and biodiversity impacts.

14.4.5 The proposed haul route from the A131 itself would be approximately 3.8km long, 7m wide (with 4m wide soil storage to the side and passing places), crossing the existing highway network at multiple points to be able to penetrate through to the Stour Valley West Cable Sealing End Compound (Paragraph 2.2.2 of [PD-001] Document 8.1 Rule 9 Letter Response). The lanes that the haul route would still need to cross are Old Road, the road near the junction of Lorkins Lane and Cripple Corner, Bishops Lane and then finally a further lane near Henny Back Road. As such, while the haul route may reduce the overall amount of work required to these lanes, there would

still be considerable work required for construction vehicles to safely access each section of the haul route.

14.4.6 Overall, based on the above, the haul route would likely take up an 11m wide swathe of land, not to mention any off-set required to plant any crops near the haul route (albeit this has not been specified). Across 3.8km, that is a significant quantity of agricultural land which will be sterilised for an extended period of time during the construction of the development across 4 years.

14.4.7 BDC and local residents raised concerns about the effects on local farmers businesses from the proposed haul route from the A131 at the Targeted Consultation, when it was first put forward by NG. Following the Targeted Consultation, NG tried to take on board some of the feedback received to amend the alignment of the route. However, the route would still bisect several agricultural fields in central positions, which would have the biggest impact on the production of crops by local landowners. It is understood that the affected residents are mainly farmers who rely on the land for their income and the haul road would likely have a large impact on future crops and income generation. It is noted that compensation is being discussed with the landowners for the use of their land for the haul route, however BDC cannot comment on this as these are separate discussions.

14.4.8 It is noted that the local roads are capable of taking combine harvesters and other large agricultural vehicles. BDC consider that further work should be carried out on why the local road network, or at least part of the local network cannot be used to avoid impact on local farming businesses. NG should be required to repair any damage post construction.

14.4.9 As such, despite improving the alignment, BDC remain concerned about the impact of the haul route from the A131 to the Stour Valley West Cable Sealing End Compound. The local roads are capable of taking combine harvesters and other large agricultural vehicles and further work should be carried out on why the local road network, or at least part of the local network cannot be used to avoid impact on local farming businesses. NG should also be required to repair any damage post construction.

14.4.10 As such, BDC request that further exploration is given to how best the Stour Valley West CSE Compound can be reached, and perhaps whether a hybrid approach, using both sections of a new haul road, and the better sections existing highway network, might work, taking into account that the haul route from the A131 would still require significant alterations to the existing lanes. It is acknowledged that there may be additional security implications from a hybrid approach; however, this will likely be the case with the HGV's having to cross multiple points in the highway network anyway.

14.4.11 **Operation Phase Impacts -** Paragraph 11.3.3 of [APP-079] Document 6.2.11 confirms that operational phase impacts of development are scoped into the assessment due to the presence of BMV ACL.

14.4.12 However, in terms of the permanent loss of BMV land, this would be much more limited than that affected by the construction activities, with farming able to take place near to new pylons. In addition, Braintree is a predominantly rural area and therefore has a high quantity of BMV ACL.

14.4.13 NG are proposing to retain rights of access over the land where the haul route is to be located from the A131, however they confirm that the land will be returned to ACL following the completion of development.

14.4.14 **Decommissioning Phase Impacts** – These will be similar to the construction phase impacts, with new hardstanding potentially required from the A131 to access the Stour Valley West Cable Sealing End Compound.

14.5 <u>Required Mitigation</u>

14.5.1 Paragraph 11.4.23 of [APP-178] Document 7.5.1 sets out standard good practice measures which would be undertaken during construction if the project is granted consent. This includes measures within the CoCP and CEMP to protect the quality of soils when stropped, stockpiled and restored, while attempts would be made to recreate any returning agricultural land.

14.5.2 BDC consider that any and all measures to preserve the quality of all agricultural land affected by the development is paramount. BDC would appreciate that this is discussed further in the hearing sessions in order for

NG to reassure BDC and landowners that the impacts of the works would be temporary (where applicable) and not permanently affect valuable BMV land.

14.6 Summary

14.6.1 Chapter 11 of the Environmental Statement sets out the impacts of the development on Agriculture and Soils. The report confirms that a very high percentage of all sampled land is BMV, while further surveys are to be carried out to confirm whether BMV is present in other affected areas.

14.6.2 BDC have significant concerns about the proposed haul route from the A131 to the Stour Valley West Cable Sealing End Compound and the impact that would have, albeit temporarily, on the effective function of agricultural land for the affected landowners. Further exploration is requested about how alternative means of access to the Stour Valley West Cable Sealing End Compound should be considered.

14.6.3 All mitigation measures must be robust to protect the quality of the soil that is being affected and replaced at the end of the construction period.

15 Traffic and Transport

15.1 National Policy

15.1.1 Paragraph 5.13.6 of EN-1 states that a new energy NSIP may give rise to substantial impacts on the surrounding transport infrastructure and the IPC should therefore ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development. Where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the IPC should consider requirements to mitigate adverse impacts on transport networks arising from the development, as set out below. Applicants may also be willing to enter into planning obligations for funding infrastructure and otherwise mitigating adverse impacts.

15.1.2 Paragraph 113 of the NPPF states that "All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed."

15.2 Local BDC Development Plan Policies

15.2.1 Policy LPP42 *(Sustainable Transport)* of the Adopted Local Plan requires development to make appropriate provision for all transport modes including pedestrians, cyclists, public transport and servicing, refuse and emergency vehicles. It also requires development to be consistent with the 'Essex Transport Strategy' Local Transport Plan for Essex (or its successors), for Developers to produce Travel Plans and Transport Assessments and it confirms that the Essex County Council Transportation Development Management Policies provide further detail on requirements relating to accessibility and access.

15.2.2 Policy LPP43 *(Parking Provision)* of the Adopted Local Plan relates to vehicle parking and requires that provision is made in accordance with the Essex Parking Standards (2009).

15.2.3 Policy LPP52 (Layout and Design of Development) states that a proposed development should not have a detrimental impact on highway safety or any other public right of way and its users.

15.2.4 Policy LPP69 of the Adopted Local Plan relates to Protected Lanes and states that the Council 'will conserve the traditional landscape and nature conservation character of roads designated on the Proposals Map as Protected Lanes, including their verges, banks, ditches and natural features such as hedgerows, hedgerow trees and other structural elements contributing to the historic features of the lanes'.

15.2.5 Policy LPP69 of the Adopted Local Plan further states that proposals which fail to do this, or which would 'generate traffic of a type or amount inappropriate for the traditional landscape and nature conservation character of a protected lane, will not be permitted'.

15.3 Local ECC Development Plan Policies

15.3.1 Local Highway Development Management policies have been the subject of a full public consultation exercise, together with a Sustainability Appraisal and Strategic Environmental Assessment. They have been approved by ECC cabinet members for Highways and Transportation and for Communities and Planning and as such have been formally adopted as ECC Supplementary Guidance.

15.4 Key Local Issues

15.4.1 In the time available to review the documents ECC's Highways and Transportation Team (H&T) have concentrated on the following:

- Transport Assessment (APP-061)
- Environmental Statement on Traffic and Transport (APP-080)
- ES Appendix on significant transport effects (APP-134)

15.4.2 The H&T Team have also been passed draft copies of the draft EIR prepared by Suffolk County Council and have read the highways section of the EIR

and have reviewed their Appendices. This work is detailed and comprehensive.

15.4.3 Whilst it is appreciated that the majority of the Bramford to Twinstead (B2T) NSIP scheme falls within Suffolk, the works scheduled to take place in Essex are significant and in this regard the highway comments raised by Suffolk County Council regarding the above documents and draft DCO should equally apply to the highway network in Essex. To that end Essex Highways would be happy to attend joint meetings with Suffolk Highways and the DCO Applicants to resolve outstanding issues.

15.4.4 From a highways viewpoint ECC agree that the operational effects on the highway network will be limited and the greatest impact on the highway and public rights of way network will occur during the construction and decommissioning phases.

15.4.5 With the decommissioning period being 40+ years away it is difficult to accurately predict the future operation of the Local Highway Network and therefore whilst decommissioning is an important element of the B2T project the supporting information concentrates on the construction phase.

15.4.6 Whilst it is correct that a number of topic meetings has taken place with stakeholders prior to submission of this DCO, it similarly appears that the highways and transportation submissions have been prepared without focussed discussions on particular highway topic areas. The comments as made by Suffolk CC in their draft LiR are similar to those here and ECC's H&T Team remain concerned that pre-submission discussions on the strategy and specifics of this DCO in respect of highways and transportation issues have not been sufficiently developed.

15.5 Transport Assessment

15.5.1 From an Essex viewpoint the traffic impact set out in the Transport Assessment (TA) (APP-061) is limited but is of course dependent on many assumptions that are not yet fully agreed and evidenced and upon which Essex County Council would welcome further discussion for example in

respect of working hours and seasonal variation, construction, and worker traffic generation etc. This point is raised by Suffolk CC in detail.

15.5.2 Whilst the temporary impact of the vehicle movements on the wider local road network is likely to be accommodated without the requirement for any significant wider mitigation it remains difficult to extract information relating to the uplift of vehicles on individual roads that are proposed to be used by construction traffic between the A and B road network and individual pylon construction sites. Construction vehicle numbers have been shown in the peak hours within the TA (APP-061) but this is generic and it is difficult to understand if this is completely representative given that activity levels will vary over the duration of the project and therefore it is not entirely clear from the submission what the actual numbers and mix of traffic is anticipated to be on the local road network and if this requires additional mitigation.

15.5.3 For example, where access is required to a discreet pylon construction what typical vehicle mix would this involve and over what duration? Presumably access would only be required for a limited widow within the overall project period, but this is not clear.

15.5.4 It is noted that the proposed temporary construction compound locations are not fixed (other than the main construction compound). It would assist in clarity (for the purposes of assessing environmental impacts) if more specific detail could be given as to the locations of the construction compounds as to enable environmental impacts of these works to be properly identified and assessed.

15.5.5 As regards committed developments at 5.2.3 within the TA (APP-061) reference is made to the A12 widening project, itself a DCO project for which the Examination is closed, with a recommendation on the same from the ExA expected by the 11th October 2023. Since the preparation of the supporting information there may now be greater clarity on vehicle numbers and distribution following the DCO hearings and this should be considered.

15.5.6 **Temporary Haul Road to Cable Sealing Compound -** In October 2022 ECC provided comments regarding the Temporary Haul Road from the A131

to the sealing compound. The proposal to provide a temporary haul road between the western sealing compound and the A131 is supported in principle by ECC and would significantly reduce the impact of construction traffic, particularly HGVs, on the local road network in this rural area, and reduce the necessity to carry out local mitigation schemes significantly on these roads. It is acknowledged that BDC have a different view to ECC on the acceptability of the Haul Route, given the impact on local farmers (see Agriculture and Soils section for further details) and wish for further alternative measures to be explored to access the sealing compound from the A131.

15.5.7 In any case, it was anticipated that additional information regarding the form and construction of this haul road and its junction with the A31 would be included within the DCO submission including minor road crossing point, visibility splays informed by speed surveys of the local road network, vehicle swept paths, traffic management, land ownership and highway boundary information and a stage one road safety audit and designer's response but this information does not appear to have been provided and therefore it cannot be concluded that this mitigation is appropriate or deliverable.

15.5.8 **Other Proposed Bellmouth Site Accesses -** A generic bellmouth detail is shown *Design and Layout Plans: 2.11.12 Temporary Bellmouth* (APP-033). This provides no local context nor provides any information as to whether the individual access point can be safely provided within land in the control of the developer and/or the highway boundary with regard to access geometry and visibility requirements. It cannot therefore be concluded that these accesses are suitable for use in connection with the B2T project at this time.

15.6 Consents and Licenses

15.6.1 **Permit Schemes -** It is welcomed that the project will use the Essex Permitting Scheme to coordinate street works.

15.6.2 **Traffic Regulation Orders -** Article 47 of the DCO (APP-034) has not been reviewed in detail but is it acknowledge that TROs will need to be agreed with ECC to manage traffic for duration of the project.

15.6.3 **Highway Works Agreement** - Essex County Council would seek to use Section 278 of the Highway Act 1980 to regulate construction of the accesses/haul road and crossings and would seek agreement to this within a Statement of Common Ground.

15.7 Access, Rights of Way and Public Navigation Plans (2.7) (APP-012)

15.7.1 Figure 1 Traffic and Transport Study Area Key Plan within APP-012 shows that Mill Road and Bures roads are marked as a 'Construction Route to the Strategic Road Network' it is questioned as to why this route is being recommended as opposed to the B1508 and consideration should also be given to using the A131 and haul road to access this area?

15.8 Construction Traffic Management Plan (CTMP) (7.6) (APP-180)

15.8.1 At 5.2.2 further clarification on the process for repair of the highway if condition survey identifies that works are required.

15.8.2 At 5.5 Access points, there does not appear to be specific reference to wheel cleaning, this should be added, or it should be identified where it is referred to in the CTMP.

15.8.3 ECC's Highways and Transportation Team recognise the comment in Appendix C of the submitted Transport Assessment (APP-061) that construction traffic routing will avoid high sensitivity receptor; areas subject to high levels of traffic incidents; narrow rural lanes with tight turns, roads with signage indicating height, weight and width restrictions. At this time, and with the proposed construction routes being somewhat undefined, with the as submitted General Arrangement Plan (APP-018) showing access to the development off the existing highway network and not the construction routes leading thereto, the applicant is reminded that a number of structures exist on this predominantly rural highway network including but not limited to the one at Halstead at the bridge over the River Colne and Head Street,

leading up to the access points as are proposed at this time. These restrictions sit both within the remit of the development as well as roads leading thereto and on the wider road network which construction traffic may propose to use, which have both weight and/or width restrictions placed on them, which would prohibit HGV access and negate their use for the transport of HGV and abnormal loads necessary to implement the development. ECC as the Highway Authority needs to understand that construction traffic will avoid all such restrictions at all times.

15.8.4 The Council's note that it is the applicant's intention to insert a ghosted right hand turn lane at the A131 to afford construction access to the site by means of a haul road. The Highways Authority remains unsure if this can be accommodated within the existing road layout which, and for an A class road, is narrow in this rural location with no footways on either side of the highway. It is also noted that to facilitate this in the space available it appears that this could not be achieved without widening the road which itself would lead to a significant loss of established roadside vegetation which would have a pronounced harm within this rural location. Here the applicant should demonstrate that adequate room is available within the local highway network for this change and the implications of ensuring the available site lines can be achieved are explained.

15.9 Abnormal Indivisible Loads (AILs)

15.9.1 AIL deliveries are required to the works area but there is little to no information regarding these routes. It is appreciated that AILs are covered by their own regulations but insofar as possible these routes should be identified now together with any associated mitigation.

15.10 Public Rights of Way (PROW)

15.10.1 ECC's Public Rights of Way (PROW) Team have viewed the documents relating to PROW. Overall, it appears the safety of users on our network is properly considered and the mitigation methods within the Construction

Traffic Management Plan are considered appropriate. However, there are a few things that need to be clarified or brought attention to.

15.10.2 On page 6 of Document 7.5.1: CEMP Appendix A – Code of Construction Practice (APP-178), there is mention at Table 1.1 page 06 with the heading LV01 of replacement vegetation planted as close by as practicable. It is our recommendation that no new planting should occur within 2 metres from the edge of a PROW, even if the existing hedge/vegetation was originally planted much closer. This is to prevent future maintenance issues with overgrown/overhanging vegetation causing an obstruction to the width of the path. Perhaps some wording can be provided to assure user groups that the legal minimum widths of PROW will be considered.

15.10.3 On page 24 of the Construction Traffic Management Plan (APP-180) there is a section introducing the definitions of PROW (para 6.1.1 bullet point 3). Although this acknowledgement is appreciated it is a little incorrect – a cycle track is not a PROW. Only 4 types of PROW exists – perhaps it is worth bringing this information from our website to their attention so they can amend the wording: https://www.essexhighways.org/about-prow. It is also worth noting at this point the different legal minimum widths for each status type:

- An enclosed or field edge Footpath has a legal min width of 1.5m. A Footpath crossing an agricultural field is 1m wide.
- An enclosed or field edge Bridleway has a legal min width of 3m. A Bridleway crossing an agricultural field is 2m wide.
- A Byway or Restricted Byway has a legal minimum width of 5m.

15.10.4 On page 26 of the Construction and Traffic Management Plan (APP-180) under “Temporary access road coincident with PRoW” it mentions temporary fencing to segregate PROW where they coincide with temporary access routes. Again, ECC’s PROW Team recommend that some acknowledgement of the minimum width requirements for each status of PROW would be appreciated to assure user groups that no issues with encroachment or obstructions will occur.

15.10.5 The ECC PROW Team also wish to clarify the contact number provided at APP-180 at table 6.1. A contact number for National Grid on all signage placed on site is necessary as it would not be the responsibility of the local highway authority to resolve any issues/answer any queries that may arise from the temporary closures/diversions. All enquiries the local PROW Officer receives directly will be forwarded on to National Grid.

16 Air Quality and Emissions

16.1 National Policy

16.1.1 Paragraph 5.2.1 of EN-1 states that infrastructure development can have adverse effects on air quality. The construction, operation and decommissioning phases can involve emissions to air which could lead to adverse impacts on health, on protected species and habitats, or on the wider countryside and species.

16.1.2 Paragraph 174 of the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by inter alia: *e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;"*

16.2 Local BDC Development Plan Policies

16.2.1 Policy LPP52 *(Layout and Design of Development)* of the Adopted Local Plan seeks to ensure protection of neighbour amenity with regard to privacy, overshadowing, loss of light and overbearing.

16.2.2 Policy LPP70 *(Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards)* of the Adopted Local Plan states inter alia that Development will not be permitted where, individually or cumulatively and after mitigation, there are likely to be unacceptable impacts arising from the development on: (inter alia) air quality.

16.3 Key Local Issues

16.3.1 This LIR is focused on the air quality context of Section G (Stour Valley) and Section H (GSP Substation). The air quality context of sections outside of BDC's/ECC administrative are not specified in this report, however some of the recommendations can be applied to the project as a whole.

16.3.2 There are no Air Quality Management Areas in BDC area which would be materially affected by the development. There are however ecologically designated sites and residential and community receptors which could be impacted by the development. The local context and key considerations for Section G (Stour Valley) and Section H (GSP Substation) are set out on figure 3.1, Sheets 10-14 of [APP-154] Document 6.4.9.

16.3.3 The proposal is for electrical transmission equipment and therefore the main impacts in relation to air quality would stem from the construction phase of the development rather than from its operational phase. Indeed, air quality impacts from the operational phase of development were scoped out of the ES.

16.3.4 The development involves soil stripping, horizontal directional drilling and the movement of construction vehicles to deliver the project if approved. These effects would be mostly limited to the construction phase of development.

16.3.5 The submitted documentation in [APP-081] Document 6.2.13 sets out the assessment of air quality for the route as a whole. The study of the baseline environment was carried out by desktop survey but using a variety of data sources from Government bodies such as DEFRA and data from BDC and B&MS DC.

16.3.6 Overall, it is not anticipated that there would be significant effects on air quality from the construction phase of development, providing that good practice measures are followed, including the use of the Code of Construction Practice (CoCP) and Construction Environment Management Plan (CEMP) to control dust created from the development.

16.3.7 Taking into account the proximity of ecologically designated sites and human/community receptors in the BDC area, it will be imperative that the CoCP and CEMP are in place during the construction phase of the development.

16.4 Summary

16.4.1 Overall, it is not anticipated that there would be any likely significant residual effects in relation to air quality on ecologically designated sites or human / community receptors in the BDC area if relevant good practice measures are followed.

17 Noise and Vibration

17.1 National Policy

17.1.1 Paragraph 5.11.8 of NPS EN-1 states that a project should demonstrate good design through selection of the quietest cost-effective plant available; containment of noise within buildings wherever possible; optimisation of plant layout to minimise noise emissions; and, where possible, the use of landscaping, bunds or noise barriers to reduce noise transmission. Paragraph 5.11.9 of NPS EN-1 states a number of additional considerations for the IPC to consider, including avoiding significant adverse impacts on health and quality of life from noise.

17.1.2 Paragraph 174 of the NPPF states that planning policies and decisions should contribute to and enhance the natural and local environment by: *e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans;"*

17.2 Local BDC Development Plan Policies

17.2.1 Policy SP7 *(Place Shaping Principles)* of the Adopted Local Plan requires all new development to protect the amenity of existing and future residents with regard to inter alia noise and vibration.

17.2.2 Policy LPP70 *(Protecting and Enhancing Natural Resources, Minimising Pollution and Safeguarding from Hazards)* of the Adopted Local Plan addresses emissions and pollution. It states that new development should prevent unacceptable risk from all emissions and other forms of pollution including noise pollution. Development will not be permitted where cumulatively or individually (after mitigation) there are likely to be unacceptable impacts to the general amenity and tranquillity of the wider rural area.

17.3 Key Local Context

17.3.1 This LIR is focused on the Noise and Vibration context of Section G (Stour Valley) and Section H (GSP Substation). The Noise and Vibration context of sections outside of BDC's/ECC administrative are not explored in detail here, however some of the recommendations can be applied to the project as a whole. The comments in this section are informed by the Council's appointed Environmental Health Consultant at Wardel Armstrong.

17.3.2 The report focuses on the impacts of the development on Noise Sensitive Receptors (NSR's), which are classified as human receptors, particularly residential and community receptors, close to and within the Order Limits. Potential vibration effects on structures and buildings close to and within the Order Limits are also considered.

17.3.3 NSR's have been identified 300m from the order limits for construction noise [APP-082] Document 6.2.14 - (Paragraph 14.4.5), 100m for vibration effects (Paragraph 14.4.6) and 10m for construction traffic noise effects (Paragraph 14.4.7). It is understood that these assessment distances have been chosen based on accepted industry practice and are not challenged by BDC.

17.3.4 While the exact number of NSR's are not listed, a visual breakdown can be found on [APP-154] Document 6.4.9, with sheets 10-14 specifically covering NSR's in the Braintree District. The maps evidence that the proposed development would affect a predominately rural area, with more sporadic clusters of residential dwellings other than the small villages of Twinstead, Lamarsh, Alphamstone and Wickham St Paul which are affected albeit to a lesser extent. The number of dwellings in the area is however considered to be inconsequential, as national and local policy seek to protect the amenity of all residents who could be affected by the development.

17.4 Local impact of Development

17.4.1 **Construction Phase Impacts -** The main disturbance at receptors, in terms of noise and vibration, will be during the construction phase of the

development. The main areas of disruption will be around the construction of the pylons, underground cables, and trenchless crossing.

17.4.2 [APP-082] Document 6.2.14, Paragraph 14.6.23 identifies that using a reasonable worst case and assuming no site specific Best Practicable Means (BPM), there are potential significant adverse effects at:

> *Seven NSRs due to daytime construction noise (two in BDC area),*
>
> *Twelve NSRs due to potential night-time construction noise in relation to the trenchless crossings (eight in BDC area),*
>
> *One NSRs due to construction vibration, and (not in BDC area)*
>
> *Four additional NSRs when considering flexibility offered within the Limits of Deviation (LoD) within the parameters shown on the Works Plans. (Not in BDC area)*

17.4.3 Therefore, mitigation measures have been put forward by NG to reduce the effect of this construction noise and vibration effect, through industry best practice from the CoCP and CEMP, as well as clearly defined construction hours. NG are also committing to using different methods of piling or quieter plant in some of the more sensitive areas, as set out in Tables 14.3 and 14.4 of [APP-082] Document 6.2.14. Enforcing the use of these additional measures will be key to achieving reduced neighbour impacts. The requirements will need to be clearly defined so that any future contractors are able to abide by the working restrictions without issue.

17.4.4 The main area of concern from BDC's perspective is with regard to the proposed construction hours, and nighttime works that are allowed outside of these hours.

17.4.5 The construction periods proposed by NG exceed normal working hours. The working hours have been defined as 0700-1900hrs Monday to Friday and 0800-1700hrs Saturdays, Sundays and Bank Holidays (Paragraph 14.4.33 Document 6.2.14). These construction periods are excessive, and

significantly longer than BDC would expect for typical construction activities. These construction periods have the potential to cause a larger adverse impact than is necessary, at more antisocial times for NSR's.

17.4.6 BDC consider that the core construction hours should be in line with accepted working hours in order to reduce the impacts on NSR's as much as possible;

> *08:00-18:00 Monday to Friday and 08:00-13:00 Saturdays with no working on Sundays and Bank Holidays.*

17.4.7 It is acknowledged that the inclusion of a clause within the application to allow the completion of operations commenced during the core working hours which cannot safely be stopped' is intended to provide a degree of necessary flexibility to allow contractors to work outside of core hours. This extended working could result in night-time working, which has the potential to cause a significant adverse impact at noise sensitive receptors, as identified by NG (Table 14.1 of Document 6.2.14).

17.4.8 BDC accept that in exceptional circumstances with some activities such as the horizontal directional drilling, it may be necessary to go beyond the working hours. It must however be ensured that this flexibility does not become a matter which could be exploited by the developer and/or contractor. If possible, it should be incumbent upon NG to sequence works, as best as possible, so as not to require working outside of the core hours.

17.4.9 BDC consider the hours of working and nighttime working need extensive discussions in order to reduce these to the lowest possible for the project, while NG should demonstrate how it plans to undertake all possible measures to minimise disruption to local residents, specifically where a significant adverse effect has been identified.

17.4.10 Notwithstanding the hours of working issue above, in terms of more general noise and proposed vibration from the proposed haul road from the A131 to the CSE Compound by Henny Back Road, NG have committed to regular inspections of the surface to keep it free from potholes and imperfections.

This addresses to a large extent the previous concern that BDC had with regard to additional noise impacts on NSR's. Ensuring that routine inspection and maintenance is carried out will be key and a programme should be required to be agreed through the Requirements if DCO consent is granted.

17.4.11 **Operational Phase Impacts –** Operational noise from overhead lines and the GSP substation were scoped out of the assessment, as this equipment is not considered by National Grid to cause a significant noise issue.

17.4.12 **Decommissioning Impacts –** These impacts would be similar to that of the construction phase and need careful consideration regarding working hours and mitigation measures to reduce impacts at NSR's.

17.5 Summary

17.5.1 BDC do not question the methodology used to assess the likely impact of development on NSR's.

17.5.2 BDC agree that the primary noise and vibration impact will be from the construction phase of the development, where it will be imperative to reduce the impact on NSR's as much as possible.

17.5.3 BDC remain extremely concerned about the extensive working hours and nighttime working proposed and request that they are reduced to a reasonable time period.

18 Socio - Economic

18.1 National Policy

18.1.1 Socio-economic impacts of energy NSIP's are covered in Section 5.12 in NPS EN-1. This section highlights a number of key factors to consider when assessing the socio-economic impacts of development including; changes in local population dynamics, cumulative impacts with other projects and associated impacts such as on tourism from visual impacts. It also encourages any legacy benefits that can be secured from the development.

18.2 Local BDC Development Plan Policies

18.2.1 In terms of the rural economy, Policy SP3 *(Spatial Strategy for North Essex)* of the Adopted Local Plan covers the spatial strategy for North Essex and states that 'beyond the main settlements the authorities will support diversification of the rural economy and conservation and enhancement of the natural environment'.

18.2.2 Policy SP6 (Infrastructure and Connectivity) of the Adopted Local Plan states in relation to social infrastructure that the local planning authorities will work with relevant providers and developers to facilitate the delivery of a wide range of social infrastructure required for healthy, active and inclusive communities, minimising negative health and social impacts, both in avoidance and mitigation, as far as is practicable.

18.2.3 Paragraph 4.25 of the Adopted Local Plan sets out that the District has a number of villages and towns that are popular destinations for tourism due to the high quality of their built or historic environment. Such settlements include Finchingfield, Castle Hedingham and Coggeshall. It is important that within these settlements, facilities for visitors are maintained and enhanced in order to promote tourism, without detracting from the features that make them attractive to visitors.

18.3 Local ECC Development Plan Policies

18.3.1 ECC local policy and evidence base includes:

ECC (2021) Everyone's Essex

ECC (2020) Developers' Guide to Infrastructure Contributions

ECC (2022) Essex Sector Development Strategy

ECC (2022) Levelling Up Essex: An Essex White Paper

ECC/Mace (2020) Construction Growth in Essex 2020-2040

ECC/Mace (2022) Green Skills Infrastructure Review for Essex

ECC Skills and Employment Principles for Major Projects and Developments

ECC (2022) Essex Skills Plan

Local Skills Improvement Plan

18.3.2 Everyone's Essex is Essex County Council's (ECC) plan for levelling up Essex. It sets out 20 commitments under four headings:

the economy

the environment

children and families

promoting health, care and wellbeing

18.3.3 The Essex Developers' Guide to Infrastructure Contributions is a well-established vehicle for setting out planning obligation requirements relating to the work of Essex County Council. It contains specific requirements around the preparation of Employment and Skills plans/strategies to ensure residents of the County benefit from opportunities presented by development projects.

18.4 Key Local Issues

18.4.1 Essex is home to some of the world's leading companies with concentrations of high-skill, high-wage jobs as well as two leading universities and cutting-edge skills providers. Economic growth is the engine that will drive and enable so many of ECC's wider ambitions – from levelling up to net zero – as set out in Everyone's Essex.

18.4.2 The proposed development is a major project which could result in increased demand for construction skills and equipment at a time when other major projects may also commence with similar timeframes and result in shortages. The Construction Growth in Essex 2020-2040 report produced by MACE on behalf of ECC suggested that major projects across the county will add 15,000 local labour demand at peak and that labour shortages are expected to peak in 2031.

18.4.3 The applicant should cooperate and work with relevant partners, including other major projects across the county and use the skills, employment and education strategy to reduce the likelihood and severity of skills and construction worker shortages, as other projects may come forward within similar timeframes. Mitigation is likely to require investment in further education, apprenticeships and training within the local area to deliver the required workforce for the construction phase, in order to reduce the risk of disruption to this projects and other projects coming forward. The applicant should consider the potential opportunities resulting from looking at how this project will run alongside other projects and the potential employment opportunities that this could offer, including the potential for skills training programmes, shared apprenticeships and traineeships. Approaching this within the wider context of various concurring schemes will ensure that social value is maximised.

18.4.4 The proposed development is a major project which could provide an opportunity to incorporate green methods of construction and tools. This would provide an opportunity to develop skills and employment opportunities in green methods of construction and civil engineering. The applicant should use the skills and employment strategy to look at how they can maximise

these opportunities and maximise the social value impact of the project locally.

18.4.5 In Part 4 of the Socio Economics and Tourism Report (APP-066) it states at para 4.3.11 – *"Until contracts are let for the construction work, there is no way of knowing how much of the construction spend would be placed into the local economy. Given that much of the spend is anticipated to go to specialist contractors who may not be based in the local area, it is expected that effects would be negligible to slightly beneficial at best. The project may source materials and services from the local area, which could boost the local economy during construction. Examples could include construction supplies such as skip hire, fencing and planting for landscaping. Given the limited effects that the project would have on local material supply and services, the project is unlikely to have a significant effect on the local economy during construction".* However, ECC would expect the applicant to fully engage with local supply chains for labour, material and equipment and source from there where possible. This not only adds to local economic benefit but also reduced greenhouse gas and pollutants deriving from extended travel.

18.4.6 ES Chapter 4 – (APP-072) estimation indicates that there would be up to 350 workers per day at peak (Quarter 3, 2025) across the project and an average of around 180 workers on site across the whole of the construction schedule. These are not large in numbers in comparison to other local major projects, but there is likely to be some positive economic impact during construction as a result of the project, with the creation of job opportunities and potential to increase skills to the residents of the local area, through a skills and employment plan/strategy. Whilst these jobs are temporary, the skills attained would be transferrable to other infrastructure projects, and as such it is accepted that there could be a positive economic impact in the local area during the construction phase.

18.4.7 Part 4 of the Socio Economics and Tourism Report (APP-066) also states: *"previous National Grid project experience indicates that workers would be split between around 10% from the local area and 90% who would travel into*

the area from elsewhere. Assuming an average of around 180 workers on site at any one time, this would equate to an average of 18 local workers and 162 non-local workers. The majority of employment activities would require trained specialists who are qualified to work on high voltage electricity lines. These are typically sourced from National Grid's existing pool of approved contractors. However, from experience of other National Grid projects, it is likely that a minimum of 10% of the workforce would be sourced from the local labour market, including apprentices, security workers and delivery drivers. This level of local employment, based on a peak monthly employment assumption of 350 workers, could result in the peak monthly local job demand being up to approximately 35 jobs locally." ECC would expect that the applicant ensures that as many workers as possible are appointed from the local area.

18.4.8 The grid supply point substation and cable sealing end compounds would be operated remotely and would not require any operators to be permanently on site. There would be routine inspections and maintenance associated with the project, but this would be of a similar order of magnitude to that undertaken on the existing 400kV overhead line, and no additional jobs are anticipated directly as a result of the operational phase. Therefore, it is accepted that it is unlikely that there would be significant effects during operation on jobs and the economy.

18.4.9 There is potential for disruption to access to workplaces and businesses for local residents during construction. The applicant should seek to minimise the disruption caused during the construction phase and allow access to be maintained as far as possible to mitigate the impact that the work will inevitably have on local residents and businesses, including local farmers.

18.5 <u>Adequacy of the Application/DCO</u>

18.5.1 It is accepted that the Socio-Economic effects have been adequately considered within the Socio Economics and Tourism Report.

18.5.2 The structure and methodology of the Environmental Statement (ES) is generally accepted. Essex County Council wish to minimise short term negative impacts during the construction phase of development.

18.5.3 The cumulative impact of significant construction/infrastructure projects in the county requires consideration. This includes 13 NSIPs (including major highways works at the M25/A12 junction), four new Garden Communities and two Freeports in Essex. Consideration should include the timing/phasing of the projects and inter-project impacts – including the transportation of construction materials and availability of labour. This should be considered as part of the 'future baseline' scenario.

18.5.4 Currently there is no reference to an employment and skills plan or strategy. An employment and skills plan should be prepared prior to the commencement of construction. This should set out measures that the applicant will implement in order to advertise and promote employment opportunities associated with the proposed development locally. Furthermore, the applicant should also make a skills and education contribution to assist and encourage local people to access apprenticeships and training. This should be secured by way of a DCO requirement and should help maximise positive gains for the local economy, including upskilling the construction workforce, including within education settings to support emerging modern green methods of construction, jobs and skills retention within Essex.

18.5.5 ECC has produced a 'Skills and Employment Principles for Major Project and Developments' document, which outlines ECC expectations of what a Local Employment and Skills Plan should cover. The requirement for the skills and employment plan/strategy is justified in the Essex Developers' Guide to Planning Contributions document. ECC would welcome assurances that a Skills and Employment Plan or Strategy, will be secured by way of a DCO requirement, which should help maximise positive gains for the local economy, including upskilling the construction workforce, including within education settings to support emerging renewable technology innovation,

jobs and skills retention within Essex. ECC would also welcome assurances on how any employment and skills strategy will be monitored and the process for reporting on the progress against the objectives set within the strategy, consistent with the Construction National Skills Academy KPIs established by CITB.

18.6 Opportunities/legacy

18.6.1 The following could be considered as part of the proposals:

Work with local further education providers to invest in and support the development of training programmes in green and modern methods of construction.

Contractual targets to create local jobs. Apprenticeship target, shaped to reflect local economic strategy. A financial contribution to enable local authorities to target those furthest from employment.

Contractual targets to create local jobs.

Apprenticeship target, shaped to reflect local economic strategy.

19 Minerals and Waste

19.1 National Policy

19.1.1 Paragraph 5.14.6 of NPS EN-1 states that the applicant should set out the arrangements that are proposed for managing any waste produced and prepare a Site Waste Management Plan. The arrangements described and Management Plan should include information on the proposed waste recovery and disposal system for all waste generated by the development, and an assessment of the impact of the waste arising from development on the capacity of waste management facilities to deal with other waste arising in the area for at least five years of operation. The applicant should seek to minimise the volume of waste produced and the volume of waste sent for disposal unless it can be demonstrated that this is the best overall environmental outcome.

19.2 Local BDC Development Plan Policies

19.2.1 Policy LPP52 (Layout and Design of Development) of the Adopted Local Plan states that 'development proposals will incorporate measures for environmental sustainability throughout the construction, occupation and demolition of the development; in relation to energy conservation, water efficiency, waste separation (internal and external), climate change, flood resilience and resistant construction and the use of materials with low overall energy requirements'.

19.3 Local ECC Development Plan Policies

19.3.1 The Policies applicable are addressed earlier in this LiR and are not repeated here.

19.4 Key Local Context

19.4.1 The revised 'Order Limits' as confirmed in September 2022 forms the basis for the minerals and waste safeguarding assessment set out below.

19.4.2 This response deals with mineral policy matters and waste policy matters in turn, and for convenience represents an update on the MWPAs previous response in March 2022.

19.4.3 A spatial representation of the revised Order Limits and the matters discussed can be found in Appendix Four. A list of relevant designations and specific facilities which would potentially be affected are listed with their most recent planning application reference where relevant, in Appendix Five. Appendix Six shows Minerals and Waste Safeguarding Screening - 10km from Order Limits. Please note that all information provided in all of the appendices are the most up to date.

19.4.4 It is noted that the proposed development crosses the border between the counties of Essex and Suffolk. Essex County Council is the MWPA for the county of Essex only. Suffolk County Council are a separate MWPA and are responsible for minerals and waste matters in their own administrative area. As such, this response relates to Essex matters only.

19.5 <u>Mineral Resources Assessment</u>

19.5.1 Paragraph 2.4.3 of the MRA refers to Policy MP10 of the adopted MLP, this should be Policy S8. The paragraph also mentions an MCA, this should be an MSA.

19.5.2 It is noted that ‘Prior extraction of the minerals along the underground cable route in Section E: Dedham Vale AONB would lead to a larger footprint and a longer construction duration within the nationally designated AONB’ and would ‘likely to lead to significant effects on this nationally important designation, which would outweigh the benefit associated with the mineral extracted’.

19.5.3 It is also noted that the two relevant Minerals Assessment Reports (MAR) reveal that ‘whilst there are sand and gravel deposits safeguarded within the Order Limits, the existence, extent and quality of such is not proven and is anticipated to be highly variable’.

19.5.4 Therefore, due to the cable route for this proposal being located within an Area of Outstanding Natural Beauty (AONB) and the significant impacts which minerals development would cause, as well as historic reports revealing that the mineral deposits are anticipated to be ‘highly variable’, it is not considered ‘practical and feasible’, as per the NPPF. Therefore, the MWPA removes it’s holding objection.

20 Cumulative Effects

20.1 National Policy

20.1.1 Paragraph 5.12.3 of NPS EN-1 covers potential cumulative impacts of development: if development consent were to be granted for a number of projects within a region and these were developed in a similar timeframe, there could be some short-term negative effects, for example a potential shortage of construction workers to meet the needs of other industries and major projects within the region.

20.2 Local BDC Development Plan Policies

20.2.1 Policy LPP52 (*Layout and Design of Development*) of the Adopted Local Plan states inter alia that use of sustainable modes of transport are promoted in the design and layout of new development. The highway impact shall be assessed and the resultant traffic generation and its management shall seek to address safety concerns. Developments which will result in a severe impact upon the highway network (taking into account cumulative impacts) will be refused unless they can be effectively mitigated.

20.2.2 Policy LPP78 *(Infrastructure Delivery and Impact Mitigation)* of the Adopted Local Plan states inter alia that Developers and landowners must work positively with BDC, neighbouring authorities and other infrastructure providers throughout the planning process to ensure that the cumulative impact of development is considered and then mitigated, at the appropriate time, in line with their published policies and guidance.

20.3 Key Local Issues

20.3.1 The Norwich to Tilbury (formerly East Anglia Green) project is a particular concern with regard to cumulative effects with the B2T project, as the route corridor is likely to go through part of Braintree District and neighbouring authorities between Norwich and Tilbury at similar times.

20.3.2 Nevertheless, it is acknowledged in the as submitted Cumulative Impact Assessment (APP-083) document 6.2.15 at para 15.6.41 that: *“During*

operation, significant cumulative landscape and visual effects could arise from the combined presence of the proposed 400kV overhead line component of the project and the two new 400kV overhead lines associated with East Anglia GREEN (ID DCO-019). The potential for significant cumulative effects would be greatest close to Bramford Substation where East Anglia GREEN (ID DCO-019) would be most intervisible and would add to the overall influence of high voltage electricity infrastructure."

20.3.3 We also note in the SCC LIR that concerns are raised as to the potential transport implications should both B2T and Norwich to Tilbury are progressed at the same time, the Council's supports this.

20.3.4 Similarly, if the projects are implemented simultaneous or with overlap this may have a significant impact on available labour force.

21 Draft Development Consent Order (DCO) [APP-034]

21.1 Overview

21.1.1 In August 2022, prior to submission of the application, National Grid (NG) provided BDC, ECC and the other Host Authorities with an initial draft version of the DCO. The purpose was to obtain initial views on the dDCO so that the submission version of the dDCO could be more advanced. BDC reviewed this initial pre-submission version of the dDCO and raised various concerns directly to NG.

21.1.2 Having now reviewed the submission version of the dDCO, NG has made some amendments to address concerns raised by BDC. However, there are still various areas of discrepancy which are set out.

21.1.3 Comments are also made on behalf of ECC on the submission version of the dDCO.

21.2 dDCO Article 2 - Interpretation

21.2.1 'Commence' (Page 5 of dDCO) – the submitted dDCO provides a new definition of 'Commence' (when considered against the original pre-submission dDCO); it links to a new definition "pre-commencement operations" on page 6, which specifies a wide range of preparatory works which can take place before development formally commences.

21.2.2 BDC's previous request to exclude certain preparatory works prior to the commencement of development has been partially accepted only. The preparatory works still included that BDC are concerned about are:

> *…set up work associated with construction compounds, temporary accesses, erection of any temporary means of enclosure or temporary demarcation fencing marking out site boundaries…*

21.2.3 BDC and ECC consider that these activities, despite being temporary, still have the potential to have significant environmental effects, and therefore should trigger the commencement of development (i.e., not be excluded as

currently proposed). For example, as it stands the haul roads (up to 3-4km in length) and set up works for the various construction compounds listed in Work No 12 falls within this definition. It is acknowledged that NG have removed some of activities from this pre-commencement definition including the full establishment of construction compounds and welfare facilities.

21.2.4 In any case, pre-commencement operations are to be controlled via the Code of Construction Practice, and as such there would need to be a mechanism to enable BDC/ECC to enforce any breaches if appropriate.

21.2.5 The defined term 'Environmental Statement' relates to those certified documents comprising the environmental statement. It is noted that some detailed design will not be firmed up until after confirmation of the DCO following the appointment of the main works contractor; it is important that relevant authorities are given sufficient information to enable them to identify and assess any materially new/different environmental impacts, to require reasonable amendments to the proposed range of mitigation set out in the CTMP, CEMP, LEMP and MWMP and for any agreed changes to those documents to be reflected within the certified set of documents.

21.2.6 The defined term 'maintain' (page 6 of dDCO) includes a wide range of specified operations in relation to the authorised development, providing such works do not give rise to any materially new or materially different environmental effects to those identified in the Environmental Statement. BDC's request that the definition of 'maintain' be amended to refer to such works which do not "in the opinion of the local planning authority give rise to any materially new or materially different environmental effects…." has not been taken on board. It is therefore unclear how the environmental effects of any operations will be assessed in case of dispute. Revisions are therefore required to the definition of 'maintain' in BDC's view to add an appropriate additional control mechanism.

21.2.7 'Operational use' (page 6 of dDCO) has also been amended so that this occurs when part of the authorised development first transmits electricity at either 400Kv or higher voltages, opposed to "lower voltages". This change is

welcome as there are more limited circumstances in which operational use will be deemed to start. Consideration is still however required in the context of trigger timings.

21.3 dDCO – Other Articles

21.3.1 Article 3 & 4 – principal powers (Page 9 of dDCO); BDC had requested that NG (and any successors in title) should be under a mandatory obligation to deliver (and maintain) the whole of the authorised development, or in circumstances where the scheme is not fully completed, to decommission and remove any structures/works which are no longer needed.

21.3.2 This request was not accepted. Unnecessarily retaining any structures/works which are no longer needed would only have negative impacts on the environment. Moreover, the word 'may' in reference to maintaining the authorised development does not give certainty that maintenance will occur. It is not clear why the undertaker cannot be obligated to maintain the whole of the authorised development to a reasonable standard for its lifetime. Both BDC and ECC request NGs approach on these articles is revisited.

21.3.3 Article 5 – Limits of Deviation (Page 10 of dDCO); BDC accept that there needs to be flexibility in the limits of deviation so as not to affect the deliverability of the authorised development as set out in the explanatory memorandum accompanying the dDCO (APP-035 Document 3.2 Paragraph 3.9.3). BDC and ECC are concerned however that a one size fits all approach as proposed is not suitable for particularly sensitive areas such as protected landscapes and Grade 1 listed buildings where the potential impact would be higher than in other areas. The proposed 10% deviation is not appropriate in these areas and in BDC's view would need to be reduced/removed before the SoS needs to step in to consider impacts. It would assist in clarity (for the purposes of assessing environmental impacts) if more specific detail could be given as to the location within the LoD of the proposed 'free-floating' construction compounds so as to enable environmental impacts of these works to be properly identified and assessed; ECC as local flood authority

are concerned to minimise works in the flood plain and as such would welcome more specificity about the location of works in the flood plain.

21.3.4 Art 11 - Street works – ECC reserves the right to comment further on the proposed range of street works in Schedule 5.

21.3.5 Art 12 - Application of the Permit Schemes. ECC reserve the right to comment further on the proposals relating to the Permit schemes.

21.3.6 Art 14 - Power to alter the layout of the streets etc. ECC reserves the right to comment further on these proposals and associated Schedule 6. This article contemplates that unscheduled works can be done in the highway but outside the Order limits for the purpose of constructing/maintaining the Authorised Works; it is not clear whether planning permission would be required for such works (see comments at Article 20 below).

21.3.7 Art 15 - Temporary stopping up of streets and public rights of way. ECC reserves the right to comment further on this provision. ECC requires detail as to the width of diverted public rights of way in order to be satisfied that any proposed diversion is adequate to meet the ongoing needs of relevant traffic. As drafted, stopping up/ diversions are permitted for a 'reasonable' length of time, but no actual time period is specified. There needs to be a mechanism introduced to allow for intervention in circumstances where the stopping up/diversions remains in place for an unreasonably long period i.e., for no apparent reason.

21.3.8 Art 16 - Access to works – ECC reserves the right to comment further on these provisions. The Council's request that further time is allowed before deemed consent is given as 28 days is too short. It is requested that the time period be extended to 56 days to give the Councils reasonable time to consider the applications. It is recommended that this time period be consistently applied across multiple provisions in the DCO.

21.3.9 Art 17 - Construction, alteration and maintenance of streets - ECC reserves the right to comment further on these provisions in due course. There needs to be a mechanism for ECC to be notified of completion of works and to sign off that these have been completed to a reasonable standard before the 12-

month period leading to dedication as public highway is accepted; ECC must be able to reasonably require rectification of any substandard works before assuming responsibility for dedicated public highway.

21.3.10 Article 20 – Protective Provisions (Page 20 of dDCO); this provision allows the undertaker to carry out protective works (i.e., ground strengthening/ underpinning/remedial works after construction) to any land, building, structure, apparatus or equipment, lying within the Order limits or which may be affected by the 'authorised development', as the undertaker considers necessary or expedient. Article 20 therefore refers to protective works outside of the Order Limits, however it is unclear whether such works would constitute development for which planning permission is required and this needs clarification in the Order. No such clarification has been provided.

21.3.11 Article 47 – Traffic Regulation - ECC reserves the right to comment further on the operation of this provision and associated schedules 12 and 13. BDC and ECC question what impact will these proposals have on local traffic. i.e., will residents still be able to park outside their houses overnight? How will the traffic restrictions be enforced? There needs to be clarity as to who in effect will be enforcing any breach of a TRO and whether there are resources available to ECC if it is likely to have a role in this regard.

21.3.12 Article 48 – Felling and Lopping of Trees; BDC and ECC request clarification the definition of 'near' and setting out what impact this will have on the local area.

21.3.13 Article 50 - Temporary Closure of and works in the River Stour (Page 44 of dDCO); this provision allows NG to interfere with the River Stour without limitation during development. While impacts on watercourses and rights of navigation are outside of BDC's remit, from a general point of view, it is considered that this provision needs further clarification; How will closures be communicated to vessels who are moored upstream? What would happen where vessels need to pass and cannot? Further exploration / clarification should be provided.

21.3.14 Art 57 and Schedule 17 Certification of documents. A number of key control documents are included in Schedule 17 including the CEMP, LEMP, MWMP and CTMP; these documents include controls in relation to both pre-commencement works and the Authorised Development. Each of these documents contemplates that they will be modified through the examination process and that there may be changes proposed for which the consent of BDC as local planning authority will be sought. As the detailed design of significant elements of the proposal cannot be confirmed until after the DCO has been confirmed following appointment of the main works contractor, there needs to be a mechanism for ensuring that the local planning authority is provided with sufficient information to enable it to identify and assess any materially new/different environmental impacts of any proposed changes in these control documents and where it does consent, that the agreed changes are properly reflected in the set of certified documents attaching to the DCO. One approach might be to amend Sched 17 to include any amendments agreed in writing between LPA/NG and lodged with the SoS. There needs to be a mechanism for dealing with circumstances where the local planning authority (acting reasonably) cannot agree to any particular proposed amendment.

21.4 <u>dDCO – Schedule 1</u>

21.4.1 Associated Development (Page 56-57 of dDCO) includes a list of activities which may be carried out in addition to those specified in the Authorised Development section of the dDCO (pg. 50-55). Some of these activities may give rise to materially different environmental effects than those assessed in the Environmental Statement, especially anything that has been unforeseen. As drafted, there is no mechanism to decide who checks whether these works would result in materially new/different environmental effects. BDC previously suggested that working should be added to say ‘in the opinion of the LPA’ at the end of (r) (page 57 of dDCO) so that a checking mechanism could be built in, however this was not accepted by NG. It therefore remains

as an unknown who would be making that distinction of materially different environmental effects from these additional activities.

21.4.2 Work number 12 temporary site compounds describes the works to set up a temporary site compound; it is understood that many of these works fall into the 'pre-commencement operations' definition; it is understood that the final spec of these works will not be confirmed until after the DCO has been confirmed and the main works contractor appointed; it is further understood that to some extent these compounds are 'free floating' within the Order limits. These are significant items of work which may give rise to materially new/different impacts to those identified in the existing environmental statement. There do need to be appropriate controls in place to enable the LPA to identify and assess materially new/different environmental impacts and an appropriate opportunity afforded to the LPA to require the imposition of appropriate reasonable mitigations/controls.

21.5 <u>dDCO – Schedule 3 - Requirements</u>

21.5.1 Requirement 1 – (interpretation – page 65 of dDCO) – Biodiversity Metric refers to Metric 3.1; however, the latest Biodiversity metric is 4.0 and may be updated again in November when BNG becomes mandatory through the Environment Act. Consideration needs to be given to what metric is appropriate for this development to use.

21.5.2 Requirement 2(1) (Time Limits – page 66 of dDCO) can, and potentially should, be deleted. The rationale behind this includes that "commencement" (as defined) is a stipulation/requirement within 5 years and, as such, any work to "begin" the development will have had to have happened before this time in any event. In short, it is not considered that 2(1) adds much, if anything.

21.5.3 Requirement 3 (Stages of Authorised Development – page 66 of dDCO) – a staging document is required to be submitted to the LPA. There is however no mechanism for commenting and/or approving of the development staging

by the LPA. BDC consider a short period of time should be built in for the LPA to comment on the staging document, should they wish to.

21.5.4 Requirement 5 - Approval and Implementation of Drainage Management Plan - ECC as lead flood authority should be a Requirement Consultee in relation to this Requirement.

21.5.5 Requirement 7 – Construction Hours (page 67 of dDCO) – the proposed construction hours for the development are not acceptable; as drafted the works allow for a 12-hour day during the week, with a significant amount of work able to be carried out even outside of these hours. The development could therefore give rise to significant noise and disruption for local residents, especially along the proposed haul route from the A131 to the Stour Valley West Cable Sealing End Compound. As a rule, the standard planning conditions BDC ordinarily uses in this regard provide that working is contained to *08:00-18:00 Monday to Friday and 08:00-13:00 Saturdays with no working on Sundays and Bank Holidays.*

21.5.6 While some disturbance during construction is unavoidable, BDC consider that the hours of working, and the extent to which activities can be carried on outside of the working hours, needs to be refined to minimise the impact on neighbouring properties and businesses as far as possible.

21.5.7 Requirement 10 - Implementation and maintenance of reinstatement planting plan (Page 68 of dDCO) – this requirement places an onus on NG to replace necessary new vegetation within 5 years after planting. While 5 years is usually accepted for TCPA Planning Applications, consideration should be given to extending this required beyond 5 years, to at least 10 years, owing to the overall significant impacts of the NSIP development. Hinckley Point C NSIP had a requirement for planting to be replaced for 15 years.

21.5.8 Requirement 13 – Biodiversity Net Gain (Page 68 of dDCO) – this requirement relates to BNG however it needs further refinement as it does not make it clear what BNG is being sought, how the BNG will be managed, nor the period for which the biodiversity net gain should be provided for. While the provisions of mandatory BNG will come out in November, there is

an accepted condition approach at this time for TCPA applications. An example of a Biodiversity Net Gain condition is below:

> *No development shall commence unless and until a Biodiversity Management Plan to ensure that there is a minimum 10% net gain in biodiversity within a 30-year period as a result of the development has been submitted to and agreed in writing by the Local Planning Authority. The net biodiversity impact of the development shall be measured in accordance with the Secretary of State's biodiversity metric as applied in the area in which the site is situated at the relevant time and the Biodiversity Management Plan shall include:*
>
> *a) Proposals for the on-site biodiversity net gain;*
>
> *b) A management and monitoring plan for onsite biodiversity net gain including 30-year objectives, management responsibilities maintenance schedules and a methodology to ensure the submission of monitoring reports in years 2,5,10,15,20,25 and 30 from commencement of development, demonstrating how the BNG is progressing towards achieving its objectives, evidence of arrangements and any rectifying measures needed;*
>
> *The development shall be implemented in full accordance with the requirements of the approved Biodiversity Management Plan.*

21.5.9 It should be noted that any proposals for off-site biodiversity net gain in Braintree District have been secured via S106 agreements.

21.5.10 In terms of Requirements more generally, there seems to be a very low number considering the size of this development. BDC suggest consideration be given to including additional Requirements including:

Control of artificial light – this would be important as the route is predominantly rural – while the pylons might not have a light source the cable sealing end compounds may be lit,

Species specific conditions i.e., bats/newts, fencing as appropriate,

HGV traffic, scheme marking, highway signage, traffic incident management plan, travel plan,

residential amenity: information dissemination and complaints handling,

external appearance of structures, colour of pylons, construction compounds, design approach to site specific infrastructure,

overhead line conductors,

assessment of noise and vibration impacts.

Further submission of details in relation to finalised control documents once a contractor is appointed (e.g., CEMP).

Flood management issues

21.6 dDCO - Schedule 4 – Discharge of Requirements

21.6.1 Para 1 (Applications made under Requirements page 69 of dDCO) sets out a proposed 28-day period for the relevant authority to discharge the Requirements. BDC and ECC consider that this time period is too short; 28 days is insufficient for the technical matters which require assessment, as well as any cross-boundary issues. There are limited numbers of employees with knowledge on the project – any combined annual leave would leave the timeframe even more unachievable. Furthermore, with the threat of deemed consent after 28 days, it could be that Requirements are refused with insufficient time to fully assess/resolve issues.

21.6.2 It is noted that other projects have a longer period for the discharge including National Grid Hinckley Point C Connection Project Order 2016 ('Hinckley Point C) had a decision of 8 weeks re major applications and 5 weeks for minor applications; Brechfa Forest Wind Farm Connection Order 2016 ('Brechfa'), another similar NSIP project C (PINS ref EN020016) is just 8 weeks. It is considered that 56 days (8 weeks) would be sufficient to facilitate effective discharge of Requirements. BDC and ECC therefore request that the time period for discharging conditions is extended to 56 days opposed to 28 days as previously requested.

21.6.3 Furthermore, the proposed fee of £116 is not sufficient to cover BDC and ECC costs for Requirements, this payment is only accepted if an accompanying PPA is agreed which would secure additional resource to deliver on discharging Requirements. NG have indicated that they are willing to work with both Councils and provide financial assistance to provide an extended PPA to cover the discharge of requirements.

21.6.4 Para 2 (Further information page 69 of dDCO) sets out that the Relevant Authority must, within 3 business days, notify the undertaker if any further information is required in writing. This has been increased from 2 business days in the pre-submission version of dDCO. BDC had requested that 7 business days were allowed to be able to request further information, as three business days is wholly insufficient to be able to reasonably expect a consultee Officer to be able to review all of the documentation. Moreover, should a consultee be on leave, there is no flexibility for a colleague to pick up the work. 3 business days is still therefore wholly too short for ECC/BDC as relevant authority to be able to effectively engage with the discharge of Requirements process.

21.6.5 In any case, provision should be made to consult the relevant Requirement Consultee at the same time as serving the relevant authority to promote effective use of time.

22 Community Benefits

22.1 Overview

22.1.1 The Essex Climate Action Commission (ECAC) has set out recommendations for Essex County Council on tackling the climate change crisis across six core themes, Energy being one of the six core themes. Within this core theme there is a trajectory of targets and milestones that will need to be met for Essex to become a net zero county by 2050.

22.1.2 The energy recommendations focus on ways to invest in renewable energy, switch to a greener electricity supply and create community energy neighbourhoods. Key recommendations include:

- A network of community energy neighbourhoods to be built across every district in Essex, to generate, store, share and use energy locally by 2035.
- All large-scale renewable developments to have an element of community ownership from 2021.
- 100 per cent of fuel-poor households to be retrofitted and supplied with affordable renewable energy by 2030.

22.1.3 The Joint Council's would wish to see opportunities and options explored by the applicant for community ownership, together with detail of the scope and operation of a community fund open to applications from community projects or groups.

23 Summary

23.1 Overview

23.1.1 Braintree District Council and Essex County Council as host Local Authorities have reviewed the application and evaluated the local impacts of the development in the context of National Policy, Local Development Plan Policy and other relevant policy. These local impacts are separated out into their relevant topic areas, informed by the Environmental Statement submitted with the DCO. A summary of impacts and mitigation is provided within each of these topic areas where appropriate and is not repeated verbatim in this section. For detailed impacts, refer to each topic area.

23.2 Local Impacts & Mitigation

23.2.1 The development would have significant local impacts both from the construction, operation and eventual decommissioning phase. These include **landscape impacts** from construction and operation, **ecological impacts** from construction, **heritage impacts** from construction and operation (listed buildings, protected lanes and archaeological remains), l**oss of Best and Most Versatile Agricultural Land** and i**mpact upon businesses**, **air quality** impacts from construction and **noise and vibration** impacts from construction.

23.2.2 In terms of **Highways and Transportation**, the development as here proposed would have a significant impact on the highways network within Essex, particularly during the construction phase, with a large number of vehicles of a significant size, accessing the highway network at a number of key locations in Essex. Whilst it is correct that a number of topic meetings have taken place with stakeholders prior to submission of this DCO, it similarly appears that the highways and transportation submissions have been prepared without focussed discussions on particular highway topic areas. It is noted that the submission is made on a number of assumptions, hence it appears that the highways and transportation submissions have been prepared without focussed discussions on particular highway topic

areas. The as proposed temporary construction compound locations are not fixed (other than the main construction compound). It would assist in clarity (for the purposes of assessing environmental impacts) if more specific detail could be given as to the locations of the construction compounds as to enable environmental impacts of these works to be properly identified and assessed.

23.2.3 In terms of **Green Infrastructure**, the ECC GI Team place significant importance on a major development of this type to provide initiatives to protect and enhancing GI, accessibility and biodiversity net gain. The Council's welcomes National Grid 's commitment to 'deliver net gain by at least 10% or greater in environmental value (including biodiversity) on all construction projects' (National Grid,2021d) and where practicable link to wider environmental gains. While it is positive to see that the scheme will aim to deliver 10% BNG, it is recommended that further consideration is given to where possible aim beyond this, which Authorities have the discretion to require a higher percentage BNG if they so choose. It is noted that landscaping is proposed to be carried out and maintained as necessary for a period of 5 years, it is recommended that this period is extended to a minimum of 15 years to allow this vegetation to be installed and maintained/replaced as necessary, to ensure it matures and is retained to successfully mitigate against the scheme's significant and wide-ranging impact.

23.2.4 In terms of **Flood Risk**, ECC as LLFA has engaged collaboratively with National Grid and their commissioned drainage consultants to scope the detail required to assess the proposed surface water drainage strategy and other supporting documents including Flood Risk Assessment, Ground Investigation Report, water quality assessment, flood management during construction phase of the B2T DCO. The proposed B2T proposal consists of largely greenfield land which requires appropriate flood mitigation and surface runoff management throughout the development site. The Councils are satisfied with the level of information provided to support that the

proposed scheme would not increase risk of flooding from surface water, ground water and from ordinary watercourses during the operational phase of the development.

23.2.5 In terms of **Socio-Economics,** the proposed development is a major project which could result in increased demand for construction skills and equipment at a time when other major projects may also commence with similar timeframes and result in shortages. The applicant should cooperate and work with relevant partners, including other major projects across the county and use the skills, local supply chains for labour, an employment and education strategy to reduce the likelihood and severity of skills and construction worker shortages, as other projects may come forward within similar timeframe. in order to reduce the risk of disruption to this projects and other projects coming forward the applicant should consider the potential opportunities resulting from looking at how this project will run alongside other like proposals and the potential employment opportunities that this could offer, including the potential for skills training programmes, shared apprenticeships and traineeships. Approaching this within the wider context of various concurring schemes will ensure that social value is maximised. It is accepted that the Socio-Economic effects have been adequately considered within the Socio Economics and Tourism Report, but there is no reference to an employment and skills plan or strategy, hence an employment and skills plan should be prepared prior to the commencement of construction. The Council's would also welcome assurances on how any employment and skills strategy will be monitored and the process for reporting on the progress against the objectives set within the strategy, consistent with the Construction National Skills Academy KPIs established by CITB.

23.2.6 In terms of **Minerals and Waste**, given that the proposal is within an area of high landscape significance Essex Minerals and Waste consider that prior extraction of underlying minerals from the DCO route would be neither

practical, reasonable nor appropriate given the setting and environmental sensitivity of the site.

23.2.7 In terms of **Climate Change,** ECC note that only part of the scheme is within its administrative boundary. However, the applicant is encouraged to go further in its submission and asses the climate impact of the scheme against ECC's target of net zero by 2050, and not just the national target of net zero by 2050. Whilst the narrative is rightly centred around the impacts on improving the capabilities to decarbonise the energy network, but positive direction on the achievement of the scheme was second to that. Similarly, the applicant is asked for more clarity and commitment to the mitigation measures they identify and include in the scheme including using reasonable opportunities to reduce greenhouse gas emissions and to make firm commitments to do so.

23.2.8 However, it is noted that National Grid have made reasonable efforts to minimise these impacts as far as possible. This includes undergrounding across the Stour Valley (Section G) to significantly reduce landscape impacts during operation, while horizontal directional drilling is proposed for this undergrounding section to reduce the impacts of the proposal on Local Wildlife Sites and biodiversity. BDC and ECC are supportive of these measures.

23.2.9 Other measures to mitigate the impacts of development (as far as possible) are informed by best practice through the proposed adoption of a Code of Construction Practice, Construction Environmental Management Plan, Landscape Ecological Management Plan and Outline Written Scheme of Investigation. However, BDC and ECC proposed that requirements are added to any DCO consent to submit further information to each Host Authority for approval when further technical information is available and a mains work contractor appointed.

23.3 <u>Outstanding Matters / Issues</u>

23.3.1 While Braintree District Council and Essex County Council support the adoption of the proposed mitigation measures and documents above, there are still matters and issues which require attention to be resolved.

23.3.2 Many of these matters arise from simply amending or adding to baseline data/document methodology and are set out in full within each corresponding topic in the report. These additional matters can be summarised at a very high level as:

Additional viewpoint to inform the LVIA,

A comprehensive mitigation and compensation plan (landscaping) to be provided including any associated impacts on heritage assets,

Better demonstrating avoidance of tree felling / works, as well as providing a longer time frame (10-15 years) for any new landscaping to be maintained as necessary,

Further exploration about alternative crossing points on protected lanes,

Further archaeological surveys,

Geological baseline information clarification & private water supplies.

Further submission of information on Control Documents (e.g., CTMP) following appointment of Mains Works Contractor through additional Requirements,

Further detail of the locations of temporary construction compounds,

An employment and skills plan be prepared prior to the commencement of construction, along with details of monitoring said plan,

More clarity and commitment to the mitigation measures they identify and include in the scheme including using reasonable opportunities to reduce greenhouse gas emissions.

23.3.3 There are however some principle areas of disagreement with the design/scope of the development. These are set out in full in the report but can be summarised as follows:

The alignment of the proposed haul route from A131 to the Stour Valley West Cable Sealing End Compound (BDC only),

Retention of redundant 132kv line between Twinstead Tee and proposed GSP at Butlers Wood (Section H).

Specific technical details contained within the dDCO including inter alia; unreasonable working hours, scope of works before commencement, limits of deviation and unreasonable timeframes to discharge requirements.

Preliminary design principles for the Bramford to Twinstead 400kV project

The following preliminary design principles are offered by Suffolk County Council, supported by Essex County Council and Braintree District Council in order that good design can be embedded at every stage of the project, in accordance with both current and emerging policy in the National Policy Statements[1].

It is considered that there are opportunities for effective placemaking at the four sealing end compounds and two substations, that should be fully exploited to ensure effective mitigation, as well as biodiversity and environmental net gain in accordance with the requirements laid down by Ofgem for both new projects, and in respect of the performance of National Grid's non-operational land.[2]

A. Placemaking and host Communities

There is an opportunity for the promoter to enable the participatory engagement of host communities in the process of placemaking for the project as a whole, and in these locations in particular. Specifically, to go beyond informing and consulting, and, in accordance with the spectrum of public participation[3], involve and collaborate with the relevant communities.

B. Siting of Transmission Towers, buried cables & Sealing End Compounds

1. Tower locations and Sealing End Compounds and cable corridors should be located to minimise or eliminate permanent adverse impacts on the fabric of the landscape, historic features and landscape character, or ecological features such as trees, hedges, woodlands, wetlands etc.

2. Tower locations and Sealing End Compounds should be located to minimise or eliminate permanent adverse impacts on visual amenity and the setting of historic assets.

3. Any ecological impacts that cannot be mitigated within the red line area of the development will require effective mitigation elsewhere, as close as possible to the site.

[1] s4.6 Criteria for "Good Design" for Energy Infrastructure https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1147380/NPS_EN-1.pdf

[2] https://www.ofgem.gov.uk/sites/default/files/docs/2021/02/final_determination_nget_annex_revised.pdf

[3] https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf

4. Mitigation proposals, and biodiversity and environmental net gain measures, should be climate resilient, and or capable of adaptation to current and emerging climate change impacts.

5. National Grid should seek all opportunities to reinstate landscape features and habitats following the removal of the 132Kv towers.

6. Infrastructure should be located to minimise adverse impacts of noise on public and residential amenity.

7. Tower siting should protect residential amenity. The tower locations should not be overbearing or oppressive on residential amenity.

8. Harm to built heritage assets and their setting should be minimised, substantial harm should be avoided.

   Although the option of tower alignment being closely parallel is generally to be preferred, this may lead to specific impacts that could otherwise be avoided with an alternate siting.

   Detailed discussions on the alignment around Hintlesham Hall have yielded landscape and visual benefits. It is recognised that this approach would not be practicable for the whole of the over ground section of the route, however sensitive areas, for example, the Brett Valley or the setting of the AONB, require a more detailed iterative approach, in the same way as that used at Hintlesham, which tests the engineering possibilities, to minimise the landscape and visual impacts of the development.

9. Cable corridors, tower locations and associated haul and construction access routes should avoid or minimise permanent loss of buried archaeological features.

10. The location of the towers, the buried cable, and other infrastructure such as SEC, should not compromise economic activity along the route, in particular agricultural and horticultural operations. These are an integral part of the local economy and are characteristic land uses that contribute to local distinctiveness.

11. Detailed scheme design should, during both the construction and operational phase, not add to local surface water or fluvial flood risk; or should provide an opportunity to eliminate such additional risks as may be created.

12. Detailed scheme design should achieve acceptable operational site access, and where required temporary construction access that can be reasonably remediated following commencement of site operation.

C. Cable Corridors, temporary haul routes, and construction access and laydown

13. Cable corridors, associated haul routes and construction access, should avoid, or minimise loss of trees, hedgerows, woodland, and other landscape features, historic landscape character and wildlife.

14. Cable corridors, associated haul routes and construction access should avoid or minimise temporary adverse impacts on public and private amenity in respect of noise, dust, availability of rights of way and other disturbance.

15. Cable corridors, haul routes and construction access should be located and designed in such a way that they are capable of effective restoration.

D. Design and landscaping of Substations and Sealing end compounds.

16. Whilst it is recognised that the design of the majority of the infrastructure for this project will be shaped by engineering necessity, the project promoter should identify any elements that are capable, in principle, of design treatment.

17. The landscape design associated with, the two substations and the four SECs, should seek to integrate them as far as possible into the fabric of the landscape. It is recognised, given the scale of the infrastructure concerned it may not be possible, or appropriate, to fully screen the infrastructure.

18. Landscape design should respond effectively to the character of the site and the receiving landscape, as well as effectively incorporating water management, ecological, archaeological, and public access requirements.

19. Lighting should wherever possible be eliminated or minimised. Where lighting is necessary, light spill and sky glow should be effectively controlled.

20. A Landscape Design Strategy and layout should be provided for these elements of the infrastructure in advance of any detailed planting plans that demonstrates the scope, extent and character of the landscape proposals and shows how these and future management will secure the desired screening, mitigation, landscape enhancement effects.

APPENDIX 2 -- UKPN LETTER

Registered Office:
Newington House
237 Southwark Bridge Road
London SE1 6NP

Company:
UK Power Networks
(Operations) Limited

Registered in England and Wales No: 3870728

Cllr Gabrielle Spray, Cabinet Member for Planning and Infrastructure, Braintree District Council

National Grid Bramford to Twinstead Reinforcement Project:

Removal of Pylons – National Grid Bramford to Twinstead project

Dear Mrs Gabrielle Spray,

I would like to thank you for your enquiry to UK Power Networks, submitted on the 11th of January, regarding the 132kV overhead line pylons following National Grid Bramford to Twinstead project.

We at UK Power Networks have been working very closely with National Grid in delivering cleaner electricity efficiently, reliably and safely, in support of the United Kingdom's move to Net Zero. This project, and in particular the creation of the new Twinstead grid supply point substation at Butler's Wood is a key enabler in the East Anglia region, and as such has been developed within a holistic framework, looking into the interactions between the distribution and transmission electricity networks.

The new substation delivers an electrical equivalent solution to the existing 132,000 Volt dual circuit overhead line between Burstall Bridge - Babergh and Twinstead Tee – Braintree, which provides a secure electricity supply to 77,645 customers. UK Power Networks has agreed to the removal of circa 25km of existing pylons to allow for the new 400,000 Volt overhead line to be constructed and aligned with this route.

As part of the proposal, we have considered the future of the remaining 132,000 Volt overhead line between PCB 89 and PCB 97 pylons, a 2.7km section of overhead not required as part of National Grid works. The options included dismantlement and replacement by new underground cables at a cost to electricity customers of up to £3.4m with further consideration given to the future development of the electricity network in the region. We have concluded that preserving this section of overhead line is of strategic importance to delivering the area's future electrical needs, at a lower cost to the consumer, and therefore we cannot dismantle the line at this stage, as it could be required in the near future.

UK Power Networks has seen a significant level of activity, in particular low carbon generation and other technologies such as electrical vehicles and heat pumps as part of the move to Net Zero. This has led to a number of investment projects being developed including costly reinforcements at other grid supply point substations in the region.

By preserving the section between PCB 89 and PCB 97, we will be able to provide quicker, more efficient and lower cost connections for low carbon generation customer in the region as well as providing a route East of Twinstead and extending the benefits that new grid supply point substation delivers.

Yours sincerely,

[redacted]

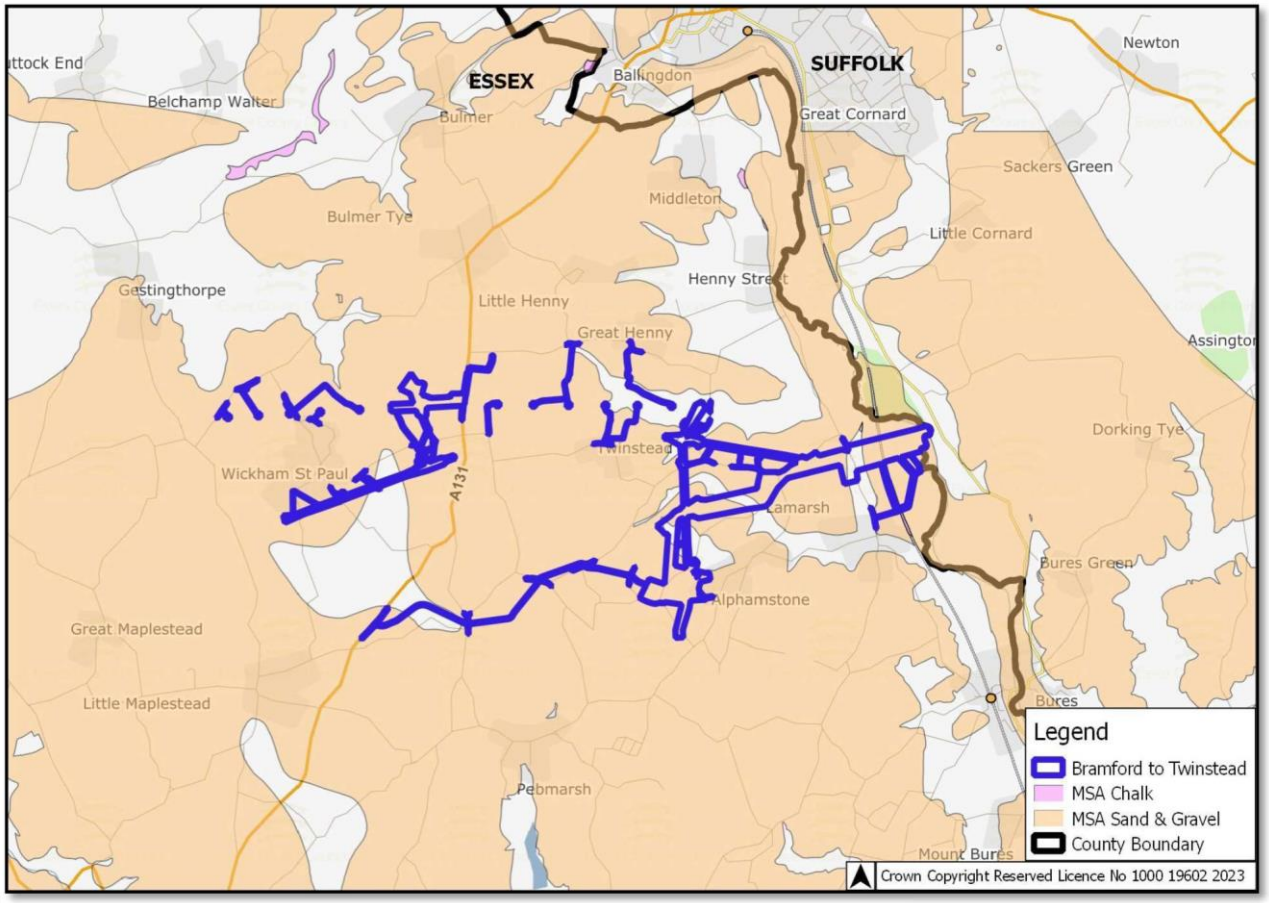
Nuno da Fonseca, MSC, MIET
UK Power Networks | Asset Management | Network Planning Manager - EPN

Appendix 3: Map of ECACs Climate Focus Area

Figure 1: Map of ECACs Climate Focus Area

Appendix 4 - Location of Mineral Safeguarding Areas in Relation to the Project Area in Essex

Map 1 - Minerals and Waste Safeguarding Screening of Order Limits within Essex, August 2023



Note - Essex County Council is the MWPA for the county of Essex only. Suffolk are their own MWPA and are responsible for minerals and waste matters in their own administrative area.

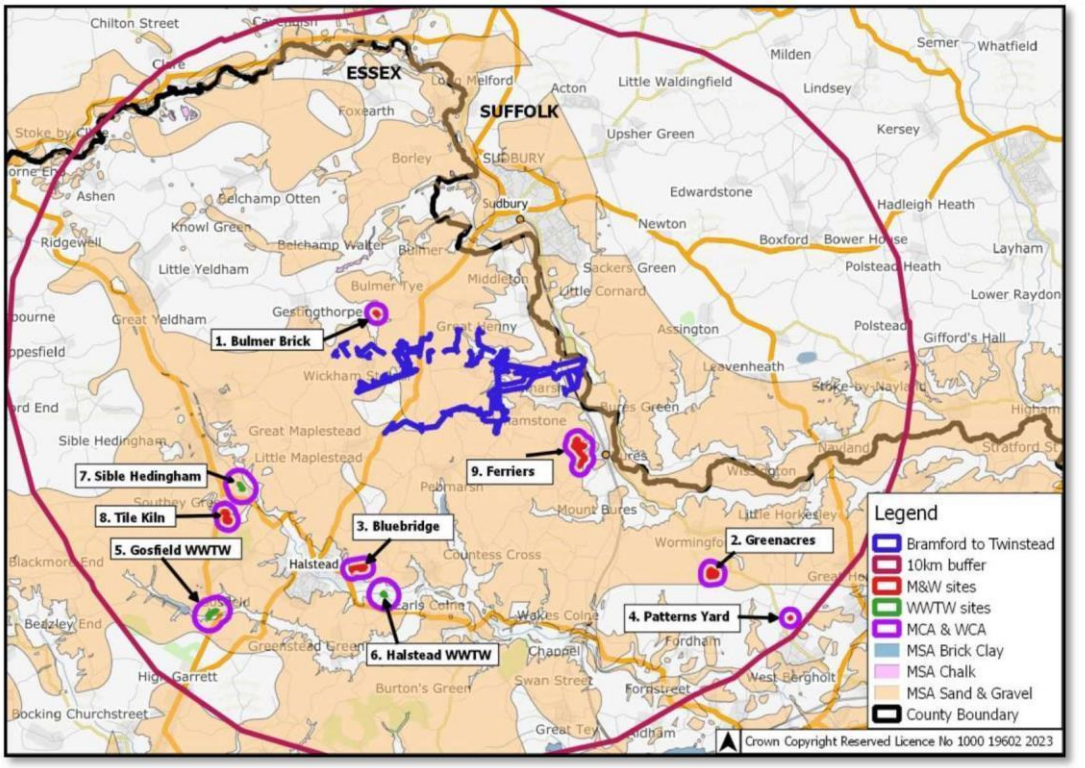
Appendix 5 – Schedule of Safeguarding Designations and Safeguarded Minerals and Waste Infrastructure within and up to 250m of the Order Limits

Table 1 - Schedule of Safeguarding Designations and Safeguarded Minerals and Waste Infrastructure within and up to 250m of the Order Limits

Site type	Site name	Planning application number	Further Details
Mineral Safeguarding Areas (subject to MSA designation: Policy S8 of the Essex Minerals Local Plan)	Sand and gravel	N/A	Policy implications set out under 'Mineral Matters – Safeguarding Mineral Resources'. Spatial extent shown in Appendix One.

Appendix 6 - Minerals and Waste Safeguarding Screening - 10km from Order Limits

Map 2 - Minerals and Waste Safeguarding Screening - 10km from Order Limits, August 2023



Zoomed in Map

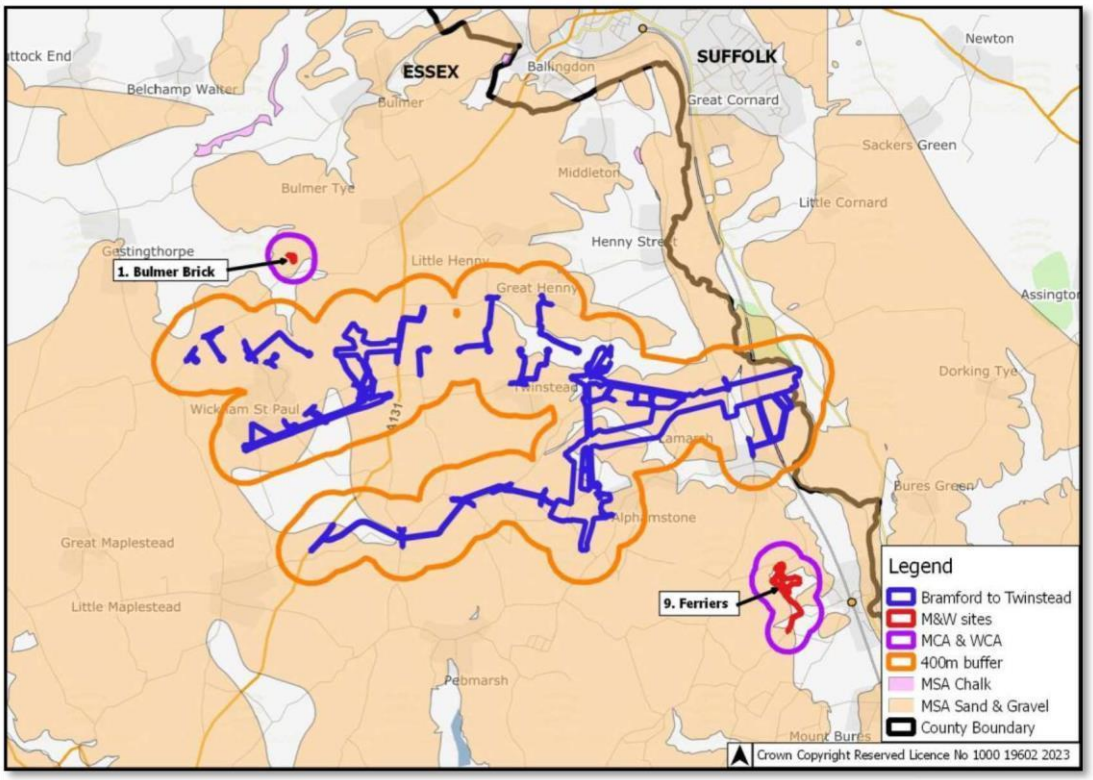


Table 2 - Minerals and Waste Safeguarding Screening - 10km from Order Limits

Map Reference	Relevant - Planning Application
1. Bulmer Brick & Tile Co Ltd	ESS/12/12/BTE - Stripping of topsoil and subsoil/overburden and quarrying of clay to maintain supply to the adjoining brickworks. Top soil and subsoil/overburdern to be used in future conservation restoration of site and extraction area. (Current not extant permission) - Extraction ceased and site restored by 01/05/2037
2. Greenacres, Packards Lane, Wormingford, CO6 3AH	ESX/57/92/COL - Waste transfer site
3. Halstead Anaerobic Digestion Facility, Bluebridge	ESS/25/10/BTE – Construction of an anaerobic digestion plant including combined heat and power with associated offices and new access
4.Patterns Yard, West Bergholt	ESS/41/11/COL - Retrospective importation of inert waste material (hardcore, concrete and soils), together with storage and recycling of the same prior to export from the site.
5.Gosfield WWTW – 400m buffer	No extant permission
6.Halstead WWTW	ESS/21/13/BTE - Installation of three new control kiosks within the existing sewage treatment works (no extant permission)
7. Sible Hedingham WWTW	No extant permission (ESS/64/21/BTE – prior notification - demolition of disused garage/workshop)
8. Tile Kiln Farm, Hedingham Road, Sible Hedingham, CO9 1UP	ESS/69/21/BTE - Continued importation of inert waste material without compliance with condition 9 attached to planning permission ref: ESS/95/20/BTE to vary the number of approved vehicle movements and associated changes to the extant permission
9. Ferriers Farm Pit	ESS/82/19/BTE - Certificate of Lawfulness for the use of the land edged red on drawing Site Location Plan K153.1~20~002 as an non-hazardous and inert waste recycling facility