

# BEANE SOLAR FARM

## Planning, Design and Access Statement – Incorporating Air Quality Statement

2747  
Planning, Design and  
Access Statement  
FINAL  
29 January 2025

## REPORT

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## Contents

<b>1</b>	<b>INTRODUCTION .....</b>	<b>1</b>
	Accompanying documents .....	1
	The Applicant.....	4
<b>2</b>	<b>THE SITE AND SURROUNDING CONTEXT .....</b>	<b>5</b>
	Statutory Designations .....	6
	Non-statutory Designations .....	8
<b>3</b>	<b>SITE ASSESSMENT CRITERIA.....</b>	<b>10</b>
<b>4</b>	<b>PRE-APPLICATION DISCUSSIONS AND COMMUNITY ENGAGEMENT .....</b>	<b>11</b>
<b>5</b>	<b>THE PROPOSED DEVELOPMENT .....</b>	<b>14</b>
	Overview.....	14
	5.2 Landscape Proposals.....	18
	5.3 Biodiversity Proposals.....	19
	5.4 Construction Period.....	20
	5.5 Operational and Maintenance .....	21
	5.6 Decommissioning .....	22
	5.7 Rochdale Envelope .....	22
<b>6</b>	<b>NEED FOR THE DEVELOPMENT AND NETWORK CONTEXT .....</b>	<b>23</b>
<b>7</b>	<b>ENERGY AND CLIMATE CHANGE POLICY FRAMEWORK .....</b>	<b>26</b>
<b>8</b>	<b>LEGISLATIVE CONTEXT.....</b>	<b>35</b>
<b>9</b>	<b>NATIONAL PLANNING POLICY.....</b>	<b>36</b>
	9.1 National Planning Policy Framework (NPPF 2023) .....	36
	9.2 National Planning Policy Framework Proposed Reforms (NPPF 24) .....	38
	9.3 Planning Practice Guidance (PPG) .....	40
	9.4 National Policy Statements (NPS) .....	43
<b>10</b>	<b>THE DEVELOPMENT PLAN .....</b>	<b>45</b>
	10.2 Neighbourhood Plan .....	49
<b>11</b>	<b>OTHER MATERIAL CONSIDERATIONS.....</b>	<b>51</b>
	11.1 Written Ministerial Statements (WMS) .....	51
	11.2 Labour Written Ministerial Statements 2024 .....	52
	11.3 Recent Appeal Decisions .....	53
<b>12</b>	<b>DESIGN AND ACCESS STATEMENT .....</b>	<b>55</b>
<b>13</b>	<b>PLANNING APPRAISAL .....</b>	<b>60</b>
	13.1 Principle of development.....	60
	13.2 Agricultural Land Classification .....	61
	13.3 Air quality.....	62
	13.4 Ecology and ornithology .....	62
	13.5 Fire safety.....	63
	13.6 Flood Risk .....	64
	13.7 Glint and Glare .....	65
	13.8 Heritage, Archaeology and Geophysical Survey .....	66
	13.9 Landscape and Visual.....	67
	13.10 Noise .....	68
	13.11 Transport .....	69
<b>14</b>	<b>SUSTAINABLE DEVELOPMENT ASSESSMENT .....</b>	<b>71</b>
<b>15</b>	<b>PLANNING BALANCE AND CONCLUSION .....</b>	<b>74</b>

Tables

Table 1: Documents submitted in support of this application .....2

Table 2: Drawings submitted in support of application .....2

Table 3: Statutory designations within a 3km radius of the site .....6

Table 4: Non-statutory designations within a 2km radius of the site .....8

Table 5: NPPF 2023/2024 policy comparison table .....39

Figures

Figure 1: Site Location.....5

Figure 2: Solar panel arrangement.....16

Figure 3: FES 2024 net-zero pathways .....33

Appendices

- Appendix A:** APP/X1925/V/23/3323321 – Land at Graveley Lane and to the East of Great Wymondley
- Appendix B:** APP/E2530/W/24/3337544 - Land associated with Washdyke Farm to the North of Billingborough Rd, Folkingham, Lincolnshire, NG34 0EZ
- Appendix C:** APP/U2235/W/23/3321094 - Land north of Little Cheveney Farm, Sheephurst Lane, Marden, Kent
- Appendix D:** APP/W2845/W/23/3314266 Land at Milton Road, Gayton, Northampton, NN7 3HE

# 1 INTRODUCTION

- 1.1 This Planning, Design and Access Statement – Incorporating Air Quality Statement (PDAS) has been prepared by RPS on behalf of Renewable Energy Systems Ltd. (RES) ('the Applicant'), to accompany a full planning application submitted to East Hertfordshire District Council (EHDC) as the Local Planning Authority (LPA) for the proposed Beane Solar Farm located on land to the west of the A507, Cottered, East Hertfordshire, SG9 0QD ('the site').
- 1.2 This planning application seeks permission for the following development ('the Proposed Development'):
- "Installation and operation of a solar farm including co-located energy storage facilities, onsite substation, ancillary infrastructure and landscaping at land to the west of the A507, Cottered, East Hertfordshire, SG9 0QD."***
- 1.3 The Proposed Development will provide a reliable source of clean renewable energy that will be supplied to domestic and commercial consumers via the District Network Operator (DNO) network.
- 1.4 The lifetime of the Proposed Development is 40 years.
- 1.5 The Proposed Development will contribute to local and national 'net zero' targets with an export capacity of up to 49.9 megawatts (MW) of renewable energy. This is enough to supply 15,000<sup>1</sup> homes per annum with an associated saving of c.760,000 tonnes of CO<sub>2</sub> across the 40-year operational lifespan of the proposed development. Energy storage has been included to optimise the development and will store excess energy from the solar farm to be exported at times of low/no energy production. As the site exceeds 1 hectare in area, it is defined as a Major Development, as per The Town and Country Planning (Development Management Procedure) (England) Order 2015.
- 1.6 This PDAS is provided in support of a full planning application made under the Town and Country Planning Act 1990 (the 1990 Act) and the Planning and Compulsory Purchase Act 2004 (the 2004 Act) (together the Planning Acts), as amended. It sets out: a description of the site and context; engagement undertaken by the Applicant; the Proposed Development and need; the legislative and policy framework; national and local planning policy; an assessment of the principle of development; how material planning considerations and environmental issues have been addressed; together with a sustainable development assessment before concluding with a planning balance assessment.
- 1.7 Whilst the PDAS is set out as a standalone document, it has been informed by the suite of documents that comprise the planning submission and accordingly should be read in the context of same to allow a full understanding of the Proposed Development, inclusive of potential impacts, mitigation and enhancement measures and the overall planning merits.

## Accompanying documents

- 1.8 As stated, this PDAS is part of a planning application pack that also contains the following documentation:

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<sup>1</sup> The homes equivalent figure has been calculated by taking the predicted annual electricity generation of the site (based on RES assessments Beane has a predicted capacity factor of 11.2% and dividing this by the annual average electricity figures from the Department for Business, Energy & Industrial Strategy (BEIS) showing that the annual UK average domestic household consumption is 3,239 kWh (January 2024).

**Table 1: Documents submitted in support of this application**

Document	Author
Application Forms	RPS
Town And Country Planning (Development Management Procedure) (England) Order 2015 Notice Under Article 13 Of Application For Planning Permission	RPS
Acoustic Assessment	RES
Aboricultural Impact Assessment	RPS
Agricultural Land Classification	Soil Environment Services Ltd
Biodiversity Net Gain Assessment	RPS
Biodiversity Questionnaire	RPS
Construction Traffic Management Plan	RPS
Ecological Assessment Report	RPS
Farmland Bird Mitigation Strategy	RPS
Flood Risk Assessment and Sustainable Drainage Strategy	RPS
Flood Risk Sequential Test	RPS
Heritage Statement	RPS
Geophysical Survey Report	Headland Archaeology
Glint and Glare Study	Pager Power
Landscape and Visual Impact Assessment	RPS
Statement of Community Involvement	Cavendish
Transport Statement	RPS

1.9 Drawings submitted in support of this application are listed in Table 2 below.

**Table 2: Drawings submitted in support of application**

Drawing Title	Reference	Revision
Figure 1 Site Location Plan	05003-RES-LAY-DR-PT-001	2
Figure 2 Site Location Map	05003-RES-LAY-DR-PT-002	4
Figure 4 Infrastructure Layout	05003-RES-LAY-DR-PT-003	8
Figure 5A Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004A	8
Figure 5B Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004B	2
Figure 5C Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004C	2
Figure 5D Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004D	2
Figure 5E Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004E	2
Figure 5F Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004F	2
Figure 5G Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004G	2
Figure 5H Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004H	2
Figure 5I Infrastructure Layout Enlargement	05003-RES-LAY-DR-PT-004I	2
Figure 6A Typical PV Module and Rack Detail	05003-RES-SOL-DR-PT-001A	4

Drawing Title	Reference	Revision
Figure 6B Typical PV Module and Rack Detail	05003-RES-SOL-DR-PT-001B	1
Figure 6C Typical PV Module and Rack Detail	05003-RES-SOL-DR-PT-001C	1
Figure 7A Typical Inverter and Storage Layout	05003-RES-SOL-DR-PT-002A	3
Figure 7B Typical Inverter and Storage Layout	05003-RES-SOL-DR-PT-002B	3
Figure 8 Typical Inverter Substation	05003-RES-SOL-DR-PT-003	1
Figure 9 Typical Energy Storage Enclosure	05003-RES-BAT-DR-PT-001	1
Figure 10 Typical DC DC Convertor	05003-RES-SUB-DR-PT-001	1
Figure 11A Substation Compound Layout Plan	05003-RES-SUB-DR-PT-002A	4
Figure 11B Substation Compound Layout Elevations	05003-RES-SUB-DR-PT-002B	1
Figure 12 Typical Access Track Detail	05003-RES-ERW-DR-PT-001	2
Figure 13A Typical Temporary Construction Compound Layout – Plan	05003-RES-CTN-DR-PT-001A	1
Figure 13B Typical Temporary Construction Compound Layout – Elevations	05003-RES-CTN-DR-PT-001B	1
Figure 14 Typical Security Fence Detail	05003-RES-SEC-DR-PT-001	1
Figure 15 Typical Deer Fence	05003-RES-SEC-DR-PT-002	1
Figure 16 Typical Security CCTV Detail	05003-RES-SEC-DR-PT-003	1
Figure 17 Site Entrance Layout (A507)	05003-RES-ACC-DR-PT-001	3
Figure 18 Site Entrance Layout (Cromer Heath)	05003-RES-ACC-DR-PT-002	1
Landscape Mitigation Plan (Overall)	2747.5.01	H
Landscape Mitigation Plan (Sheet 1)	2747.5.02	H
Landscape Mitigation Plan (Sheet 2)	2747.5.03	H
Landscape Mitigation Plan (Sheet 3)	2747.5.04	H
Landscape Mitigation Plan (Sheet 4)	2747.5.05	H
Landscape Mitigation Plan (Sheet 5)	2747.5.06	H
Landscape Mitigation Plan (Sheet 6)	2747.5.07	H

- 1.10 The above plans and documents are submitted in accordance with national and local validation checklists and The Town and Country Planning (Development Management Procedure) (England)

Order 2015 (as amended). Further, the suite of documents adhere to the advice provided by EHDC in their pre application advice and in respect of the required documentation to support a planning application for the Proposed Development.<sup>2</sup>

### The Applicant

- 1.11 The applicant, RES, are the world's largest independent renewable energy company with over 40 years' experience in the industry. Delivering over 23GW of renewable energy projects worldwide and supporting an operational asset portfolio exceeding 12GW, RES are one of the leaders in the renewable energy sector.
- 1.12 The projects delivered cover a wide range of forms, including wind, solar, storage and transmission and distribution.
- 1.13 The Group's head office in Kings Langley, near London, is complemented by other offices across the UK including Glasgow, Cardiff, Gateshead, Exeter, Truro, Guildford, Rugby and Larne in Northern Ireland, with engineers working across the UK. Internationally, RES has overseas subsidiary offices in France, Scandinavia, Australia, New Zealand, Canada, Turkey, Germany, and across the USA. The RES Group employs approximately 3,000 staff.
- 1.14 Within the United Kingdom and Ireland, RES has the expertise to develop, construct and operate solar farms of outstanding quality. RES track record has given them a reputation for excellence that is second to none and have achieved significant success in the solar energy market. This is demonstrated with the planning consent achieved for Derril Water (42MW), Longhedge (49.9MW) and Varley (25MW).
- 1.15 RES wish to continue the good work they have already done through the extensive contributions to the renewable energy sector and assisting in tackling climate change, through exploring further avenues of appropriate renewable energy provision across the country.

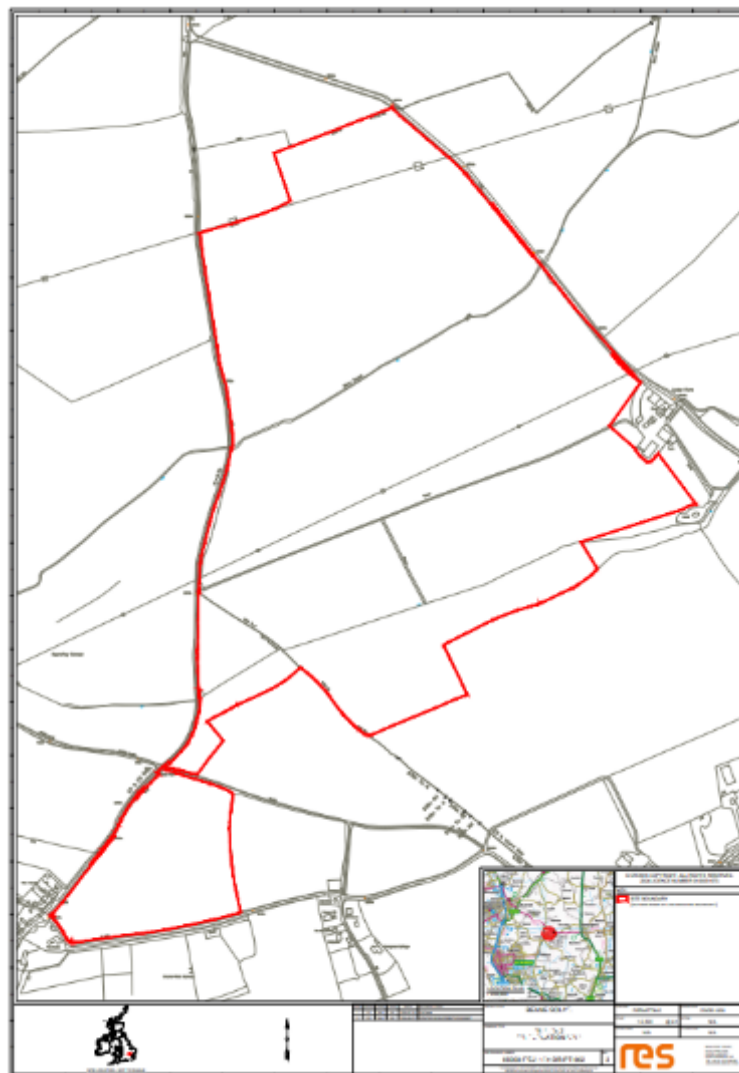
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<sup>2</sup> Council Ref:M/23/0018/MPRAP – Provided 12<sup>th</sup> January 2024



## 2 THE SITE AND SURROUNDING CONTEXT

- 2.1 The site lies approximately 0.5km to the northwest of Cottered and 0.5km to the south of Cumberlow Green. Beyond this local context, Stevenage is located approximately 4.5km to the southwest, Buntingford 5km to the east and Letchworth Garden City some 8km to the northwest.
- 2.2 The site lies within a countryside location beyond the green belt. The predominant surrounding land use is agricultural. The site is bounded to the north by hedgerow and agricultural land, to the east by the A507, to the west by Cromer Heath (lane), and to the south by the B1037, hedgerows, woodland a pond and farmland.
- 2.3 The hamlet of Cromer is located adjacent to a small proportion of the site's southwestern boundary. Lodge Farm lies adjacent to the southeastern corner of the site.
- 2.4 The site's principal access is off the A507 and Cromer Heath, another field access is located along Cromer Heath. The southern parcel is served by a field access off Cromer Heath.
- 2.5 The site extends to an area of 79.5 hectares (ha). It is currently in use as agricultural land where crops are grown for anaerobic digestion. Part of the site is also in use as a private airfield (Cottered Airfield). The site is broadly divided into two triangular areas with a larger parcel located in the north and a smaller parcel to the south, as illustrated in Figure 2.1 below.



**Figure 1: Site Location Plan**

- 2.6 Boundary treatments include field edge vegetation, drainage ditches, hedgerows and intermittent more mature vegetation.
- 2.7 The site's western boundary follows the break between East Hertfordshire and North Hertfordshire Councils.
- 2.8 A series of farm tracks are located across the site.
- 2.9 The topography of the site is generally flat however, the site slopes upwards to either side of the River Beane, more prominently to the south west.
- 2.10 Two Public Rights of Way (PRoW) run through the site, Cottered no.028 and Ardeley no.049. Cottered no.28 routes through the site on a southwest to north east axis. Ardeley no.49 routes through the southern part of the site on a northwest to south east axis connecting Cromer Heath with the B1037.
- 2.11 There are no statutory landscape or ecological designations attributed to the site.
- 2.12 There are several heritage assets in close proximity to the site including Cottered Conservation Area (CA) which lies 0.4km to the southeast of the site.
- 2.13 The closest listed building is the Grade 2 Brick Barn at Lodge Farm. Chequers, again Grade 2 listed, lies to the southwest of the site in Cromer and Cromer Windmill Grade 2\* lies close to the site's southern boundary. The Garden House at Cottered is a Grade 2\* registered park and garden southwest of Cottered. All heritage assets and their distance from the site are listed below in Table 3.
- 2.14 The River Beane courses horizontally across the northern part of the site. Land near its bank top lies in Flood Zones 2 and 3. A smaller unnamed ordinary watercourse flows parallel to the River Beane further (c.450m) south in the site. Land immediately adjacent to the smaller unnamed ordinary watercourse lies in Flood Zone 2.
- 2.15 High risk areas of surface water flooding correspond with higher risk flood zones, with additional low risk areas featuring along the site's western boundary and centrally to the northeast of the River Beane.
- 2.16 Two overhead powerlines transverse the site on an east west axis some 500m apart. The northern line is 400kV and the southern is 132Kv.

## Statutory Designations

- 2.17 Statutory designations within a 3km radius of the site are listed below. Please note only those listed buildings closest to the site approximately 1km are included.

**Table 3: Statutory designations within a 3km radius of the site**

Designation	Distance from Site	Description
Flood Zone	0.0km	2
Flood Zone	0.0km	3
Listed Building (Grade II)	0.0km	The Brick Barn at Lodge Farm
Listed Building (Grade II*)	0.1km	Cromer Windmill
Listed Building (Grade II)	0.1km	Chequers
Listed Building (Grade II)	0.2km	Stable At Cromer Hall
Listed Building (Grade II)	0.2km	Cromer Hall
Listed Building (Grade II)	0.3km	Barn At Lime Tree Farm
Listed Building (Grade II)	0.3km	Farmhouse At Lime Tree Farm
Listed Building (Grade II)	0.3km	The Cottage

## REPORT

Listed Building (Grade II)	0.3km	Rose Cottage
Listed Building (Grade II*)	0.4km	Farmhouse At Cromer Farm
Listed Building (Grade II)	0.4km	Granary At Cromer Farm
Conservation Area	0.4km	Cottered
Scheduled Monument	0.5km	Site of Cumberlow Manor House
Listed Building (Grade II)	0.4km	Nottingham
Listed Building (Grade II)	0.4km	Lilac Cottages
Listed Building (Grade II)	0.4km	Paddocks Wells
Listed Building (Grade II)	0.4km	Barn At Childs Farm
Listed Building (Grade II)	0.4km	Farmhouse At Childs Farm
Listed Building (Grade II)	0.5km	The Town House
Listed Building (Grade II)	0.5km	Scaldsgrove
Registered Parks and Gardens (Grade: II*)	0.4km	The Garden House, Cottered
Listed Building (Grade II)	0.6km	Architectural Fragment in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Shinto Shrine in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Japanese House in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Green Arch in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Miniature Bridge in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Resting House in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Architectural Fragments in Italian Garden at Garden
Listed Building (Grade II)	0.6km	Tea House In Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Group Embracing All Stone Lanterns in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Spirit Bridge in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Small Resting House in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Red Arch (Torii) In Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Fan-Shaped Shelter in Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Entrance Gate with Side Screen into Japanese Garden at Garden House
Listed Building (Grade II)	0.6km	Dovecote At Broom Manor
Listed Building (Grade II)	0.6km	Broom Manor
Listed Building (Grade II)	0.6km	Barn And Hovel at Bancroft
Listed Building (Grade II)	0.6km	Old Farm Buildings at Bancroft Farm
Listed Building (Grade II)	0.7km	Farmhouse At Cheynes Farm
Listed Building (Grade II)	0.7km	Barn At Cheynes Farm
Listed Building (Grade II*)	0.7km	Parish Church Of St John the Baptist
Conservation Area	1.5km	Ardeley
Scheduled Monument	1.7km	Ardeley Bury moated site and fishpond

Registered Parks and Gardens (Grade: II)	1.9km	Julians
Conservation Area	2.2km	Walkern
Conservation Area	2.5km	Moor Green
SSSI	3km	Moor Hall Meadows
Scheduled Monument	3km	Moor Hall

## Non-statutory Designations

2.18 Table 4 sets out the known non-statutory designations within a 2km radius of the site.

**Table 4: Non-statutory designations within a 2km radius of the site**

Designation	Distance from site	Description
Local Wildlife Site (LWS)	Adjacent	Cottered Road Verge
Woodland Priority Habitat Network	0.1km	Woodland area to site's southern boundary.
LWS	0.50km	Cottered Churchyard
LWS	0.61km	Back Lane, North of Wood End
LWS	0.70km	Cromer Hall Meadows
LWS	0.75km	Wind Pump Marsh, Springfield Farm
LWS	0.76km	Markham's Wood
LWS	0.76.km	Southern Green Copse & Chalk Pit
LWS	0.82km	Hickman's Hill Green Lane
LWS	0.82km	Shaw Green Lane
LWS	0.89km	Munches Wood
LWS	1.05km	Lolleywood Green Lane
LWS	1.12km	Southern Green Grassland
LWS	1.18km	Sloggar's Wood
LWS	1.21km	Ardeley Pasture
LWS	1.29km	Burymead Lane and Paddock
LWS	1.29km	Throcking Road Verge
LWS	1.37km	Basket's Wood
LWS	1.42km	Ardeley Bury
LWS	1.46km	Hicks Grove
LWS	1.5km	Rushden Church Area
LWS	1.51km	Southern Green Farm Green Lane
LWS	1.56km	Rydals Wood
LWS	1.64km	Drinkwater Wood and Gardner's Wood
LWS	1.78km	Howell's Wood
LWS	1.89km	Halls Green Grassland
LWS	1.94km	Coldash Wood
LWS	1.94km	Squitmore Spring and Plantation
LWS	1.94km	Flanders Green Moat Field
LWS	1.97km	Broadfield Great Wood

## Planning History

2.19 A planning history search was undertaken using EHDC's public register. However, there is no relevant planning history on the site. Further to this, a planning search was carried out for solar and BESS developments in close proximity to the site, the search resulted in no applications.

- 2.20 As the search resulted in no planning applications, an additional search was made to assess the position of grid scale renewable energy applications being brought forward across the district. A search was undertaken for all ground mount solar applications from 2020 to the present date. The search results are as follows:
- Ref. No: 3/24/1275/FUL - Land To The West Of Ware, Ware Park Farm, Ware, Hertfordshire, SG12 0DU. Construction and operation of a circa 24MW (AC) solar farm development with a (Battery Energy Storage System) BESS, and associated infrastructure. In planning 24MW. Approximately 15km from application site.
  - Ref. No: 3/24/0259/SCREEN - Land To The East Of Tewin Bury Farm Hotel And North Of Tewin Mill Fish Farm, Hertford Road, Tewin, Hertfordshire AL6 0JB. Screening Opinion for a solar array with associated battery storage, substation and cabling. Approximately 15km from application site.
  - Ref. No: 3/23/2349/SCREEN - Land West Of Buntingford South Of A507 Baldock Road, Buntingford, Hertfordshire. Screening Opinion for proposed development of Land West of Buntingford, South of the A507 Baldock Road for solar farm, commercial uses and greenspace. Approximately 3km from application site.
  - Ref. No: 3/23/1734/CPO - Westmill Landfill Westmill Road, Ware, Hertfordshire, SG12 0ES. A County Council Application - to be determined by HCC - Application for construction and operation of solar farm and associated infrastructure. Approved 7.3MW. Approximately 14km from application site.
  - Ref. No: 3/22/2465/SCREEN - Land North Of Ware Park Farm, Ware Park, Ware, Hertfordshire. Request for screening opinion for proposed solar park. 24MW of solar PV Development with a 15MWh battery. Approximately 14km from site.
  - Ref. No: 3/22/2445/FUL - Land To The Rear Of The Moat House, 226 Hertingfordbury Road, Hertford, Hertfordshire SG14 2LB. Installation of ground mounted solar PV panel array. Refused and Appeal Dismissed. 10KW. Approximately 17km from application site.
  - Ref. No: 3/21/2781/FUL - Land East of Pelham Substation, Maggots End, Manuden, Construction and operation of a solar farm. Erection of mounted solar photovoltaic (PV) arrays and battery storage. Erection of inverter cabins, DNO substation, customer switchgear, fencing, CCTV, landscaping and creation of access. Withdrawn. Approximately 15km from application site.
  - Ref. No: 3/21/2601/FUL - Land At Wickham Hall Estate North Of The A120, Bishops Stortford, Hertfordshire CM23 1JG. Erection of a solar photovoltaic farm with an output capacity not to exceed 49.9MW of energy, with supporting infrastructure and battery storage, inverters and transformers, fencing and landscaping works. Approved. Approximately 17km from application site.
  - Ref. No: 3/21/1722/SCREEN - Land Off Violets Lane, Furneux Pelham, Hertfordshire. Proposed ground-mounted solar PV development. Screening for 45MW array. Approximately 13km from application site.
- 2.21 The remaining solar applications on the planning register are small scale domestic or commercial roof mount installations, or private wire arrangements.
- 2.22 Currently in planning grid scale solar applications in East Hertfordshire District amount to 24 MW capacity. Consented grid scale solar applications amount to 57.2 MW capacity. None of the applications are located closely enough to the Proposed Development to result in any potential cumulative impacts.

### 3 SITE ASSESSMENT CRITERIA

- 3.1 The UK electricity network faces exceptional challenges to meet the Government's commitment of reducing carbon emissions. This will largely be achieved through decommissioning carbon intensive plants and rapidly increasing low carbon generation through wind and solar technology, together with grid reinforcement works.
- 3.2 Defining an appropriate location for a proposed solar farm involves a staged approach. At an overarching level a review takes place to identify areas that are:
- Capable of hosting a viable installation which will produce energy from the sun; and
  - Capable of achieving planning permission when considered against all relevant environmental factors as well as legislation and policy.
- 3.3 This initial stage in the process primarily involves desktop mapping and analysis to identify constraints at a national and regional level including:
- Examination of the electricity network to ascertain whether there may be grid capacity to host a renewable energy project; and,
  - A baseline environmental study to identify known European and national environmental constraints including but not exclusive of, Areas of Outstanding Natural Beauty (AONB) (now National Landscapes); Special Protection Areas (SPA); Special Areas of Conservation (SAC); Sites of Special Scientific Interest (SSSI) and National Nature Reserves (NNR), together with local designations.
- 3.4 This work augmented a site visit to collectively ascertain the local context in respect of inter-alia:
- Land availability;
  - The context of the site and presence of landscape features;
  - Settlement pattern;
  - Connectivity and access;
  - Nature conservation and site specific environmental constraints for example, the presence of flooding and cultural heritage constraints.
- 3.5 The proposed site is considered to be appropriate for the Proposed Development in that:
- It is free from any international or national environmental designations;
  - It is located within the "Rural Area beyond the Greenbelt" as per the East Herts District Plan, in an area that supports the principle of renewable energy developments;
  - There is available grid capacity and a point of grid connection crossing the site into which the Proposed Development can connect, thus minimising the potential for environmental impacts associated with any detached grid connection. Furthermore, this also helps the economic viability of the Proposed Development;
  - The site benefits from existing access points onto the surrounding road network which can be upgraded to facilitate the construction process;
  - It provides adequate land area which is available to host the renewable energy proposal. Although the point of grid connection crosses the site, the capital expenditure involved in the project - including significant connection costs – is such, that the project must be of the proposed scale to ensure it remains viable; and.
  - Site survey has demonstrated that where environmental constraints have been identified, these can be mitigated through overall project design including avoidance and/or through mitigation measures where possible.



## 4 PRE-APPLICATION DISCUSSIONS AND COMMUNITY ENGAGEMENT

- 4.1 Both EHDC and the National Planning Policy Framework (NPPF) encourage pre-application engagement. NPPF Paragraph 39 states that early engagement has significant potential to improve the efficiency and effectiveness of the planning system for all parties. Good quality pre-application discussions enable better coordination between public and private resources and improved outcomes for the community. The Applicant has effectively undertaken engagement with EHDC and the local community even though this not a statutory requirement, in order to better understand any impacts of the development on key stakeholder groups and where possible evolve the design in response to these.

### **EHDC Environmental Impact Assessment Screening Opinion (3/23/2478/SCREEN)**

- 4.2 A request for a Screening Opinion was submitted to EHDC on 21st December 2023, reference 3/23/2478/SCREEN.
- 4.3 The Council's Screening Opinion, was received on the 24th January 2024, and in summary concluded:
- The Proposed Development does not fall within Schedule 1 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the Regulations);
  - The Proposed Development does fall within Schedule 2 Part 3 (a) of the Regulations, thus requiring a screening opinion;
  - The Proposed Development is not within or adjacent to a sensitive area as defined by the Regulations;
  - The likely impacts would largely be restricted to the site itself and would not have a major impact on a larger geographical area and population;
  - Given the scale, location and nature of the development, the effects on the environment are unlikely to be significant, when assessed against the criteria identified within Schedule 3 of the Regulations; and
  - An EIA is not required in this instance.

### **EHDC Pre-application advice (M/23/0018/MPREAP)**

- 4.4 A pre-application advice request in respect of the Proposed Development was submitted to the Council in August 2023 and given the reference M/23/0018/MPREAP – as referred to in Para 1.10 of this Report.
- 4.5 EHDC's written response was received 12th January 2024. EHDC provided initial comments on the proposal, identified areas of potential policy conflict, and matters that would need to be addressed together with a list supporting documentation that would be required in support of any future planning application.
- 4.6 Comments, actions, and assessments set out in the advice are incorporated and provided within and in support of this application as appropriate.
- 4.7 To reaffirm, all necessary documentation, detailed in the pre-application written response and where necessary within the EHDC's local validation checklist, is submitted in support of this planning application.

## **Highway Pre-Application advice**

- 4.8 A Technical Note (TN) was produced by RPS in March 2024 which detailed the access options for Hertfordshire County Council (HCC) to review and provide a response on the different access options proposed. Detail of this engagement is set out from paragraph 1.12-1.19 in the Transport Statement (TS) submitted in support of this application.

## **Ward Member and Councillor engagement**

- 4.9 On the 12<sup>th</sup> December 2023 a meeting between the Applicant and Cllr David Woollcombe was held to discuss the proposal. On the 22<sup>nd</sup> of February 2024 a meeting with Cllrs Vicky Burt, Vicky Glover-Ward, Aubrey Holt, Tim Hoskin, Sue Nicholls, David Woollcombe, David Lamb, Neil Button and the Applicant was held to discuss proposals and reception to the public consultation. On the 21<sup>st</sup> March 2024 a meeting with Cllrs Aubrey Holt, Stuart Norman, Jim Egginton, Beane Solar Farm Opposition Group and the Applicant to discuss the evolving proposals and objections to the array.
- 4.10 In addition to the meetings held, the Applicant has been in regular contact with Cllr Aubrey Holt and Cllr Jim Egginton throughout the pre-application period to discuss the proposals for Beane Solar Farm and their constituents' concerns.
- 4.11 Throughout the pre-application period, the Applicant received written feedback from Cllr Aubrey Holt, Cllr Jim Egginton and Cllr Stuart Norman.
- 4.12 The Applicant has also engaged with residents who live closest to the site beyond the public consultation itself. Between November 2023 and February 2024, the Applicant met with nine neighbouring residents to discuss the proposals and the then ongoing site surveys.

## **Community consultation**

- 4.13 The planning application is supported by a Statement of Community Involvement (SCI). The SCI details the strategies and processes used to undertake community engagement and summarises the responses received, the Applicant's response and where relevant, how feedback informed the design evolution of the Proposed Development. The SCI demonstrates the Applicant's commitment to community involvement in the planning process.
- 4.14 The Applicant devised an engagement plan to consult widely and effectively with the local community, taking the form of a 'hybrid' in-person and virtual consultation to present the plans and understand the views and priorities of local residents and stakeholders in relation to the proposal.
- 4.15 An in-person public exhibition was held on 14 November 2023 in a venue local to the site. This was supported by a virtual exhibition which was live from 14 - 28 November 2023. This virtual exhibition displayed the same information as was presented at the in -person exhibition to ensure equal opportunity to learn about the proposals and feedback, irrespective of how local people preferred to engage.
- 4.16 In order to advertise the event and consultation period as widely as possible, invitation flyers were delivered on 4 November 2023 to 366 local households and businesses, identified due to their proximity to the site. Site neighbours received a bespoke letter inviting them to a preview of the exhibition. Key stakeholders were sent emails notifying them of the consultation launch and the in-person event.
- 4.17 A survey was used to gather feedback on the local community's priorities and collect their ideas on how the development could respond to local needs.
- 4.18 89 individuals attended the in-person public exhibition. Members of the project team were on hand to meet with attendees and respond to queries.



- 4.19 In total, 32 pieces of feedback were submitted to the consultation. Three of these were received via the online feedback form, 19 via hard copy feedback form and 10 via email.
- 4.20 Most respondents agreed that there is a global climate emergency and that renewable energy, including solar, can help solve the crisis. The majority of respondents stated their opposition to the Proposed Development. Reasons for supporting the solar farm included the need for renewable energy and the positive landscaping proposed. Reasons for objecting to the proposed solar farm included negative visual and environmental impacts and difficulties with site access and construction traffic. More details of the findings of the consultation activity can be found in Section 4 of the SCI.
- 4.21 This SCI provides an overview of the public consultation undertaken which has been conducted in accordance with national policy, local requirements, and industry best practice. As an established solar farm developer, RES are committed to public engagement and rely on local inputs to help deliver acceptable, high quality solar projects. Following the application's submission, the applicant will continue to engage with local residents, community groups and other stakeholders for the duration of the planning application process.

## 5 THE PROPOSED DEVELOPMENT

5.1 The main elements of the Proposed Development are set out below. A Design and Access Statement (DAS) is provided in Section 12 of this report:

The Proposed Development comprises the construction and operation of a solar farm with a proposed capacity of 49.9MW. Key project components are:

- Photovoltaic (PV) Solar Panels erected on steel/aluminium frames set out in south facing arrays;
- Transformer/ inverter units and energy storage facility co-located within compounds placed throughout the site;
- Electrical Substation Compound;
- On-site cabling;
- Internal Tracks;
- New site accesses;
- Associated infrastructure including CCTV and Security Fencing;
- Temporary construction compounds (x2);
- Associated Landscaping; and,
- Biodiversity Enhancement.

### Overview

5.2 When operational, the site will comprise a 49.9MW solar farm and energy storage. It is Proposed the array will have an operational life of 40 years.

5.3 In conjunction with the generating station the site will also be used for sheep grazing securing a continued agricultural use across the site for the lifetime of the development.

5.4 Project components are further summarised below.

### Access

5.5 Construction access arrangements are temporary as follows.

5.6 The construction access along the A507 will not be a new access, rather an improvement and marginal relocation of an existing gated field access. A preliminary access design, Figure 17 05003-RES-ACC-DR-PE-001 rev3 demonstrates the ability of a 16.5m articulated HGV to manoeuvre into the A507 access junction. 2.4m x 160m visibility splays are achievable in both directions.

5.7 Two construction compounds will be located within the northern parcel. One is located adjacent to the main entrance track and a short distance west of the A507 access. The second is proposed in the southwest of the main land parcel. All construction materials and infrastructure will be delivered firstly to main compound, just off the A507. The construction access will not be a new access, rather an improvement and marginal relocation of an existing gated field access. The locations of the proposed temporary compounds are illustrated on Figure 4 Infrastructure Layout 05003-RES-LAY-DR-PT-003 rev 8.

5.8 The A507 access arrangements seek to avoid construction HGVs travelling along constrained sections of the public highway. As alluded to above, construction materials will all enter the site via the A507 access into the northern parcel and distribute materials into the primary compound.

- 5.9 From here, materials will be transferred internally across the site to the southern compound to facilitate transit between the northern and southern parcels, via a tractor and trailer. Construction vehicles between the northern and southern parcel will utilise Cromer Heath. Stop / go boards will be in place to hold vehicles on Cromer Heath to enable a tractor and trailer to transfer construction materials between the northern and southern parcels. The existing access to the southern parcel will be marginally relocated and upgraded.
- 5.10 Temporary signage will be located in the vicinity of the accesses in both directions on Cromer Heath during the construction period to warn drivers of the site entrances. This approach will reduce / minimise the distance travelled by construction HGVs along constrained sections of the public highway, and appropriate traffic management measures can be adopted where necessary.

### **Solar panels and mounting frames**

- 5.11 Solar panels will be composed of bifacial photovoltaic cells designed to maximise the absorbency of the sun's rays and to minimise solar glare. A typical PV module and rack detail drawings are shown on Figures 6A, 6B, 6C Typical PV Module and Rack Detail, drawing numbers 05003-RES-SOL-DR-PT-001A rev 4, 05003-RES-SOL-DR-PT-001B rev 1, 05003-RES-SOL-DR-PT-001C rev 1 is submitted in support of this application.
- 5.12 The solar panels will be arranged in south facing arrays, fixed within the site in landscape orientation. There are no moving parts and they do not move to follow the sun.
- 5.13 Panels will be tilted between 10 to 30 degrees from the horizontal front. The lowest edge of the panels is unknown at this stage, typically panels are raised 0.8m from the ground at the lowest point (the southern edge). The maximum height of the panels will be 3.5m (the northern edge). The lowest edge of solar panels within the floodplain would be raised above the flood level. Overall panel heights from ground level will be up to 3.5m high.
- 5.14 Panel arrays will be fixed atop steel or aluminium frame tables which are pile driven or pushed into the ground. The exact depth will be determined in accordance with geotechnical site investigation findings to be undertaken post consent. Typical depths range from 1.5m to 1.7m. Panel arrays will be spaced up to 3m apart to avoid inter-panel shading.
- 5.15 Posts are pushed or driven into the ground via typical agricultural methods routinely used to erect fence posts on farms and rural areas. There is no concrete required to facilitate this process.
- 5.16 In cases where it is required due to ground conditions panels can be mounted using concrete ballasts which sit atop the ground. If required, ballasts will be manufactured off-site and brought to site pre-formed.
- 5.17 A panel bank of panels arranged in landscape format is shown below in Figure 2.



**Figure 2: Solar panel arrangement**

### Connecting cables

- 5.18 Strings of connecting cables run along the back of each panel to the end of every row where they connect to main cables which, in turn, connect to inverter substations situated within associated compounds strategically located across the site. Energy is then directed to either the co-located energy storage facilities or direct to the substation for transfer to the grid. This depends on grid demand at the time.

### Inverter substations and compound

- 5.19 Inverter substations are located within compounds throughout the site as shown on Figure 4 Infrastructure Layout drawing ref 05003-RES-LAY-DR-PT-003 rev 8. A total of 12 inverters are proposed. Inverters are small cabin-like buildings constructed on a concrete base/plinth with footprint dimensions of 5m x 3m x 3m. Transformers typically measure 4m x 3 x 3m. Details are shown on Figures 7A & 7B Typical Inverter and Storage Layout, drawing ref 05003-RES-SOL-DR-PT-002A rev 3 and 05003-RES-SOL-DR-PT-002B rev 3.
- 5.20 Inverter stations convert the Direct Current (DC) electricity generated by the solar panels into Alternating Current (AC) electricity which is appropriate to be fed into the primary substation and then to the DNO network.
- 5.21 Each compound also contains DC/DC units (1.2m x 1.8m x 2.3m) which convert the voltage of the energy created on site to facilitate transfer from the inverters to the energy storage units, as well as an area of hardstanding to facilitate HGV / crane movements during operation, in the unlikely event they are required. The area of hardstanding measures approximately 15m x 15m.

### Energy storage

- 5.22 Energy storage is a key part of managing the increasingly complex supply and demand needs of the 21st Century.
- 5.23 In order to optimise the benefits of solar energy generation, the Proposed Development includes energy storage to help increase the flexibility and generation opportunities of the site. The inclusion of energy storage facilities will allow for generated electricity to be stored and supplied to the grid during times of peak demand.

- 5.24 Energy storage facilities are co-located throughout the site next to inverters within the same compounds as detailed on Figures 7A & 7B Typical Inverter and Storage Layout, drawing ref 05003-RES-SOL-DR-PT-002A rev 3 and 05003-RES-SOL-DR-PT-002B rev 3.
- 5.25 In total there are 24 energy storage enclosures grouped in 12 pairs, one pair within each compound. Each pair of enclosure units are subject to detail design but typically measure 12.2m x 2.44m x 2.9m high and are located on concrete foundations as detailed on Figure 9 Typical Energy Storage Enclosure drawing ref 05003-RES-BAT-DR-PT-001 rev1.
- 5.26 Energy stored in the units will be transferred via underground cables to the substation.

### Primary on-site substation

- 5.27 A substation compound will accommodate all necessary equipment to enable the solar farm electrical system to be controlled, monitored, metered and connected to the DNO network. The layout is shown on Figures 11A and 11B Substation Compound Layout, drawing ref 05003-RES-SUB-DR-PT-002A rev 4 and 05003-RES-SUB-DR-PT-002B rev 1. A crane hardstand, solar compound, UK Power Network (UKPN) compound and grid transformer comprise the main elements of the substation.
- 5.28 An onsite control building will take the form of a multi-compartment prefabricated structure located on a concrete foundation and accommodate metering equipment, switchgear, transformers, the central computer system and electrical control panels. Supervisory Control and Data Acquisition (SCADA) and telecommunications links will also be required at the site for the purposes of metering, remote control and protection communication to the Network Control Centre.
- 5.29 The substation compound will also contain other electrical infrastructure components including, capacitors banks, a harmonic filter, resistor, reactor, grid transformer, storage containers, poles and cables, some of which will be overhead. The maximum height of this element of the development is anticipated to be approximately 7m.

### Grid connection

- 5.30 It is anticipated that the solar farm will be connected to existing electric power lines crossing the site. This connection does not form part of the planning application.

### Internal tracks

- 5.31 The Proposed Development will retain existing tracks and require the construction of some new access tracks within the site. A typical detail is shown in Figure 12 Typical Access Track Detail 05003-RES-ERW-DR-PT-001 rev 2.
- 5.32 Tracks will be constructed in stone, have a permeable finish and a typical running width of 4m. Access will also be achievable during construction and operation via tractor or 4 x 4 vehicles around the periphery of existing fields or through the significant spacing between panel arrays and within buffers around field boundaries.

### Perimeter fencing

- 5.33 For security purposes Proposed Development will be enclosed by post and wire “deer fencing” up to 2.4m high. Fence elevations are shown on Figure 15 Typical Deer Fence 05003-RES-SEC-DR-PT-002 rev 1. Fence lines are interspersed with small “badger gates” which allow access across the site for foraging mammals.
- 5.34 The choice of materials is in keeping with the landscape. Where hedgerows exist or where planting is proposed the fencing will be located on the internal side to obscure visual impacts.

### CCTV cameras

- 5.35 For security purposes there will be CCTV cameras placed strategically throughout the development site. These will be pole mounted to heights of 3.5m, be directed along fence-lines and utilise infra-red technology. Further detail is shown on Figure 16 Typical Security CCTV Detail ref 05003-RES-SEC-DR-PT-003 rev 1.
- 5.36 Cameras are designed to not move either intentionally or unintentionally due to adverse weather conditions or animal activity.

### Lighting

- 5.37 There will be no artificial lighting around the site as CCTV is inward facing infra-red. Lighting will be manually controlled rather than passive infrared (PIR), in order to prevent unnecessary activation.

## 5.2 Landscape Proposals

- 5.1 The proposal enhances the landscape by minimising detrimental impact of the Proposed Development and enhancing habitats, while retaining and improving the vegetative concentration at the site. Landscape proposals are inclusive of the following measures.
- The project encompasses best practice guidance, guidance on retention and enhancement, and aims to retain while improving the existing vegetative habitats at the site.
  - The proposal is informed by ecologists which aids in delivering a naturally managed project.
  - The proposal creates new habitat and improves the biodiversity at the site, resulting in a positive biodiversity net gain.
  - The proposal will minimise landscape and visual effects by:
    - Supplementing the existing landscape features to further physically and visually integrate the Proposed Development and associated infrastructure into the surrounding landscape.
    - Providing suitable screening to minimise visual intrusion, particularly in views from close to residential receptors.
    - Retaining existing hedgerows, trees, shelterbelt planting and roadside vegetation on peripheral and internal boundaries.
    - Proposing mitigation in keeping with existing character and features. Hedgerows with scattered specimen trees are considered acceptable and appropriate to the landscape.
    - Selecting locally appropriate deciduous trees and hedge species to ensure successful plant establishment and to maintain and increase biodiversity. This will provide visual screening of the Proposed Development year-round.
    - Visual integration of the Proposed Development will be facilitated by planting larger nursery stock native tree species, including: *Quercus robur* (Oak), *Alnus glutinosa* (Alder), *Fagus sylvatica* (Beech) and *Populus tremula* (Aspen) within areas of proposed woodland mix planting and within proposed sections of new hedgerow or existing hedgerows to be augmented
    - 250nr. new trees are proposed and to aid visual screening.
    - 0.89 hectares of new woodland planting will be comprised of locally appropriate shrub species composed to complement existing woodland planting within the



locale. Species will include evergreen species such as *Ilex aquifolium* (Holly) and *Pinus sylvestris* (Scots Pine) together with deciduous species such as *Corylus avellana* (Hazel) and *Sambucus nigra* (Elder).

- Hedgerow enhancement will be provided by planting species such as; *Ilex aquifolium* (Holly), *Crataegus monogyna* (Hawthorn), *Corylus avellana* (Hazel), *Sambucus nigra* (Elder) within existing hedgerows and as new hedgerows along field boundaries defined by post and wire fencing. New hedgerows, totalling 0.45 km will be planted with 9 no. native species per 30m length, creating new species rich hedgerows.
- Hedgerow enhancement, totalling 0.3km will be provided through planting locally appropriate tree and hedge species to provide continuity in hedge extent, and hedges to be maintained at a minimum of 3m height to provide increased habitat provision.
- Maintenance of the landscape works will be an integral part of the on-going site management. This will include a defects liability period during which any defective plant material (as stated above) is to be replaced. Litter picking and weed control shall be carefully monitored during the early growing seasons of the landscape maintenance contract.

## 5.3 Biodiversity Proposals

5.1 The Proposed Development includes the following biodiversity measures:

- retain individual trees;
- retain hedgerows and treelines;
- plant modified grassland;
- plant wildflower grassland;
- new woodland planting;
- plant 250 individual trees;
- new hedgerow planting;
- existing hedgerow enhancement;
- ditch enhancement with marginal aquatic plant species;
- raptor/barn owl and bat boxes;
- skylark habitat mitigation to include the 14 mitigation plots and adjacent to the site together with managed grassland on and off site;
- bats to be protected by preventing disturbance and loss of habitat, including the avoidance of direct lighting; and,
- preventive measures to not disturb breeding bird nests during breeding season where vegetative clearance is required, only to be carried out with an ecologist present outside of breeding season. If clearance is necessary during breeding season this would only be done under the supervision of an ecologist.

5.2 Enhancement measures could also include:

- invertebrate boxes in various habitats, including near hedgerows and within retained grassland;

- the provision of bat boxes on existing mature trees (up to three boxes per tree) facing in different directions to offer suitable roosting conditions all year round; and
- amphibian/reptile hibernacula located in retained grassland.

## 5.4 Construction Period

- 5.1 It is anticipated the proposal will be constructed across an 18-month period excluding holiday periods.
- 5.2 The construction phase is likely to consist of the following principal operations:
- Creation of relocated and upgraded accesses;
  - Erection of security fencing and gates;
  - Setting down the temporary construction lay-down areas;
  - Delivery of energy storage units;
  - Delivery of solar panels, mounting frames, inverters and ancillary infrastructure;
  - Installation of mounting frame foundations (if required);
  - Installation of mounting system and solar panels;
  - Installation of inverter and storage compound ;
  - Installation of inverters and storage units;
  - Installation of ancillary infrastructure;
  - Installation of primary substation and point of connection;
  - Cable trenching, ducting & backfilling;
  - Cable installation, terminations & testing;
  - Commissioning of the generating station and grid connection;
  - Site reinstatement, including southern access,
  - ecological enhancement; and
  - Demobilisation from site.
- 5.3 The Construction Traffic Management Plan (CTMP) which is submitted in support of this application, sets out a more detailed management scheme in relation to transport/access. Beyond the CTMP it is envisaged that a Construction Environmental Management Plan (CEMP), would be provided to EHDC as a pre-commencement requirement of any planning consent.
- 5.4 Two temporary construction compounds will facilitate the construction process. The compound areas will measure a maximum of approximately 50m x 60m as shown on Figures 13A and 13B Typical Temporary Construction Compound Layout, drawing ref 05003-RES-CTN-DR-PT-001A rev 1 and 05003-RES-CTN-DR-PT-001B rev 1.
- 5.5 One temporary compound is proposed to be located adjacent off the A507 access, whilst the second is proposed in the southwest of the site as shown on Figure 4 Infrastructure Layout 05003-RES-LAY-DR-PT-003 rev 8. The construction compounds will be surrounded by a 3m high security fence as a safety measure and to secure the infrastructure.
- 5.6 The temporary compounds will house temporary site facilities and welfare facilities for contractors. The area will also be used for vehicle parking, refuelling, materials storage and a generator will provide power supply.



- 5.7 The fuel storage container will be surrounded by a bund wall to protect against spillages and contamination.
- 5.8 Ground surfacing is likely to be finished in a 300mm Type 3 stone or equivalent.
- 5.9 Any toilets will be self-contained. There will be no discharge to the ground or requirement for septic tank provision. Toilet waste will be disposed of off-site as required by appropriate contractors and to appropriate licenced facilities.
- 5.10 During the construction period, the site will be accessed by HGVs which will deliver the infrastructure to the site. If ground conditions dictate, wheel washing facilities will be provided to ensure no mud or loose material is transferred onto the local highway network, with all construction vehicles having to exit through a wheel wash area
- 5.11 Upon completion of construction works, compound areas will be infilled with panels. All hardcore will be removed off site and disposed of appropriately or utilised within the tracks.

### **Waste**

- 5.12 During the construction phase waste is likely to be minimal and consist mainly of packaging for project components.
- 5.13 Covered skips within the temporary construction compounds will be provided and where possible allow for recycling. The minimal waste generated during construction will be disposed of appropriately to licensed facilities. As stated previously, toilets will be self-contained and disposed of off-site by approved contractors.

## **5.5 Operational and Maintenance**

### **Overview**

- 5.1 It is anticipated that the Proposed Development will have an operating life of 40 years, after which all panels, storage and associated infrastructure will be removed, and the site reinstated to a wholly agricultural use, in accordance with a scheme to be agreed in writing with the EHDC at that time.

### **Solar farm and Energy Storage Facility**

- 5.2 Once operational, the Proposed Development will be monitored remotely and will not require permanent staff to be located on site. Occasional maintenance activities will be required for cleaning of the solar panels and repair in the event of any panel damage. Based on the Applicant's experience of other projects, it is expected that the operational phase could require up to two maintenance visits per month in transit van type vehicles.
- 5.3 Professional contractors will undertake panel cleaning using de-ionised water. Cleaning typically takes place during times of dry weather. As per the specified PV module manufacturer guidelines, no chemicals will be used in the cleaning of the modules ensuring there will be no contaminated run-off from panel washings on.
- 5.4 PV modules are classed as a 'Class 2' electrical component; this means that no touchable part of the panel is capable of causing electrocution, even in the event of internal short circuit.
- 5.5 Vegetation will grow under the solar panels and around the field margins, which will require ground maintenance. It is proposed that the site would be maintained in co-located pastoral agricultural use through low intensity sheep grazing and managed to deliver significant biodiversity net gains as set out in the accompanying Biodiversity Net Gain Assessment.
- 5.6 No significant sources of operational waste are anticipated with the development.

## **Access and traffic movements**

- 5.7 Maintenance vehicles will access the site from the relocated accesses.

## **5.6 Decommissioning**

- 5.1 At the end of the proposed 40-year operational period, the solar farm, energy storage facilities and its ancillary equipment will be decommissioned, dismantled and removed from the site. Following removal of all components and hardstanding, the site will be fully reinstated to the satisfaction of EHDC and returned to its former full agricultural use.
- 5.2 Where possible, all of the solar farm components will be removed and reused or recycled. Where this is not possible, any waste generated during decommissioning will be removed and transported by a certified and licensed contractor.
- 5.3 When batteries reach the end of their life, a recycling process would be followed with an approved recycling partner. The partner would transport the batteries to a suitably licensed recycling centre, where cells would be processed. Some materials are recovered from this process, including economically valuable metals, as well as slag material used in construction or as aggregate for concrete. Hazardous materials such as chlorine and fluorine would be collected from the process.
- 5.4 The traffic management and reinstatement works element of the decommissioning phase will be addressed in an appropriately timed Decommissioning Plan as required by planning condition in the event planning permission is granted.

## **5.7 Rochdale Envelope**

- 5.1 Energy storage is a rapidly evolving technology, and refined products are emerging at an unprecedented rate. Due to its wide application and central role in decarbonising the energy sector, renewable technology is receiving high levels of investment and products are continually becoming more innovative and efficient.
- 5.2 On this basis, this planning application adheres to the principles of the Rochdale Envelope approach to assessment.
- 5.3 In accordance with this accepted approach, the details submitted in this application present maximum parameters ensuring a worst-case scenario has been assessed. The approach allows for some flexibility where project parameters are not yet completely confirmed given continuing technological advances that may emerge between consent and construction.

## 6 NEED FOR THE DEVELOPMENT AND NETWORK CONTEXT

### The need for renewable energy

- 6.1 The UK Government realises the potential solar energy can contribute to national renewable energy generation, acknowledging not enough is being done to both promote and allow for increased solar provision across the country. In response to this, the Government has published a paper 'Powering Up Britain – Energy Security Plan' (April 2023), which states:

*"The UK has huge deployment potential for solar power, and we are aiming for 70 gigawatts of ground and rooftop capacity together by 2035. This amounts to a five-fold increase on current installed capacity. We need to maximise deployment of both types of solar to achieve our overall target.*

*Ground-mounted solar is one of the cheapest forms of electricity generation and is readily deployable at scale. The government seeks large scale ground-mount solar deployment across the UK, looking for development mainly on brownfield, industrial and low and medium grade agricultural land. Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. We consider that meeting energy security and climate change goals is urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK. We encourage deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement. The government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment.*

*The government considers that there is a strong need for increased solar deployment, as reflected in the latest draft of the Energy National Policy Statements. We recognise that as with any new development, solar projects may impact on communities and the environment. The planning system allows all views to be taken into account when decision makers balance local impacts with national need."*

- 6.2 The Government has been due to publish a solar roadmap in 2024 which is expected to set out a clear step by step deployment trajectory to achieve the five-fold increase of providing up to 70GW of solar by 2035 to demonstrate the Government's clear commitment to the sector. Delays to publication are due to the new Labour Government's recent election and revisions to the roadmap including Labour's goal of 50GW by 2030. Estimates are that the UK has around 20GW of solar generation capacity at the time of writing. Energy Secretary Ed Miliband is a strong advocate of a solar revolution with ambitions to speed up the delivery of solar deployment.
- 6.3 Solar is readily deployable at very large scales and one of the cheapest forms of renewable electricity generation. It can be sited to facilitate biodiversity enhancements such as wildflower meadow habitat alongside a continuing agricultural grazing use. Solar energy lies at the core of the Government's intention to rapidly increase renewable energy production to cut energy bills, boost energy security, deliver economic growth and cut greenhouse gas emissions.
- 6.4 The Overarching National Policy Statement for Energy EN1 (2024) clearly recognises that to meet the Government's net zero objectives, a significant amount of energy infrastructure including renewable energy generation from solar farms of all scales, including small scale developments at local level, and that achieving a secure, reliable, affordable and net zero consistent system in 2050 is likely to be comprised predominantly of new wind and solar development. EN1 sets out the need for security of supply with sufficient margin to ensure there is enough energy to meet unexpectedly high demand and to mitigate risks such as unexpected plant closures and extreme weather events. EN1 concludes that energy generating technologies are Critical National Priority (CNP)

infrastructure and that there is an urgent need for CNP infrastructure. The Government strongly supports the delivery of CNP Infrastructure and advises it should be progressed as quickly as possible.

- 6.5 In summary, solar farm projects are a critically important component of meeting the urgent national need for a secure, reliable, cost efficient, low carbon supply of energy and form a key part of the delivery of Government's energy policy, climate change policy and legally binding net zero and climate change targets.

### The need for energy storage

- 6.6 The UK generates electricity in several ways including coal, gas, nuclear, and renewable resources. The electricity system is balanced in real-time, and so matching demand (led by consumer behaviour) with supply can be particularly challenging, especially when the generation is intermittent, as is the case with renewable energy technology.
- 6.7 The Government is committed to a rapid transition towards a zero-carbon economy; a significant expansion in low carbon electricity generation is a key part of the Government's energy strategy. The British Energy Security Strategy, published in April 2022, reinforces this further.
- 6.8 Consequences of this expansion include changes to the daily electricity supply and demand pattern, an increasingly volatile generation mix and amplified issues with the geographical concentration of generation.
- 6.9 Network constraints occur when current infrastructure limits the ability of the network to transmit all the available power to where it is needed. Constraints can take different forms, including thermal, voltage and stability.
- 6.10 Thermal constraints show a clear regional pattern, typically with subsidised generation being paid to turn down when its generation cannot all be used or exported, north-south transfer limitations represent most thermal constraints in Great Britain.
- 6.11 The pace of the deployment of renewable energy sources to address the climate emergency is occurring faster than the ability of the network to handle peaks in supply. Costs of network constraints have been increasing significantly in recent years and National Grid Electricity System Operator (ESO) (who are responsible for distributing high-voltage electricity around the country) have increased their expectations of future power flows across key network boundaries.
- 6.12 New network infrastructure and Pathfinder projects will go some way to alleviating constrained volumes, but constraints are and will continue to be a feature of the energy system (it is not cost effective to design a transmission system that caters for all possible power flows) and the market is currently failing to deliver solutions that will provide alternatives to curtailing renewable energy when constraints do bite.
- 6.13 This is one of the most pressing issues for the electricity system over the coming years, as it is already a problem set to worsen significantly.
- 6.14 Electricity Market Reform (EMR) is a UK government policy designed to:
- Incentivise investment in secure, low-carbon electricity;
  - Improve the security of the UK's electricity supply; and
  - Improve affordability for consumers.
- 6.15 The UK's electricity supply has historically relied on large, centralised power plants. However, old coal power plants are in the process of reducing capacity and closing as they no longer meet the required environmental and performance standards and existing nuclear power plants are reaching the end of their design lives, while the delivery of new nuclear plants has been beset by delays. In parallel, there is the requirement to deliver a greater amount of renewable energy but

these technologies (e.g., wind and solar generation) are intermittent, only generating when weather conditions allow. These different factors mean that demand and supply are more challenging to match.

- 6.16 The reduction in synchronous generation could lead to system operability challenges with reduced short circuit levels and inertia. This potentially leads to increased dynamic network behaviour depending on factors such as weather conditions and the price of electricity.
- 6.17 Network constraints occur when the physical limits of parts of the transmission network are reached and there isn't enough transmission capacity to transport electricity from generation to demand. To keep the system secure, before this occurs, balancing actions are taken which limit the flow of electricity over the part of the network that is at risk of being overloaded. These actions, e.g. paying generators to reduce their power output, have costs which get passed through to consumers.
- 6.18 Significant reinforcement to the network is needed across the UK. Energy storage can help to reduce the cost of constraints and the amount of renewable energy curtailed by storing excess wind or solar energy when constraints occur.
- 6.19 The Proposed Development plays a crucial part in meeting the government's objective of achieving a reliable, cost effective and zero carbon electricity supply. Once operational, the Proposed Development would have the ability to respond rapidly to fluctuations in the output from renewable energy sources and the short-term variations related to local demand. The almost instantaneous response provided by the Proposed Development means that it could operate at full power within less than a second.
- 6.20 The efficiency of the proposed facility is significantly increased because it incorporates both a renewable energy generating station and an energy storage facility which can accept the energy created when there is no demand or network availability. This can then be released when required rather than lost to the network. The associated benefits are many, including those relating to energy security, reliability, cost efficiency, the transformation to a decarbonised economy and climate change, and other wider environmental benefits, including reduced pollution, improved ecosystems and improved air quality from reduction in carbon emissions related to fossil fuel or hydrocarbon use.

## 7 ENERGY AND CLIMATE CHANGE POLICY FRAMEWORK

- 7.1 There is overwhelming international and national support to urgently address the climate crisis.
- 7.2 The justification for the Proposed Development is set within the context of legislation, policy and guidance set at international and national government level. These are material considerations in the determination of this planning application. During a recognised climate and nature crisis, there has been a focussed effort both to reduce greenhouse gas emissions and to deploy renewable technologies for the generation, and secure supply of, electricity to reduce dependence on fossil fuels.
- 7.3 Renewable energy generating stations and storage is recognised as an established and important resource, which can help achieve climate and energy targets. The rapidly approaching targets, which have been set, require the quick approval and implementation of critical renewable energy developments and generating stations.
- 7.4 The most relevant guidance is summarised below to demonstrate the wealth of documentation that sets out the pressing need to rapidly accelerate the reduction of greenhouse gas emissions and decarbonisation of the energy system.

### Kyoto Protocol (1997)

- 7.5 The Kyoto Protocol operationalises the United Nations (UN) Framework Convention on Climate Change (UNFCCC) by committing industrialised countries and economies in transition to limit and reduce greenhouse gases emissions in accordance with agreed individual targets. The Convention asks those countries to adopt policies and measures on mitigation and to report periodically.

### The UK renewable Energy Roadmap (2011)

- 7.6 The UK Renewable Energy Roadmap (2011) ('the Roadmap') sets out the Government's commitment to increasing the use of renewable energy up to 2020. The Roadmap identified National Policy Statements as a potential means of improving the delivery of renewable energy development through their advice on need, mitigation, and sustainable delivery.
- 7.7 The UK Renewable Energy Roadmap Update (2013) ('the Roadmap Update') reports on the progress that has been made in the renewable energy sector since the publication of the Roadmap. The Roadmap Update re-iterates the Government's commitment to renewable energy at Paragraph 1:

*"The Government strongly supports renewable energy as part of a diverse, low carbon and secure energy mix. Alongside gas, low-carbon transport fuels, nuclear power and carbon capture and storage, renewable energy offers the UK a wide range of benefits from economic growth, energy security and climate change perspective."*

- 7.8 The Roadmap Update indicates that tools to help balance the supply and demand of electricity, including energy storage and management, are required to remove constraints on the level of renewable energy which the grid can support.
- 7.9 The Roadmap Update also recognises that several barriers continue to present challenges to delivery, including pre-consent delays.



## UN Framework Convention on Climate Change: The Paris Agreement (2015) and the Paris Agreement (2016)

- 7.10 197 countries, including the UK, adopted the Paris Agreement, a legally binding international treaty on climate change, at the 21st Conference of the Parties (COP21) in Paris in 2015. This is an agreement, which seeks to reduce global greenhouse gas emissions and to limit the global temperature increase in this century to 2 degrees Celsius, while pursuing the means to limit this to 1.5 degrees Celsius. This was ratified by the Government in November 2016 and now forms part of UK Policy.

## The Clean Growth Strategy: Leading the way to a low carbon future (2017)

- 7.11 On 12th October 2017 the Government published the Clean Growth Strategy which sets out how the UK will grow the economy while cutting greenhouse gas emissions. The energy system plays a key role in achieving clean growth, and the Government sees the diversification of the electricity system as a fundamental requirement to provide homes and businesses with secure, affordable and clean power.
- 7.12 The strategy recognises the way in which energy is generated in the UK is changing and that complementary mechanisms, including energy storage, will play a vital role.

## UK Industrial Strategy (2017)

- 7.13 This strategy set out a long-term plan to boost the productivity and earning power of people throughout the UK. The strategy set out how the Government will help businesses create better, higher-paying jobs with investment in skills, industries and infrastructure. 'Clean Growth' is identified as one of the four 'Grand Challenges' set out in the strategy; the Government is seeking to *"lead the world in the development, manufacture and use of low carbon technologies, systems and services that cost less than high carbon alternatives."*

## Upgrading our Energy System: Smart Systems and Flexibility Plan (2017)

- 7.14 The Department for Business, Energy and Industrial Strategy (BEIS) and the Office of Gas and Electricity Markets (Ofgem) published Upgrading our Energy System which sets out 29 actions that the Government, Ofgem, and industry will undertake to remove barriers to smart technologies, including storage; enabling smart homes and businesses; and making electricity markets work towards flexibility. The Smart Systems and Flexibility Plan (SSFP) states that:

*"By harnessing the potential of energy storage, demand-side response, and smarter business models, we have an opportunity to upgrade to one of the most efficient, productive energy systems in the world. This is central to how we deliver secure, affordable and clean energy now and in the future."*

## A Green Future: Our 25 Year Plan to Improve the Environment (2018)

- 7.15 This sets out the Government's goals for improving the environment within a generation and 'leaving it in a better state than we found it'. It details how the Government will work with communities and businesses. As well as protecting the natural environment, the document promotes the reduction of greenhouse gas and the development of clean, sustainable energy.

## Electricity System Operator (ESO) National Grid Future Energy Scenarios (FES) (2018)

- 7.16 ESO are the electricity system operator for Great Britain, making sure that Great Britain has the essential energy it needs by ensuring supply meets demand. Future Energy Scenarios (FES) outlines different credible pathways for the future of energy for the next 30 years and beyond. It considers how much energy is needed and where the energy could come from. In all scenarios demand for electricity increases; primarily due to a predicted increase in electric vehicles ahead of the 2035 ban on petrol, diesel and hybrid vehicles.

## IPCC Special Report on Global Warming on 1.5°C (2018)

- 7.17 An Intergovernmental Panel on Climate Change (IPCC) Special Report was prepared discussing the potential impacts of global warming to 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change.
- 7.18 The report sets out that pathways limiting global warming to 1.5°C with no or limited overshoot would require rapid and far-reaching transitions in energy, land, and infrastructure, and deep emission reductions in all sectors. A 'wide portfolio' of mitigation options and a significant upscaling of investments in those mitigation options is identified.
- 7.19 Amongst other significant transitions, the IPCC has stated that by 2050, 97% of power will need to be generated from renewables.

## Committee on Climate Change: 2019 Report to Parliament – Reducing UK emissions

- 7.20 This report assesses progress in meeting Carbon Budgets and acknowledges the Government's net zero emissions target as follows.
- 7.21 Reaching net zero emissions requires an annual rate of emissions reduction (15MtCO<sub>2</sub>e per year, 3% of 2018 emissions) that is 50% higher than under the UK's previous 2050 target and 30% higher than achieved on average since 1990.
- 7.22 Actions such as power sector decarbonisation reduce UK consumption emissions by addressing emissions produced in the UK. Actions in the UK to set and pursue vigorously ambitious emissions reduction targets can "*help support an increase in global effort to start reducing emissions.*"
- 7.23 Reaching net zero emissions requires "*extensive changes across the economy, with complete switchovers of several parts of the UK capital stock to low carbon technologies. Delivery must progress with far greater urgency.*"
- 7.24 More rapid electrification must be accompanied with greater build rates of low-carbon generation capacity; this means the deployment of more low-carbon capacity in the 2020s.

## UK Government Net Zero 2050 (2019)

- 7.25 In May 2019, the Committee on Climate Change published Net Zero – The UK's Contribution to Stopping Global Warming. This report responds to a request from the governments of England, Wales and Scotland, asking the Committee on Climate Change to reassess the UK's long-term emissions targets. The report recommends a new emissions target for the UK: net zero gases by 2050 and recommends a 2045 net-zero target for Scotland to reflect Scotland's greater relative capacity to remove emissions than the UK as a whole. The report highlights the falling cost of key renewable technologies, which are now generally comparable or lower in cost than power from fossil fuels, whilst bringing significant co-benefits such as reduced air pollution.



## UK Climate Emergency (2019)

- 7.26 In May 2019 a national climate emergency was declared by the UK Parliament. Members of Parliament (MP) called on the Government to make changes that included setting a new target of reaching net zero emissions before 2050.

## Achieving net zero – National Audit Office (NAO) Report (2020)

- 7.27 Published on 2nd December 2020, the National Audit Office (NAO) report to the Government examines the main risks to achieving net zero effectively and efficiently. The report is forthright that most emission reduction in the UK has resulted from the switch away from coal used for electricity generation. Whilst reducing emissions further will require wider changes to the UK economy, further investment in renewable electricity generation will be required.
- 7.28 BEIS projects that the UK will not meet its targets for emissions reduction unless action is taken to reduce the shortfall in achieving the targets set in the fourth and fifth carbon budgets. At paragraph 6 of the summary, the report states:

*“Achieving net zero is a colossal challenge and significantly more challenging than the Government’s previous target to reduce emissions by 80% by 2050.”*

- 7.29 At paragraph 13 of the summary, the report confirms that BEIS will launch a net zero strategy prior to COP26 in November 2021. The strategy will set out the Government’s vision for transitioning to a net zero economy by 2050, encompassing all sectors that need to decarbonise, and closing the gap that currently exists in meeting the targets in the fourth and fifth carbon budgets. The strategy will set the level for the sixth carbon budget, review the cost of net zero and how it should be paid for, and establishing meeting net zero as part of the wider economic response to the Covid-19 pandemic.

## Energy White Paper (2020)

- 7.30 The Energy White Paper marks a significant milestone in the UK’s net zero transition, setting a net zero target by 2050 and outlining how this may be achieved. It relates to the generation, supply and use of energy with the drive towards net zero by 2050 at its core, along with energy efficient buildings and lower household bills. It signals a decisive move away from fossil fuel generation and highlights how planned Government investment has the potential to leverage billions of pounds more in private sector funding and support for over 250,000 jobs in the green economy by 2030.

## Sixth Carbon Budget Report (2021)

- 7.31 On 9th December 2020, the Committee on Climate Change released The Sixth Carbon Budget which updated intermediary targets for the UK’s progress to net zero as follows:

*“Our recommended pathway requires a 78% reduction in UK territorial emissions between 1990 and 2035. In effect, it brings forward the UK’s previous 80% target by nearly 15 years. There is no clearer indication of the increased ambition implied by the Net Zero target than this.”*

- 7.32 In establishing intermediary targets towards net zero, the context exists for local authorities to recognise that action must be taken sooner rather than later. As concluded in the Sixth Carbon Budget:

*“The implication of this path is clear: the utmost focus is required from government over the next ten years. If policy is not scaled up across every sector; if business is not encouraged to invest; if the people of the UK are not engaged in this challenge – the UK will not deliver Net Zero by 2050.”*

## Progress in Reducing Emissions – 2021 Committee on Climate Change Progress Report to Parliament

- 7.33 The 2021 Committee on Climate Change Progress Report to Parliament was published in June 2021 and provides a review of the Government's efforts over the previous 12 months with regards to climate change. While UK emissions fell by 13% in 2020, much of this decline was likely a result of the Covid-19 pandemic and as such, lasting changes are uncertain. The report recommends taking action to transition to a fully decarbonised electricity system. Furthermore, it sets a target to phase out gas fired electricity generation in the UK by 2035, subject to ensuring security of supply.
- 7.34 There has been significant progress in the transition to renewables, with emissions from electricity having decreased by 65% from 2009 to 2019. However, the report notes that generation from renewable resources will need to increase to support the transition to electric vehicles. The International Energy Agency has identified solar power as producing some of the cheapest electricity in history and forecasts that if there is a rapid built-out of renewables (particularly solar and wind), net-zero emissions for the power sector can be achieved by 2035 in advanced economies.

## Build Back Better: Our Plan for Growth (2021)

- 7.35 The Build Back Better agenda is one that focusses on tackling key problems whilst generating growth and dynamic industries. The focus for net-zero is on generating offshore wind to produce 40GW by 2030 supporting up to 60,000 jobs, developing the low carbon hydrogen sector and becoming a world leader in carbon capture and storage by developing carbon capture clusters.

## British Energy Security Strategy (2022)

- 7.36 This plan emerged as a result of rising global energy prices, provoked by surging demand after the Covid-19 pandemic as well as Russia's invasion of Ukraine. The strategy is central to weaning Britain off expensive fossil fuels, which are subject to volatile gas prices set by international markets the UK is unable to control. Boosting a diverse range of homegrown energy sources across the UK is identified to ensure energy security in the long-term.
- 7.37 The Government supports the effective use of land by encouraging large scale projects to be located on previously developed, or lower value land, where possible, and ensure projects are designed to avoid, mitigate, and where necessary, compensate for the impacts of using greenfield sites.
- 7.38 There has been significant progress in the transition to renewables, with emissions from electricity having decreased by 65% from 2009 to 2019.
- 7.39 The proposed increase in renewable energy sources increases the requirement for strengthened networks and for storage and flexibility. The strategy states that "*we will ensure a more flexible, efficient system for both generators and users ...encouraging all forms of flexibility with sufficient large-scale, long-duration electricity storage to balance the overall system.*" It includes an ambition for 2024 to develop appropriate policy to enable investment in long-duration energy storage.

## ESO Future Energy Scenarios (FES) (2022)

- 7.40 FES 2022 represent a range of ways to achieve net zero by 2050 as well as a decarbonised energy system by 2035.
- 7.41 A key recommendation of the report is to increase the flexible capacity of the energy system in addition to requiring strategic storage to balance inter-seasonal demand and supply and increase resilience against supply risks. This includes large-scale electricity storage projects which must

commence now to support an electricity system without unabated natural gas after 2035. The report states: “We expect battery storage to make up the largest share of storage power capacity in all scenarios by 2050 to help with shifting demand within the day and managing network constraints as battery costs fall.”

- 7.42 On regulation the report states: “The policy, regulatory and market environment for storage will need change to bring forward the levels of energy storage we expect to need on the system. This could involve changes to how storage is treated by electricity codes, removal of planning permission barriers and market change to allow greater revenue stacking of different services to improve the business case for storage projects.”

### Powering Up Britain (March 2023)

- 7.43 The Government is aiming for 70 GW of ground-mount and rooftop capacity together by 2035. This amounts to a five-fold increase on current installed capacity. Maximum deployment of both installation types is required to achieve this target.
- 7.44 Ground-mounted solar is one of the cheapest forms of electricity generation and is readily deployable at scale. The Government is seeking to deploy large scale ground-mount solar across the UK, on brownfield, industrial and low and medium grade agricultural land.
- 7.45 Solar and farming can be complementary, supporting each other financially, environmentally and through the shared use of land.
- 7.46 The Government considers that meeting energy security and climate change goals are urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK. Deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement is supported. Consequently, no changes are proposed to categories of agricultural land which might constrain solar deployment.
- 7.47 The Government considers that there is a strong need for increased solar deployment, as reflected in the draft Energy National Policy Statements (now adopted). The Government recognises that solar projects may impact communities and the environment and provides reassurance that the planning system allows all views to be taken into account when decision makers balance local impacts with national need.

### ESO Future Energy Scenarios Report (FES) (July 2023)

- 7.48 The FES 2023 report sets out ways net zero can be achieved by 2050, in addition to meeting the Government’s target of a decarbonised electricity system by 2035. Furthermore, it highlights the need to address global uncertainty in the energy market caused by external influences such as Russia’s invasion of Ukraine.
- 7.49 The ESO network planning process is undergoing major transformation through transitioning to the Centralised Strategic Network Plan and is being developed as part of their Network Planning Review in collaboration with Ofgem’s Electricity Transmission Network Planning Review (ENTPR).
- 7.50 The report reiterates the need for electricity storage to reinforce security of supply and efficiently manage supply and demand. Installed capacity and volume need to increase significantly to support the decarbonisation of our electricity system as we transition to net zero. Research shows around 18GW of electricity storage is expected to be connected into the system by 2028 which is not sufficient to meet the required targets. This represents issues surrounding planning considerations and connection delays. At the time of publication, the report cited the report shows only 2.8GW of operational battery storage capacity within Great Britain.
- 7.51 The importance of energy storage is also highlighted throughout FES 2023, recognising it:

- Is an efficient way to manage supply and demand by reducing the amount of generation and network investment needed to decarbonise the electricity system;
- Is a fast-acting response for inertia/frequency stabilisation purposes, within-day balancing (moving energy between days as the weather changes) and ensuring adequacy needs are met across the seasons;
- Could make a significant contribution to managing supply and demand and ensuring security of supply in the 2030s; and
- Helps address the current market uncertainty.

- 7.52 The report highlights the need for changes in the policy, regulatory and market environment for storage to bring forward the levels of energy storage expected to be needed in the system. Changes suggested include the removal of planning permission barriers and market change to allow greater revenue stacking of different services both of which improve the business case for storage projects.
- 7.53 Significant deployment of transmission connected storage is expected in the Great Britain towards 2050, with current predictions showing a combined capacity of 7.1 GW in England and Wales.
- 7.54 The power sector must be fully decarbonised, meaning renewable sources must emerge as the dominant source of electricity generation in Great Britain between now and 2050. The local ambition for low carbon generation is clear, the challenge is how regions can effectively store or transfer this energy to where it is needed and how regions with high levels of renewable generation can meet demand when wind or solar resources are less available.
- 7.55 In respect of solar, the maximum solar generation scenario is where solar is co-located with flexible technologies at different connection voltages, such as battery storage in connection with solar farms.
- 7.56 As renewable capacity increases and energy storage is developed alongside solar, in later years when supply is high compared to demand, it is expected this would result in lower electricity prices.
- 7.57 Day-to-day uncertainty due to weather is acknowledged but in general, solar generation is quite predictable over the course of a year. This means solar generation can be a great asset for meeting annual demand levels, especially when coupled with energy storage.

### The UK Battery Strategy

- 7.58 The UK battery strategy sets out the government's vision for the UK to achieve a globally competitive battery supply chain by 2030. The UK battery strategy brings together government activity to achieve a globally competitive battery supply chain by 2030, that supports economic prosperity and the net zero transition.
- 7.59 The strategy recognises the importance of grid-scale battery energy storage systems and their role in enabling electricity to be used more flexibly and decarbonise the energy system. They are identified as a cost-effective measure and underpin national security and the UK's ability to develop innovative defence capabilities. They are anticipated to be refined and increasingly used within aerospace, rail, and marine sectors.
- 7.60 The strategy is heavily focussed on battery production and creating a UK supply chain, however the Government's vision within the strategy is for the UK to be a world leader in the design, manufacture and use of batteries.

## COP28

7.61 The UN Climate Change Conference (COP28) closed on 13 December 2023. The UN press release states the agreement reached “*Signals the ‘beginning of the end’ of the fossil fuel era by laying the ground for swift, just and equitable transition, underpinned by deep emissions cuts and scaled up finance.*”

7.62 The statement reads:

*“The stocktake recognises the science that indicates global greenhouse gas emissions need to be cut 43 % by 2030, compared to 2019 levels, to limit global warming to 1.5 °C. But it notes parties are off track when it comes to meeting their Paris Agreement goals.*

*The stocktake calls on parties to take actions towards achieving, at a global scale, a tripling of renewable energy capacity and doubling of energy efficiency improvements by 2030. The list also includes accelerating efforts towards the phase down of unabated coal power, phasing out inefficient fossil fuel subsidies, and other measures that drive the transition away from fossil fuels in energy systems, in a just, orderly and equitable manner, with developed countries continuing to take the lead.”*

## FES 2024

7.63 Future Energy Scenarios 2024 (FES 2024) outlines three net zero pathways - Holistic Transition, Electric Engagement and Hydrogen Evolution – each explore strategic routes to net zero based on extensive stakeholder engagement, research, and analysis. An additional scenario ‘Counterfactual’ is considered which does not meet the 2050 net zero target. The Counterfactual is used to understand the gap between successful tracking of the pathways versus enabling change too slowly and missing key targets. Figure 2 below illustrates the pathways.

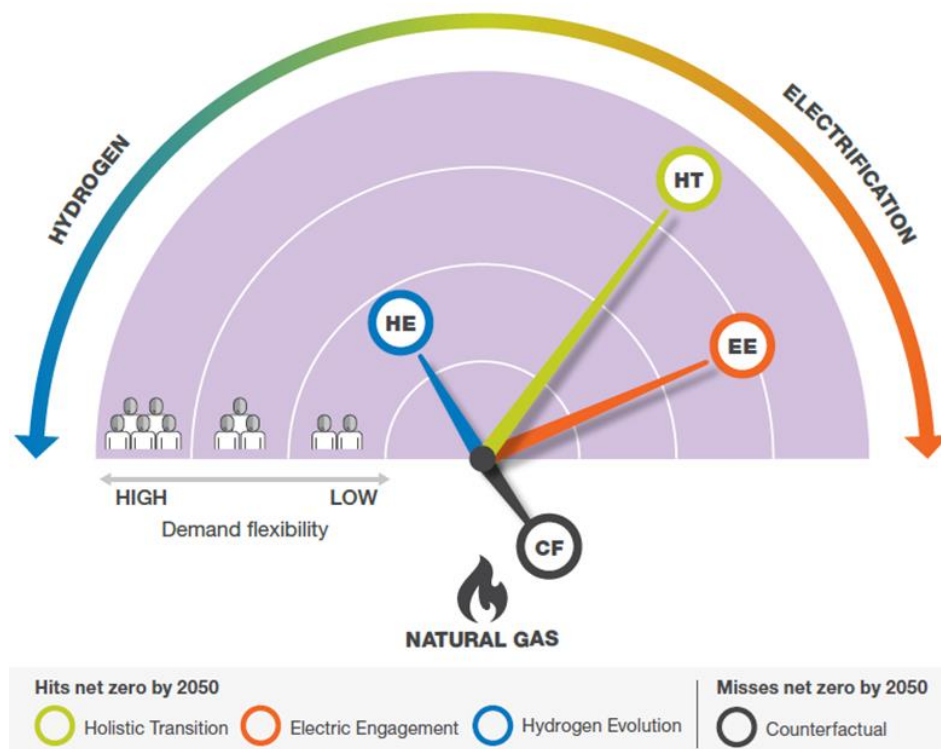


Figure 3: FES 2024 net-zero pathways



- 7.64 FES 2024 is widely used by stakeholders across the energy industry to underpin energy network investment, support financial investment decisions for net zero technologies and to inform national and regional policy. It is recognised that action must be taken now to achieve a secure, clean energy system to meet legal targets, ensuring a reliable and affordable energy supply for future generations.
- 7.65 The case for solar generation is strong, the report states “*Solar power generation remains one of the lowest cost options to meet our energy needs and, if efficiently integrated, can minimise the total system cost.*”
- 7.66 FES 2024 states there is 15 GW of distributed solar generation in Great Britain. Since publication of that report current figures stand at 17 GW at the time of writing.
- 7.67 The report reiterates the need for electricity storage to reinforce security of supply and efficiently manage supply and demand. Installed capacity and volume need to increase significantly to support the decarbonisation of our electricity system as we transition to net zero. Research shows around 23-30GW of electricity storage is expected to be connected into the system by 2030. The pathways reflect this increase and also consider supply chain issues, planning considerations and connection delays.
- 7.68 As it stands, FES 2024 states there is only 4.7GW of operational battery storage capacity within Great Britain. Longer-duration batteries have been introduced onto the distribution network this year, demonstrating a shift away from one to two-hour batteries.
- 7.69 Different durations of energy storage offer different benefits. Two to four-hour storage can meet short variations in demand and supply, provide short-term reserve and help manage the network. Long-duration storage can help secure the system over longer periods of high or low renewable generation output. The electricity storage sector is a rapidly developing one however a key potential constraint is identified around the supply chain and aligning battery growth with available lithium reserves available.
- 7.70 Key messages in FES 2024 include the requirement to “*accelerate the delivery of whole system infrastructure through a strategic approach to network investment and introduction of planning reforms.*” Energy storage is identified as a key piece of infrastructure that is necessary for system flexibility.
- 7.71 Co-locating assets are identified as an efficient way to optimise grid connections “*Locating solar power generation with flexible technologies at different connection voltages can optimise grid connections. Co-located assets, such as electrolysis to produce hydrogen and grid-scale battery storage for solar farms, can leverage the combined power of solar generation and other flexible technologies over shared connections. Improvements in the planning process and engaging with communities will be vital for the deployment of these co-located assets and for ensuring a greener and cost-effective energy source for consumers.*”

## 8 LEGISLATIVE CONTEXT

- 8.1 At a UK level there are legally binding renewable energy, electricity and carbon emission reduction targets to meet by 2050, and interim targets to meet by 2035.
- 8.2 The drive to replace fossil fuel-based energy sources with renewable sources is becoming more urgent in Government rhetoric. The legislation and targets set out in this section of the report are material considerations that weigh heavily in support of achieving net zero and GHG emissions targets through the use of renewable technologies.

### Planning and Compulsory Purchase Act (2004)

- 8.3 Section 19 (1A) of the Planning and Compulsory Purchase Act 2004 (as amended) requires local plans to incorporate policies that contribute to the mitigation of, and adaptation to, climate change, in respect of development proposals.

### Climate Change Act (2008) (and amendment 2019)

- 8.4 The Climate Change Act (2008) (2050 Target Amendment) Order 2019 sets a legally binding target for reducing greenhouse gas emissions. As originally enacted, these targets included a reduction of greenhouse gas emissions by 80% (1990 levels) by 2050. In setting this target, the Climate Change Act established the Committee for Climate Change ('CCC'), which is responsible for setting interim binding targets over five-year periods.
- 8.5 In May 2019, the CCC recommended a new emissions target for the UK: a 100% reduction ('net zero') of emissions by 2050. This change in legislation mandating a 100% reduction in carbon dioxide emissions by 2050 was approved in 2019 and is now the Government's statutory carbon reduction obligation.

### The Infrastructure Planning (Electricity Storage Facilities) Order 2020

- 8.6 This Order amends the Planning Act 2008 to remove electricity storage facilities (except for pumped hydroelectric storage facilities) from the category of generating stations whose construction or extension requires development consent as a Nationally Significant Infrastructure Project (NSIP) under the Planning Act 2008.
- 8.7 When combined with another generating station any capacity provided by the energy storage facility is to be disregarded for the purposes of determining whether the generating station is an NSIP scheme.

### Energy Act (2023)

- 8.8 The Energy Act was adopted on 26th October 2023 and seeks to make the energy system appropriate for the future by preparing it for an increasingly decarbonised grid. The legislation supports the facilitation of the net zero transition, strengthening energy security and ensuring household bills are more affordable long-term.

## 9 NATIONAL PLANNING POLICY

### 9.1 National Planning Policy Framework (NPPF 2023)

- 9.1 The NPPF 2023 sets out the Government's guidance on planning policies for England and how these should be applied.
- 9.2 Paragraph 5 states National Policy Statements (NPS) form part of the overall framework of national planning policy and may be a material consideration in making decisions on planning applications. NPS' of relevance to the application are considered in Section 9.4 of this statement.
- 9.3 The NPPF emphasises the importance of sustainable development. Paragraph 7 states the purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.
- 9.4 Paragraph 8 sets out the three overarching objectives of achieving sustainable development through the planning system:
- a. *an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
  - b. *a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*
  - c. *an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.*
- 9.5 Paragraph 10 states that so that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.
- 9.6 Paragraph 11 sets out the presumption in favour of sustainable development, which for decision-taking means the following:
- c) *approving development proposals that accord with an up-to-date development plan without delay; or*
  - d) *where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*
    - i. *the application of policies in this Framework that protects areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
    - ii. *any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.*
- 9.7 Paragraph 30 states once a neighbourhood plan has been brought into force, the policies it contains take precedence over existing non-strategic policies in a local plan covering the neighbourhood area, where they are in conflict; unless they are superseded by strategic or non-strategic policies that are adopted subsequently.



- 9.8 Paragraph 38 states that local planning authorities should approach decisions on proposed development in a positive and creative way. They should work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible.
- 9.9 Paragraphs 39 to 46 promote the use and effectiveness of the pre-application process. It is considered that good quality pre-application discussion enables better coordination between public and private resources and improved outcomes for the community. Local planning authorities have a key role to play in encouraging other parties to take maximum advantage of the pre-application stage.
- 9.10 Paragraph 55 sets out how local planning authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations.
- 9.11 Section 6 of the NPPF 'Building a strong, competitive economy' seeks to support a prosperous rural economy. Paragraph 88 sets out that planning policies should enable development and diversification of agricultural and other land-based rural businesses.
- 9.12 Paragraph 114 states sustainable modes of transport should be promoted and significant impacts of the development on the transport network (in terms of capacity and congestion) or on highway safety should be cost effectively mitigated to an acceptable degree.
- 9.13 Paragraph 115 states development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.
- 9.14 Paragraph 124 identifies how planning policies and decisions should encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains – such as developments that would enable new habitat creation or improve public access to the countryside.
- 9.15 Paragraph 157 states the planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.
- 9.16 Paragraph 160 states *“To help increase the use and supply of renewable and low carbon energy and heat, plans should a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, while ensuring that adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts).”*
- 9.17 Paragraph 163 states when determining planning applications for renewable and low carbon development, local planning authorities should:
- a. *not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and*
  - b. *approve the application if its impacts are (or can be made) acceptable.*
- 9.18 Paragraph 175 identifies that major developments should incorporate sustainable drainage systems unless there is clear evidence that this would be inappropriate. The systems used should:
- a. *Take account of advice from the Lead Local Flood Authority;*
  - b. *Have appropriate proposed minimum operational standards;*

- c. *Have maintenance arrangements in place to ensure an acceptable standard of operation for the lifetime of the development; and*
- d. *Where possible, provide multifunctional benefits.*

9.19 Paragraph 180, states planning policies and decisions should contribute to and enhance the natural and local 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; ...*
- 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; ...*
- f. *remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

9.20 Paragraph 181 footnote 62 reads: “Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.”

9.21 Paragraph 189 seeks to ensure sites are suitable for their proposed uses taking into account risks of instability and contamination.

9.22 Paragraph 191 advises planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment. Impacts from noise and light pollution should be minimised to preserve local amenity.

9.23 Paragraph 195 of the states that heritage assets should be conserved in a manner appropriate to their significance. Paragraph 200 sets out that the significance of any heritage asset affected by a development should be described, including any contribution made its setting. Paragraph 205 states great weight should be given to the asset’s conservation the more important the asset, the greater the weight should be. A proportionate level of information and assessment is required according to the assets significance.

9.24 Paragraph 208 states 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.

## 9.2 National Planning Policy Framework Proposed Reforms (NPPF 24)

9.25 The Government is currently consulting on reforms to the NPPF in order to achieve sustainable growth. The consultation considers ‘Proposed reforms to the National Planning Policy Framework and other changes to the planning system’ and applies to England only. Views are being sought on proposals in relation to increased planning fees, local plan intervention criteria and increased thresholds for some NSIP projects. The consultation closed on the 24<sup>th</sup> September 2024. Due to the high level of responses received, publication of the revised NPPF is expected to be in the new year.

- 9.26 Table 7 below provides a comparison of extant NPPF paragraphs against those within the consultation draft NPPF 2024 (NPPF 24) to highlight the Government's direction of travel.
- 9.27 It should be noted that due to the introduction of paragraph 27 in NPPF 24, the paragraph numbers no longer directly correspond. Only footnotes relevant to the application are included in Table 7.

**Table 5: NPPF 2023/2024 policy comparison table**

NPPF 2023 Paragraph No.	NPPF 2023 Policy Wording	NPPF 2024 Paragraph No.	NPPF 2024 DRAFT Policy
11	<p>Plans and decisions should apply a presumption in favour of sustainable development. For decision-taking this means:</p> <ul style="list-style-type: none"> <li>c. approving development proposals that accord with an up-to-date development plan without delay; or</li> <li>d. where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless: <ul style="list-style-type: none"> <li>I. the application of policies in this Framework that protects areas or assets of particular importance provides a clear reason for refusing the development proposed; or</li> <li>II. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.</li> </ul> </li> </ul>	11	<p>Plans and decisions should apply a presumption in favour of sustainable Development. For decision-taking this means:</p> <ul style="list-style-type: none"> <li>c. approving development proposals that accord with an up-to-date development plan without delay; or</li> <li>d. where there are no relevant development plan policies, or the policies <b>for the supply of land<sup>8</sup> which are most important for determining the application are out-of-date<sup>9</sup></b>, granting permission unless: <ul style="list-style-type: none"> <li>I. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed<sup>7</sup>; or</li> <li>II. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole, <b>in particular those for the location and design of development (as set out in chapters 9 and 12) and for securing affordable homes.</b></li> </ul> </li> </ul>
163	<p>When determining planning applications<sup>57</sup> for renewable and low carbon development, local planning authorities should:</p> <ul style="list-style-type: none"> <li>a. not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and</li> <li>b. approve the application if its impacts are (or can be made) acceptable.</li> </ul>	164	<p><del>In determining planning applications</del> <b>Local planning authorities should support planning applications for all forms of renewable and low carbon development.</b> When determining planning applications <del>for renewable and low carbon</del> <b>these</b> developments, local planning authorities should:</p> <ul style="list-style-type: none"> <li>a. not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the proposal's contribution to renewable energy generation and a net zero future;</li> <li>b. recognise that even small-scale <b>and community-led</b> projects provide a</li> </ul>

			valuable contribution to significant cutting greenhouse gas emissions.
181	Footnote 62 reads:  Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.	181	Footnote 63 reads:  Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. <del>The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding what sites are most appropriate for development.</del>

- 9.28 Chapter 9 ‘Supporting green energy and the environment’ of the consultation document seeks views on revisions to the NPPF to increase support for renewable energy schemes. It states:

*“Boosting the delivery of renewable energy is also vital to meet the Government’s commitment to reaching zero carbon electricity generation by 2030. Onshore wind and solar are cheap, efficient and quick to build technologies that are an important part of the energy mix. Between them, they account for over a half of renewable electricity generating capacity in the UK.”*

- 9.29 In relation to the proposed changes to extant paragraph 163, NPPF 24 paragraph 164, Chapter 9 paragraph 7 of the consultation document states:

*“We are proposing amendments to existing paragraph 163 to direct decision makers to give significant weight to the benefits associated with renewable and low carbon energy generation, and proposals’ contribution to meeting a net zero future. In doing so, this aims to increase the likelihood of local planning authorities granting permission to renewable energy schemes and contribute to reaching zero carbon electricity generation by 2030.”*

- 9.30 Chapter 9 paragraph 9 of the consultation document states:

*“Development of renewables may be proposed in sensitive areas which may include valuable habitats that provide carbon sequestration, including peatlands which are critical for mitigation and adaptation, and provide key habitats for biodiversity. While these changes seek to promote the delivery of renewable energy schemes, proposals would still be subject to the policy requirements set out in the framework alongside other environmental safeguards.”*

- 9.31 The above demonstrates a significant shift in policy to deploy the scale of renewables needed to meet the rapidly approaching 2030 net zero electricity generation target.

- 9.32 A Planning and Infrastructure Bill is also intended to speed up infrastructure delivery and enable growth.

## 9.3 Planning Practice Guidance (PPG)

- 9.33 Planning Practice Guidance supplements the NPPF and provides guidance on how the policies should be interpreted. Categories and paragraphs of most relevance to the determination of the application are set out below.

### Climate Change

*“Addressing climate change is one of the core land use planning principles which the National Planning Policy Framework expects to underpin both plan-making and decision taking. To be*

*found sound, Local Plans will need to reflect this principle and enable the delivery of sustainable development in accordance with the policies in the National Planning Policy Framework. These include the requirements for local authorities to adopt proactive strategies to mitigate and adapt to climate change in line with the provisions and objectives of the Climate Change Act 2008, and co-operate to deliver strategic priorities which include climate change.*

*In addition to the statutory requirement to take the Framework into account in the preparation of Local Plans, there is a statutory duty on local planning authorities to include policies in their Local Plan designed to tackle climate change and its impacts. This complements the sustainable development duty on plan-makers and the expectation that neighbourhood plans will contribute to the achievement of sustainable development. The National Planning Policy Framework emphasises that responding to climate change is central to the economic, social and environmental dimensions of sustainable development.”*

Paragraph: 001 Reference ID: 6-001-20140306

Revision date: 06 03 2014

## Natural Environment

*“The Agricultural Land Classification assesses the quality of farmland to enable informed choices to be made about its future use within the planning system.*

*There are five grades of agricultural land, with Grade 3 subdivided into 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a. Planning policies and decisions should take account of the economic and other benefits of the best and most versatile agricultural land.*

*In the circumstances set out in Schedule 4 paragraph (y) of the Development Management Procedure Order 2015, Natural England is a statutory consultee: a local planning authority must consult Natural England before granting planning permission for large-scale non-agricultural development on best and most versatile land that is not in accord with the development plan. Natural England has published guidance on development on agricultural land.”*

Paragraph: 001 Reference ID: 8-001-20190721

Revision date: 21 07 2019

## Renewable and Low Carbon Energy

- 9.34 This PPG guidance is included within the PDAS to acknowledge its existence however it predates policy set out in the NPPF, NPS's and Written Ministerial Statement's (WMS's).

*“Increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable.”*

Paragraph: 001 Reference ID: 5-001-20140306

Revision date: 06 03 2014

*“The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.*



*Particular factors a local planning authority will need to consider include:*

- *encouraging the effective use of land by focussing large scale solar farms on previously developed and non agricultural land, provided that it is not of high environmental value;*
- *where a proposal involves greenfield land, whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality land; and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays. See also a speech by the Minister for Energy and Climate Change, the Rt Hon Gregory Barker MP, to the solar PV industry on 25 April 2013 and written ministerial statement on solar energy: protecting the local and global environment made on 25 March 2015.*
- *that solar farms are normally temporary structures and planning conditions can be used to ensure that the installations are removed when no longer in use and the land is restored to its previous use;*
- *the proposal's visual impact, the effect on landscape of glint and glare (see guidance on landscape assessment) and on neighbouring uses and aircraft safety;*
- *the extent to which there may be additional impacts if solar arrays follow the daily movement of the sun;*
- *the need for, and impact of, security measures such as lights and fencing;*
- *great care should be taken to ensure heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large scale solar farms on such assets. Depending on their scale, design and prominence, a large scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;*
- *the potential to mitigate landscape and visual impacts through, for example, screening with native hedges;*
- *the energy generating potential, which can vary for a number of reasons including, latitude and aspect.*

*The approach to assessing cumulative landscape and visual impact of large scale solar farms is likely to be the same as assessing the impact of wind turbines. However, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography the area of a zone of visual influence could be zero."*

Related policy: paragraph 170

Paragraph: 013 Reference ID: 5-013-20150327

Revision date: 27 03 2015 See previous version

*"Electricity storage can enable us to use energy more flexibly and de-carbonise our energy system cost-effectively – for example, by helping to balance the system at lower cost, maximising the usable output from intermittent low carbon generation (e.g. solar and wind), and deferring or avoiding the need for costly network upgrades and new generation capacity."*

Paragraph: 032 Reference ID: 5-032-20230814

*"Where planning permission is being sought for development of battery energy storage systems of 1 MWh or over, and excluding where battery energy storage systems are associated with a residential dwelling, applicants are encouraged to engage with the relevant local fire and rescue service before submitting an application to the local planning authority. This is so matters relating*



*to the siting and location of battery energy storage systems, in particular in the event of an incident, prevention of the impact of thermal runaway, and emergency services access can be considered before an application is made.*

*Applicants are also encouraged to consider guidance produced by the National Fire Chiefs Council (PDF, 488 KB) when preparing the application.*

*The location of such sites are of particular interest to fire and rescue services; who will seek to obtain details of the design, and firefighting access and facilities at these sites in their register of site specific risks that they maintain for the purposes of Section 7 of the Fire and Rescue Services Act 2004.”*

Paragraph: 034 Reference ID: 5-034-20230814

Updated on 4<sup>th</sup> of August 2023

## 9.4 National Policy Statements (NPS)

- 9.35 Paragraph 5 of the NPPF states that National Policy Statements (NPS) “*form part of the overall framework of national planning policy and may be a material consideration in preparing plans and making decisions on planning applications.*”
- 9.36 As such, EN-1 and EN-3 are material considerations in the determination of energy generation applications.

### Overarching National Policy Statement for Energy EN-1 (2024)

- 9.37 Paragraph 1.2.1 states EN-1, in combination with any relevant technology specific NPSs, are a material consideration in decision making on energy generation applications that fall under the Town and Country Planning Act 1990 (as amended).
- 9.38 Paragraph 1.2.2 advises that whether the policies in EN-1 are material and to what extent, will be judged on a case-by-case basis and will depend on the extent to which the matters are already covered by applicable planning policy.
- 9.39 EN-1 reiterates the legally binding international and national targets set out in Section 8 of this report in the pursuit to achieve net zero by 2050 whilst meeting the associated interim targets.
- 9.40 Paragraph 2.3.3 states “*our objectives for the energy system are to ensure our supply of energy always remains secure, reliable, affordable, and consistent with meeting our target to cut GHG emissions to net zero by 2050, including through delivery of our carbon budgets and Nationally Determined Contribution. This will require a step change in the decarbonisation of our energy system.*”
- 9.41 Paragraph 2.3.4 goes on to state “*Meeting these objectives necessitates a significant amount of new energy infrastructure, both large nationally significant developments and small-scale developments determined at a local level.*”
- 9.42 Paragraph 2.3.7 forecasts a doubling in demand up to 2050 and states “*Decarbonisation means we are likely to become more dependent on some forms of energy compared to others. Using electrification to reduce emissions in large parts of transport, heating and industry could lead to more than half of final energy demand being met by electricity in 2050, up from 17 per cent in 2019, representing a doubling in demand for electricity.*”
- 9.43 Part 3 of EN-1 sets out the urgent need for a significant amount of new energy infrastructure.
- 9.44 Paragraph 3.1.2 recognises deployment of the necessary amounts of infrastructure will result in some significant residual adverse impacts.

- 9.45 Paragraph 3.3.1 sets out the need for security of supply with sufficient margin to ensure there is enough energy to meet unexpectedly high demand and to mitigate risks such as unexpected plant closures and extreme weather events. Paragraph 3.3.2 states the larger the margin, the more resilient the system and consequently the lower the risk of a supply interruption.
- 9.46 Paragraph 3.3.3 on future states, *“To ensure that there is sufficient electricity to meet demand, new electricity infrastructure will have to be built to replace output from retiring plants and to ensure we can meet increased demand. Our analysis suggests that even with major improvements in overall energy efficiency, and increased flexibility in the energy system, demand for electricity is likely to increase significantly over the coming years and could more than double by 2050 as large parts of transport, heating and industry decarbonise by switching from fossil fuels to low carbon electricity.”*
- 9.47 Paragraph 3.3.4 states a combination of different forms of electricity infrastructure will be required to deliver national objectives.
- 9.48 The role of wind and solar is presented in paragraphs 3.3.20 - 3.3.24. Wind and solar are recognised as the cheapest forms of generating electricity providing a clean and secure source of electricity supply and a net zero system is likely to be comprised of predominantly wind and solar.
- 9.49 EN-1 establishes the urgent need for electricity generating capacity and confirms the need for all the generating technologies within it to meet the government’s energy objectives at Paragraph 3.3.61 with Paragraph 3.3.62 concluding that energy generating technologies are Critical National Priority (CNP) infrastructure.
- 9.50 At Paragraph 3.3.63 the urgent need for CNP infrastructure to achieving energy objectives, together with the national security, economic, commercial, and net zero benefits, will in general outweigh any other residual impacts not capable of being addressed by application of the mitigation hierarchy. Government strongly supports the delivery of CNP Infrastructure and it should be progressed as quickly as possible.

### **National Policy Statement for Renewable Energy Infrastructure EN-3 (2024)**

- 9.51 EN-3 covers nationally significant renewable electricity generating stations and confirms the Government’s commitment to sustained growth on solar capacity. It reiterates the governments expectation to achieve up to 70GW of solar deployment by 2035.
- 9.52 EN-3 provides guidance on which factors should influence site selection and confirms land type should not be a predominating factor in solar site selection.
- 9.53 On agricultural land classification and land type, Paragraph 2.10.30 states the development of ground mounted solar arrays is not prohibited on best and most versatile agricultural land.
- 9.54 EN-3 further states economic and other benefits of best and most versatile land should be considered and consideration may be given as to whether the proposal allows for continued agricultural use and/or can be co-located with other functions.

## 10 THE DEVELOPMENT PLAN

- 10.1 Section 38 of the Planning and Compulsory Purchase Act (2004) and section 70 of the Town and Country Planning Act (1990) require that planning applications must be determined in accordance with the relevant development plan, unless material considerations indicate otherwise. In this case, the relevant Development Plan (DP) is as follows:
- East Herts District Plan 2018; and
  - Buntingford Community Area Neighbourhood Plan 2014 – 2031.
- 10.2 The pre-application response from EHDC listed the following policies felt at that time as being of relevance to the application. For ease of reference these are summarised below.

### East Herts District Plan 2018

#### DPS2 – The Development Strategy 2011-2033

- 10.3 Policy DSP2 (The Development Strategy 2011-2033) sets out the Council's strategy for delivering sustainable development. The strategy is to deliver sustainable development in accordance with the following hierarchy:
- Sustainable brownfield sites;
  - Sites within the urban areas of Bishop's Stortford, Buntingford, Hertford, Sawbridgeworth and Ware;
  - Urban extensions to Bishop's Stortford, Hertford, Sawbridgeworth and Ware, and to the east of Stevenage, east of Welwyn Garden City and in the Gilston Area; and
  - Limited development in the villages.

#### GBR2 – Rural Area Beyond the Green Belt

- 10.4 Green Belt in East Herts covers approximately one-third of the district. The remaining two-thirds of the district are located in the 'Rural Area Beyond the Green Belt'. This rural area is highly valued particularly for its open and largely undeveloped nature. It is a considerable and significant countryside resource, which Policy GBR2 seeks to maintain by concentrating development within existing settlements.
- 10.5 In order to maintain the Rural Area Beyond the Green Belt as a valued countryside resource, only developments that are compatible with the character and appearance of the rural area will be permitted.

#### DES2 – Landscape Character

- 10.6 Development proposals must demonstrate how they conserve, enhance, or strengthen the character and distinctive features of the district's landscape.
- 10.7 Appropriate mitigation measures will be taken into account when considering the effect of development on landscape character/landscaping.
- 10.8 Where relevant, development proposals will have regard to the district Council's currently adopted Landscape Character Assessment Supplementary Planning Document.

**DES3 – Landscaping**

- 10.9 Development proposals must demonstrate how they will retain, protect, and enhance existing landscape features which are of amenity and/or biodiversity value, in order to ensure that there is no net loss of such features.
- 10.10 Where losses are unavoidable and justified by other material considerations, compensatory planting or habitat creation will be sought either within or outside the development site. Replacement planting schemes should comprise mature, native species appropriate to the local conditions and landscape character, supported by a monitoring and replacement programme.

**DES4 – Design of Development**

- 10.11 All development proposals, including extensions to existing buildings, must be of a high standard of design and layout to reflect and promote local distinctiveness.
- 10.12 Proposals must not prejudice the development opportunities of surrounding sites.

**CFLR3 – Public Rights of Way**

- 10.13 Proposals for development must not adversely affect any PRow and, where possible, should incorporate measures to maintain and enhance the rights of way network.

**ED2 – Rural Economy**

- 10.14 In order to support sustainable economic growth in rural areas and to prevent the loss of vital sources of rural employment, proposals that create new employment generating uses or support the sustainable growth and expansion of existing businesses in the rural area will be supported in principle where they are appropriately and sustainably located and do not conflict with other policies.
- 10.15 Proposals that consist of a change of use of agricultural or employment generating use in the rural area to other employment generating uses will be supported in principle subject to other policies.

**EQ2 – Noise Pollution**

- 10.16 Development should be designed and operated in a way that minimises the direct and cumulative impact of noise on the surrounding environment. Particular consideration should be given to the proximity of noise sensitive uses, and in particular, the potential impact of development on human health.
- 10.17 Noise sensitive development should be located away from existing noise generating sources or programmed developments where possible to prevent prejudicing the continued existing operations. The use of design, layout, landscaping tools and construction methods should be employed to reduce the impact of surrounding noise sources.

**EQ3 – Light Pollution**

- 10.18 External lighting schemes must:
- Not have an unacceptable adverse impact on neighbouring uses or the wider landscape;
  - Be the minimum required for security and operational purposes;
  - Minimise the potential glare and spillage;
  - Minimise harm to the amenity of residents and road users and prevent impacts on the local ecology.

- 10.19 Where appropriate EHDC will seek to control the times of illumination.

### **EQ4 – Air Quality**

- 10.20 All applications should take account of the Council's Air Quality Planning Guidance Document, which details when an air quality assessment is required. All development should take account of the Council's latest Air Quality Action Plan, local Air Quality Strategies, Local Transport Plans, as well as national air quality guidance.
- 10.21 All developments should include measures to minimise air quality impact at the design stage and should incorporate best practice in the design, construction, and operation of all developments.
- 10.22 Where development will have a negative impact on local air quality during either construction or operation, mitigation measures will be sought that will remove overriding impacts, such as an air quality neutral or negative development. Evidence of mitigation measures will be required upfront.
- 10.23 Developments must not:
- Lead to a breach or worsening of a breach of UK or EU limit values;
  - Lead to a breach or worsening of a breach of an Air Quality objective or cause the declaration of an Air Quality Management Area or;
  - Prejudice the implementation of any Air Quality Action Plan or local air quality strategy.

### **HA1 – Designated Heritage Assets**

- 10.24 Development proposals should preserve and where appropriate enhance the historic environment.
- 10.25 Development proposals that would lead to substantial harm to the significance of a designated heritage asset will not be permitted unless it can be demonstrated that the harm or loss is necessary to achieve substantial public benefits that outweigh that harm or loss. Less than substantial harm should be weighed against the public benefits of the proposal.

### **HA4 – Conservation Areas**

- 10.26 Development proposals outside Conservation Areas which affect setting will be permitted provided that they preserve or enhance the special interest, character and appearance of the area. likewise.

### **HA7 – Listed Buildings**

- 10.27 Proposals that affect the setting of a Listed Building will only be permitted where the setting of the building is preserved.

### **HA8 – Historic Parks and Gardens**

- 10.28 Development proposals should protect the special historic character, appearance or setting of those sites listed on the Historic England 'Register of Historic Parks and Gardens'. The same level of protection will be afforded to other locally important sites.

### **TRA1 – Sustainable Transport**

- 10.29 A number of elements should be considered to achieve accessibility improvements and promotion of sustainable transport in the district. Of most relevance to the proposal is the policy requirement to protect existing rights of way.

### **TRA2 – Safe and Suitable Highway Access Arrangements and Mitigation**

- 10.30 Development proposals should ensure that safe and suitable access can be achieved for all users. Site layouts and access proposals should:
- a) Be acceptable in highway safety terms;
  - b) Not result in any severe residual cumulative impact; and
  - c) Not have a significant detrimental effect on the character of the local environment.

### **TRA3 – Vehicle Parking Provision**

- 10.31 Vehicle parking provision associated with development proposals will be assessed on a site-specific basis and should take into account the provisions of the adopted Supplementary Planning Document 'Vehicle Parking Provision at New Development'.

### **NE2 – Sites or Features of Nature Conservation Interest (Non-Designated)**

- 10.32 All proposals should achieve a net gain in biodiversity where it is feasible and proportionate to do so, as measured by using and taking into account a locally approved Biodiversity Metric, and avoid harm to, or the loss of features that contribute to the local and wider ecological network.
- 10.33 Proposals will be expected to apply the mitigation hierarchy of avoidance, mitigation and compensation, and integrate ecologically beneficial planting and landscaping into the overall design.

### **NE3 – Species and Habitats**

- 10.34 Development should always seek to enhance biodiversity and to create opportunities for wildlife. Proposals must demonstrate how the development improves the biodiversity value of the site and surrounding environment. Evidence will be required in the form of up-to-date ecological surveys undertaken by a competent ecologist prior to the submission of an application. The Biodiversity value of a site pre and post development will be determined by applying a locally approved Biodiversity Metric where appropriate. Submitted information must be consistent with BS 42020 2013. Where insufficient data is provided, permission will be refused.
- 10.35 Development which would result in the loss or significant damage to trees, hedgerows or ancient woodland sites will not be permitted. EHDC will seek their reinforcement by additional planting of native species where appropriate. Protective buffers of complementary habitat will be expected to adjoin these features, sufficient to protect against root damage and improvement of their long-term condition. A minimum buffer zone of 10m (or greater if required) is considered appropriate.

### **NE4 Green Infrastructure**

- 10.36 A diverse network of accessible, multi-functional green infrastructure across the district will be protected and enhanced for its biodiversity, recreational, accessibility, health and landscape value and for the contribution it makes towards combating climate change.

### **CC3 – Renewable and low Carbon Technology**

- 10.37 In considering the impact of renewable technologies, EHDC will attach particular importance to maintaining the special countryside character of the rural area, including the preservation of long-distance views from public rights of way.



**WAT1 – Flood Risk Management**

- 10.38 Development proposals should neither increase the likelihood or intensity of any form of flooding, nor increase the risk to people, property, crops or livestock from such events, both on site and to neighbouring land or further downstream.
- 10.39 Development should take into account the impacts of climate change and should build in long term resilience against increased water levels. Therefore, appropriate distances and buffers between water courses and built development should be maintained in accordance with Environment Agency guidelines.
- 10.40 In order to steer new development to areas with the lowest probability of flooding, the Sequential Test will be used.

**WAT3 – Water Quality and the Water Environment**

- 10.41 Development proposals will be required to preserve or enhance the water environment, ensuring improvements in surface water quality and the ecological value of watercourses and their margins and the protection of groundwater.

**WAT5 – Sustainable Drainage**

- 10.42 Development must utilise the most sustainable forms of drainage systems in accordance with the Sustainable Urban Drainage System (SUDS) hierarchy, unless there are practical engineering reasons for not doing so.
- 10.43 Development should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.
- 10.44 Drainage should be designed and implemented in ways that deliver other policy objectives including water use efficiency and quality, biodiversity, amenity and recreation. Where SUDs are provided as part of a development, applicants should detail how it will be maintained in the long term.
- 10.45 Where practicable, SUDS should be designed to ensure the sustainable drainage networks have the additional capacity required to cope with infrequent adverse weather conditions and therefore reduce flood risk.

## **10.2 Neighbourhood Plan**

**Buntingford Community Area Neighbourhood Plan 2014 – 2031**

- 10.46 The Buntingford Community Area Neighbourhood Plan 2014 – 2031 (NP) was adopted in 2017 and pre-dates a number of Government policy and guidance documents. Policies of most relevance to the application are listed below.

**ES2 – River Beane**

- 10.47 Development proposals that encroach within 12m of the bank tops of the Rivers Rib, Beane and Quin will not be supported, unless the benefits from the development clearly outweigh any harm to the contribution of the river courses to the landscape, wildlife, and biodiversity. Development that abuts the rivers will be expected to observe this minimum distance, to manage this zone as complimentary habitat and to take opportunities to restore the aquatic environment where it has been damaged.

### **ES3 – Green Energy Generation**

- 10.48 Green energy generation initiatives such as wind turbines, solar, anaerobic digestion, biomass, ground and air source heat pumps and hydro will be supported in order to make an important contribution to combatting climate change, where an assessment demonstrates that the benefits of the proposal outweigh any harmful impact on:
- a) environmental and historic assets;
  - b) visual amenity and landscape character;
  - c) local transport networks;
  - d) the amenity of neighbouring residents and sensitive uses;
  - e) air quality and human health;
  - f) the preservation of long-distance views from public rights of way; and
  - g) high quality agricultural land.

### **ES7 – Biodiversity**

- 10.49 Development will be expected to protect and enhance biodiversity in line with NPPF requirements. Development must demonstrate a net gain in biodiversity in an ecological report consistent with BS 42020.
- 10.50 In order that development truly achieves net gains in biodiversity it must be objectively assessed and quantified and the application of these standards will help ensure that development takes into account adverse impacts on biodiversity.

### **EHDC Climate Emergency**

- 10.51 In July 2019, EHDC unanimously approved a Climate Change Declaration in recognition of the climate emergency.
- 10.52 Section 13 of this PDAS sets out an assessment of the Proposed Development which takes into account those relevant matters referred to within the above referenced policies.

## 11 OTHER MATERIAL CONSIDERATIONS

### 11.1 Written Ministerial Statements (WMS)

- 11.1 WMS's are a function of Parliament which often accompany significant announcements being made by Government on a change of policy or legislation affecting the planning system. Such statements can be material considerations in the determination of planning applications and the preparation of emerging development plans.

#### **Written Ministerial Statement on Solar Energy: Protecting the Local and Global Environment (March 2015)**

- 11.2 The WMS was issued on 25 March 2015. It seeks to protect the environment in the selection of sites for renewable energy schemes.
- 11.3 The WMS states “...any proposal for a solar farm involving the best and most versatile agricultural land would need to be justified by the most compelling evidence.”
- 11.4 The weight attached to this WMS has reduced as a number of Government documents have subsequently been produced including several revisions of the NPPF, NPS EN-3 and other more recent WMSs, which do not prohibit solar development on prime agricultural land.

#### **Government Response to petition ‘Introduce new restrictions on solar facilities to protect land and food security’ (April 2024)**

- 11.5 A response to the above petition was given by the Government in April 2024. The most relevant parts of the response to this application are referenced below.

*“Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. Government considers that meeting energy security and climate change goals is urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK...”*

*“...Solar projects and agricultural practice can co-exist. Many solar projects are designed to enable continued livestock grazing....Solar energy can also be an important way for farmers to increase their revenue from land less suited to higher value crop production.”*

#### **Written Ministerial Statement: Solar and protecting our Food Security and Best and Most Versatile (BMV) Land (May 2024)**

- 11.6 The WMS was released to ensure the careful consideration of food security and the cumulative impacts of solar farms on villages in solar planning applications. Safeguarding both food and energy security is paramount, and the Government sets out its commitment to maintaining the level of food produced domestically.
- 11.7 The WMS provides reassurance that impacts of solar projects are considered effectively by the planning system but states:
- “For all applicants the highest quality agricultural land is least appropriate for solar development and as the land grade increases, there is a greater onus on developers to show that the use of higher quality land is necessary.”*
- 11.8 There is no policy change, but more emphasis is placed on providing evidence as to why sites of higher-grade land are necessary to be selected for solar use.

## 11.2 Labour Written Ministerial Statements 2024

### Contracts for Difference (CfD) Allocation Round 6 Results, 3<sup>rd</sup> September 2024, Statement UIN HCWS65

- 11.9 The Sixth Contracts for Difference (CfD) auction results were published on 3<sup>rd</sup> of September 2024 and unlocked 9.6GW of renewable electricity projects. Although not directly relevant to the application, Government rhetoric around CfD and the amount of funding and financial resourcing to fund the scale of projects indicate the urgency attributed to the need for renewable energy projects.
- 11.10 Contracts have been awarded to the two largest offshore wind farms in Europe, the world's largest floating offshore windfarm to date and record numbers of solar projects. The results are over 2.5 times bigger than Allocation Round 5.
- 11.11 Just over 130 renewable electricity projects across the UK secured contracts, enough to power the equivalent of 11 million homes.
- 11.12 A record 93 solar projects have secured contracts. This is more than the total number of contracts agreed via Allocation Round 5 across all technologies and represents around a 20% increase in the current installed solar capacity. Solar is one of the cheapest, most readily-deployable energy sources, and its growth is recognised as being vital to meeting the clean power mission.
- 11.13 More renewables like wind and solar in the system are identified as playing a key role in protecting the UK from fluctuations in global gas prices.
- 11.14 The lifting of the onshore wind ban, Allocation Round 6, and the creation of Great British Energy, all signal the ramping up of efforts in the UK to deliver clean power by 2030 and Net Zero, moving towards energy independence.
- 11.15 Going forwards, the UK will continue to work with investors, developers, and the supply chain to accelerate the Government's mission to become a clean energy superpower.

### Building the homes we need, 30<sup>th</sup> July 2024, Statement UIN HCWS48

- 11.16 The Government is determined to do more to support sectors which will be the engine of the UK's economy in the years ahead. Therefore, there will be a change in policy to make it easier to build growth-supporting infrastructure such as laboratories, gigafactories, data centres, electricity grid connections and the networks that support freight and logistics. Alongside consulting on revisions to planning policy, the Government is also seeking views on whether it should expand NSIP thresholds to reflect larger scale projects becoming increasingly necessary to meet legal targets.
- 11.17 Boosting the delivery of renewables is critical to meeting the Government's commitment to zero carbon electricity generation by 2030. The Government ended the ban on onshore wind, with that position formally reflected in the update to the NPPF.
- 11.18 The Government is proposing to:
- Boost the weight that planning policy gives to the benefits associated with renewables;
  - Bring larger scale onshore wind projects back into the NSIP regime; and
  - Change the threshold for solar development to reflect developments in solar technology.
- 11.19 A Planning and Infrastructure Bill will be introduced, which will:

- Modernise planning committees by introducing a national scheme of delegation that focuses their efforts on the applications that really matter, and places more trust in skilled professional planners to do the rest;
- Enable local authorities to put their planning departments on a sustainable footing; further reform compulsory purchase compensation rules to ensure that what is paid to landowners is fair but not excessive; and
- Streamline the delivery process for critical infrastructure; and provide any necessary legal underpinning to ensure we can use development to fund nature recovery where currently both are stalled.

## 11.3 Recent Appeal Decisions

- 11.20 The cases selected focus on decision making where best and most versatile land (BMV) is used to host solar energy generation stations. They are a useful aid in demonstrating how policy and guidance are being interpreted, how the energy crisis is being considered alongside national food reserves and how these matters have been addressed and prioritised in the planning balance.
- 11.21 The appeal decisions are provided in full as appendices to this report.

### **APP/X1925/V/23/3323321 – Land at Graveley Lane and to the East of Great Wymondley, Hertfordshire (Determined 11 March 2024). North Hertfordshire District Council application ref 21/03380/FP**

- 11.22 The appeal is attached as Appendix A.
- 11.23 The proposal for 49.9MW solar farm and BESS was allowed in March 2024 by the Secretary of State (SoS). A main consideration of the application was the use of BMV. The composition of land quality on that site was 32.2% grade 2 and 67.8% sub-grade 3a.
- 11.24 Paragraphs 7.18 – 7.20 set out the SoS's conclusions on the use of BMV land. The SoS refers to the temporary nature of the array with the land returning to agricultural use following decommissioning. Further weight is attributed to increasing and improving soil quality, structure and drainage by resting the land from intensive agricultural use. Long term benefits to soil health and carbon sequestration are also identified.
- 11.25 At paragraph 7.20 the SoS states "*There is no planning policy to require land to be used for food production; there is no food security crisis or concern.*"

### **APP/E2530/W/24/3337544 - Land associated with Washdyke Farm to the North of Billingborough Rd, Folkingham, Lincolnshire, NG34 0EZ (Determined 23 April 2024). South Kesteven District Council application ref S23/0511.**

- 11.26 The appeal decision is attached as Appendix B.
- 11.27 The proposal for a 27MW solar array was allowed on 23rd April 2024. A main issue considered by the Inspector was BMV agricultural land.
- 11.28 At paragraph 11 of the appeal decision the Inspector refers to NPS EN-3 as a material consideration in the determination of the application and solar development being recognised as Critical National Priority Infrastructure. This was also recognised within the appeal decision at Great Wymondley above. The Inspector highlights guidance within NPS EN3 which states that land type should not be a predetermining factor in the site selection process.

- 11.29 The constitution of agricultural land quality within that site is 11.23ha grade 2, 2.77ha grade 3a and 13.87ha grade 3b.
- 11.30 The site search assessment undertaken by the Appellant was considered by the Inspector to not have adequately assessed alternative sites. However, the fact that the site would be used in conjunction with grazing and the development temporary, it was concluded that there would be no significant loss of agricultural land and consequently no conflict with the NPPF.

### **APP/U2235/W/23/3321094 - Land north of Little Cheveney Farm, Sheephurst Lane, Marden, Kent (Determined 05 February 2024). Maidstone Borough Council application ref 22/501335/FULL.**

- 11.31 The appeal decision attached as Appendix C.
- 11.32 The proposal for a 47MW solar farm was allowed on 5th of February 2024. 47% of the appeal site was BMV land. This breaks down as 9% grade 2 and 38% grade 3a.
- 11.33 At paragraph 42 of the appeal decision the Inspector states *"It is agreed, however, that for solar farm development of the scale proposed it is almost inevitable that agricultural land will be used. There are likely to be few areas of previously developed land, contaminated or industrial land which are capable of accommodating such proposals, and neither the Council nor the Appellant has identified any in this case."*
- 11.34 The Inspector defers to NPS EN-3 and its guidance that land quality should not be a predominating factor in the selection of sites for solar farms. The Inspector considers NPS EN-3 to be a material consideration in the determination of applications for solar farms using BMV land. In this case NPS EN-3 is further considered relevant due to the scale of the proposal being close to NSIP entry thresholds.
- 11.35 Paragraph 47 of the appeal decision reads *"There is no requirement to carry out a sequential analysis of alternative sites as suggested by the Council. Had there been such a requirement in policy or advice it would surely have said so. The recent judgement in Bramley Solar Farm v SOS for Levelling Up, Housing and Communities says just that in finding that PPG does not mandate the consideration of alternatives, still less that a sequential test be adopted. The best that can be said is that in cases such as this it should be shown that the use of agricultural land has been demonstrated to be necessary, and that could involve an assessment of potential alternatives."*
- 11.36 On the matter of using BMV for electricity generation from solar, no conflict was found with national or local planning policy.

### **APP/W2845/W/23/3314266 Land at Milton Road, Gayton, Northampton, NN7 3HE (Determined 13 March 2024). WNS/2021/1858/EIA.**

- 11.37 Appeal Decision attached as Appendix D.
- 11.38 In a proposal for a 49.7MW array with 10.6 ha BMV the Secretary of State (SoS) considered the segregation of different grades of land quality and the impracticalities of farming pockets of BMV land where BMV is not contiguous. Consideration of the land being farmed for animal feed rather than food production was given credence in the planning balance. Overall, the loss of BMV was afforded limited weight.



## 12 DESIGN AND ACCESS STATEMENT

- 12.1 Part 3, Article 9 of the Town and Country Planning (Development Management Procedure) (England) (Amendments) Order 2015, requires certain types of development to be accompanied by a Design and Access Statement (DAS). Further, Article 9 sets out the requirements regarding the contents of a DAS. As set out previously, the Proposed Development requires a DAS given its definition as a Major Development, as it exceeds 1 hectare in area.
- 12.2 In accordance with Requirements, this Section of the PDAS:
- Outlines the various design principles applied to the development; and
  - Confirms how issues relating to access have been dealt with, and access elements that have been considered when preparing the layout, scaling, and sizing of the Proposed Development.
- 12.3 The Proposed Development is underpinned by a design process which seeks to ensure it is delivered in a sustainable manner to meet the local and national objectives of climate change, energy security, biodiversity enhancement, and a prosperous rural economy.
- 12.4 In the interests of avoiding unnecessary repetition, where necessary this Section of the Report should be read alongside other Sections of the PDAS.

### Development components

- 12.5 A comprehensive description of project components is set out in section 5 of this report.

### Design Principles

- 12.6 A series of design principles have informed the evolution of the project layout including:
- Undertaking development proposals cognisant of onsite physical constraints to ensure features including landscaping is retained in-situ;
  - Working with the existing site topography to avoid cut and fill or regrading of land;
  - Where environmental constraints are identified, retaining these in-situ, by mitigating through avoidance; and
  - Integration of a comprehensive package of landscape and ecological enhancement measures as an integral project component.

### Materials and appearance

- 12.7 As set out previously in Section 1, this PDAS, whilst appropriate to be read as a standalone document, is informed by a suite of accompanying planning documents. Further, Table 2 of this Report sets out the comprehensive drawing pack that accompanies the planning application submission. This drawing pack provides appropriate details of all project components that form part of the Proposed Development.
- 12.8 Solar panels have a dark blue face with a matte silver-coloured anodized aluminium frame. The purpose of the panels is to absorb and not reflect light. Modern PV benefits from an anti-reflective coating to limit the glint and glare associated with much earlier versions of the technology. The panels are mounted on a matte galvanized steel framework that does not glint or gleam in the light.
- 12.9 All inverters, storage and spare containers can be clad in metal of muted tones to be better absorbed into the landscape.

- 12.10 With respect to the substation, and other associated above-ground infrastructure, the applicant considers that pre-commencement procedures will afford EHDC and their respective consultees an opportunity to review and input into final materials and finishes.
- 12.11 Section 5.7 of the Report confirms the robust approach taken in respect of design parameters through application of the Rochdale Envelope principles ensuring a worst-case scenario approach to assessment. The approach allows for some flexibility where project parameters are not yet completely confirmed given continuing technological advances that may emerge between consent and construction.

### Use

- 12.12 The application is for the installation and operation of a renewable energy generating station and storage facility designed to provide highly flexible back-up power at short notice. The design and layout arrangement is essential to achieving this function.
- 12.13 The use of land in the countryside to produce energy is consistent with tradition and practice going back to when woodland was planted and managed to generate wood for fuel. In the present day, fuel is derived from arable crops such as wheat, maize, and rapeseed for biomass fuel. The UK imports both food and fuel and security of supply is a factor in relation to both. The use of farmland such as the site for energy production will contribute to the UK's energy security, net zero targets and to a reduction in its reliance on fossil fuels.
- 12.14 The site is currently in agricultural use, under arable cultivation for anaerobic digestion for electricity generation. This has been the case for the last three years.
- 12.15 The features on site are not uncharacteristic for the area, comprising open farmland, broken up by hedgerows with scattered trees and occasional more heavily wooded bands.
- 12.16 Once operational, the site can still be used for grazing and as such can retain an agricultural use. Less intensive arable agricultural use will allow for recovery and soil quality improvement where possible.
- 12.17 Once the Proposed Development has reached the end of its operational life, all infrastructure will be removed, and the site will be reinstated to the satisfaction of EHDC. In addition to providing a source of clean renewable energy into the grid, valuable storage capacity and co-located grazing, the Proposed Development will secure a significant Biodiversity Net Gain substantially in excess of 10% through reinforced hedgerow planting, tree planting, wildflower and grassland coverage and organic land management. A gain of 98.40% for habitats, 189.90% for hedgerows and 10.19% for watercourses is a substantial overall gain and a vast improvement to an arable site, intensively managed through conventional farming methods.

### Amount and Scale

- 12.18 The red-line application area of the site is approximately 79.5 hectares. This includes areas between the solar arrays, perimeter standoffs, hedgerow, underground cables, boundary fencing, inverters and storage, other supporting infrastructure, internal access tracks, additional landscape planting, bund and biodiversity enhancements.
- 12.19 Although not all land within the red-line application area is proposed for development, the scale of the Proposed Development ensures that a viable generation output from the Proposed Development can be achieved. The LVIA included with this application considers the various landscape and visual impacts of the Proposed Development and the approach to mitigation including new landscape features.
- 12.20 Panels would be approximately 0.8m from the ground and up to approximately 3.5m at their higher edge. Drawings submitted in support of this application set out the typical dimensions of the

proposed development and infrastructure. These present a worst-case scenario in terms of scale and the final design will keep within these parameters.

- 12.21 The pole mounted CCTV cameras will be up to approximately 3.5m high.
- 12.22 Although the development requires a large area of land, in terms of physical intrusion the development would only impact a small proportion of the red line site area due to the limited surface area required to support above-ground presence. As set out in the Flood Risk Assessment that accompanies the application, the overall impermeable surface area within the site equates to c.5961m<sup>2</sup>. In turn this is less than 1% of the redline area. Accordingly the overall extent of ground disturbance on-site would be minimal to implement the Proposed Development.
- 12.23 Once the Proposed Development is no longer efficient and viable the entire facility will be removed, and the field will return to agricultural use with no residual impacts. Therefore, the Proposed Development is fully reversible.

### Layout

- 12.24 As set out in Para 12.6, the emerging layout at the site was underpinned by a series of guiding design principles including physical constraints that emerged through survey effort during the planning lead-in period.
- 12.25 As well as existing field accesses, tracks, hedgerows, overhead power lines, topography, consideration was given to emerging constraints including PRoW, wildlife and presence of watercourses. Appropriate buffers were provided around all identified features. The PRoW will remain unaffected by development proposals. The layout has also evolved to set back from existing field boundaries. Although there are no formal proposals brought forward as part of the Proposed Development, the set-back separation distances are sufficient in size to facilitate future aspirational improvements in connectivity in the PRoW network, as per suggestions mooted in the Hertfordshire Rights of Way Improvement Plan. It must be reiterated again, there are no formal proposals for PRoW links as part of this proposal, and any discussions in respect of same would be at a future date.
- 12.26 Three points of access are located off the A507 and Cromer Heath to facilitate construction. One of these onto Cromer Heath from the northern land parcel is a temporary access point to help facilitate the transfer of panels between the northern and southern land parcels. This will be closed permanently after construction has ended.
- 12.27 The layout has been influenced by the need to optimise solar gain and in response to field topography. Arrays will be laid out east-west in order for modules to face south, at an optimised angle for energy generation. A deer fence will enclose the site, with gates to allow access (e.g. for security or maintenance). There will be an infrared CCTV system around the perimeter of the site adjacent to the fence, inverters will be erected and dispersed across the site to maximise their efficiency and are kept away from noise sensitive receptors.
- 12.28 Pre-application advice, community consultation feedback and specialist findings were all considered in the design process and where appropriate the design was amended in response to these. The SCI submitted in support of this application provides full detail of feedback received and the Applicant's response to same. Among layout amendments were the entire removal of an area of panels previously proposed to the west of the now Proposed Development site, and additional substantial reductions to proposed infrastructure at the existing southern extents. Both amendments were undertaken in response to feedback received during the pre-application community consultation process which expressed concerns regarding the proximity of panels to properties at Cromer.

## **Landscaping & Arboriculture**

- 12.29 The approach to landscaping is set out in paragraph 13.11 in section 13 of this report.
- 12.30 The elements of the Proposed Development are described earlier in this section 5 of this PDAS and illustrated in the drawing suite submitted in support of the application.
- 12.31 Landscape planting comprises an inherent component of the Proposed Development and have evolved through the assessment process to ensure inter-alia, the potential for landscape effects from surrounding receptors is minimised, that existing landscape features are enhanced and that the opportunity for biodiversity net gain is maximised.
- 12.32 A Landscape and Visual Impact Assessment (LVIA) forms part of the planning application pack submitted for consideration. Informed through consultation with EHDC, the LVIA considers the effects of the proposal on landscape resources and receptors as well as visual receptors in the surrounding landscape.
- 12.33 Compared to other forms of energy generation such as gas fired power stations or wind turbines, the Proposed Development is much lower in profile and considered to have a more localised impact, particularly when the degree of existing visual containment, which will be enhanced, is taken into account.
- 12.34 An Arboricultural Impact Assessment (AIA) has informed the landscaping approach and is submitted in support of this application. All trees within the site were recorded, and information was gathered, to allow them to be considered using guidance contained within BS5837:2012 - Trees in Relation to Design, Demolition and Construction.
- 12.35 In total: 88 individual trees, 46 tree groups, 2 woodland sections and 39 hedges were surveyed and recorded within or immediately adjacent to the development site.
- 12.36 There are no Tree Preservation Orders (TPO) affecting trees recorded during the survey and the site does not fall within a Conservation Area. There are also no ancient woodlands recorded within or adjacent the site.
- 12.37 In order to accommodate visibility splays for the access point off Cromer Heath Road, it will likely be necessary to remove 13m of hedgerow.
- 12.38 In order to accommodate visibility splays for the access point off the A507, it will likely be necessary to prune adjacent hedgerow.
- 12.39 In contrast, the Proposed Development includes a comprehensive package of landscape works including the proposed planting of some 4.5km of hedgerow as well as further hedgerow augmentation and wildflower seeding.
- 12.40 The site security fencing included as part of the Proposed Development can provide the majority of the tree protection on the site. This can then be supplemented by Tree Protection Fencing (TPF), as shown on the Tree Protection Plan (see drawings 794-PLN-LAN-5151\_710-718) contained within the AIA which forms part of the planning application pack.
- 12.41 By following guidance in the AIA retained trees will be protected during the works and as such the Proposed Development accords with NPPF paragraph 180 and DP policies DES2 and NE3 and NP ES3.

## **Construction access and routing**

- 12.42 Access and routing arrangements during the construction phase are set out in the CTMP.
- 12.43 Three access points will be utilised to facilitate the construction process. One off the A507 involves the improvement and marginal relocation of an existing access. The two at Cromer Heath propose improvements to existing field entrances, the northern-most of which is temporary, proposed only

to facilitate the transfer of materials between the northern and southern land parcels via tractor and trailer.

- 12.44 The designated routes for all construction vehicles and traffic management measures are set out in the CTMP.
- 12.45 The proposed construction vehicle route is considered to provide the most direct route from the strategic highway network while limiting impact on local settlements in as much as possible. The use of any other roads other than the designated and signposted route shall not be permitted and this shall be managed as per the CTMP. Appropriate mitigation measures will be provided throughout the construction phase in order to manage the arrival and departures of HGVs at the site.
- 12.46 It is expected that some construction workers could travel into nearby villages in cars or vans for food/drink from local shops or cafes. Other than this, potential incidental travel for purchases in local villages by individual workers, no construction traffic will be routed through the surrounding smaller settlements of Cromer and Coterred.
- 12.47 The construction compounds will be located on site temporarily during the construction phase. These will be removed and filled with panels towards the end of the construction period. Construction compounds have sufficient room to accommodate parking and large vehicle manoeuvring. All traffic will leave and enter the site in a forward gear. No construction traffic will be allowed to wait on the local highway network outside the site. No construction worker vehicles will be allowed to park on verges outside the site.
- 12.48 The construction compounds are intentionally located in fields closest to the access points from the local highway network. This avoids the need for HGV's to travel further than necessary. Materials will be delivered to the compound by HGV and around the site by tractor trailer type vehicles. This will reduce the risk of heavy traffic causing compaction of the internal access tracks.

### **Operational and maintenance access**

- 12.49 The operational lifespan of the development is proposed to be 40 years.
- 12.50 The operational route will be via the relocated access onto the A507 and the improved access into the southern site parcel at Cromer Heath. Once operational, there will be minimal on-site activity. The development will be monitored remotely and will not require any permanent staff to be located on site.
- 12.51 Operatives will only need to visit the site on an ad hoc basis via standard light vehicles for routine maintenance and in the events of system failures.

## 13 PLANNING APPRAISAL

### 13.1 Principle of development

- 13.1 National policy is strongly supportive of renewable energy as a means of meeting our increasing energy demands, tackling climate change and transitioning to a prosperous and low-carbon sustainable economy. Solar farms such as the Proposed Development are recognised as being not just necessary but central to meeting an urgent need.
- 13.2 The efficiency of the Proposed Development is significantly improved as it includes both solar and energy storage. Energy storage is again, a crucial part of the narrative in the drive to net-zero and provides the capability to store renewable energy for release to the network instantaneously at times of demand, helping ensure energy security. It also guards against the prospect of renewable energy being “lost” to the grid through network constraints at the time of generation.
- 13.3 NPPF paragraph 163 and NPS EN-1 do not require applicants to demonstrate the need for electricity generation from renewable sources, with the latter identifying the need as urgent and solar farms as Critical National Priority (CNP) infrastructure.
- 13.4 Solar and onshore wind are identified as the cheapest forms of electricity generation by the UK government across a number of energy and climate change policy context documents. Growth in solar and wind is identified as a key vehicle which will help to meet the legally binding 2050 net zero target. 70GW of solar capacity is expected to be achieved by 2035 to realise a fully decarbonised power sector. The two energy sources also complement one another. Most wind blows at night, whilst solar is operational during the day.
- 13.5 NPPF paragraph 11 contains a presumption in favour of sustainable development “*meeting the needs of the present without compromising the ability of future generations to meet their own needs*” (Paragraph 7 of the NPPF). A sustainable development assessment is provided in section 14 of this PDAS.
- 13.6 NPPF paragraph 157 states that the planning system should support the transition to a low-carbon future and support renewable and low-carbon energy and associated infrastructure. NPS EN-1 sets out the need for security of supply due to increasing demand, fossil fuel plant closures and extreme weather events.
- 13.7 The Government has expressed the need for CNP infrastructure to be progressed as quickly as possible. It has established a strong need for increased solar deployment to ensure energy security and climate change targets are met.
- 13.8 The Proposed Development will contribute up to 49.9MW of renewable energy capacity to national and local targets meeting the annual electricity demand of the 15,000 homes, a significant contribution to decarbonising the energy sector.
- 13.9 The direction of travel of the new Labour Government provides even more support for renewable energy schemes. Paragraph 163 of the NPPF 2024 (Chapter 9 paragraph 7 of the consultation document) states:
- “We are proposing amendments to existing paragraph 163 to direct decision makers to give significant weight to the benefits associated with renewable and low carbon energy generation, and proposals’ contribution to meeting a net zero future. In doing so, this aims to increase the likelihood of local planning authorities granting permission to renewable energy schemes and contribute to reaching zero carbon electricity generation by 2030.”*
- 13.10 As we rapidly approach 2030, the Government is ramping up efforts through pending policy changes to deliver clean power by 2030, and for the UK to become a clean energy superpower.



- 13.11 There is no requirement to justify the need for renewable energy development. The Proposed Development will play an important role in achieving energy objectives, security of supply and economic, commercial and net zero benefits, which are afforded significant positive weight in the planning balance. DP Policy GBR2 supports development appropriate to a rural area and the DP supports renewable energy proposals in principle and ED2 supports sustainable economic growth. NP ES3 supports green energy generation initiatives.
- 13.12 The principle of renewable energy generation in the proposed location is therefore acceptable.

## **13.2 Agricultural Land Classification**

- 13.13 An Agricultural Land Classification (ALC) report supports this application. 20% of the site is Grade 2, 58.75% of the site is Grade 3a and 21.25% is Grade 3b.
- 13.14 The site is currently in use for crop production for anaerobic digestion.
- 13.15 East Hertfordshire is characterised by Grade 2 'very good' and pockets of Grade 3 'Good/Moderate' land.
- 13.16 NPS EN-3 states that land type should not be a predominating factor in solar site selection. WMS of May 2024 advises that BMV should preferentially be avoided but where selected justification is required. The availability of land at this scale is the key ground for the site's selection. NPS EN-3 further provides that ground-mounted solar arrays are not prohibited on BMV agricultural land. Therefore, the Proposed Development does not conflict with national policy and guidance in regard to BMV land.
- 13.17 NPPF paragraph 181 footnote 62 reiterates the preference to avoid the development of high-quality land and that the availability of land for food production should be considered. Unlike the energy crisis, there is no food security crisis or national threat to food security however, resources should be safeguarded. The United Kingdom Food Security Report states: "*The biggest medium to long term risk to the UK's domestic [food] production comes from climate change and other environmental pressures like soil degradation, water quality and biodiversity.*" The sites current use and yields supply the energy market already, therefore there is no immediate loss or impact on food production.
- 13.18 Once operational the site will be managed by sheep grazing. The Proposed Development will continue to contribute to food production and security.
- 13.19 The positive benefits associated with resting agricultural land are now well known leading to improved ground conditions and soil quality. Increased soil fertility, reduced erosion and compaction, cessation of fertiliser and agrochemical application, improved drainage and carbon sequestration are other benefits resulting from the cessation of conventional farming methods.
- 13.20 The site will operate as a generating station for a temporary period of 40 years. Following decommissioning the site is intended to revert to a wholly agricultural use. There will be no permanent loss of agricultural land and the land resource will be safeguarded for future agricultural use.
- 13.21 There is no policy conflict with the NPPF or PPG and improving soil quality accords with the environmental improvement principles of NPPF Paragraph 180.
- 13.22 The Proposed Development is multifunctional and provides significant benefits for energy security, also contributing to climate change, food security, biodiversity and the soil ecosystem. No conflict exists between the proposal and national or local planning policy. At section 11.3 of this statement recent case law demonstrates the increasing acceptability of using BMV land for energy generation in conjunction with grazing. The Proposed Development accords with NPS EN-3, NPPF paragraphs 180 and 181 footnote 62, DP policy ED2 and NP ES3.

### 13.3 Air quality

- 13.23 It is considered that with respect to the Proposed Development, an Air Quality Mitigation Statement is not required because the generating station would not be associated with any triggering factors. However, for the EHDC's reassurance, solar farms operate as a passive form of energy generation. There are no moving parts, industrial processes, or ancillary elements such as generators that could be associated with emissions or air pollution impact.
- 13.24 Traffic associated with an operational solar farm is negligible and likely to be less than the traffic movements of existing arable farming operations. There will be a brief temporary increase in traffic associated with the temporary construction stage. Measures within this application's CTMP provide for relevant air quality mitigation including but not limited to prevention of vehicle idling and control of dust/dirt.
- 13.25 As stated previously within the PDAS, the Proposed Development will create enough clean, renewable electricity to power over c.15,000 homes, with associated CO2 savings of c.740,000 tonnes across the operational lifespan of the project. Accordingly, the Proposed Development will result in an overall significant net benefit in Air Quality terms.
- 13.26 The proposal therefore accords with DP policy EQ4 and NP ES3.

### 13.4 Ecology and ornithology

- 13.27 The site of the Proposed Development is not located within the boundary of any statutory or non-statutory designated sites of international, national or local nature conservation importance.
- 13.28 An Ecological Assessment Report, including a desk study, Phase 1 habitat survey, badger survey, preliminary bat roost assessment (PBRA), two seasons of breeding bird surveys, wintering bird surveys, great crested newt (GCN) Habitat Suitability Index (HSI) assessment and GCN environmental DNA (eDNA) surveys supports this planning application.
- 13.29 The assessment of impacts upon designations, habitats and species concludes as follows in summary:
- 13.30 **Designated Sites** – Three designated sites are located within 5km, the closest being Moor Hall Meadows (SSSI) approximately 3km to the southeast designated for species rich grassland for which no mitigation is required and 29 non-statutory sites within 2km, the closest being Cottered Road Verge (LWS) of species rich grassland for which mitigation measures will be applied to prevent accidental pollution from construction activities as detailed in the CEMP.
- 13.31 **Habitats** – There are species rich hedgerows within the site boundary which are Habitats of Principal Importance listed under Section 41 of the NERC Act (2006) for which measures will be undertaken to ensure those retained are protected from damage during construction. The majority of the grassland field margins were identified as improved or species-poor. An area of neutral semi-improved neutral grassland lies to the south-eastern corner of the site and will be retained and unaffected by the Proposed Development.
- 13.32 **Reptiles** – The site was not considered floristically diverse and of limited value to invertebrates. However, it provides suitable habitats for basking, foraging and hibernating reptiles and a precautionary method of works and measures to enhance the site are included within this application which mitigate potential for impacts on reptiles.
- 13.33 **Bats** – 5 trees with bat roosting potential were identified and will be retained with adequate protection buffers during the construction phase. No artificial lighting will be used during construction or operation of the Proposed Development.
- 13.34 **Badgers** – habitats and fields provide foraging opportunities. A confidential survey was undertaken and will be made available to EHDC directly.

- 13.35 **Otter and Water Vole** – habitats on site are considerable unsuitable for either mammal.
- 13.36 **Great Crested Newt** – the habitats on site are considered suitable with good connectivity to off-site terrestrial and aquatic habitats and as such precautionary measures will be implemented on site. Two waterbodies were considered ‘average’ suitability however a GCN survey provided negative results. Mitigation measures during construction will be undertaken to ensure no adverse impacts.
- 13.37 **Breeding Birds** – The site provides foraging, nesting for breeding birds and foraging for wintering birds and arable fields are suitable for ground nesting birds. The site has potential to provide habitat for breeding birds and as such Breeding and Wintering Bird surveys were carried out. The 2023 survey identified 24 breeding birds including a Species of Principal Importance, the skylark, alongside 5 other red listed species and 7 amber listed species. The 2024 survey identified 20 breeding birds including 6 red listed species and 4 amber listed species. Of the breeding birds all were identified as ‘local’ geographical importance apart from the skylark, of ‘county’ importance. On balance, it was not considered that the proposed development would result in impacts on breeding birds that are significant beyond site level. Any vegetation clearance will be undertaken outside of breeding season. A farmland bird mitigation strategy accompanies this application and ensures that there would be no adverse effects on the species present and using the site.
- 13.38 **Wintering Birds** – 25 species recorded met nature conservation criteria. 9 of these are species of Principal Importance listed under Section 41 of the NERC Act (2006); a further 9 are included on the BoCC Red List ; 2 the Golden Plover and Red Kite are Annex 1 species however these were recorded passing over and had no site interaction; and the resultant are included on the BoCC Amber List. The majority of wintering birds use hedgerows and field margins which will largely be retained and increased in extent. Skylark and corn bunting use arable fields for foraging and as such a mitigation plan for the breeding populations accompanies this application, and which ensures there will be no adverse effects on the species present and using the site.
- 13.39 The Applicant is willing to accept a condition requiring the provision of a Landscape Ecological Management Plan (LEMP) which will secure enhancement measures post determination **of any planning permission to** include new and augmented hedgerow, woodland planting, specimen tree planting, wildflower grassland seed mix beneath the arrays and bird boxes to retained trees, for 30 years or an agreed timeframe with EHDC.
- 13.40 As per the NPPF a BNG assessment has been undertaken which accompanies this application and sets out the Proposed Development will deliver a gain of 98.40% for habitats ,189.90% for hedgerows and 10.19% for watercourses. Accordingly the BNG associated with the Proposed Development is proposed as substantial.
- 13.41 The Proposed Development accords with NPPF paragraph 124 and 180, DP policies NE2, NE3 and NE4, and NP ES7 and ES3.

## 13.5 Fire safety

- 13.40 At this time the proposed battery type for the facility is lithium-ion which is the most widely used technology-type in energy storage applications. It is anticipated that a requirement of any emerging consent for the application will be a pre-commencement condition to confirm the type of technology proposed.
- 13.41 As with any form of built development, fire risk and how to deal with this is a key consideration of the design process. Energy storage has become an increasingly common part of the energy mix, and as set out, is crucial to support the non-synchronous energy supply from wind and solar. As the industry has matured, so too the technology has improved, as has the understanding in respect of fire risk and the approach to dealing with same.

- 13.42 Fire or explosion from energy storage systems is rare. Nevertheless, the risk must be designed out or reduced to as low as reasonably practicable.
- 13.43 A key design precaution is an efficient system cooling process to prevent (or at least slow) thermal runaway processes. Thermal runaway is the uncontrolled heating of an energy storage system due to a self-sustaining chemical reaction.
- 13.44 In addition, the use of fire barriers as part of the energy storage units and with a predefined minimum fire resistance, would slow down propagation, making the intervention of first responders easier and potentially preserving a portion of the battery system.
- 13.45 The energy storage facilities proposed are also dispersed across the site and not condensed together. This design measure alone protects against the potential for fire spread. Other precautionary measures include:
- Energy storage system monitoring;
  - Smoke detection;
  - Flame detection;
  - Heat detection;
  - Thermal imaging; and
  - Gas detection.
- 13.46 In the very unlikely event that an incident were to occur, any cell failure or even potential fire would be contained within the individual component enclosures, which are equipped with fire detection, alarming and automated extinguishing systems. Early detection is key to preventing or slowing thermal runaway.
- 13.47 The Applicant can confirm that the supplier and site operator (maintenance and servicing provider) will align to all relevant and current legislation and best practice for the design, construction, and operation of the facility. This will include all matters in relation to fire safety, including management systems, monitoring, control, isolation, detection, and suppression systems. A Fire Safety Management Procedure will be prepared for the site and agreed with EHDC as an anticipated requirement through condition of any emerging consent.
- 13.48 Alongside the in-built safety measures outlined, this approach will negate safety risk in the unlikely event of fire.

## 13.6 Flood Risk

### Flood Risk

- 13.49 A Flood Risk Assessment and Sustainable Drainage Strategy have been undertaken for the Proposed Development following the guidance of the NPPF and PPG. Environment Agency (EA) mapping indicates that the majority of the site is located within Flood Zone 1 however the central portion lies within Zones 2 and 3 adjacent to River Beane and further area to the south within Zone 2 adjacent to a watercourse. The lowest edge of solar panelling will be set to 0.3m above ground level to mitigate flood levels.
- 13.50 There are also areas of overland flow/surface water flooding along the watercourses. The solar panels will be raised off the ground and as such, the development is unlikely to cause an obstruction to the flow paths/ponding.
- 13.51 Flooding from groundwater, reservoir and sewer sources is also considered to be low.

## Hydrological Appraisal

- 13.52 The incorporation of appropriate management techniques will mitigate the potential increase in runoff from the Proposed Development.
- 13.53 The design of the development, as well as surface water and soil management measures outlined in Section 10, will ensure that there is negligible alteration to local drainage patterns and flow directions and manage suspended sediments for entering the drainage channels.

## Surface Water and Soil Management Measures

- 13.54 SuDS techniques shall be incorporated into the design, when and where required, and will work in conjunction with existing field drainage to manage the discharge of any excess water from the Site.
- 13.55 Where construction has resulted in soil compaction, the areas between panel rows would be tilled / scarified to an appropriate depth and the receded with an appropriate vegetation cover.
- 13.56 All areas of the Site, where appropriate, will have vegetation cover at all times.
- 13.57 Any existing field drainage system will be restored.
- 13.58 Access tracks finish will be permeable. Appropriate swales will be used where required and this will be explored at detailed design stage.
- 13.59 The panels will be elevated above the defined floodplain and will not cause any blockage overland flow routes.
- 13.60 Gravel subbases will be provided for ancillary infrastructure to attenuate up to the 1 in 100-year plus 40% climate change rainfall extent.
- 13.61 The FRA demonstrates:
- The Proposed Development would neither exacerbate existing flooding problems nor increase the risk of flooding on Site or elsewhere;
  - Surface water runoff will be mitigated by maintenance of a vegetation cover and gravel subbases;
  - With appropriate surface water and soil management techniques, there is negligible alteration to local drainage patterns and directions within the Site;
  - In summary, the Proposed Development is at 'low' to 'moderate' risk of flooding from all sources assessed, and with appropriate surface water and soil management measures, would cause negligible effects on the existing hydrological regimes.

## 13.7 Glint and Glare

- 13.62 A Glint and Glare assessment was undertaken to assess the potential impact of the Proposed Development on road safety, residential amenity and aviation activity associated with Graveley Airfield, Benington Airport, Rush Green Airfield, Wisbridge Farm Airfield, Note;y Green Airfield and Newnham Airfield.

## Assessment Conclusions Roads

- 13.63 Solar reflections are geometrically possible towards a 1.9km section of the A507 and a 2.9km section of the B1037.
- 13.64 Screening in the form of existing vegetation, existing buildings or intervening terrain is predicted to significantly obstruct views of reflecting panels such that solar reflections will not be experienced

by road users along a 1.3km section of the A507 and a 2.4km of the B1037. No impact is predicted along these sections, and accordingly mitigation is not required.

13.65 For 200m of the B1037, partial screening in the form of existing vegetation is predicted to only allow for short, fleeting views of the reflecting panels. A low impact is predicted, mitigation is not recommended.

13.66 For the remaining 600m section of the A507 and 300m section of the B1037, mitigation is recommended. A moderate impact is predicted, prior to mitigation. Significant screening is proposed such that after mitigation there will be no significant impacts remaining where no further mitigation is required.

13.67 Further to implementation of the landscape planting proposed as part of the landscape mitigation plan which forms part of the planning pack, no significant impacts are predicted along roads.

### **Assessment Conclusions Dwellings**

13.68 Solar reflections are geometrically possible towards 48 of the 53 assessed dwellings.

13.69 For 44 of the dwellings, screening in the form of existing vegetation and/or intervening terrain is predicted to significantly obstruct views of reflecting panels such that solar reflections will not be experienced by residents. No impact is predicted, and mitigation is not required.

13.70 For two of the dwellings, existing vegetation or intervening terrain is predicted to partially obstruct views of reflecting panels for an observer on the ground floor, the remaining visible reflecting panels will have a separation distance of over 900m. A low impact is predicted, and mitigation is not recommended.

13.71 For the remaining two dwellings mitigation is recommended. This recommendation has been taken account of in the landscape mitigation plan and appropriate screening is proposed, meaning there are no significant residual impacts predicted.

### **Assessment Conclusions Aviation**

13.72 No significant impacts are predicted on any of the identified airfields.

## **13.8 Heritage, Archaeology and Geophysical Survey**

13.73 A Heritage Statement accompanies this application.

13.74 The site is not located within a Conservation Area nor does it contain any designated or non-designated built heritage assets. However, due to the presence of a large number of built heritage assets being located within a 1 km search study radius of the proposal site, it is necessary to ascertain if the settings, or significance, of these buildings would be affected by the proposals.

13.75 An extensive visit to the proposal site and local area in July 2023 enabled the majority of designated heritage assets within the search area to be scoped out as they would not be affected by the Proposed Development. This is due to the facts that their historical associations, settings, and thus significance are not reliant upon the proposal site and they remain well removed and/or screened from it due to extant development and/or interceding vegetation. Further assessment was, though, required in respect of seven designated built heritage assets:

- Cromer Windmill – Grade II\* UID:1101453;
- Chequers – Grade II UID:1101452;
- The Brick Barn at Lodge Farm - Grade II UID: 1101291;
- Church Farmhouse – Grade II UID: 1308151;



- Barn at Church Farmhouse – Grade II UID: 1102703;
- Old Farm Buildings at Bancroft Farm – Grade II UID: 1295626; and
- Hovel at Bancroft Farm – Grade II UID: 1347988.

- 13.76 The Heritage Statement concludes that none of these would be directly (materially) harmed by the Proposed Development and that the setting, or significance, of five of these would be less than substantial, at the lower end of that scale, or neutral.
- 13.77 In respect of the Grade II\* Cromer Windmill, it was concluded that the harm to its significance is less than substantial at the higher end of the scale and that to the Grade II Brick Barn at Lodge Farm is less than substantial at the mid-range of the scale.
- 13.78 Non-designated heritage assets include the Braughing – Baldock Roman Road within the site. Archaeological remains identified within the proposal site comprise the projected line of the Roman Road and undated cropmarks of uncertain origin. The projected Roman road alignment as recorded on the HER is currently avoided by development.
- 13.79 In the locale there is sporadic multi-period evidence of activity from the Prehistoric period onwards, but limited direct evidence of settlement remains. This suggests that the potential for significant archaeological remains to be present within the proposal site is generally low to moderate. This potential should also be considered alongside the very limited below-ground impacts of solar farm developments, meaning that harm to the significance of buried archaeological remains within the proposal site is unlikely to be a serious concern within the planning process.
- 13.80 A geophysical survey was undertaken and concludes that the potential for significant archaeological remains to be present within the site is generally low to moderate. Due to the very limited below ground impacts of solar developments, harm to archaeological remains is unlikely.
- 13.81 A phased programme of archaeological fieldwork, commencing with trial trench evaluation, is proposed at post-determination stage to be secured by planning condition in order to test the assessed archaeological potential of the proposal site and characterise any archaeological remains present within its boundary.
- 13.82 The levels of harm as per para 208 of NPPF have been assessed and it is considered that the public benefits of the solar farm outweigh the less than substantial harm assessed.
- 13.83 The Proposed Development would result in limited (and reversible) harm to the character of the historic landscape, although the recorded Historic Landscape Characterisation type is not rare in this part of the county and is not considered particularly important.
- 13.84 As such the Proposed Development accords with NPPF paragraphs 195 and 208, DP policies HA1, HA4, HA7 and HA8 and NP ES3.

## 13.9 Landscape and Visual

- 13.85 An LVIA has been undertaken based on the relevant guidance described in the Guidelines for Landscape and Visual Impact Assessment, Third Edition (The Landscape Institute and Institute of Environmental Management & Assessment, 2013) (GLVIA3) and the Technical Guidance Note 06/19 Visual Representation of Development Proposals (The Landscape Institute, 2019).
- 13.86 The LVIA identifies and determines the effects on landscape character, landscape features, visual receptors and visual amenity as a result of the works proposed as part of the construction and the future presence and operation of the Proposed Development.
- 13.87 The Proposed Development is located within a single Landscape Character Area identified as South Suffolk and North Essex Clayland NCA (86). The identified NCA has been assessed for both construction and operational phase effects associated with the Proposed Development. The NCA has been predicted to experience localised, moderate to major, adverse, short-term

reversible effects assessed as significant during the construction phase, restricted to areas contained within the Proposed Development site only, with surrounding landscape predicted to experience no significant indirect effects. During the operational phase of the Proposed Development, moderate, localised medium-term assessed as significant effects are predicted, reducing to minor localised and not significant following the successful establishment of planting associated with the Proposed Development which aids integration and screening. Remaining portions of the NCA outwith the Proposed Development site are predicted to experience no significant, indirect effects.

- 13.88 The predicted significance of landscape effect for the Upper Beane Valley Tributes during the construction phase is localised, moderate to major, adverse, short-term reversible effects assessed as significant during the construction phase, restricted to areas contained within the Proposed Development site only, with surrounding landscape predicted to experience no significant indirect effects. During the operational phase of the Proposed Development, moderate, localised medium-term assessed as significant effects are predicted, reducing to minor localised and not significant following the successful establishment of planting associated with the Proposed Development which aids integration and screening. Remaining portions of the NCA outwith the Proposed Development site are predicted to experience no significant, indirect effects
- 13.89 The Proposed Development has been assessed as not giving rise to any direct or indirect effects on any of the landscape designations including; AONB's (National Landscapes); National Parks; Historic Parks and Gardens; LNR's or CA's.
- 13.90 There are five PRoWs located within the study area associated with the Proposed Development site, one of which (Cottered 028) traverses through the site. Recreational receptors on this PRoW are predicted to experience localised significant effects during the construction and initial operational phases of the Proposed Development, with impacts reducing to not significant in the long-term as proposed planting establishes and aids screening and integration of the Proposed Development.
- 13.91 A total of 18 viewpoints have been assessed, for both construction and operational phases of the Proposed Development. Six viewpoints are predicted to experience localised significant effects during the construction phase, which is not unexpected given that these viewpoints lie within proximity to the Proposed Development site.
- 13.92 During initial operational phase of the Proposed Development, six of the viewpoints assessed are predicted to experience localised significant effects in the medium-term, with predicted effects for all views assessed reducing to not significant following successful establishment of proposed planting. It is considered that proposed planting will reduce the predicted effects, such that views are predicted to experience not significant effects as visible elements of the Proposed Development will become screened in views. An integrated package of soft landscaping interventions is proposed.
- 13.93 The Proposed Development accords with NPPF paragraph 180 and DP policies GBR2, DES2, DES3 and CFLR3 and NP ES3.

## 13.10 Noise

- 13.94 An acoustic impact assessment is submitted in support of this application.
- 13.95 The current sound environment at properties surrounding the site typically consists of traffic along local roads including the A507 and wider road network, birdsong, a bird scarer located to the north of the Proposed Development, wind in the trees and foliage, the pattering of rain, localised human activities and aircraft overhead.
- 13.96 A survey of the existing background and ambient sound levels was undertaken at four locations considered representative of the environment at properties neighbouring the Proposed

Development as discussed and agreed with the Environmental Health Officer (EHO) dealing with the Proposed Development.

- 13.97 Sound level meters (SLMs) were installed at identified measurement locations between the 22<sup>nd</sup> and 29<sup>th</sup> February 2024. The equipment was housed with appropriate outdoor protections and uprated microphone wind shields. The microphones were placed at a height approximately 1.3 m above the ground.
- 13.98 A model of the solar and energy storage facilities, including the site surroundings was developed using sound modelling software. The predominant sources of sound to be introduced as part of the Proposed Development are the inverters/power conversion system units, transformers, energy storage containers and substation/transformer.
- 13.99 The site has been designed on an iterative basis with a view to minimising, as far as practicably possible, the projected operational sound levels with due regard to the relative sensitivity of neighbouring premises and all other site constraints.
- 13.100 The assessment indicates that the predicted sound impact from the Proposed Development at the nearest neighbouring properties is negligible for daytime and negligible-to-low for night-time periods.
- 13.101 The results show that sound levels resulting from the operation of the site will generally be low in the context of relevant assessment criteria (BS 4142) and can be considered 'present and not intrusive' in terms of government policy and industry guidance.
- 13.102 A warrantee and/or guarantee will be sought from the manufactures of the equipment to be installed as part of the Proposed Development that limits the potential for a tonal character to be present in the sound generated. This will also allow for appropriate recourse with the manufacturer if tones (in the low frequency region or otherwise) are present in practice, should the site become operational.
- 13.103 The Proposed Development locates generating noise sources away from sensitive receptors and the predicted impacts are considered to be acceptable therefore the Proposed Development accords with NPPF paragraph 191, DP EQ2 and NP ES3.

## **13.11 Transport**

- 13.104 A Transport Statement and CTMP form part of the suite of documents that accompany the planning application for the Proposed Development. This was informed by feedback provided as part of the pre-application process with EHDC as well as direct engagement between the RPS Team and Hertfordshire County Council as the Highway Authority.
- 13.105 Access arrangements off the A507 seek to avoid construction HGVs travelling along constrained sections of the public highway. Construction materials will all enter the site via the A507 access into the northern parcel, and materials designated for the southern parcel will be transhipped onto smaller vehicles (e.g. tractor and trailers, or light goods vehicle) in the main temporary construction compound (located adjacent to the access track off the A507). From here, materials will be transferred internally across the site to the southern temporary construction compound to facilitate transit between the northern and southern parcels, via a tractor and trailer on Cromer Heath. This approach will reduce / minimise the distance travelled by construction HGVs along constrained sections of the public highway, and appropriate traffic management measures can be adopted where necessary.
- 13.106 As set out, the construction phase will occur over a period of 18 months. Overall, the delivery of materials to site will generally occur within the first 5 months of the project's construction period, with a peak at month 3, with an estimated 20 HGV deliveries per day. This would equate to 40 HGV movements per day, or one HGV movement on average every 15 minutes during the peak month of construction.

- 13.107 The booking system and traffic management measures to be adopted are detailed within the CTMP is expected to be conditioned to the grant of any planning consent accordingly. All arrivals will be known in advance as part of the HGV access arrangements, and all departing HGV movements will be managed on-site to ensure no departing HGVs meet an arriving HGV through the access junctions.
- 13.108 The construction of the Proposed Development requires a total of 146 staff across the site. Construction staff will typically arrive in teams of up to 10 persons in working 10-person minivans, as per most construction sites. Whilst the number of construction staff will vary across the construction phase, in accordance with a worst-case scenario approach, the transport assessment considers month 3 (associated with peak HGV deliveries) as well as anticipated peaks in construction staff in months 9 and 16. During Month 3 there will be 19 vehicles carrying construction staff arriving on site per day and in months 9 and 16 there will be 37 and 16 vehicles arriving per day respectively. All construction staff cars would park on site during the day.
- 13.109 All staff are anticipated to arrive at the site during the 30-minute period preceding the start of the operating day (i.e. 07:30 to 08:00 Monday to Saturday) and depart during the 30-minute period that follows the end of the operating day (i.e. 18:00 to 18:30 Monday to Friday and 13:00 to 13:30 on Saturdays). Staff trips are likely to travel to / from different origins / destinations and hence spread their movement across the highway network.
- 13.110 The Proposed Development will have negligible trip generation during its operational period.
- 13.111 There will be occasional visits throughout the year (typically once per week) made by 4x4 vehicles for inspection and maintenance.
- 13.112 The Proposed Development can achieve a safe and suitable means of access for the construction and operational period described, and the Proposed Development will not have a severe impact on the road network or an unacceptable impact of highway safety.
- 13.113 The Proposed Development accords with NPPF paragraphs 114 and 115, and DP policies TRA1, TRA2, and TRA3 and NP ES3.

## 14 SUSTAINABLE DEVELOPMENT ASSESSMENT

- 14.1 The Proposed Development represents a sustainable scheme that is supported by local and national policy. Sustainable development is defined as meeting the needs of the present without compromising the ability of future generations to meet their own needs. Assessment of sustainability can be broken down under three primary headings; economic, social, and environmental.
- 14.2 A summary of the Proposed Development with respect to the ambits of Sustainable Development is set out as follows.

### Economic

- 14.3 The solar farm represents a temporary farm diversification strategy. Although the site will remain in co-located agricultural grazing use it will also provide a guaranteed income to the farm at a precarious time for UK agriculture when factors like extreme weather events due to climate change put smaller farms at increased financial risk.
- 14.4 The co-location of grazing use will enable the farm to maintain an agricultural use and an additional income stream alongside the solar array. Although the operation of the solar farm will reduce the intensity of the agricultural use, this presents an opportunity to rest and improve the soil over the lifetime of the Proposed Development. Taking the land out of intensive crop rotation is an investment in soil quality and future food production.
- 14.5 Solar farms represent an effective use of agricultural land that is not discordant with current or historic agricultural land use. The practice of using farmland as a renewable energy resource goes back centuries. Solar is a very efficient way of using land to produce energy when compared with crops grown for biofuels such as biodiesel (predominantly from oil seed rape) and bioethanol (wheat and sugar beet). The crop on the land for 2024 is triticale grown for anaerobic digestion. Even ignoring the fuel used to sow and harvest energy crops and produce agrochemicals, solar produces 6-20 times more energy per acre than energy crops.
- 14.6 Farming for energy is an agricultural use, and farmland for “home grown” energy represents an efficient use of land. Energy crops are significantly less energy efficient, have carbon costs associated with producing comparatively less energy, and represent intensive practices that degrade soil and water quality and harm biodiversity. In the end, dedicating agricultural land to temporary solar energy generation (with co-located grazing) will release more land for growing human and animal food crops because less land will be needed for inefficient energy crops. Consequently, allowing solar on agricultural land aligns with policies for the protection of agricultural land and the rural economy.
- 14.7 The Proposed Development will provide construction and engineering employment during implementation and operation. In isolation this may be less significant without a guarantee of local construction jobs, although this is caveated in that where possible local workforce and contractors will be utilised. However, when considered more holistically, it is part of a growing industry (the future of energy technology). Supporting today’s renewable energy developments is support for a sustainable economic future. Local employment, apprenticeship opportunities, and research at local universities are part of a wider network that rely on projects like the Proposed Development. Considering a scheme on its own merits does not mean considering it in isolation from the role renewable energy developments play in enabling a more resilient, secure, low carbon economy.
- 14.8 Direct local economic benefits during the construction stage include the use of locally based contractors where possible, wider UK contractors where required, and the use of facilities by construction staff. Direct benefits also include landowner benefits whilst wider indirect benefits include the supply of construction materials, which will be sourced locally as much as is feasibly possible.

- 14.9 There will be similar economic benefits at the time of decommissioning.
- 14.10 There will be assured direct local economic benefit for the life of the generating station through business rates. While agricultural economic activity will remain in a co-located way, the temporary change of use will mean there is no business rate exemption which has both economic and social benefit through EHDC's public interest spending.
- 14.11 Solar is an essential part of the UK's energy security strategy; it's delivery will ensure the UK is economically stable and resilient, reliant on home grown energy instead of imports, with the uncertainties and moral compromises this can entail. Energy security is essential to energy affordability, evidenced by shortages, and the recent extreme price rises that are central to the current cost of living crisis.
- 14.12 The above does not represent the whole of the Proposed Development's economic benefit because the principles of sustainable development are intrinsically linked. The Proposed Development is a contribution to the betterment of local ecosystem services. Ecosystem Services are the benefits provided by ecosystems that contribute to making human life both possible and worth living. Examples include 'goods and services' like food, water, energy, and regulation of floods, and non-material benefits such as recreational and wellbeing benefits.
- 14.13 Damage to the environment has a degrading impact on ecosystem services in a way that has direct and indirect economic impact. In a context of a nationally and locally declared climate emergency it is unreasonable and not reflective of sustainable development objectives to overlook the positive economic knock-ons from the social and environmental benefits of the Proposed Development or the negative impacts from a failure to deploy enough renewable energy generating stations.

### Social

- 14.14 A community benefit fund will be made available, the details of which will be discussed in due course with the relevant parties.
- 14.15 As with the economic arm of sustainability, many of the positive social gains are indirect effects of ecosystem services and green infrastructure benefits and are established by a holistic consideration of inter-dependencies. For example, the increase in business rates can mean more money for local social-benefit spending. Conversely, the more money EHDC has to spend fixing potholes for example, caused by an increase in extreme weather events, the less money is available for public-good spending on the maintenance of heritage assets or the provision of outdoor play areas.
- 14.16 It is also well established that enhancements to biodiversity in one area have positive ecological effects elsewhere, and that there are both direct and indirect links between environmental quality and psychological and physical health. The substantial Biodiversity Net Gain associated with the project will therefore lead to positive social impacts.
- 14.17 Therefore, the Proposed Development will deliver both direct and indirect social benefits.

### Environmental

- 14.18 The Proposed Development will have an export capacity of 49.9MW and generate a significant amount of electricity from a renewable resource. This would result in the equivalent amount of electricity currently sourced from fossil fuel combustion no longer being required. The Proposed Development can therefore displace a large amount of fossil fuel generated electricity leading to large CO2 savings.
- 14.19 The Proposed Development is estimated to provide the energy needs for approximately 15000 (based on the average home using 8kwh per day) homes per annum. This represents an



associated saving of c.740,000 tonnes of CO<sub>2</sub> over its 40-year operational lifetime and a substantial benefit which would be delivered if planning permission were to be granted.

- 14.20 The carbon payback period for a solar farm is typically 1–4 years, which includes emissions from the supply chain. This means that after the carbon payback period, the electricity generated by the solar farm is close to zero carbon.
- 14.21 The array will enhance habitats and support more wildlife. The land will no longer be sprayed with pesticides and fertilisers, improving the soil and environmental quality. By implementing the proposed landscape and biodiversity strategy the Proposed Development will deliver a gain of 98.40% for habitats, 189.90% for hedgerows and 10.19% for watercourses. This is a substantial benefit for biodiversity and far exceeds the minimum 10% requirement.
- 14.22 The Proposed Development aligns with the environmental arm of sustainable development and will play a significant role in supporting the Government's commitment to reduce greenhouse gas emissions and reach net zero by 2050.

## 15 PLANNING BALANCE AND CONCLUSION

### Planning balance

- 15.1 A large and rapid increase in electricity generation from renewable sources is essential for the UK to meet its net zero emissions targets.
- 15.2 The Government realises the potential solar energy can contribute to national renewable energy generation, acknowledging not enough is being done to both promote and allow for increased solar provision across the country. In response to this, the Government has published a paper 'Powering Up Britain – Energy Security Plan' (April 2023), which states:

*"The UK has huge deployment potential for solar power, and we are aiming for 70 gigawatts of ground and rooftop capacity together by 2035. This amounts to a five-fold increase on current installed capacity. We need to maximise deployment of both types of solar to achieve our overall target.*

*Ground-mounted solar is one of the cheapest forms of electricity generation and is readily deployable at scale. The government seeks large scale ground-mount solar deployment across the UK, looking for development mainly on brownfield, industrial and low and medium grade agricultural land. Solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land. We consider that meeting energy security and climate change goals is urgent and of critical importance to the country, and that these goals can be achieved together with maintaining food security for the UK. We encourage deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement. The government will therefore not be making changes to categories of agricultural land in ways that might constrain solar deployment.*

*The government considers that there is a strong need for increased solar deployment, as reflected in the latest draft of the Energy National Policy Statements. We recognise that as with any new development, solar projects may impact on communities and the environment. The planning system allows all views to be taken into account when decision makers balance local impacts with national need."*

- 15.3 Powering up Britain also recognises that solar projects may impact local communities but that decision makers must balance local impact with national need.
- 15.4 Solar is, therefore, readily deployable at very large scales. It is one of the cheapest forms of renewable electricity generation, can be sited to facilitate biodiversity enhancements, can be done in parallel with farming and plays a key role in the realisation of the Government's aims to increase renewable energy production.
- 15.5 Renewable energy projects are a critically important component of meeting the urgent national need for a secure, reliable, cost efficient, low carbon supply of energy and form a key part of the delivery of Government's energy policy, climate change policy and legally binding net zero targets.
- 15.6 The energy storage element of the Proposed Development plays a crucial part in utilising renewable electricity and meeting the Government's objective of achieving a reliable, cost effective and zero carbon electricity supply. The efficiency of the Proposed Development is significantly increased because it combines co-located renewable energy generating and energy storage facilities. There are many benefits directly associated with this relating to energy security, reliability, cost efficiency, the transformation to a decarbonised economy and climate change, and other wider environmental benefits, including reduced pollution, improved biodiversity and improved air quality.

- 15.7 National and local planning policy provides strong support for renewable energy infrastructure provided environmental impacts are or can be made acceptable.
- 15.8 This application is supported by a suite of environmental and technical information which demonstrates that the Proposed Development would not cause unacceptable significant adverse effects on the environment, amenity or highway safety.
- 15.9 There is no significant harm to any designated sites of Importance for biodiversity resulting from the proposed development in accordance with paragraph 186 of the NPPF. Where impacts are predicted on biodiversity, these are adequately mitigated for within the suite of accompanying environmental reports.
- 15.10 There is no substantial harm or loss of any designated or non-designated heritage assets as a result of the Proposed Development in accordance with paragraph 205 of the NPPF.
- 15.11 There is some localised and temporary landscape harm during the Proposed Development's initial operational phase. Six of the viewpoints assessed are predicted to experience localised significant effects in the medium-term, with predicted effects for all views assessed reducing to not significant following successful establishment of proposed planting. Weighed against the national need and urgency to decarbonise the grid by 2030, achieve net zero by 2050 and strengthen UK energy security of supply, and few grid scale renewable energy developments in the district, the localised and temporary harm is clearly outweighed by national priorities with the balance tipping firmly in favour of the Proposed Development.
- 15.12 The provision of renewable energy carries substantial weight in the planning balance. Ground-mounted solar farms are fundamental to providing energy security and achieving net zero targets. Solar farms are identified in national policy as critical national priority infrastructure. Further positive weight is attributed to the economic benefits of farm diversification and the wider direct and indirect economic benefits associated with the construction of the Proposed Development.
- 15.13 The applicant has a grid connection agreement in place with UK Power Networks (UKPN), on site to a 132kV line, consequently, the scheme will be delivered as quickly as possible.
- 15.14 Significant weight is attributed to biodiversity net gain. Good working practices can be ensured through planning controls to maintain a high-quality environment for the life of the Proposed Development.
- 15.15 Policy and guidance are clear that solar farms are not prohibited on BMV where their location is justified. The need to be in close proximity to the point of connection on a site of this scale justifies the Proposed Development's location. A co-located grazing use will continue the site's agricultural use and following a temporary period of 40 years, the site will revert back to its former use. Therefore, the proposal does not result in the permanent loss of BMV, or agricultural land nor will it prevent ongoing agricultural use.
- 15.16 Additional benefits will result from the proposed less intensive farming practices which will lead to increased soil fertility, reduced erosion and compaction and improved drainage. The site will facilitate carbon sequestration for a period of 40 years.
- 15.17 Furthermore, it is considered that the substantial weight afforded to the provision of renewable energy alone outweighs the limited temporary adverse impacts identified.
- 15.18 Considering the significant benefits of the Proposed Development alongside the minimal degree of environmental impact which would arise, the Proposed Development has been demonstrated to comply with national and local planning policy. It is concluded that the planning balance tilts firmly in favour of the Proposed Development as a recognised and meaningful contributor towards sustainable development and a decarbonised energy system. Furthermore, it is considered that there are no significant adverse impacts resulting from the Proposed Development which would demonstrably outweigh its recognised benefits.

- 15.19 The Proposed Development accords with the Development Plan as a whole, national planning policy and guidance and other material considerations, including National Policy Statements.

### Summary and conclusion

- 15.20 This PDAS is submitted in support of a planning application prepared on behalf of RES for a 49.9MW solar generating station comprising ground-mounted photo voltaic panels, BESS and associated infrastructure and works, together with biodiversity and landscape enhancements.
- 15.21 The Proposed Development benefits from strong national and local planning policy support and a significant raft of material considerations associated with energy policy, climate change and resilience, and the transition to decarbonising the power sector. The need for the development is clear and the development will make a valuable contribution to national and renewable energy generation and carbon reduction targets.
- 15.22 The substantial local, national and international environmental benefits associated with the proposal and the role it will help to play in reaching net-zero targets, electricity decarbonisation and emission reduction targets outweigh the small amount of localised impact. The carbon payback period for a solar farm is typically 1–4 years, which includes emissions from the supply chain. This means that after the carbon payback period, the electricity generated by the solar farm is close to zero carbon.
- 15.23 Appropriate consultation with EHDC and the local community has been undertaken as part of the pre-application process.
- 15.24 The environmental assessments have demonstrated that the Proposed Development will not, subject to mitigation and planning and environmental controls, result in a significant adverse environmental impact. The Proposed Development will generate renewable energy and allow an agricultural use to continue. The Proposed Development will, with positive management, restore and conserve soil and water quality and deliver biodiversity net gain which will be of benefit to flora, fauna and human health and wellbeing.
- 15.25 In conclusion, the planning balance tilts firmly in favour of the Proposed Development as a recognised and meaningful contributor towards sustainable development.
- 15.26 It is respectfully requested planning permission is granted for the Proposed Development.

## APPENDICES