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Hilfield Solar Farm and Battery Storage

Planning Statement

on behalf of Elstree Green Limited

Prepared by Aardvark EM Limited | December 2020 | Document Reference: R003

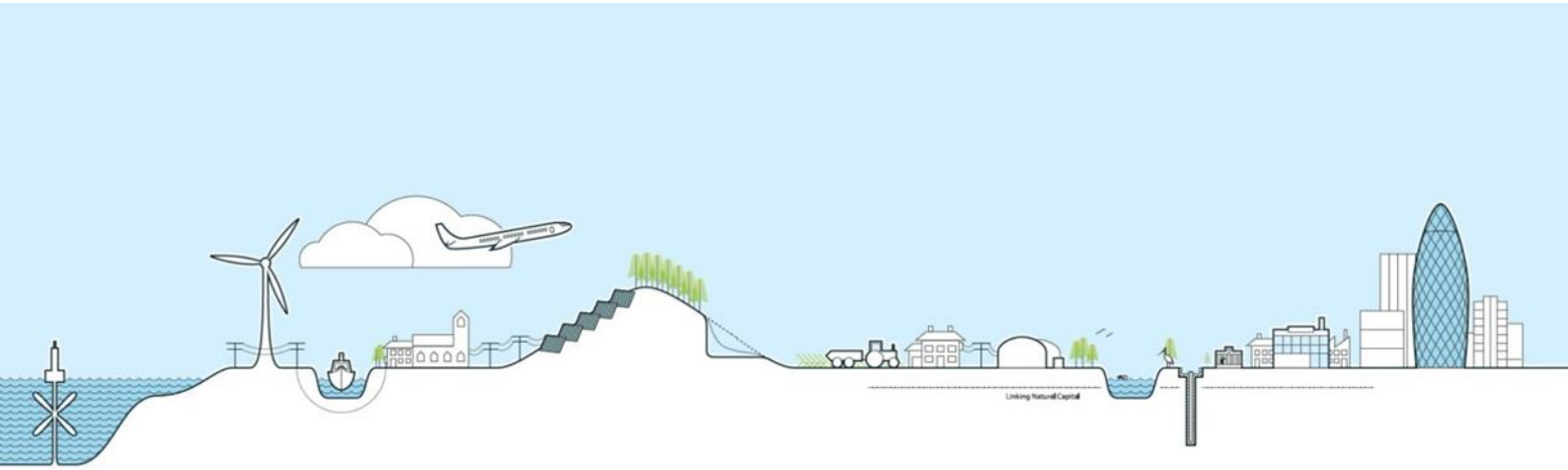
PLANNING STATEMENT

Accompanying a planning application for the construction and operation of a grid-connected solar photovoltaic farm with battery storage, other ancillary infrastructure, access, landscaping and biodiversity enhancements on Land to the North East and West of Elstree Aerodrome, Hertfordshire

DECEMBER 2020

Prepared By

aardvark
environment matters



Project Quality Control Sheet

ORIGINAL	Author	Checked by	Approved by
Signature			
Date	22/12/2020	22/12/2020	22/12/2020
Company	Aardvark EM Ltd	Aardvark EM Ltd	Aardvark EM Ltd

Location: Land to the North East and West of Elstree Aerodrome, Hertfordshire

Grid Reference: TQ 515093 196697 (centre of application site)

Project Manager: Nicholas Leaney

Report Authors: Nicholas Leaney

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Report Number: **R003**

Report Status: **FINAL**

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1 Introduction

This Planning Statement has been prepared by Aardvark EM Limited on behalf of Elstree Green Limited ("the Applicant") to accompany a full planning application to Hertsmere Borough Council (HBC) for the construction, operation and decommissioning of a grid connected solar farm with battery storage and associated infrastructure ("the Proposed Development") on Land to the northeast and west of Elstree Aerodrome, Hertfordshire ("the Site"). The development will provide a reliable source of clean renewable energy which will be supplied to domestic and commercial consumers via the National Grid network.

The Proposed Development would supply up to 49.9MW to the National Grid, providing the equivalent annual electrical needs of approximately 15,600 family homes in Hertsmere. The anticipated CO_2 displacement is around 25,400 tonnes per annum, which represents an emission saving equivalent of a reduction in c.8,100 cars on the road every year. It is also estimated the solar farm will increase the total amount of renewable electricity generated in Hertsmere from 5.4% to 20%, bringing Hertsmere closer to the national average of 33% electricity generated from renewable sources.

The battery storage facility would be utilised to reinforce the power generation of the solar farm. Storing energy at times of low demand and releasing to the grid in periods of higher demand or when solar irradiance is lower, as well as providing balancing services to maintain National Grid stability.

There is an urgent requirement for renewable energy generation which the Proposed Development would help fulfil; whilst being suitable to the Site and its surroundings; according with national and local planning policy and relevant material planning considerations; and delivering significant biodiversity benefits.

In accordance with the validation requirements of HBC, this report sets out the planning policy context relating to the benefits and acceptability of the principle of the Proposed Development assessed against the design principles and concepts that have been applied and how environmental issues relating to the proposed scheme have been addressed.

Whilst the Planning Statement is set out to be read as a standalone document, it should be read in the context of the entire submission documentation in order to fully understand the Proposed Development, its potential impacts and planning merits.

1.1 Accompanying Documentation

The covering letter and planning application form for the Proposed Development (Document Ref: R001) is accompanied by the following documentation:

Document	Author	Reference
Covering Letter, Application Form and Certificates	Aardvark EM Limited	R001
Planning Application Drawing Pack	Aardvark EM Limited and Blueleaf	R002
Planning Statement including Green Belt Assessment	Aardvark EM Limited	R003
Design and Access Statement	Aardvark EM Limited	R004
Construction Traffic Management Plan	Transport Planning Associates	R005

Non-Technical Summary of the Environmental Statement	Aardvark EM Limited and Pager Power Limited	R006
Environmental Statement Main Text	Aardvark EM Limited and Pager Power Limited	R007
Environmental Statement Technical Appendices	Aardvark EM Limited and Pager Power Limited	R008
Landscape and Ecological Management Plan	LDA Design and BSG Ecology	R009
Flood Risk Assessment and Drainage Strategy	RMA Environmental	R010
Noise Impact Assessment	Inacoustic	R011
Glint and Glare Assessment	Pager Power Limited	R012
Ecological Appraisal Report (including Biodiversity Net Gain Statement)	BSG Ecology	R013
Statement of Community Involvement	Alpaca Communications	R014
Agricultural Land Classification Report	Askew Land and Soil Limited	R015
Ground Investigation Assessment	R M Cameron Environmental Services Ltd	R016
Heritage Desk Based Assessment	Headland Archaeology	R017
Landscape and Visual Impact Assessment	LDA Design	R018

Table 1.1 Documents Comprising the Planning Application

The planning application drawings submitted in the Planning Application Drawing Pack (see Document Ref: R002) are set out in Table 1.2 below:

Drawing No	Plan Name
HF1.0	Location Plan
HF1.1	Location Plan – Eastern Parcel
HF1.2	Location Plan – Western Parcel
HF2.0	Proposed Site Plan
HF2.1	Proposed Site Plan – Eastern Parcel
HF2.2	Proposed Site Plan – Western Parcel
HF3.0	PV Elevations
HF4.0	Inverter Transformer Stations

HF5.0	Internal Access Road Elevations
HF6.0	Fence and Gate Elevations
HF7.0	Weather Station Detail
HF8.0	Substation Elevations
HF9.0	Control Room Elevations
HF10.0	Auxiliary Transformer
HF11.0	CCTV Elevations
HF12.0	Battery Container Elevations 40ft
HF13.0	Storage Container Elevations
7533-012	Landscape and Ecological Enhancement Plan (LEEP)
HF14.0	Field Topographical Data East
HF15.0	Field Topographical Data West

Table 1.2: Planning Application Drawings

1.2 The Applicant

Elstree Green Limited is a wholly owned subsidiary of Enso Green Holdings Ltd, a joint-venture partnership between Enso Energy and Macquarie's Green Investment Group (GIG). Enso Energy is one of the UK's leading developers of energy projects, having delivered in excess of 1GW of distributed generation to date. GIG is a global leader in renewable energy development and investment, with a European based out of London. GIG is responsible for delivering renewable energy generation totalling 493,000GWh of electricity and has investment and operations in over 25 markets, more than 400 staff and £20 billion of capital committed or arranged to support green energy projects.

1.3 EIA Screening & Scoping

An Environmental Impact Assessment (EIA) Screening Request in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) for a proposed solar farm and battery storage facility on the Site was submitted by the Applicant to HBC on 4 August 2020 (ref. 2017-R001). This provided details of the baseline condition, the proposed approach to the assessment and the likely potential effects arising from the Proposed Development.

A response was received on 10 September 2020 (20/1183/EI1) from HBC confirming an Environmental Statement would be required under the Town & Country Planning (Environmental Impact Assessment) Regulations 2017 and that the only topic that would be required to be addressed within the Environmental Statement (see Document Ref: R007 and R008) was Aviation Safety impacts.

A Non-Technical Summary is submitted with the ES (see Document Ref: R006);

In addition, environmental studies and supporting documents accompany the planning application (see Table 1.1 above) and are cross referred to in the Design and Access Statement (see Document Ref: R004).

1.4 Structure of the Planning Statement

The subsequent sections of this Planning Statement are organised into:

Section 2: Scheme Overview

This section summarises the existing uses and environs of the Site, together with a summary of the Proposed Development. It also identifies the designations applying to the site and surrounding area together with the relevant planning history. See also the Design and Access Statement (Document Ref: R004) for full details describing the Proposed Development.

Section 3: Community Engagement

This section summarises the engagement the Applicant has had with the local community and how feedback received has influenced the Application. See also the Statement of Community Involvement (Document Ref: R014).

Section 4: Policy Context

This section sets out the relevant national and local development plan policy, together with the applicable Supplementary Planning Guidance.

Section 5: The Planning Appraisal

Here the planning considerations considered important to the determination of the Proposed Development are set out and explained in the context of the applicable planning policy outlined in Section 4.

Section 6: Conclusions

This provides a concluding statement in terms of the Proposed Development and its planning merits.

1.5 Community Infrastructure Levy

The Community Infrastructure Levy (CIL) is a charge to support the delivery of funds to infrastructure in Hertsmere. The proposed development is not a chargeable form of development under the Community Infrastructure Levy Regulations. CIL applies mainly to residential and retail developments.

2 Site Overview

2.1 Location

The Site has been subdivided into two main parcels and the fields within the Site are referred to as Fields 1 to 20 as shown on Figure 1 below.

- The western parcel (grid reference: TQ151965 (centre of parcel)) and comprises Field 1 to 5.
- The eastern parcel (grid reference: TQ165975 (centre of parcel)) and comprises Field 7 to 20 (Field 6 was removed from the scheme during the design process).

The red line indicates the extent of the Proposed Development area which is contiguous with the land under the control of the Applicant. Overall, the red line application site area comprising the grid connection cable route between the two land parcels and twenty adjoining arable fields as shown on Figure 1 below totals an area of approximately 130 hectares. Excluding the grid connection cable route between the two parcels, the Site totals an area of approximately 128 hectares.

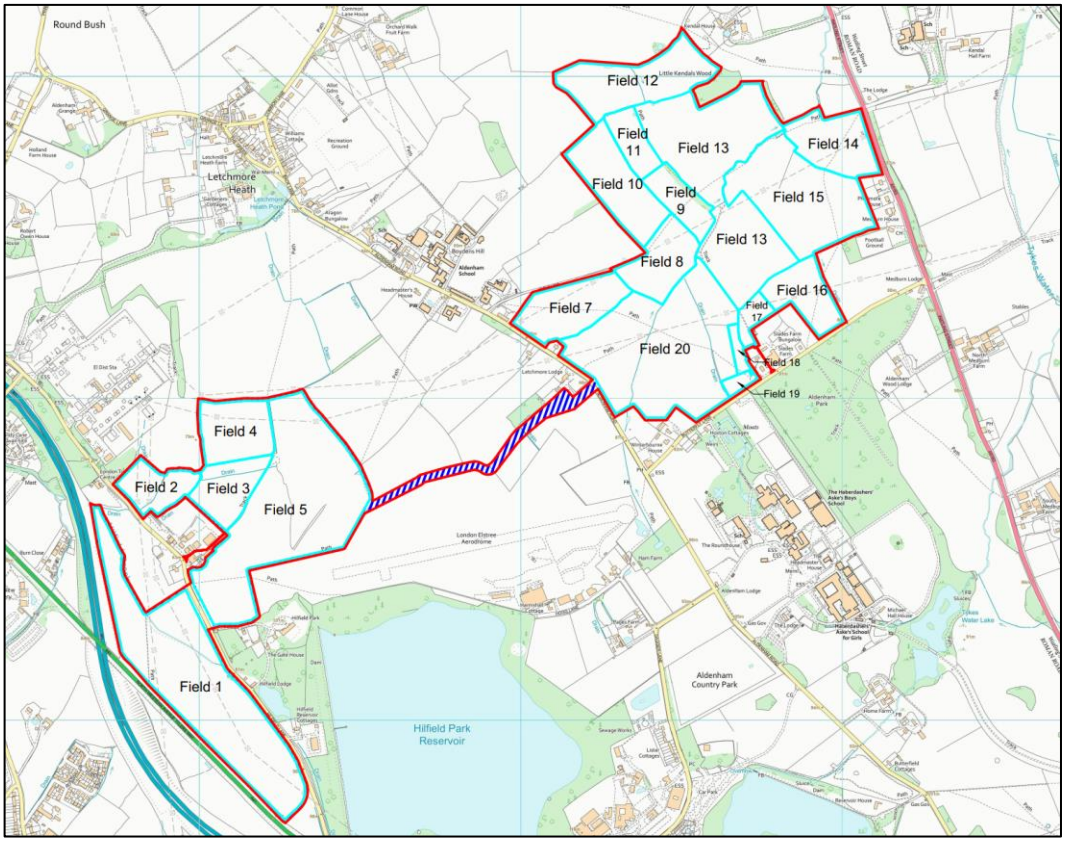

Figure 1: Existing Site Location Plan (see Document Ref: R002 for scale drawing)

The Site is located approximately 3km east of Watford and approximately 2km west of Borehamwood and sits within an agricultural landscape, surrounded by energy and transport infrastructure, including the adjacent Elstree Aerodrome and major transport corridors of the M1 and A41. The Hilfield Reservoir lies approximately 100m east of Field 1 (western parcel) and Aldenham Reservoir lies approximately 1km to the south of Field 20 (eastern parcel). The Midland Main Line railway is located to the east, approximately 660m from the Proposed Development at its closest point.

The Site is located wholly within the London Metropolitan Green Belt (LMGB). The Hertsmere Borough Council Local Plan Core Strategy (2013) identifies that 80% of the borough falls within the Green Belt, with the four main settlements of Borehamwood, Bushey, Potters Bar and Radlett constituting the only urbanised areas in the borough.

The Site is located in a semi-suburban setting, with localised intrusion of man-made features areas, including the Elstree Aerodrome, adjacent to the southern boundary of the western parcel; Aldenham Road, which separates the two parcels; Hilfield Lane, which intersects the western parcel; the M1, which lies approximately 50m west of the western parcel (Field 1); and the A41 (North Western Avenue), which lies adjacent to the southwestern boundary of Field 1; Butterfly Lane and Watling Street, which lie adjacent to the southern and eastern boundary of the eastern parcel (Fields 7 and 20), respectively; properties and schools along Aldenham Road; overhead power lines, which cross over the Site; and the National Grid Elstree Substation which is located within approximately 100m to the northwest of the western parcel (Fields 2 and 4).

The settlements within the wider context of the Site include Letchmore Heath, Round Bush and Radlett to the north; Bushey to the southwest, and Borehamwood to the east.

2.2 Description

The Site is semi-suburban in character with some localised intrusion of man-made features. There are no statutory landscape, heritage or ecological designations within the Site.

The Site is accessed via Hilfield Road and Butterfly Lane. The Site wholly comprises Subgrade 3b agricultural land, as identified by the Agricultural Land Classification (ALC), which is not classified as Best and Most Versatile (BMV) agricultural land.

The Site has been subject to 'historical landfilling activity' which is recorded in the southwestern and western areas of the eastern Site parcel (Fields 17, 18, 19 and 20). It is likely that landfilling activity took place pre-1974.

The Site is predominantly located in the Parish Council area of Aldenham, the western parcel does not fall within a parish but the whole Site is within the administrative area of HBC.

The field network within the Site is characterised by hedgerows, hedgerow trees and woodland. The Site is gently undulating ranging between approximately 100 – 80m above ordnance datum (AOD). The western parcel rises to its highest elevation in the western area of the parcel (Field 5), at approximately 100m AOD and slopes in a general northwesterly direction to approximately 80m AOD in Field 2. The eastern parcel rises to its highest elevation in the southern area in Fields 18 and 19, at approximately 90m AOD and slopes in general northeasterly direction to approximately 80m AOD in Fields 13, 14 and 15.

Hilfield Brook flows partly along the boundary of, and through, Field 1, in a northwesterly direction, and a series of drains route into Fields, 2, 3 and 5. A series of drains also flow through the eastern parcel, from a watercourse which routes though the parcel in a northeasterly direction, which forms part of the Tykes Water and Borehamwood Brook, approximately 700m northeast of the eastern parcel. There are approximately six ponds within the Site and a further two immediately adjacent to the Site boundary.

In terms of Public Rights of Way (PRoW), restricted byways Bushey 36 and 38 route through Fields 1 and 5 on a general east-west alignment, from the A41 to the Elstree Aerodrome site, continuing as public bridleways Bushey 53 and Aldenham 78. A restricted byway, Bushey 46, routes from public bridleway Bushey 53 in a northerly direction and continues north as Footpath Aldenham 14, both of

which form the eastern boundary of Field 5. Footpath Aldenham 30 routes from Footpath Aldenham 14 on northeast-southwest alignment, forming the eastern boundaries of Fields 3 and 4. Footpath Aldenham 30 eventually joins restricted byway Bishey 38 in the southwestern area of Field 5. Footpath Aldenham 40 routes through Fields 6, 7, 8, 9, 13, 15 and 14 (eastern parcel) between Watling Street and Aldenham Road on a general east-west alignment. From Footpath Aldenham 40, Footpath Aldenham 42 routes on a on a northwest-southeast direction toward Butterfly Lane through Fields 7, 20, 18 and 19. Footpath Aldenham 44 routes toward Butterfly Lane northeast-southwest alignment through Field 14, 15 and 16. Footpath Aldenham 43 routes through Field 20, parallel to the south of P Footpath Aldenham 40, from Aldenham Road to the west, eventually adjoining Footpath Aldenham 42 to the east. Footpath Aldenham 32 routes along the eastern boundaries of Fields 9 and 11 and continues along the northern boundaries of Fields 11 and 10. Footpath Aldenham 31 routes along part of the northern boundary of Field 12 in the northernmost extent of the Site, and routes in a general northeast-southwest direction between Watling Street to the east and Footpath Aldenham 17 to the north.

2.3 Designations

There are no statutory landscape, heritage or ecological designations within the Site (see Table 2.1 below).

The Site is located within the LMGB the purposes of which are to[1]:

- to check the unrestricted sprawl of large built-up areas;
- to prevent neighbouring towns merging into one another;
- to assist in safeguarding the countryside from encroachment;
- to preserve the setting and special character of historic towns; and
- to assist in urban regeneration, by encouraging the recycling of derelict and other urban land.

Environmental Designation	Distance	Search Results
National Parks	5km	0
Area of Outstanding Natural Beauty	5km	0
World Heritage Sites	5km	0
Scheduled Monuments	1km	1
Conservation Areas	1km	2
Grade I Listed Buildings	1km	0
Grade II* Listed Buildings	1km	3
Grade II Listed Buildings	1km	38
Registered Parks and Gardens	1km	1

[1] Hertsmere Borough Council (2017) Green Belt Assessment Report (Stage 1)

Environmental Designation	Distance	Search Results
Registered Battlefields	1km	0
Ramsar Sites	5km	0
Special Protection Areas	5km	0
Special Area of Conservation	10km	0
National Nature Reserve	5km	0
Site of Special Scientific Interest	5km	0
Local Wildlife Sites	2km	35
Local Nature Reserves	2km	2

Table 2.1: Designations

2.4 Planning History

The following relevant development control applications/decisions have been determined close to the Site:

- 20/1183/EI1: EIA Screening Opinion Request for a screening opinion (Environmental Impact Assessment) for a proposed solar farm and battery storage facility. This relates to this Application.

2.5 Proposed Development

The Application seeks permission for the following Proposed Development:

> *"Installation of renewable led energy generating station comprising ground-mounted photovoltaic solar arrays and battery-based electricity storage containers together with substation, inverter/transformer stations, site accesses, internal access tracks, security measures, access gates, other ancillary infrastructure, landscaping and biodiversity enhancements"*

The Proposed Development would operate for a temporary time period, 35 years from the commencement of operation, with the potential for low intensity sheep grazing amongst the solar arrays, maintaining an agricultural use of the Site in combination with the delivery of significant biodiversity enhancements. On decommissioning the Site would continue in agricultural use.

The connection to the grid will be made at the National Grid Elstree Substation, located to the west of the Site. The cable would run below ground from the boundary of the Site directly under National Grid owned land to the substation.

The main components of the Proposed Development are explained in detail within the Design and Access Statement (Document Ref: R004) and shown on Figure 2 below.

Figure 2: Proposed Site Layout (See Document Ref: R002 for scaled drawings)

Construction would take place over approximately 10 months (around 40 weeks) with construction vehicles accessing the Site via two existing agricultural accesses on Hilfield Lane and Butterfly Lane. Internal access tracks will then connect construction vehicles to all fields that form the Site.

The access arrangements and swept path analysis for a 16.5m articulated lorry (the largest vehicle to visit the site) is shown in the Construction Traffic Management Plan (CTMP) (Document Ref: R005) for both access points. Two points of Construction Access are proposed, via Hilfield Lane to the west for Fields 1 to 5 and the substation/battery energy storage compound (through Hilfield Farm) and from Butterfly Lane to the east (through Slades Farm) for Fields 7 to 20 (field 6 has been removed from the scheme).

On average there would be five deliveries (10 two-way movements) per day by HGVs during the construction period that would be split between the two access points.

Construction activities will be carried out Monday to Friday 08:00-18:00 and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sunday or Public Holidays. Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional peak hours. As there are several schools in the area, deliveries will be coordinated during term time and weekdays to avoid drop of and pick up times, between 07:30-09:00 and 15:00-18.00. As such, all deliveries during these periods will be made between 09:00-15:00.

The Site is located close to the strategic highway network, being east of the M1 Motorway and A41, south of the M25 and west of the A1. The identified routes, as set out below, are considered the most

appropriate route to connect the Site to the strategic road network, avoiding all weight restrictions in the local area.

Construction traffic will route to the western parcel from the M1 Motorway via the following route;

- M1 Motorway Junction 5;
- A41 North Western Avenue;
- Sandy Lane; and
- Hilfield Lane.

Construction traffic will route to the eastern parcel from the M1 Motorway via the following route;

- M1 Motorway Junction 5;
- A41 North Western Avenue;
- Dagger Lane;
- Aldenham Road; and
- Butterfly Lane.

The details of the construction vehicle routes have been discussed with officers at HBC and Hertfordshire County Council (HCC) and are considered, subject to management of delivery times, to be the most appropriate for use by construction vehicles and are discussed in more detail within the CTMP (see Document Ref: R005).

Upon decommissioning all electricity generating equipment and built structures associated with the Proposed Development would be removed from the Site and it would continue in agricultural use. All boundary planting would be retained.

2.6 Landscape and Biodiversity

Landscape mitigation and biodiversity enhancement proposals have been incorporated into the scheme design as part of the iterative design process (see the Design and Access Statement (Document Ref: R004) for an explanation of the design journey); the Ecological Appraisal and Biodiversity Net Gain Assessment (see Document Ref: R013); and the Landscape and Ecological Management Plan (LEMP) (Document Ref: R009).

Landscape and biodiversity mitigation proposals are incorporated into the scheme design and are detailed in the Landscape and Visual Impact Assessment (LVIA) (Document Ref: R018).

The landscape and biodiversity mitigation proposals include measures that aim to avoid, reduce, or remedy significant adverse impacts on the landscape and ecology by ensuring that the scheme has a good fit within the landscape and biodiversity setting. It also includes measures that would reduce the visual prominence of the solar arrays in local views by enhancing the condition of key field boundaries on the perimeter of the Site.

The proposed hedgerow, scrub and tree planting and landscape management would produce landscape features of the specified height and provide effective screening towards the Proposed Development within 15 years (medium-term). The proposed elements would also enhance the local landscape character and provide additional screening towards the Proposed Development).

The key landscape and biodiversity benefits as set out in the LEMP are listed below:

- Significantly enhance the overall biodiversity value of the Site, including for protected and notable species and habits and locally designated sites. As a result, biodiversity would be

significantly improved with a 39.54% habitat biodiversity net gain and 23.30% hedgerow biodiversity net gain;

- Protect and enhance the existing characteristics and features of value of the Site including the field structure, mature trees, hedgerows and ditches;
- Create a strong structural planting framework and protect, restore and maintain the existing vegetation network, which would also provide enhanced screening of close- and middle-distance views of the Proposed Development.
- Create greater opportunities for protected species' and species of conservation concern;
- Significantly enhance the Green Infrastructure (GI) connectivity within the Site and wider landscape, contributing positively to aspirations set out with the Hertsmere Green Infrastructure Plan (2011);
- Facilitate opportunities for engagement with the natural environment and renewable energy;
- Protect and enhance recreational amenity from PRoW;
- Secure the long-term future management of the Site for the duration of the development.

Safe road access has been designed in accordance with the advice of the Highway Authority, and residential amenity is protected from noise and glint and glare impacts.

2.7 Public Amenity

All existing PRoWs within the Site will be retained and will remain open and in their present position for the duration of the construction and operational phases.

An important objective of the LEMP (Document Ref: R009) is to minimise where possible the perceived detrimental impacts of the Proposed Development on the recreational amenity and engage / celebrate the benefits of renewable solar energy. This has been addressed by:

- The provision of green corridors, green wedges and nature areas;
- Creation of new native species planting along existing routes to screen and filter close views to the Proposed Development, comprising dense linear screening planting to include lower lever shrubs and tall hedgerow trees;
- Retention of at least 5m wide footpath corridors either side of PRoW to minimise any perceived channelling / funnelling of the visual experience from these routes;
- A new permissive path around the football club pitches at the junction of Watling Street and Butterfly Lane;
- A new permissive path linking with the Hertfordshire Way that previously wasn't possible from the internal network of PRoW across the Site;
- Siting of security fencing behind new structure planting to reduce visual impact;
- Implementation of interpretation boards at appropriate junctions of PRoW within the Site, which will allow for opportunities to better understand the positive contribution the Proposed Development will make in adapting to climate change.

3 Community Engagement

The Applicant is committed to early engagement with the local community and other parties as it recognises that good quality, pro-active pre-application discussions should lead to better informed planning applications and improved outcomes for all involved. This section summarises the engagement the Applicant had with the local community prior to submitting the planning application. A full and detailed account of the pre-application consultation process is provided in the Statement of Community Involvement submitted to accompany the planning application (see Document Ref: R014).

Although impacted by the consequences of the COVID19 pandemic, the Applicant sought to listen closely to the community, and pro-actively sought the public's involvement in the development of the proposals through the following outreach events:

- Virtual meetings with the local stakeholders;
- Distribution to local residents and businesses a brochure informing them about the proposals, requesting feedback via a pre-paid feedback form and inviting attendance to a virtual public exhibition event;
- A virtual public exhibition webinar where registered local residents were able to ask questions of the development team, listen to a presentation of the proposals and provide formal feedback on the scheme via an online survey or posted/emailed feedback form;
- Establishing a website for the project which gave an overview of the proposals, a recording of the virtual public exhibition event; and
- Site meetings and/or virtual meetings with residents at Ward Cottages, Butterfly Lane and Watling Street.

The consultation feedback received via the submitted feedback forms and online survey was constructive. Of the 32 local residents that completed a feedback form or online survey, eight were in favour of the proposal, 23 were in objection and one was of no opinion.

Key matters raised during pre-application consultation included:

- Impact on Green Belt land;
- Construction periods;
- Traffic routing;
- Size of the project;
- Glint and glare impact especially in regard to the aerodrome;
- Safety impact on those living next to site; and
- Impact on local schools.

The consultation also sought community feedback on the Concept Design (see Document Ref: R004) which outlined construction traffic route, interpretation boards as well as feedback on planting and whether residents would like to see an improvement in connectivity of PRoW and whether low-key nature areas around ponds should be included on the Site that PRoW go past.

The residents that responded were clear that they would like PRoW connectivity to be improved and planting to take place along the ecological corridor low-key nature areas to be around the ponds. The majority of residents did not share a clear preference regarding the most suitable location for the interpretation boards.

In response to several of the issues raised during the public consultation process the design of the scheme has been amended as follows:

- The Applicant has reduced the area of solar panels within the site by 9.6 hectares or approximately 10%, to increase the buffer of the scheme from neighbouring properties.
- After consultation with Aldenham School, the Applicant has moved inverters away from Field 7 adjacent to where Aldenham School boarding houses are located.
- After a socially distanced one-to-one consultation between the Applicant and the residents in Ward Cottages, Aldenham Road, the Applicant has decided to pull the panels further away from the Ward Cottages and their communal garden area and the intervening land will be planted including an orchard. The Site will be moved back to the south substantially to mitigate the immediate views from the Ward Cottages.
- After a socially distanced one-to-one consultation between the Applicant and a relation of a resident on Butterfly Lane, the Applicant has pulled the panels back substantially from the Site boundary to the north of the PRoW, further away from Butterfly Lane. In addition, taking into account the viewpoints to the north and northeast, the Applicant increased the buffer by reducing the number of panels to help mitigate the impact on views. In respect of ecological matters, the Applicant has proposed in the LEMP how to improve the land and habitats in the areas where they have pulled back the panels from the Site boundary by adding additional planting and hedgerows.
- After socially distanced one-to-one consultations between the Applicant and residents on Watling Street, the Applicant has decided to pull the project back, further away from the Watling Street properties by reducing the number of panels. Based on resident suggestions, the Applicant has removed panels from the field immediately behind the Watling Street properties and back to the existing PRoW which will now form the boundary of the site. Furthermore, the Applicant proposes additional hedgerow planting in between the footpath and the property to further mitigate the view.
- After correspondence between the Applicant and the resident at Hilfield Lodge, the Applicant decided to pull the project back, further away from area adjacent to Hilfield Lane in Field 1 to mitigate the impact the scheme has on Hilfield Lodge. Furthermore, the Applicant has also moved the inverter locations away from Hilfield Lodge.
- After consultation with the Belstone Football Club on the corner Watling Street and Butterfly Lane, the Applicant provided a permissive footpath around the boundary of the football pitches as an alternative route to the one that currently crosses the pitches.
- Following consultation with the local schools and residents, construction traffic and deliveries will be routed to the Site outside of peak hours

In addition to reducing the area of the panels, the new design also offers:

- Over 7.5ha of grassland and wildflower planting;
- 6.7ha of low intervention skylark habitat;
- 2ha of parkland;
- Two Nature Areas;
- 0.7ha of orchard;

- 578 m of permissive paths linking to the Hertfordshire Way and providing an alternative route around Belstone Football Club's pitches; and
- 2.4km of green corridor.

4 Policy Context

The policy to be considered in the examination of the Proposed Development is derived from European and national energy policy and planning policy as set out in the overarching National Policy Statement for Energy EN-1, the National Planning Policy Framework (2019) and the Local Development Plan.

Consideration is also given in this section to Supplementary Planning Guidance as provided by the online Planning Policy Guidance and its advice on renewable and low carbon energy.

4.1 International Energy Policy

4.1.1 The Paris Agreement (2016)

The UK commitment to the reduction of greenhouse gas emissions through the ratification of the United Nations Framework Convention on Climate Change (UNFCCC) Paris Agreement in November 2016. The Paris Agreement committed its signatories to *"hold the increase in the global average temperature to well below 2^{o}C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5^{o}C above pre-industrial levels''*. The agreement also made it clear that the global economy will need to be zero-carbon by the second half of the 21st Century.

4.1.2 Renewable Energy Directive 2018/2001/EU

In December 2018, the EU Renewable Energy Directive 2018/2001/EU entered into force in order to help the EU meet its emissions reduction commitments under the Paris Agreement. This established a new binding renewable energy target for the EU for 2030 of at least 32%, with a clause for a possible upwards revision by 2023.

The decision of the UK to exit the EU casts doubt over the future application of these European targets however the UK has recently set its own more challenging legally binding targets which will drive a rapid and expanded deployment of low carbon power and renewable energy including solar.

4.2 National Energy Law and Policy

The objectives of the UK renewable energy policies are in accordance with the overall international and European policy objectives. These are focused on a number of key climate change challenges, which include:

- The reduction of CO_2 emissions to tackle climate change;
- The promotion of competitive energy markets in the UK;
- Affordability to customers; and
- Security of decentralised energy supplies.

There is a significant body of international and national energy policy support for renewable and low carbon development. This support is rooted in the Government's policy of growing the economy in a decarbonising way and achieving its recently set legally binding target of net-zero greenhouse gas emissions by 2050. To help achieve this the Government is rapidly seeking to transition from a traditionally fossil fuel dependent economy to increasing amounts of secure, resilient renewable and low carbon energy, including solar power. The fact that solar technology has advanced to the point where it no longer requires public subsidy to make it commercially viable lends it further support from Government.

4.2.1 Climate Change Act 2008

The Climate Change Act 2008 set into legislation the UK's approach to tackling and responding to climate change. It introduced a legally binding 2050 target to reduce greenhouse gas emissions by at least 80% relative to 1990 levels

The two key aims of the Act are to:

- improve carbon management, helping the transition towards a low-carbon economy in the UK; and
- demonstrate UK leadership internationally, signalling commitment to taking our share of responsibility for reducing global emissions in the context of developing international negotiations.

4.2.2 Energy Security Strategy (2012)

The Energy Security Strategy was published by the Department of Energy and Climate Change (DECC) in November 2012. The document sets the direction for energy security policy. It provides a clear assessment of the UK's position, the risks the country faces, and the actions that are being taken.

The Energy Security Strategy sets out that the Government is primarily concerned about ensuring that consumers have access to the energy services they need (physical security) at prices that avoid excessive volatility (price security). The Strategy states that the energy security must be delivered alongside achievement of our legally binding targets on carbon emissions and renewable energy. It is noted that whilst the Government cannot control world energy market prices, they are seeking to ensure that energy services are as affordable as possible, both for consumers and businesses, and in the long term to reduce dependence on imported fossil fuels.

The Strategy outlined that there are risks to security of supply over the medium-term, with approximately 20% of the capacity available in 2011 set to close by 2021. It outlines the importance of diversity in the supply of energy and places an emphasis on ensuring that there is resilience in the market. Paragraph 1.10 of the Strategy refers to how the country's energy requirements are likely to change between now and 2050, and states as follows:

"Electricity use is likely to increase by at least 30 per cent and potentially by 100 per cent as much of our heating and transportation becomes electrified. We may see more seasonal demand (caused by electrification of heating) and different peaks in demand (from electric vehicles). These changes to demand patterns, alongside an increased use of renewables and nuclear (less flexible supply), will increase the challenges of balancing the system and also present opportunities to embed demand side response (DSR) and distributed capacity (e.g. night charging of electric vehicles)."

4.2.3 UK Solar PV Strategy (2014)

Government policy is to substantially increase the deployment of renewable energy across the UK, including solar PV. It has published a Roadmap to a Brighter Future as the first part of a UK Solar PV Strategy. The Roadmap sets out four guiding principles, which form the basis of Government's strategy for solar PV. These principles are:

- Support for solar PV should allow cost-effective projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals – ensuring that solar PV has a role alongside other energy generation technologies in delivering carbon reductions, energy security and affordability for consumers.

- Support for solar PV should deliver genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020 and in supporting the decarbonisation of our economy in the longer term – ensuring that all the carbon impacts of solar PV deployment are fully understood.
- Support for solar PV should ensure proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them.
- Support for solar PV should assess and respond to the impacts of deployment on: grid systems balancing; grid connectivity; and financial incentives – ensuring that we address the challenges of deploying high volumes of solar PV.

4.2.4 Clean Growth Strategy (Oct 2017)

The Government's Clean Growth Strategy (Oct 2017) sets out how it envisages the delivery of the clean, green economic growth needed to combat global warming. It identifies the policies necessary to drive a significant acceleration in the pace of the UK's decarbonisation to achieve the 2032 carbon budget targets that in turn will keep us on track to achieve the net zero target by 2050. The Strategy recognises the potential offered by solar to grow low carbon sources of energy and the Government confirms it wants to see more investment in this sector without public subsidy.

4.2.5 UK 25 Year Environment Plan (2018)

The sister document to the Clean Growth Strategy is the Government's UK 25 Year Environment Plan (Jan 2018). This sets out the goals for improving the environment within a generation and the actions Government will take over the next 25 years to achieve them. It supports the shift away from coal towards cleaner forms of energy as a way of reducing air pollution; confirms that the environmental protection already enshrined in national policy will be maintained and strengthened; and, importantly, indicates the existing requirement to provide biodiversity net gains is likely to be expanded to providing a wider environmental net gain which will be consulted upon as a mandatory requirement.

4.2.6 National Infrastructure Assessment (2018)

In relation to the need for upgraded energy infrastructure, the National Infrastructure Assessment (2018) is highly supportive of building low cost, low carbon energy sources. The Assessment (prepared by the independent National Infrastructure Commission (NIC)), was the first of its kind in the UK and recommended an increasing deployment of renewables such that by 2030 half of the UK's power should be provided by renewables.

In its Interim Response (Oct 2018) to the Assessment the Government confirmed its ongoing commitment to promoting renewables. It recognised that, within a market-based system and with significant constraints on public expenditure, the private sector has an important role to play in the delivery of renewable energy schemes. The Government's formal response to the NIC Assessment was expected in Autumn 2019 through its publication of the UK's first comprehensive National Infrastructure Strategy. This has been delayed.

4.2.7 UK Climate Emergency (2019)

In May 2019 a National Climate Emergency was declared by the UK Parliament. MPs called on Government to make changes that included setting a new target of reaching net zero emissions before 2050.

4.2.8 Net Zero – The UK's contribution to stopping global warming advice report (May 2019)

The UK's declared National Climate Emergency was informed by the publication of this report, prepared by the Committee on Climate Change which is an independent advisor to Government on these matters. It recommended the new emissions target for the UK of net-zero greenhouse gases by 2050.The accompanying Net Zero Technical Report (May 2019) suggested the potential for 29-96 of GW of onshore wind, 145-615 GW of solar power and 95-245 GW of offshore wind in the UK.

A number of findings were made in these report that are relevant to the Proposed Development:

- Scenarios for 2030 and 2050 see variable renewables providing 50-75% of overall electrical energy production.
- Improvements in system flexibility can come from increased deployment of battery storage.
- Significant new renewable generation capacity is needed to accommodate rapid uptake of electric vehicles and hybrid heat pumps. Over the period to 2035, up to 35 GW onshore wind, 45 GW offshore wind and 54 GW solar PV could be needed.
- The UK's onshore wind, offshore wind and solar PV resource are likely to be more than adequate to deliver an expanded and decarbonised electricity system to 2050

4.2.9 Climate Change Act 2008 (2050 Target Amendment) Order 2019

On 27 June 2019 the UK Parliament approved the net zero target in law, thereby changing the original target of 80% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050 to 100%.

The aim is to meet the target through UK domestic effort, without relying on international carbon units (or 'credits').

Meeting this Net Zero Target will require major and urgent investment in new technologies and prioritisation of sustainable energy and cleaner power generation, including the use of solar.

4.2.10 Leading on Clean Growth (October 2019)

The Government Response, 'Leading on Clean Growth' (October 2019), reported on key achievements in the UK power sector including a record 33% of electricity generation from renewables in 2018, a rise of low carbon generation to some 52%, and 18 consecutive days of coal-free generation. It also recognises ongoing reform of the energy system to deliver greater system flexibility in order to integrate significant quantities of low carbon generation.

4.2.11 Reducing UK emissions - 2020 Progress Report to Parliament (June 2020)

The Committee for Climate Change published a 2020 report to Parliament, assessing progress in reducing UK emissions over the past year. The report included new advice to the UK Government on securing a green and resilient recovery following the COVID-19 pandemic, including the need to seize the opportunity to turn the crisis into a defining moment in the fight against climate change. Although a limited number of steps have been taken over the past year to support the transition to a net-zero economy and improve the UK's resilience to the impacts of climate change, the Committee identified that much remains to be done.

One of the Committee's recommendations to the Department for Business, Energy & Industrial Strategy is to deliver plans to decarbonise the power system to reach an emissions intensity of 50 gCO_2/kWh by 2030, with at least 40 GW of offshore wind and a role for onshore wind and large-scale solar power, with a clear timetable of regular auctions. The report states that reaching net-zero emissions will require all energy to be delivered to consumers in zero-carbon forms (i.e. electricity, hydrogen, hot water in heat networks) and come from low carbon sources including renewables such as solar.

The path to achieving net-zero emissions by 2050 will necessarily entail a steeper reduction in emissions over the intervening three decades and, to reach the UK's new Net Zero target, emissions will need to fall on average by around 14 $MtCO_2e$ every year, equivalent to 3% of emissions in 2019.

4.3 Local Climate Emergency

4.3.1 Hertsmere Climate Emergency

The strategy and action plan for how HBC will achieve net zero carbon emissions by 2050 was approved by Full Council on 14 October 2020. Hertsmere is one of 205 local authorities, alongside HCC, St Albans City and District Council, Watford Borough Council and Dacorum Borough Council, who have declared a Climate Emergency and committed to taking urgent action to reduce their carbon emissions. HBC declared a Climate Emergency in September 2019 and is committed to achieving carbon neutrality as soon as possible and no later than 2050. HBC approved its Climate Change and Sustainability Action Plan in 2020 (see 4.7.1 below).

4.4 National Planning Policy

4.4.1 Overarching National Policy Statement for Energy (EN-1)

EN-1 sets out the Government's national policy for the delivery of major energy infrastructure. Whilst primarily of relevance to nationally significant infrastructure projects (NSIPs) over 50MW, it is clearly a material consideration for the Proposed Development which is just below the NSIP threshold (paragraph 1.2.1). EN-1 establishes the need for energy related development with the Government not requiring decision makers to consider need on individual applications because of this.

Paragraph 1.7.2 of EN-1 states that energy National Policy Statements should speed up the transition to a low carbon economy and help to realise UK climate change commitments sooner than continuation under the current planning system. It is also acknowledged that the development of new energy infrastructure, at the scale and speed required to meet the current and future need, is likely to have some negative effects on biodiversity, landscape/visual amenity and cultural heritage. However,

EN-1 advises that in general it should be possible to mitigate satisfactorily the most significant potential negative effects.

The Government's policy on energy infrastructure development is critical to understanding the policies on need. Paragraph 2.1.1 states that there are three key goals, namely reducing carbon emissions, energy security and affordability. Producing the energy the UK requires and getting it to where it is needed necessitates a significant amount of both large and small scale infrastructure. Large scale infrastructure plays a "vital role" in ensuring security of supply (para. 2.1.2).

The transition to a low carbon economy is dealt with at paragraphs 2.2.5 to 2.2.11. The UK needs to wean itself off a high carbon energy mix, to reduce GHG emissions, and to improve the security, availability and affordability of energy through diversification. Under some of the "illustrative" 2050 pathways electricity generation would need to become virtually emission-free.

Paragraph 2.2.23 states that *"The UK must therefore reduce over time its dependence on fossil fuels, particularly unabated combustion. The Government plans to do this by improving energy efficiency and pursuing its objectives for renewables, nuclear power and carbon capture and storage"*.

Paragraph 3.3.10 also states that as part of the UK's need to diversify and decarbonise electricity generation, the Government is committed to dramatically increasing the amount of renewable energy capacity. Paragraph 3.3.11 goes onto state that an increase in renewable electricity is essential to enable the UK to meet its commitments under the EU Renewable Energy Directive.

Paragraph 3.3.12 highlights that there are several other technologies which can be used to compensate for the intermittency of renewable generation, such as electricity storage. Although Government believes these technologies will play important roles in a low carbon electricity system, the development and deployment of these technologies at the necessary scale has yet to be achieved.

Overall, EN-1 Section 3.4 identifies that large-scale deployment of renewables will help the UK to tackle climate change, reducing the UK's emissions of carbon dioxide by over 750 million tonnes by 2030. Paragraph 3.4.5 makes it clear that *"The need for new renewable electricity generation projects is therefore urgent"*.

4.4.2 National Planning Policy Framework (2019)

The National Planning Policy Framework (February 2019) (NPPF) sets out the Government's planning policies for England and how these should be applied. At its core is the need for the planning system to contribute to the achievement of sustainable development – meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Paragraph 8 of the NPPF explains that achieving sustainable development means the planning system has three overarching and interdependent objectives:

- *"**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;*
- ***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 a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being ; and*

- ***an environmental objective*** *- to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."*

The environmental objective in particular is applicable to renewable energy developments.

Paragraph 11 of the NPPF stipulates when determining planning applications, a presumption in favour of sustainable development should be applied and specifically:

> *"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 protect 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."*

Paragraph 12 underlines that the **presumption in favour of sustainable development** does not change the statutory status of the development plan as the starting point for decision making. The policies within the local development plan are considered below.

Section 6 of the NPPF refers to the economy and paragraph 83 in particular states that in supporting a prosperous rural economy planning decisions should **enable the development and diversification of agricultural and other land based rural business**.

Paragraph 98 states that planning policies and decisions should protect and **enhance public rights of way and access**, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.

Paragraph 109 directs that development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

Paragraph 118 (a) states that 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."*

Paragraph 124 states that **good design** is a key aspect of sustainable development. Paragraph 127 advises that planning policies and decisions should ensure developments function well and add to the overall quality of the area. They should be visually attractive as a result of good layout and appropriate and effective landscaping; be sympathetic to local character and history including landscape setting; and accommodate green space and be safe and accessible with a high standard of amenity and promoting health and well-being. Design quality should be considered throughout the evolution and assessment of development proposals (paragraph 128) and applications that can demonstrate early, proactive and effective engagement with the community should be looked on more favourably than those that cannot.

Paragraph 133 outlines that the Government attaches great importance to **Green Belts**. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence.

Paragraph 134 sets out that *"Green Belt serves five purposes:*

a) *to check the unrestricted sprawl of large built-up areas;*
b) *to prevent neighbouring towns merging into one another;*
c) *to assist in safeguarding the countryside from encroachment;*
d) *to preserve the setting and special character of historic towns; and*
e) *to assist in urban regeneration, by encouraging the recycling of derelict and other urban land."*

Paragraph 143 of the NPPF states "inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances".

Paragraph 144 states *"When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. "Very special circumstances" will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any harm resulting from the proposal, is clearly outweighed by other considerations."*

Paragraph 147 states *"When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed.* ***Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources****".*

Paragraph 148 sets out that the planning system should **support the transition to a low carbon future in a changing climate and it should help minimise vulnerability and improved resilience**. It states that it should shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience, and support renewable and low carbon energy and associated infrastructure.

Paragraph 153 states that local planning authorities should **expect new development to take account of landform, layout, building orientation, massing and landscaping**.

Paragraph 154 sets out that when determining planning applications for renewable and low carbon development, local planning authorities should **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 **approve the application if its impacts are (or can be made) acceptable**.

Paragraph 155 sets out that inappropriate development in areas at **risk of flooding** should be avoided by directing development away from areas at highest risk. Paragraph 163 directs that when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere and that applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment it can be demonstrated that;

a) within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
b) the development is appropriately flood resistant and resilient;
c) it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
d) any residual risk can be safely managed; and
e) safe access and escape routes.

Paragraph 170 states that planning policies and decisions should contribute to and enhance the natural and local environment including by **protecting and enhancing valued landscapes**, recognising the **intrinsic character and beauty of the countryside**, by **protecting and enhancing soils**, **minimising impacts on biodiversity** and preventing new development from contributing to, being put at unacceptable risk from, or being adversely affected by, **unacceptable levels of air or noise pollution**.

Paragraph 171 of the NPPF goes on to describe that Plans should distinguish between the hierarchy of designated sites and allocate land with the least environmental value and footnote 53 states where significant development of **agricultural land** is demonstrated to be necessary, areas of poorer quality land should be preferred to those of higher quality.

Paragraph 175 sets out the principles that local planning authorities should apply with regard to **habitats and biodiversity** when determining planning applications including refusing applications where significant harm to biodiversity cannot be mitigated/compensated for; protecting SSSIs; refusing developments that result in the loss or deterioration of irreplaceable habitats unless there are wholly exceptional; and **encouraging opportunities to incorporate biodiversity improvements especially where this can secure measurable gains for biodiversity**.

Paragraph 177 **refers back to sustainable development in relation to appropriate assessment** and states: 'the presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site'.

Paragraph 178 refers to planning decisions taking account of ground conditions and risks arising from land instability and contamination at sites. In relation to risks associated with land remediation account is to be taken of 'potential impacts on the natural environment' that arise from land remediation.

Paragraph 180 states that 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, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

Paragraph 189 states that in determining applications, local planning authorities should require the applicant to **describe the significance of any heritage assets affected, including the contribution made by their setting**. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted, and the heritage assets assessed using appropriate expertise where necessary. Where a site on which a development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

Paragraph 193 states that *"great weight"* should be given to the conservation of the significance of designated heritage assets and *"the more important the asset, the greater the weight should be"*. Paragraphs 194-197 set out the policy tests for different levels of harm to the significance of heritage assets of differing levels of importance.

The Glossary of the NPPF defines renewable and low carbon energy, including energy for heating and cooling as well as generating electricity. **Renewable energy covers those energy flows that occur naturally and repeatedly in the environment including from the sun. Low carbon**

technologies are those that can help reduce emissions (compared to conventional use of fossil fuels).

4.5 Local Planning Policy

The Site is wholly located within the jurisdiction of HBC who will act as the Local Planning Authority and determining authority for the Application.

The Development Plan for the purposes of determining the Application therefore comprises the following documents;

- Local Plan Core Strategy Development Plan Document 2013; and
- Site Allocation and Development Management Plan 2016.

The Core Strategy sets out the HBC's vision and strategy for the Borough for the next 15 years. The Site Allocations and Development Management Policies Plan sets out detailed proposals and policies by which the Council sees the aims and objectives of the Core Strategy being best achieved.

HBC is currently preparing a New Local Plan, planning for the future development in the Borough. The New Local Plan is anticipated to be adopted in late 2021.

HBC published the Hertsmere Local Plan Issues and Options in 2017 for public consultation. The consultation period closed in November 2017. The Vision Statement within the Issues and Options document highlighted that HBC plans for greater renewable energy generation of different types, including solar development.

No Neighbourhood Plans have been made by HBC although Radlett Neighbourhood Plan 2019-2026 has undergone independent examination and will be put to referendum for adoption in May 2021. This Plan covers the town of Radlett and its hinterland approximately 400m to the north of the Site at its closest boundary. Review of the Radlett Neighbourhood Plan has concluded no policies are relevant to this application.

4.5.1 Hertsmere Core Strategy 2013

HBC readily acknowledges the need for new development but recognises that a balanced Core Strategy must include strategic policies relating to the protection of the natural and built environment. The Core Strategy therefore sets out in its strategic aims and objectives to (*inter alia*);

- "*To protect the Green Belt*" Local Plan Core Strategy Objective 2
- "*To improve environmental and streetscape quality in town centres and protect and enhance the built heritage of Hertsmere*" Local Plan Core Strategy Objective 6
- "*To provide a planning framework which promotes sustainable and competitive economic performance, in support of jobs growth requirements*" Local Plan Core Strategy Objective 11
- "*To protect and enhance local biodiversity*" - Local Plan Core Strategy Objective 13
- "*To conserve and enhance biodiversity, conservation management… should go beyond merely maintaining the existing landscape features and aim to enhance them through restoration and creation of habitats, together with a reduction in fragmentation by linking, buffering and expanding*." - P.18, Hertfordshire Biodiversity Action Plan

Policy SP1 - Creating sustainable development (*inter alia*) underlines that the Council will work with key local stakeholders to enable development in the Borough to make a sustainable contribution to delivering the Core Strategy Spatial Vision and Strategy promoting decentralised and renewable or

low carbon sources without unacceptable impacts on (inter alia) the characteristics and features of the natural and built environment, green belt, heritage, biodiversity, flood risk or the historic environment.

Policy SP2 - Presumption in Favour of Sustainable Development (*inter alia*) states that when considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly, in particular through the preapplication process, to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Policy CS12 – Enhancement of the Natural Environment (*inter alia*) requires all development proposals must conserve and enhance the natural environment of the Borough, including biodiversity, habitats, protected trees, landscape character, and sites of ecological and geological value, in order to maintain and improve environmental quality, and contribute to the objectives of the adopted Greenways Strategy and the Hertsmere Green Infrastructure Plan. Proposals should provide opportunities for habitat creation and enhancement throughout the life of a development.

Policy CS13 - The Green Belt sets out (*inter alia*) a is a general presumption against inappropriate development within the Green Belt, as defined on the Policies Map, and such development will not be permitted unless very special circumstances exist. Development proposals, including those involving previously developed land and buildings, in the Green Belt will be assessed in relation to the NPPF.

Policy CS14 - Protection or enhancement of heritage assets. All development proposals must (*inter alia*) conserve or enhance the historic environment of the Borough in order to maintain and where possible improve local environmental quality. Development proposals should be sensitively designed to a high quality and not cause harm to identified protected sites, buildings or locations of heritage or archaeological value including Conservation Areas, Listed Buildings, Historic Parks and Gardens, Scheduled Ancient Monuments or their setting, and identified and as yet unidentified Archaeological Remains.

Policy CS15 – Promoting recreational access to open spaces and the countryside. The Council (*inter alia*) will work with its partners and relevant agencies to safeguard, enhance and facilitate access to parks, open spaces, rural visitor attractions and to the wider local countryside. Measures which secure the provision of safer and more secure car-free access including enhancements and additions to the rights of way / Greenways network as set out in the Council's Greenways Strategy, will be actively sought where they do not present a risk to the biodiversity value and intrinsic environmental quality of the locality.

Policy CS16 - Environmental impact of new development states that the Council (*inter alia*) will work with key partners, including the Environment Agency and Natural England, to ensure that development proposals do not create an unacceptable level of risk to occupiers of a site, the local community and the wider environment. Proposals are required to incorporate sustainability principles, minimising their impact on the environment and ensuring prudent use of natural resources by measures including (inter alia) avoiding development in the floodplain and close to river corridors unless the requirements of the sequential and exceptions tests have been met and flood prevention/mitigation measures are in place as required by the Environment Agency. Following the publication of the position statement on the Hertsmere Climate Change and Sustainability Action Plan (HCCSAP), applicants are requested to go further than creation of an 'unacceptable level' but to make a positive contribution towards the area, its biodiversity alongside climate change adaptation and mitigation.

Policy CS22 - Securing a high quality and accessible environment in line with the Planning and Design Guide SPD. The Council will require (*inter alia*) all development to be of high-quality design, which ensures the creation of attractive and usable places. Development proposals should take advantage of opportunities to improve the character and quality of an area and conserve the Borough's historic environment.

4.5.2 The Site Allocation and Development Management Plan 2016

The following Site Allocation and Development Management Plan policies apply to the proposal:

- SADM10 Biodiversity and Habitats expects (*inter alia*) developers to avoid significant harm to sites of importance for ecology, geology and biodiversity by relocating their proposed development. Where this cannot be achieved adequate mitigation measures can be employed, which will outweigh the harm caused or adequate compensatory measures will be provided and the benefits of the development are clearly shown to outweigh the harm to the natural environment. The acceptability of any development proposal will further be assessed with regard to the level of impact that the development proposal would have on the ecological interest of the habitat concerned and the wider ecological network. Opportunities should also be available to create, incorporate, enhance, or restore habitats or biodiversity as part of the development.
- Policy SADM11 - Landscape Character. Development will be managed to (*inter alia*) help conserve, enhance and/or restore the character of the wider landscape across the borough. Individual proposals will be assessed for their impact on landscape features to ensure that they conserve or improve the prevailing landscape quality, character and condition, including as described in the Hertfordshire Landscape Character Assessments. The location and design of development and its landscaping will respect local features and take opportunities to enhance habitats and green infrastructure links. Landscaping schemes should use native species which are appropriate to the area.
- Policy SADM12 - Trees, Landscaping and Development sets out (*inter alia*) that planning permission will be refused for development which would result in the loss, or likely loss, of healthy, high quality trees and/or hedgerows that make a valuable contribution to the amenity or environment of the area in which they are located. All development affecting trees, hedgerows and other plants or landscaping should be consistent with the Biodiversity, Trees and Landscape SPD and BS5837 (or any subsequent guidance). This includes the requirement for appropriate landscaping schemes and, if necessary, replacement trees.
- Policy SADM13 – The Water Environment. The natural environment of watercourses and areas of water will be improved wherever possible through Policy SADM16. Watercourses, including culverts, land adjacent to rivers, functional floodplains and flood storage areas should be restored to their natural state.
- Policy SADM14 Flood risk requires (*inter alia*) development to avoid the risk of flooding or be reduced by locating development within areas of lower flood risk through the application of the sequential test and then applying an exception test in line with the NPPF; and ensuring that development proposals in flood risk areas actively manage and reduce flood risk by applying the sequential approach at site level. Where new development is proposed in a flood risk area, a site-specific Flood Risk Assessment is required.
- Policy SADM16 Watercourses - Development on sites that contain a watercourse or are situated next to a watercourse will comply with the following principles (*inter alia*), conserving

or improving the natural environment of the watercourse, maintaining a minimum 9m wide undeveloped buffer zone will be provided from the top of the bank of any watercourse and supporting opportunities for restoration and enhancement within the catchment of the watercourse.

- Policy SADM20 Environmental pollution and development. Development should (*inter alia*) not result in any adverse impact to public health or wellbeing, or significantly add to contamination or pollution, taking into account the situation following any mitigation and remediation measures. Development on land that is known to be or suspected to be contaminated (or polluted) will only be permitted where a contaminated land assessment shows that the proposed development would not be likely to result in a threat to the health of the future users or occupiers of the site after any remediation measures are taken into account. The use of the site must be considered compatible with the level of pollution or contamination that is present or would be present after remediation measures are taken into account.
- Policy SAD26 Development Standards in the Green Belt directs that the Council will (*inter alia*) assess all applications for development in the Green to ensure they comply with the following principles (inter alia); developments should take advantage of site contours and landscape features in order to minimise the visual impact; the scale, height and bulk of the development should be sympathetic to, and compatible with, its landscape setting and not be harmful to the openness of the Green Belt; developments should use materials which are in keeping with those of the locality, and, where modern materials are acceptable, they should be unobtrusive; and existing trees, hedgerows and other features of landscape and ecological interest should be retained and enhanced.
- Policy SADM27 supports diversification and development supporting the rural economy. Proposals for the diversification of farm enterprises which involve new building and/or works, will be permitted provided (*inter alia*) the site is of a lower agricultural land grade (i.e. Grade 3b, 4, 5 or non-agricultural); and there is a reliable prospect that the land will be restored to at least its original quality. All development which is supported in principle under this policy must also satisfy the requirements of Policy SADM26.
- Policy SADM29 Heritage Assets, including Registered Parks and Gardens explains (*inter alia*) that planning applications will be considered in accordance with the NPPF. When applications are submitted for proposals affecting any heritage asset the applicant must clearly explain what the proposal is for and provide sufficient detail to allow for an informed decision to be made. When assessing proposals, the Council will have regard to the significance of the heritage asset and the potential harm to it. The Council expects features of known or potential archaeological interest to be identified, assessed, surveyed, recorded and wherever possible retained. Developers will therefore be required to undertake an archaeological field assessment and submit a report on the findings before the Council will grant planning permission.
- Policy SADM30 - Design Principles. Development which complies with the policies in this Plan will be permitted provided (*inter alia*) it makes a positive contribution to the built and natural environment; recognises and complements the particular local character of the area in which it is located, and results in a high quality design. In order to achieve a high quality design, a development must respect, enhance or improve the visual amenity of the area by virtue of its scale, mass, bulk, height, urban form; and have limited impact on the amenity of occupiers of the site, its neighbours, and its surroundings in terms of outlook, privacy, light, nuisance and pollution."

- Policy SADM40 Highway and Access Criteria for New Development sets out that development will be permitted where (*inter alia*) it will not harm the safety of any users of the highway network, cause or add significantly to road congestion or unduly harm the flow of vehicles.
- Policy SADM41 - Aviation Safeguarding - The Council will consult with the Elstree Airport Licensee on relevant proposals for development. It will only permit development proposals which will not compromise the Aerodrome's operational integrity and general safety and are compatible with the continued use of the site as an aerodrome.

4.6 Online Planning Practice Guidance (March 2014 as updated)

The key aim of the Planning Practice Guidance is to provide easily accessible and understandable guidance on the implementation of the policies within the NPPF. It contains specific guidance on planning policies for renewables energy developments and on how planning applications should be determined with regards to their impact on the natural and historic environment. Consideration of the fundamental aspects of this guidance in relation to the Application are detailed below.

4.6.1 Renewable and Low Carbon Energy

The guidance provides further advice on renewable and low carbon energy projects to facilitate the delivery of the low carbon future. It states that the government remains committed to increasing the amount of energy from renewable and low carbon technologies to ensure that the UK has a secure energy supply, to slow down climate change and to stimulate new jobs and businesses.

Paragraph 13 within the guidance specifically relates to large scale ground-mounted solar[2]. It states that:

> *"The deployment of large-scale solar farms can have a negative impact on the rural environment, particularly in very 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;*
> - *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 and on neighbouring uses and aircraft safety;*

[2] Paragraph: 013 Reference ID: 5-013-20150327, published 27 March 2015

- *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; and*
- *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."

4.6.2 Climate Change

Addressing climate change is stated as being one of the core land use planning principles which the NPPF expects to underpin decision-taking on planning applications. The guidance seeks to ensure that the planning system helps to implement the objectives of the Climate Change Act 2008 by radically reducing greenhouse gas emissions and adapting to the forecast impacts of climate change. The guidance makes it clear that Councils need to take account of global climate change including, for example, providing opportunities for renewable and low carbon energy technologies.

4.6.3 Natural Environment

The guidance was updated in July 2019 to address how planning can take account of the quality of agricultural land and that an agricultural land classification assessing the quality of farmland can enable informed choices to be made about its future use within the planning system. Planning decisions should take account of the economic and other benefits of the best and most versatile agricultural land. There are five grades of agricultural land, with Grade 3 subdivided in 3a and 3b. The best and most versatile land is defined as Grades 1, 2 and 3a.

4.6.4 Green Belt

Guidance was published in July 2019 to address the of Green Belt in the planning system and in particular what factors can be taken into account when considering the potential impact of development on the openness of the Green Belt. It states that:

"*Assessing the impact of a proposal on the openness of the Green Belt, where it is relevant to do so, requires a judgment based on the circumstances of the case. By way of example, the courts have identified a number of matters which may need to be taken into account in making this assessment. These include, but are not limited to:*

- *openness is capable of having both spatial and visual aspects – in other words, the visual impact of the proposal may be relevant, as could its volume;*
- *the duration of the development, and its remediability – taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness; and*
- *the degree of activity likely to be generated, such as traffic generation*."

4.7 Supplementary Guidance Documents

4.7.1 Hertsmere Climate Change and Sustainability Interim Planning Policy Position Statement

HBC declared a Climate Emergency in September 2019 and published its Hertsmere Climate Change and Sustainability Action Plan (HCCSAP) in October 2020 -. In light of the urgency regarding the climate agenda, a Position Statement has subsequently been produced to provide clarifications on existing sustainability and climate change policies until the new Local Plan (2018-36) and any supplementary documentation is fully adopted. **Given the urgent need to ensure the introduction of measures to meet both government and local Climate Change commitments, the Council considers it both prudent and necessary to publish a position statement which clarifies how Hertsmere as the Local Planning Authority (LPA) will interpret its existing development plan policies in the context of updated material considerations and circumstances until the new Local Plan is published and subsequently adopted.**

The position statement sets out the requirements which Hertsmere as LPA will seek on relevant applications for planning permission in order to deliver on the requirements set out in the adopted Core Strategy (2013) and the Site Allocations and Development Management Policies (SADMP) (2016), the National Planning Policy Framework (NPPF) (2019), Climate Change and Sustainability Strategy (Hertsmere Borough Council) and the Government's recent commitments and emerging priorities on climate change.

The position statement is a material planning consideration to be taken into account when determining planning applications (and appeals) until the new Local Plan is published and as concluded in the statement itself, it should be given significant weight in reaching planning decisions.

4.7.2 Biodiversity and Trees Supplementary Planning Document (SPD (2010)

This document, adopted as SPD by HBC, provides overarching guidance in relation to biodiversity and trees within the Borough. Parts C and D specifically relate to trees and protected trees, woodlands and hedgerows respectively and set out practical guidance in relation to the considering these features in the planning and design process.

4.8 Other Guidance

In addition to the policy and supplementary guidance documents identified above, there are a number of other local guidance documents which are relevant to and have been considered in the LVIA (see Document Ref: R018), which are as follows:

- GreenArc Strategic Green Infrastructure Plan (with Hertfordshire) (2011) - This document provides overarching guidance for Green Infrastructure (GI) in Hertfordshire, mapping existing

GI and identifying several key strategic GI interventions across the county. In relation to the Site and study area the document identifies the Site within the 'woodland arc' GI project area, which covers a large tract of land from Bushey in the southwest to Hoddesdon in the northeast where "Recognition of the value of woodlands as a multi-functional and strategic GI asset, and to deliver aims and aspirations of related partners" is sought including the linking of woodland and increasing the diversity of woodland habitats;

The document also identifies the aspiration to reconnect into wider GI networks within the study area by means of "Reconnection of Rights of Way that have been severed by major barriers to the movement of people and wildlife (e.g. by rivers, canals & dual carriageways)", particularly those that connect into the All London Green Grid;

- Hertsmere Borough Green Infrastructure Plan (2011) -This document supports the GreenArc Plan and provides further detail at a local borough level. In relation to the Site and study area, the document identifies opportunities for 'wetland habitat zones' along Hilfield Brooks and Aldenham Brook, 'small scale conservation zones' between Letchmore Heath and Elstree Aerodrome and the opportunity to create green links to Hilfield Reservoir linking to the wider London Loop and London greenspace network;
- Hertfordshire Landscape Character Assessment: Hertsmere (2000) - This document provides the main character analysis for the Borough and is used as the basis of assessment of landscape character for the LVIA (see Document Ref: R018).

5 The Planning Appraisal

In determining an application for planning permission, a decision maker is required by Section 70(2) of the Town and Country Planning 1990 Act to have regard to the provisions of the development plan so far as material to the application. Section 38(6) of the Planning and Compulsory Purchase Act 2004 requires that a determination *"must be in accordance with the plan unless material considerations indicate otherwise".*

The Courts have determined that it is enough that a proposal accords with the Development Plan when considered as a whole. It is therefore not necessary to accord with each and every policy contained within the Development Plan. Indeed, it is not at all unusual for Development Plan policies to pull in different directions[3].

The local development plan for the purposes of determining the application for the Proposed Development is set out in Section 4.5 above in so far as they are consistent with the NPPF. In addition, the recently published HCCSAP interim planning policy position statement is deemed by the Council to be a material planning consideration and to be given significant weight in making planning decisions.

The NPPF is also a key material consideration. It holds a presumption in favour of sustainable development which states that for decision making this means "approving development proposals that accord with an up to date development plan without delay" (paragraph 11c) and in paragraph 12 reminding decision makers that that the presumption in favour of sustainable development does not change the statutory status of the development plan as the starting point for decision making.

This section contains a detailed analysis of the Proposed Development against the identified relevant national and local planning policies and other material planning considerations. The key issues for the determination of the Application are:

- The principle of the development as renewable energy;
- Landscape and visual impacts;
- Green Belt
- Heritage impacts
- Biodiversity impacts;
- The use of agricultural land;
- Farm diversification;
- Impacts on amenity;
- Flood risk impacts;
- Aviation Safety; and
- Traffic impacts and access.

5.1 The Principle of the Development as Renewable Energy

The Proposed Development comprises a solar farm and battery storage facility, a renewable energy generating station supplying up to 49.9MW of clean energy to the National Grid. It proposes the use

[3] Laura Cummins and London Borough of Camden, SSETR and Barrett Homes Limited [2001]; R. v Rochdale MBC ex parte Milne [2000] & City of Edinburgh Council v. Secretary of State for Scotland [1997]

of bifacial modules which absorb irradiation from the front and the rear sides of the panels to generate c.4% higher energy yield than mono-facial modules. The battery storage facility would be utilised to reinforce the power generation of the solar farm, maximising renewable energy production from the Site whilst providing security of supply.

The Glossary of the NPPF defines renewable energy as covering those energy flows that occur naturally and repeatedly in the environment including from the sun. The Proposed Development meets the definition therefore of renewable energy as defined in national planning policy.

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. Privately funded, large scale solar developments such as the Proposed Development are recognised as being not just necessary but central to meeting an urgent need. Moreover, with the battery storage proposed, the Application goes further by helping to address the intermittency issues associated with renewables generally and will assist to relegate the role of fossil fuels to being one of a back-up.

Nowhere in national or local policy is there a requirement to demonstrate the need for renewable energy development. The urgency of the need for substantially greater quantities of renewable energy (including large scale solar) is self-evident in light of the recent dramatic step change in Government energy policy driven by its declared Climate Emergency to achieve a 100% reduction in greenhouse gas emissions by 2050 (Net Zero). This is a legally binding target.

The announced commitment by Government in October 2020 to raise its target for offshore wind capacity by 2030 from 30GW to 40GW demonstrates the urgency and scale of the necessary step change in switching from fossil fuels to renewables if Net Zero is to be achieved by 2050. On its own, even if it were to be delivered, this would not be sufficient to meet the need for additional renewable energy and reduce carbon emissions to the levels required by law.[4]

HBC declared its own Climate Emergency in September 2019, committing to a target of becoming carbon neutral by 2050. Its Climate Change Strategy commits the Council to matching challenging national targets on low carbon and renewable energy. The HCCSAP directs that applicants are requested to take full account of and positively design for sustainability, net zero carbon emissions, mitigation of climate change.

The 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).

NPPF paragraph 148 states that the planning system should support the transition to a low carbon future and support renewable and low carbon energy and associated infrastructure. Paragraph 153 goes onto state that in determining planning applications, local planning authorities should expect new development to *"take account of landform, layout, building orientation, massing and landscaping".* With paragraph 154 concluding that when determining planning applications for renewable and low carbon development, local planning authorities should *"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 *"approve the application if its impacts are (or can be made) acceptable".*

[4] The Committee for Climate Change's key June 2020 recommendations advised *at least* 40GW of offshore wind would be needed *together* with a role for onshore wind and *large-scale solar*.

Making prudent use of natural resources is one of the Government's four aims for sustainable development and is reflected in the objectives of the Core Strategy and HCCSAP. It is therefore considered by the Council important for the Local Plan to contain policies, which help to secure a more efficient use of natural resources.

The Core Strategy stresses that the promotion of renewable energy technology, subject to adequate mitigation of any adverse impacts, is supported by the Council. The Council considers that it is preferable for carbon omissions to be reduced through sustainable design and construction, before requirements for on-site renewable energy generation or allowable solutions are considered. Larger, commercial renewable energy source developments, whilst broadly acceptable in principle, will need to be considered on their merits including their impact on designated and non-designated landscapes in the Green Belt. The Council recognises that embracing climate change may require historic notions of urban design to be challenged.

The HCCSAP position statement sets out that in order to meet requirements of the NPPF including paragraph 8 – achieving sustainable development means the planning system has three objectives, including environmental, with a requirement to move to a low carbon economy and paragraph 148 that the planning system should support the transition to a low carbon future in a changing climate.

It continues, to accord with paragraph 8c of the NPPF, an environmental objective, **the Council will encourage development of sources of renewable or sustainable energy generation subject to existing policy caveats.**

The Proposed Development would supply 49.9MW of clean renewable electricity for distribution to the National Grid, contributing to the objective of sustainable development in accordance with NPPF paragraph 11, adopted Local Plan Policy and increasing renewable energy generation in accordance with NPPF paragraph 148. This quantity of additional renewable energy is a significant contribution to meeting both national and local renewable energy targets. It is a significant environmental benefit, displacing as it does 25,400 tonnes of CO_2per annum, which represents an emission saving equivalent of a reduction in c. 8,100 cars on the road every year. It is also estimated the solar farm will increase the total amount of renewable electricity generated in Hertsmere from 5.4% to 20%, bringing Hertsmere closer to the national average of 33% electricity generated from renewable sources. This is being provided at a time of a national and locally declared Climate Emergency.

From the assessments accompanying the Application it is clear that the Proposed Development as mitigated would not significantly adversely affect landscape designations, biodiversity (in fact a significant biodiversity net gain of 39.54% habitat biodiversity net gain and 23.30% for hedgerow would be delivered) or the historic environment. Designated heritage assets are suitably screened and distant from the Site so as to avoid significant adverse impacts and the targeted archaeology trial trenching found the areas assessed to be archaeologically sterile. Safe road access has been designed in accordance with the advice received from the Highway Authority, and residential amenity has been demonstrated to be protected from noise and glint and glare impacts. Soil health would be improved as a result of the Proposed Development and there would be no loss of best and most versatile agricultural land, the site being wholly assessed as being Grade 3b. Sheep grazing around the solar arrays would maintain the land in agricultural use.

Detailed assessments submitted with this application demonstrate that the Proposed Development would not compromise the Elstree Aerodrome operational integrity or aviation safety.

In applying the relevant national and local policy therefore regarding the principle of the development as renewable energy it is clear that the Proposed Development is fully compliant.

5.2 Landscape and Visual

The NPPF paragraph 127, adopted Local Plan Policy CS12 and SADM11 all require the protection or enhancement of the landscape and visual quality of the area. The HCCSAP position statement directs that HBC wish to see proposals for real and significant landscape and green infrastructure improvements integrated for all planning applications. Green infrastructure should be integrated as a key component of all schemes but in particular for major developments. Developers will be expected to include proposals for the management and maintenance of such infrastructure as part of their proposal. This is provided in the submitted LEMP (see Document Ref: R009).

Policy SAD26 in consideration of development standards in the Green Belt requires developments should take advantage of site contours and landscape features in order to minimise the visual impact in order to be sympathetic to, and compatible with, its landscape setting. Policy CS15 also states that the Council will support proposals which improve links and remedy identified deficiencies in the GI network, and enhancements sought to protected PRoW.

These policies have all been used to inform the layout and design of the Proposed Development and its integration with the surrounding environment.

Both the NPPF and local plan Policy SP2 also encourage an iterative approach to design and early engagement with the local community is also encouraged. Policy SP2 states that when considering development proposals the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It will always work proactively with applicants jointly, in particular through the preapplication process, to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area. The Online Planning Policy Guidance advises that the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively.

The Design and Access Statement (Document Ref: R004) and the Statement of Community Involvement (Document Ref: R014) explain in detail how the design evolution (Concept Scheme, Assessment Scheme and finally the Planning Application Drawings (Document Ref: R002)) has responded directly to the landscape setting of the Site and to local community concerns about landscape and visual impacts. This has included:

- Sensitive siting of panels, central inverters and on-site substation;
- Retention of existing tree and hedgerow field boundaries within and around the Site, with the solar farm development confined to individual field parcels to ensure it is well integrated into the landscape and provide screening;
- Creation and enhancement of GI corridors through the Site linking existing woodlands and enhancing the overall GI of the area. This has included the creation of four principal new structuring landscape components and the retention of smaller field parcels and woodland within the Site with potential for ecology and/or amenity enhancements;
- New planting along the boundaries of the Site is proposed to filter, screen, and help integrate the Proposed Development into its landscape context. Advanced or early planting of certain landscaping features around the Site's perimeter is proposed to enable new planting to become established at the earliest opportunity. It is proposed all boundaries along the Site's perimeter are enhanced where necessary, using native species' appropriate to the Site and the surrounding area;

- Careful consideration of the internal access road network has been undertaken to limit the number of field boundary crossings. Where crossings are necessary, they have been carefully aligned to either use existing access points or pass through vegetated areas where it will have the minimal impact and minimize the loss of mature trees;
- PRoWs have been retained, with proposed enhancements including the creation of a new wildflower meadow corridor, and mitigation with new vegetative hedgerows screening close views, as well as 578m of new permissive paths allowing a new connection to the Hertfordshire Way and an alternative route around Belstone Football Club's pitches;
- Creation of new amenity through two Nature Areas and two restored ponds, allowing greater connection and for local visitors and children to learn about their local environment and the role of solar farms specifically and green energy generally in combating climate change; and
- Improved biodiversity across the Site through the creation of a variety of new habitats and management of existing habitats within the Site to improve their quality and functioning.

The HCCSAP position statement adds to the design principles set out in SADM30 with the Council expecting all new development, appropriate to the scale of works proposed, to incorporate appropriate design, technological, landscape and ecological solutions to aimed at achieving net zero carbon emissions, incorporate sustainability and build resilience against climate change and its impacts.

Both the DAS and the LEMP make clear that great care has been taken in designing as a high a quality proposal as possible, with the site layout taking its lead from the environmental and community sensitivities where-ever possible including the varied and sympathetic treatment of PRoWs to enhance their recreational amenity value and the provision of additional permissive footpaths. New planting of native species woodland, tree belts, hedgerows, wildflower meadow, neutral grassland with wildflowers and scrub, and tussocky grassland is proposed across the Site, in conjunction with the careful management of the existing vegetation on-site as part of the comprehensive landscape strategy set out in the LEMP. The objective of the landscape strategy is to help integrate the Proposed Development into its surrounding landscape, minimise potential negative visual and landscape impacts (in so far as possible) and enhance the existing landscape structure, amenity value and biodiversity.

The likely landscape and visual impacts of the Proposed Development have been fully assessed in the LVIA (Document Ref: R018).

There are no landscape designations within the Site or study area that would be potentially affected by the Proposed Development. Effects on landscape character would be greatest within the Site and its immediate context where the present land use would change from an agricultural landscape to a solar farm development. Effects would reduce rapidly with distance from the Site, as the Proposed Development would be increasingly screened by a combination of vegetation, landform and buildings in the intervening landscape.

The extent of Large scale visual effects, where the Proposed Development would form a major alteration to key elements, features, qualities and characteristics of the view such that the baseline will be fundamentally changed, would generally be limited to locations within the Site from PRoW, and from those adjacent to the site boundaries.

Beyond this area, the extent of Medium scale effects is limited due to the screening effects of numerous woodland blocks and extensive tree lined hedgerows and tree belts within and in close proximity to the Site within approximately 150m, and are generally restricted to areas with glimpsed views through gaps in hedgerows/intervening vegetation.

Small scale effects would occur within an approximate 600m distance to the north but would reduce over time to Negligible as boundary screening matures.

Negligible effects would occur to receptors beyond 600m, including those at Bushey.

The screening effect of planting associated with the Proposed Development, coupled with the relaxation of management of existing field boundaries allowing them to grow out, would reduce visual effects over time and essentially limit them to within the Site and it's the immediate vicinity. In view of the above findings, it is considered that the Proposed Development would therefore accord with the relevant provisions of the NPPF and Local Plan Policies SP2, CS12, CS15, SADM11. SADM12. SADM13, SADM16 and SADM30.

5.3 Biodiversity

Both national and local policy place great importance on the protection and enhancement of biodiversity, including achieving a biodiversity and green infrastructure net gain when mitigating impacts of new development. Nationally and locally important nature conservation sites should be protected, along with protected species unless the benefits of the proposed development outweigh the harm.

The likely effects of the Proposed Development on nature conservation and biodiversity have been fully assessed in the Ecological Appraisal Report accompanying the Application (Document Ref: R013).

There are no statutory or non-statutory nature conservation sites within the Site.

The HCCSAP position statement states that applicants will be expected to demonstrate more than 'avoid significant harm', but to take positive steps to protect, enhance and improve sites of - and opportunities for ecology, geology and biodiversity. Applicants for major developments will be encouraged to demonstrate how they can work towards a positive biodiversity net gain on site. The Biodiversity Net Gain Assessment (see Document Ref: R013) calculates that biodiversity value of the site would be significantly improved with a 39.54% habitat biodiversity net gain and 23.30% hedgerow biodiversity net gain arising from the positive habitat creation and enhancement measures proposed in the Proposed Development. This is a major beneficial residual effect and should be given substantial weight in the planning balance.

The HCCSAP further directs that applicants will be expected to work with local and other partners to minimise impacts of and maximise opportunities for biodiversity, habitats. The designed-in and additional mitigation measures proposed will mitigate or compensate for all ecological impacts, will produce a biodiversity net gain in accordance with planning policy and will comply with wildlife legislation.

The provisions of the LEMP can be secured through the imposition of an appropriately worded planning condition in the event permission is granted. By adhering to the recommended objectives, implementation provision and monitoring set out in the LEMP, the Proposed Development will accord with the relevant NPPF paragraphs and Local Plan Policies SP1, CS12, CS15, CS16, SADM10, SADM12, SADM13 and SADM16.

5.4 Heritage

The Heritage Impact Assessment presented in document R017 (HIA) has considered the potential impacts of the Proposed Development upon the physical fabric of heritage assets within the Site, and the potential impacts on the setting of heritage assets within the wider landscape.

A desk-based study, walkover survey and site visits including a partial geophysical survey (see Document Ref; R017) and targeted trial trenching have been undertaken in order to identify assets that may be affected by the Proposed Development and establish their current condition and baseline setting.

The HIA has identified that any currently unrecorded archaeological remains that may be present within the site are unlikely to be of more than low importance. Although a geophysical survey was initiated as part of this assessment process it was not completed due to poor ground conditions leading to inconclusive survey results.

Targeted archaeological trial trenching of the areas of greatest impact and potential (Field 14 which lies adjacent to Watling Street and the areas of the proposed substation, battery storage facility and construction compound in agreement with the HCC Heritage advisor) has been carried out to inform the application and the findings of an interim report found the areas investigated to be archaeologically sterile.

The Proposed Development will result in up to 4% ground disturbance, with most of this occurring in the areas of the construction compound, battery storage facility and substation. Overall this is likely to result in less than substantial harm to any heritage assets. This less than substantial harm to non-designated heritage assets within the site.

No harm is predicted to the majority of designated heritage assets in the study area through change in their setting. The exception is Slades Farmhouse, a Grade II Listed Building, which is predicted to experience much less than substantial harm as a result of the change of land use.

In terms of the operational impacts of the Proposed Development, the proposed development is not predicted to result in material changes to the setting of any listed buildings with no harm to their significance.

Overall, the HIA has not identified anything in respect of archaeology or heritage that would preclude the Proposed Development in this location. As such it is concluded that the Proposed Development complies with the policies of the NPPF and Local Plan Policies SP1, CS14 and SADM29.

5.5 Use of Agricultural Land

Both the NPPF and Local Plan Policy SADM27 supports diversification and development supporting the rural economy provided the site is of a lower agricultural land grade (i.e. Grade 3b, 4, 5 or non-agricultural); and there is a reliable prospect that the land will be restored to at least its original quality seeking to resist the permanent loss of Best and Most Versatile (BMV) land, meaning grades 1, 2 and 3a as defined in the MAFF 1988 guidance for grading the quality of agricultural land. Guidance requires the proposed use of any agricultural land to be necessary and for poorer quality land to be used in preference to higher quality agricultural land.

An assessment of agricultural land quality, involving a desktop study and a semi-detailed Agricultural Land Classification (ALC) survey, has been undertaken to determine the quality of agricultural land on Fields 1-20 (the Study Area).

A semi-detailed ALC survey of the Site was carried out in July 2020 which determined that the quality of agricultural land at the whole Site is limited by soil wetness to Subgrade 3b (medium sensitivity receptor) and does not affect any BMV agricultural land.

The installation of the Proposed Development is reversible, i.e. the agricultural land can be returned to its former agricultural productivity once the generation of renewable electricity has ceased, and the solar panels and associated infrastructure is removed. Local Plan Policy SADM26 supports

diversification where there is a reliable prospect that the land will be restored to at least its original quality.

Planning Practice Guidance also recognises that the duration of the development and its remediability, taking into account any provisions to return the land to its original state or to an equivalent state of openness is a factor to be taken into account when considering development within the LMGB.

The agricultural land at the Site is currently used mainly for arable crops. In many respects, the management of the land under solar panels as grassland can benefit soil health. It is likely that soil health will be improved over the operational life of the generating station, i.e. increase in soil organic matter, increase in the diversity of soil flora, fauna and microbes, and improve soil structure.

The semi-detailed ALC survey is sufficiently robust to have determined the location and extent (area in ha) of Subgrade 3b land over the whole Site. Therefore further, more detailed, ALC survey is not necessary.

Therefore, development of agricultural land at this Site would not significantly harm national agricultural interests in accordance with paragraph 171[5] of the NPPF and would comply with Local Plan Policy SADM27. All development which is supported in principle under this policy must also satisfy the requirements of Policy SADM26

5.6 Farm Diversification

There is support in national (NPPF paragraph 83 (b)) and Local Plan policy SADM27 for farm diversification projects that meet sustainable development objectives and help sustain the rural economy and encourage agricultural enterprise, subject to development proposals being well designed and of a use and scale appropriate to the location when considering landscape, heritage and environmental impacts and safe and acceptable site access and highway impacts.

Due to the relatively low income from farming, many farmers have had to diversify to secure an economically sustainable profit. Farm diversification is broadly defined as 'the entrepreneurial use of farm resources for a non-agricultural purpose for commercial gain'. Hence, diversification reflects the reduced dependence of farmers on agriculture as a source of income. Diversification also implies entrepreneurial activity on behalf of the farmer.

The Proposed Development will be an important stream of farm diversification income whilst allow underpinning the continuation of the overall farming businesses.

Farming businesses play a vital role in the rural economy, particularly supporting the agricultural supply chain to include feed merchants, machinery sales, maintenance and repair businesses, local builders, delivery drivers and professional services, to name but a few – therefore farm diversification is key to the long-term overall survival of farms. The Proposed Development would help to support the local agricultural supply chain via the income to the farming business.

Renewable energy is an important form of farm diversification, recognised by the National Farmers Union (NFU) as an important step towards making British agriculture carbon neutral within two decades. As farming is responsible for around a tenth of UK greenhouse gas emissions, supporting renewable energy farm diversification projects will be a vital step to reaching net zero.

[5] 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. Footnote 53 of the NPPF.

5.7 Amenity

The need to protect the amenity of the local area and nearby sensitive receptors through minimising visual and noise impacts and effects of glint and glare is a requirement of both national and local planning policy. Visual impacts have been assessed in the LVIA and found to be acceptable (refer to Section 5.2 above), the effects of noise and glint and glare are considered in turn below.

Noise

A Noise Impact Assessment has been produced to accompany the Application (see Document Ref: R011).

The assessment considers the potential noise generation from the plant associated with the Proposed Development, with respect to existing sound levels in the area. The assessment methodology contained in British Standard 4142:2014+A1:2019 *Method for rating and assessing industrial and commercial sound* has been used in conjunction with supplementary acoustic guidance.

The assessment identifies that the Proposed Development will give rise to rating noise levels that are typically below the measured day and night-time background sound levels in the area, at the closest assessed residential receptors, thus giving rise to a Low Impact.

Consequently, the assessment demonstrates that the Proposed Development will give rise to noise impacts that would be categorised as No Observed Adverse Effect Level (NOAEL)[6] within the Noise Planning Practice Guideance Noise.

The amenity of the closest residential receptors would therefore not be affected by noise arising from the Proposed Development.

Glint and Glare

Solar panels are made up of silicon based PV cells that are encased in a glass covering. Glass does not have a true specular reflection but does reflect a certain magnitude of light. Reflection of sunlight from PV panels is unwanted by the Applicant. This is because the greater the amount of light which can be captured at the PV cell, the greater the amount of electricity that can be produced. The manufacturers of the panels therefore use anti–reflective coating in the glass that changes the reflectivity from specular distribution to diffuse distribution. Therefore, as light falls onto the PV panels, most of the sunlight is transmitted to the cell beneath the glass with only a small amount reflected back in a multiple of angles and magnitudes. The result is an object that is perceived to have very little glare.

Nonetheless, and for the purposes of completeness and a robust impact assessment of the Proposed Development a Glint and Glare Assessment has been prepared and submitted (see Document Ref: R012). The assessment pertains to the possible effects upon surrounding road users and dwellings. Possible glint and glare effects on aviation safety are considered in Section 5.10 below.

The glint and glare assessment has shown that the proposed landscape screening will be sufficient to remove all views of the reflective areas therefore no impact on dwellings is expected. For only four road receptors the impact is moderate and mitigation is recommended along Butterfly Lane. The

[6] The definition of *No Observed Adverse Effect Level* in PPG Noise is reproduced below:

"Noise can be heard, but does not cause any change in behaviour, attitude or other physiological response. Can slightly affect the acoustic character of the area but not such that there is a change in the quality of life."

Applicant has proposed strengthening of the northern boundary of Butterfly Lane thereby no impact is expected.

Overall, therefore the Proposed Development is acceptable in amenity terms and meets the requirements of the NPPF and Local Plan Policy SADM30.

5.8 Flood Risk

The requirements for Flood Risk Assessment (FRA) are provided in the NPPF and its associated Planning Practice Guidance, together with the Environment Agency's Guidance Notes. This policy and associated guidance have been followed in the preparation of this FRA.

The EA's flood map for planning indicates that the majority of the site is located within Flood Zone 1 (low risk). An area of Flood Zone 2 and 3 (medium and high risk, respectively) is located in the north-western part of Field 1 associated with Hilfield Brook the majority of the Site is located within Flood Zone 3 (high risk); however, an area of Flood Zone 2 and 3 (medium and high risk, respectively) is located in the north-western part of Field 1 associated with Hilfield Brook.

The EA's risk of flooding from surface water mapping identifies that the majority of the Site has a very low risk of flooding from surface water and some small areas have up to a high surface water flood risk.

The Site is potentially at risk of flooding from sewers and groundwater; however, flood risk to the Site from these sources is considered to be low.

Part of the Site is at risk from reservoir flooding; however, as reservoirs are regularly inspected ensuring that they are maintained in a stable condition. It is therefore considered that flood risk to the Site from reservoirs is negligible to low and, therefore, no specific mitigation is considered necessary from this source. Nonetheless, the most sensitive part of the Proposed Development (i.e. the battery storage area and substation) will be located outside the area at risk of reservoir flooding, as a precautionary approach.

Detailed flood data for the Hilfield Brook was received from the Environment Agency (EA) which indicates that 1%, 1% AEP plus 20% climate change (CC) and 0.1% AEP defended flood extents are confined to the channel of the Hilfield Brook when compared to the topographical survey.

It is considered appropriate to use the 0.1% AEP event as a proxy for the 1% AEP plus 35% CC and 1% AEP plus 40% CC flood events as a conservative approach. Therefore, the Proposed Development will not be adversely affected by flooding from the Hilfield Brook with climate change for the operational lifetime of the development.

The EA's flood map for planning does not include flood extents for Aldenham Brook, Aldenham Tributary or the other unnamed watercourses within the Site. These watercourses have small catchment areas of significantly less than 3 km^2 and, therefore, are excluded from the JFLOW model and EA's flood map for planning. As such, it is considered that these watercourses are unlikely to pose a significant source of flood risk.

In this instance, the EA's Risk of Flooding from Surface Water mapping appears to show that the majority of the surface water flood risk is interlinked with the fluvial flooding.

The 1% AEP plus 35% CC flood levels are not available for the Site and, therefore, it is proposed to use the low surface water flood extent as a proxy for the future fluvial Flood Zone 3 extent.

A sequential approach has been taken in the layout whereby the most vulnerable parts of the development will be located in the areas at lowest risk of flooding. In particular, the substation and battery storage area will be located outside areas at risk of flooding, where practicable.

The Proposed Development is classified as 'essential infrastructure' and, therefore, it is acceptable to locate solar arrays within all areas at risk of surface water flooding where the depth is below the level of the solar panels.

Solar arrays will be located within the low risk surface water flood extent where the estimated depths are shallow. This is considered acceptable as solar panels will be elevated on framework at least 0.8 m above ground level and, therefore, flow would not be impeded, and the displacement of floodplain storage would be negligible.

Parts of the substation and battery storage area will be located in an area at a low risk of surface water flooding. Therefore, it is recommended that any buildings and sensitive equipment associated with the substation and battery storage area which are located within the low risk extent, should be raised 150 mm above the existing ground level, i.e. above the estimated low surface water flood depth.

An appropriate buffer will be provided from the top of the bank of the watercourses in order to ensure access for maintenance, including 8 m for 'main rivers' and 6 m for ordinary watercourses.

The hazard ratings for the access/egress route for Field 1 via Hilfield Lane are a 'danger for some' and a 'danger for most', a 'very low hazard' and a 'danger for some' for Fields 2, 3, 4 and 5 via Hilfield Lane and a 'danger for most' and a 'danger for all' via Butterfly Lane, depending on the velocity. However, it is anticipated that personnel will only be onsite during the construction phase and for occasional maintenance visits.

It is not considered necessary to provide Sustainable Drainage Systems for the proposed solar panel arrays. Cook and McCuen (2013) demonstrated that solar panels do not have a significant effect on runoff volumes, peaks or time to peak if grass cover is well maintained underneath panels and between rows. Therefore, it is proposed to maintain the grass cover to prevent areas of bare ground and erosion occurring.

All proposed roads and tracks will be constructed of a permeable material; therefore, there would be no increased runoff from these areas. Battery storage and inverter stations will be located in storage containers or cabins on legs above a 300 mm sub-base formed of permeable material i.e. gravel (MOT Type 3).

This FRA has therefore demonstrated that the Proposed Development will be safe and that it would not increase flood risk elsewhere. The proposed land use is classified as 'essential infrastructure' and is considered appropriate in relation to the flood risk vulnerability classifications set out in Table 3 of the PPG subject to passing the Sequential Test.

Given the large Site area of 130 ha, it is concluded that no other sites in the vicinity of the electricity distribution station are reasonably available at a lower risk of flooding. As such, it is considered that the Sequential Test should be passed

This FRA has therefore demonstrated that the Proposed Development will be safe and that it would not increase flood risk elsewhere. The Proposed Development should therefore be considered acceptable in planning policy in terms of its location in accordance with the NPPF and Local Plan Policies SADM13, SADM14, SADM16.

5.9 Traffic and Access

A CTMP has been prepared and accompanies the Application (see Document Ref: R005). This explains in detail the proposed Site access points, vehicle movements and the construction vehicle route from the strategic highway network to the Site.

It is expected that there will be approximately five HGVs per day (10 two-way movements) accessing the Site over the construction period. There will also be construction workers arriving at the Site in the morning and departing in the evening, although the numbers involved are forecast to be relatively low on a day-to-day basis and will occur outside of peak hours. The level of traffic forecast during the temporary construction phase is therefore low. It is concluded that construction traffic associated with the Proposed Development will not have a material effect on the safety or operation of the local highway network. Mitigations measures have also been proposed to further minimise impact from resulting construction activities on the local road network and are provided in Section 6 of the CTMP.

Operational traffic is very low, at approximately one to two light van maintenance visits per month.

The existing PRoW are not proposed to be diverted or closed and will remain open to users during the temporary construction period and during operations.

Overall, the Proposed Development is acceptable in traffic and access terms and meets the requirements of the NPPF and Local Plan Policy SADM40.

5.10 Aviation Safety

Potential effects on aviation safety from the Proposed Development are considered in Chapter 6 of the Environmental Statement (ES) and the ES Technical Appendices (see Document Refs: R007 and R008).

The Applicant undertook pre-application engagement with the Elstree Airport Licensee and the Operations Manager on relevant proposals for development. The embedded design mitigation within the proposal and planned landscape screening to be secured under the submitted LEMP and Landscape and Ecology Enhancement Plan (LEEP) result in the development proposals not compromising the Aerodrome's operational integrity and general safety.

The Proposed Development is therefore considered acceptable in aviation safety terms and meets the requirements of Local Plan Policy SADM41.

5.11 Green Belt

In regard to assessing the Proposed Development in the Green Belt (see Appendix 1), the starting point is as set out by the NPPF (February 2019):

"The Government attaches great importance to Green Belts. The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence" (para 133).

Paragraph 134 goes on to state that:

"Green Belt serves five purposes:

a) *to check the unrestricted sprawl of large built-up areas;*
b) *to prevent neighbouring towns merging into one another;*
c) *to assist in safeguarding the countryside from encroachment;*
d) *to preserve the setting and special character of historic towns; and*
e) *to assist in urban regeneration, by encouraging the recycling of derelict and other urban land."*

Paragraph 143 states that inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances.

Paragraph 144 states:

"When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt. "Very special circumstances" will not exist unless the potential harm to the Green Belt by reason of inappropriateness, and any other harm[7] resulting from the proposal, is clearly outweighed by other considerations."

Very special circumstances is thereby the outcome of a planning balancing exercise and the harms must be clearly outweighed by the benefits.

The policies in the NPPF set out those types of development that are appropriate (i.e. not inappropriate) in the Green Belt. The Proposed Development does not fall into any of the exceptions listed in paragraphs 145 and 146 of the NPPF. The Proposed Development is therefore considered to be inappropriate development within the LMGB.

The NPPF does however provide provision for renewable energy projects in the Green Belt. At paragraph 147 it states:

"When located in the Green Belt, elements of many renewable energy projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed. Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources" (our emphasis).

Paragraph 141 of the NPPF adds, in relation to the improvement of the Green Belts, *"Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land."*

It is therefore necessary to apply the two tests of harm set out in the paragraph 144:

a. The amount of harm (if any) to the Green Belt; and
b. The amount of other harm (through the impact of development on highways, visual amenity or otherwise).

Thereafter it is necessary to carry out a planning balancing exercise (which is a matter of planning judgement) to establish whether any harm to the Green Belt is outweighed by other considerations including benefits of the Proposed Development and allowing for mitigation as the NPPF allows; and whether the necessary very special circumstances exist to approve the Application.

Policy CS13 of the Core Strategy specifically relates to development in the Green Belt stating that the there is a general presumption against inappropriate development within the Green Belt, as defined on the Policies Map and such development will not be permitted unless very special circumstances exist. Development proposals, including those involving previously developed land and buildings, in the Green Belt will be assessed in relation to the NPPF.

The Core Strategy does underline that the promotion of renewable energy technology, subject to adequate mitigation of any adverse impacts, is supported by the Council. The Council considers that it is preferable for carbon omissions to be reduced through sustainable design and construction, before requirements for on-site renewable energy generation or allowable solutions are considered. Larger,

[7] The phrase "any other harm" means any harm, not only Green Belt harm (see Redhill Aerodrome [2014] EWCA Civ 1386).

commercial renewable energy source developments, whilst broadly acceptable in principle, will need to be considered on their merits including their impact on designated and non-designated landscapes in the Green Belt. The Council recognises that embracing climate change may require historic notions of urban design to be challenged

5.11.1 Openness

The concept of "openness" in paragraph 133 of the NPPF is naturally read as referring back to the underlying aim of Green Belt policy that is *"to prevent urban sprawl by keeping land permanently open..."*. Openness is the counterpart of urban sprawl and is also linked to the purposes to be served by the Green Belt. It is not necessarily a statement about the visual qualities of the land, though in some cases this may be an aspect of the planning judgement involved in applying this broad policy concept. Nor does it imply freedom from any form of development; some forms of development are appropriate and as such are compatible with the concept of openness[8].

The word 'openness' is open-textured, and a number of factors are capable of being relevant when it comes to applying it to the particular facts of a specific case. Prominent among these will be factors relevant to how built up the Green Belt is now and how built up it would be if redevelopment occurs...and factors relevant to the visual impact on the aspect of openness which the Green Belt presents[9]. It is clear from '*Samuel Smith'* that visual impact is a factor that may be material to the assessment of openness, and it will be for the decision maker to determine whether or not it is to be taken into account in any individual case.

One factor which can affect appropriateness, the preservation of openness and conflict with Green Belt purposes, is the duration of development and the reversibility of its effects[10]. The Application is proposed for a lifetime of 35 operational years and is therefore considered to be relevant to its acceptability within the Green Belt.

The National Planning Policy Guidance provides further guidance to the decision maker under the heading of:

'What factors can be taken into account when considering the potential impact of development on the openness of the Green Belt?'[11]:

"Assessing the impact of a proposal on the openness of the Green Belt, where it is relevant to do so, requires a judgment based on the circumstances of the case. By way of example, the courts have identified a number of matters which may need to be taken into account in making this assessment. These include, but are not limited to:

- *openness is capable of having both spatial and visual aspects – in other words, the visual impact of the proposal may be relevant, as could its volume;*
- *the duration of the development, and its remediability – taking into account any provisions to return land to its original state or to an equivalent (or improved) state of openness; and*
- *the degree of activity likely to be generated, such as traffic generation."*

[8] R (oao Samuel Smith Old Brewery (Tadcaster) and others v North Yorkshire County Council [2020] UKSC 3 at [22]

[9] per Sales LJ Turner v Secretary of State for Communities and Local Government [2016] EWCA Civ 466 at [14]

[10] Europa Oil and Gas Ltd v Secretary of State for Communities and Local Government [2013] EWHC 2643 (Admin) at [67]; (upheld at [2014] EWCA Civ 825)

[11] Ref. ID: 64-001-20190722 published 22 July 2019

Paragraph 13 of the Planning Policy Guidance also provides specific guidance on solar farms stating that *"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."*

In so far as visual impacts are considered relevant to the assessment of the impact on openness, it is necessary to draw upon the LVIA (see Document Ref: R018). As set out above the Site in general is visually well-contained by a combination of existing hedgerows, shrubs, tree belt and woodland vegetation that are located within and along the Site's boundaries, which assist in reducing the visibility of the Site. In particular, the rising ground within the centre of the Site adjacent to where the aerodrome is situated, and the established woodland that is situated upon the local ridgeline and surrounding the boundaries of the Site, provide a considerable degree of visual containment.

The Site's visual connectivity to the wider landscape is, in general, limited to its local context up to 1km. Coupled with the landscape-led iterative design process, the Proposed Development has sensitivity sited various elements of the scheme to reduce landscape and visual effects and potential harm to the Green Belt. This has involved the confinement of solar panels to the existing fields present within the Site; the omission of solar panels on the rising ground; and the siting of the proposed battery storage facility to the immediate south of the National Grid Elstree Substation.

The Proposed Development would also retain the existing vegetation on-site in-combination with proposals to strengthen it with new planting where necessary. This would be positively managed (through the relaxation of cutting and management) to allow them to grow out and further restrict potential visibility of the Proposed Development. The nature of the Proposed Development means that site fabric and characteristics of the Site such as the vegetative network, field pattern and topography would remain intact and legible.

Notwithstanding the above, the duration of the Proposed Development would be entirely reversible after its 35-year operational phase.

A comprehensive assessment of the Site in relation to the purposes prescribed under paragraph 134 of the NPPF is provided in Appendix 1 which concludes the Proposed Development would result in limited harm to three of the four relevant purposes of the LMGB, and the strategic performance and function of the remaining LMGB would prevail.

5.11.2 Other Harm

As demonstrated above, consideration has been given to 'other harm' regarding heritage, biodiversity, agricultural land, farm diversification, amenity, flood risk, traffic and access and aviation safety. Landscape and visual impacts have also been assessed in relation to landscape character and visual receptors.

The supporting assessments are clearly set out below in Table 5.1, indicating mitigation measures taken to reduce harm as part of the Proposed Development:

Assessment	Mitigation Measures	Harm	Report Ref:
Landscape and Visual	Input into the design to ensure suitable distances from PRoW, and location of key infrastructure such as the onsite substation and battery storage facility.	Limited Temporary Harm (35 years)	R018

	Enhancement measures incorporated within the LEMP (See Document Ref: R009)		
Heritage	Undertook a partial geophysical survey and targeted trial trenching prior to submission to identify any unknown archaeology on Site. All trenches were considered archaeologically sterile.	Limited, Indirect and Reversible Harm (35 years)	R017
Biodiversity	Suitable avoidance measures applied for both habitats and species identified. Enhancement measures incorporated within the LEMP (See Document Ref: R008). 39.54% habitat biodiversity net gain and 23.3% hedgerow biodiversity net gain	Enhancement	R013
Use of Agricultural Land	100% of land is not BMV. Land will be retained in agricultural use through sheep grazing. Temporary use and fully reversible. Benefits demonstrated to soil health due to change in management of the land.	Enhancement	R015
Farm Diversification	The site would support the rural economy by providing farm diversification for the landowner.	Benefit	R003
Amenity	Noise: location of noise generating equipment has been moved as far practicable from sensitive receptors. Glint and Glare: choice of technology, configuration of technology, site topography, new vegetative screen planting and positive management of existing planting to improve screening	Noise: No Harm Glint and Glare: Limited Temporary Harm	R007, R008, R011 and R012
Flood Risk	Liaison with the Environment Agency to ensure suitable siting of equipment and sustainable drainage methods.	Limited Temporary Harm	R010
Traffic and Access	Liaison with Highway Authority to agree safe access design. Inclusion of signage, procedures and pre-commencement and post condition surveys to further minimise impacts on the local road network.	Limited Temporary Harm	R005

Aviation Risk	Liaison with Elstree Aerodrome to agree safe design	Limited Temporary Harm	R007 and R008

Table 5.1: Mitigation measures taken to reduce harm as part of the Proposed Development

It is concluded from the accompanying assessments that limited weight should be applied to "other harm" when undertaking the planning balance in accordance with paragraph 144 of the NPPF and local policies.

5.11.3 Very Special Circumstances

It is a key planning policy requirement that very special circumstances need to exist for inappropriate development to be approved in the Green Belt.

It is incorrect to suggest that every circumstance in itself has to be 'very special'. Some factors which are quite ordinary in themselves could, cumulatively, become very special circumstances[12]. Thus, the correct approach is to consider whether the very special circumstances relied upon by an applicant (and any other identified by the decision maker), when considered as a whole, are sufficient to outweigh any harm to the Green Belt and any other harm arising from the Proposed Development.

The following are considered to be benefits of the Proposed Development:

5.11.3.1 Increasing Renewable Energy Generation

The Proposed Development would supply up to 49.9MW to the National Grid, providing the equivalent annual electrical needs of approximately 15,600 family homes in Hertsmere. The anticipated CO_2 displacement is around 25,400 tonnes per annum, which represents an emission saving equivalent of a reduction in c. 8,100 cars on the road every year. It is also estimated the solar farm will increase the total amount of renewable electricity generated in Hertsmere from 5.4% to 20%, bringing Hertsmere closer to the national average of 33% electricity generated from renewable sources.

As demonstrated extensively in Section 4.2 and 4.3, the UK and HBC is at a time of climate emergency and there is an urgent requirement for renewable energy infrastructure, particularly when considered in the context of the June 2019 ambitious target to reduce greenhouse gas emissions to net zero by 2050 in accordance with the Climate Change Act 2008.

Whilst there is no requirement for an applicant to demonstrate the need for renewable energy in planning policy, national energy policy makes clear that renewable and low carbon energy is vital to our economic prosperity and social well-being and that it is important to ensure that the UK:

- Transitions to a low carbon economy and reduces greenhouse gas emissions to address the predominant challenge of our time, climate change;
- supports an increased supply from renewables;
- continues to have secure, diverse and resilient supplies of electricity as the UK transitions to low carbon energy sources and to replace closing electricity generating capacity;

[12] R. (on the application of Basildon DC) v First Secretary of State [2004] EWHC 2759

- increases electricity capacity within the system to stay ahead of growing demand at all times whilst seeking to reduce demand wherever possible; and
- delivers new low carbon and renewable energy infrastructure as soon as possible- the need is urgent.

In the most recent 2020 Progress Report to Parliament[13], the Committee on Climate Change state that the path to achieving net-zero emissions by 2050 will necessarily entail a steeper reduction in emissions over the intervening three decades and to reach the UK's new Net Zero target, emissions will need to fall on average by around 14 $MtCO_2e$ every year, equivalent to 3% of emissions in 2019.

The report goes on to state that reaching net-zero emissions in the UK will require all energy to be delivered to consumers in zero-carbon forms (i.e. electricity, hydrogen, hot water in heat networks) and come from low carbon sources (i.e. renewables and nuclear etc).

When located in the Green Belt, paragraph 147 is clear in stating that "*Such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources"*.

The NPS EN-1 and NPPF state that renewable energy and associated infrastructure should be supported in the planning system, as part of working towards a radical reduction of greenhouse gases to tackle climate change. Paragraph 151 encourages local panning authorities to maximise the potential for renewable energy and to approve such applications where their impacts are acceptable.

This is afforded significant weight in the planning balance.

5.11.3.2 Climate Emergency

In May 2019 a national climate emergency was declared by the UK Parliament. MPs called on Government to make changes that included the setting of a radical and ambitious new target of reaching net zero emissions before 2050.

The strategy and action plan for how HBC will achieve net zero carbon emissions by 2050 was approved by Full Council on 14 October 2020. Hertsmere is one of 205 local authorities, alongside Hertfordshire County Council, St Albans City and District Council, Watford Borough Council and Dacorum Borough Council, who have declared a climate emergency and committed to taking urgent action to reduce their carbon emissions. Hertsmere declared a climate emergency in September 2019 and is committed to achieving carbon neutrality as soon as possible and no later than 2050.

The recently published HCCSAP position interim statement on planning policy is given significant weight in planning decisions.

The Proposed Development would make a significant and valuable contribution to achieving emission targets on a national and local level.

This is afforded substantial weight in the planning balance.

[13] Reducing UK emissions: 2020 Progress Report to Parliament. Committee on Climate Change. June 2020

5.11.3.3 Energy Security

The Proposed Development supplies clean renewable energy to the National Grid, comprising secure, distributed and diversified energy generation which accords with the Government's policy on energy security as identified within NPS EN-1 which explains the need for energy security allied with a reduction in carbon emissions.

This is afforded substantial weight in the planning balance.

5.11.3.4 Best Available Technology

The use of best available and state of the art technology on the Site aims to maximise the use and productivity of the land for the generation of renewable energy. The Proposed Development proposes utilising high-efficiency bifacial panels and at a fixed tilt of between 20-30 degrees and orientated broadly facing south between 165-200 degrees. Bifacial panels absorb light on both sides of the panel, both directly on the top-side, and reflected light is also absorbed on the rear-side. The panel technology also utilises high efficiency monocrystalline cells meaning fewer panels are required to be installed on the site to achieve the target capacity. The combination of high-efficiency bifacial panels and optimised configuration increases the production of electricity from the site by 4% compared to monofacial systems.

The battery storage facility would be utilised to reinforce the power generation of the solar farm, maximising renewable energy production from the Site whilst providing security of supply.

This maximises renewable energy production from the Site whilst providing security of supply in accordance with Government Policy in reducing the reliance on fossil fuel generation as back up, thereby avoiding the adverse environmental and climate effects.

This is afforded significant weight in the planning balance.

5.11.3.5 Good Design

In addition to using best available technology, through undertaking an iterative design process and pre-application engagement, as outlined in the Design and Access Statement (see Document Ref: R004), the design of the Proposed Development has been a key consideration in the layout of the site to minimise harm and provide significant benefits to the development as a whole.

This is afforded moderate weight in the planning balance.

5.11.3.6 Alternatives

The ES at Chapter 3 (Document Ref: R007) sets out the alternatives considered as part of the evolution of the design and location of the Proposed Development.

Overall, it concludes that within the defined Study Area, there are no alternative sites which are suitable and available for the Proposed Development.

This is afforded substantial weight in the planning balance.

5.11.3.7 Temporary and Reversible Impacts

The Application is proposed for a lifetime of 35 operational years. After the 35-year period the generating station would be decommissioned. All electricity generating equipment and built structures associated with the Proposed Development would be removed from the Site and it would continue in agricultural use. It is therefore considered that the Proposed Development is considered a temporary development.

This also aligns with paragraph 13 of the Planning Practice Guidance which states 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[14]. In addition, Policy SADM27 supports development where there is 'a reliable prospect that the land will be restored to at least its original quality'.

Construction traffic associated with the Proposed Development will be limited to the construction period of approximately 40 weeks and will not have a material effect on the safety or operation of the local highway network.

This is afforded substantial weight in the planning balance.

5.11.3.8 Biodiversity Net Gain

The Proposed Development proposes a significant number of biodiversity benefits within the accompanying LEMP (see Document Ref: R009).

This will primarily be achieved through:

- Significantly enhance the overall biodiversity value of the Site, including for protected and notable species and habits and locally designated sites;
- Protect and enhance the existing characteristics and features of value of the Site including the field structure, mature trees, hedgerows and ditches;
- Create a strong structural planting framework and protect, restore and maintain the existing vegetation network, which would also provide enhanced screening of close- and middle-distance views of the Proposed Development.
- Create greater opportunities for protected species' and species of conservation concern;
- Significantly enhance the Green Infrastructure (GI) connectivity within the Site and wider landscape, contributing positively to aspirations set out with the Hertsmere Green Infrastructure Plan (2011);
- Facilitate opportunities for engagement with the natural environment and renewable energy;
- Protect and enhance recreational amenity from Public Rights of Ways (PRoW);
- Secure the long-term future management of the Site for the duration of the development.

The significant enhancement of the biodiversity of the Site is demonstrated by the Net Biodiversity Gain Statement (Document Ref. R013), which concludes that there will be biodiversity would be

[14] Paragraph: 013 Reference ID: 5-013-20150327, published 27 March 2015

significantly improved with a 39.54% habitat biodiversity net gain and 23.30% hedgerow biodiversity net gain through the implementation of the Proposed Development.

This is afforded substantial weight in the planning balance.

5.11.3.9 Soil Regeneration

Aims and objectives for safeguarding and, where possible, improving soil health are set out in the Government's 'Safeguarding our soils: A strategy for England'[15]4. The Soil Strategy for England, which builds on Defra's 'Soil Action Plan for England (2004-2006), sets out an ambitious vision to protect and improve soil to meet an increased global demand for food and to help combat the adverse effects of climate change.

As demonstrated within the ALC (see Document Ref: R015), the greatest benefits in terms of increase in soil organic matter (SOM), and hence soil organic carbon (SOC), can be realised through land use change from intensive arable to grasslands. Likewise, SOM and SOC are increased when cultivation of the land for crops (tillage) is stopped and the land is uncultivated (zero tillage). Global evidence suggests that zero tillage results in more total soil carbon storage when applied for 12 years or more. Therefore, there is evidence that conversion of land from arable to grassland which is uncultivated over the long-term (>12 years), such as that under solar farm arrays, increases SOC and SOM.

This is afforded moderate weight in the planning balance.

5.11.3.10 Green Infrastructure

NPPF paragraph 175 and Policy CS12 of the Core Strategy require development proposals to provide opportunities for habitat creation and enhancement throughout the life of a development. The Proposed Development, as demonstrated in the LEMP (Document Ref: R009) and the biodiversity net gain calculation (Document Ref: R013) provides substantial additional green infrastructure, including the Aldenham Brook and Hilfield Brook green corridors, the Hilfield Green Wedge and pond restoration/nature areas and an overall 39.54% habitat biodiversity net gain and 23.3% hedgerow biodiversity net gain.

The enhanced landscape structure will greatly improve green infrastructure corridors and connectivity across and within the Site and is therefore afforded considerable weight in the planning balance.

5.11.3.11 Farm Diversification

As demonstrated above, the additional income generated by the Proposed Development will help to secure the farming business.

Renewable energy is an important form of farm diversification, recognised by the National Farmers Union (NFU) as an important step towards making British agriculture carbon neutral within two

[15] Department for Environment, Food and Rural Affairs (2009). Safeguarding our soils: A strategy for England

decades. As farming is responsible for around a tenth of UK greenhouse gas emissions, supporting renewable energy farm diversification projects will be a vital step to reaching net zero.

This is afforded moderate weight in the planning balance.

5.11.3.12 Transmission Vs Distribution Connection

The advantage of connecting into the National Grid (transmission) network rather than the distribution network is that once a connection is identified, then a search can begin to identify the most suitable solar development land. This avoids considerable delays in securing both the connection with the Distribution Network Operator (DNO), land and ultimately the delivery of renewable energy to meet the UKs net zero target.

This is afforded moderate weight in the planning balance.

5.11.4 Conclusion

In accordance with paragraph 144 of the NPPF, in addition to the harm by reason of inappropriateness, weight must be attributed to the harm to openness of the Green Belt and other harm presented.

As recognised above the Proposed Development is inappropriate development, thereby it is acknowledged that substantial weight is to be applied to the openness of the LMGB through the imposition of built form, however the reversibility of the Proposed Development and limited impact on the purposes of the Green Belt are a key consideration in the planning balance.

Accompanying assessments have been undertaken to assess “other harm” regarding heritage, biodiversity, agricultural land, farm diversification, amenity, flood risk and traffic and access. Landscape and visual impacts have also been assessed in relation to landscape character and visual receptors. It is concluded from these assessments that limited weight should be applied to “other harm” when undertaking the planning balance.

Paragraph 144 is clear that very special circumstances will not exist unless the potential harm to the LMGB by reason of inappropriateness, and any other harm resulting from the Proposed Development, is clearly outweighed by other considerations. It is a key planning policy requirement that very special circumstances need to exist for inappropriate development to be approved in the LMGB.

Section 5.11.3 demonstrates the benefits of the Proposed Development, taking into account the urgent need for renewable energy generation, climate emergency and other key considerations of the Proposed Development such as achieving a 39.54% habitat biodiversity net gain and 23.30% hedgerow, all of which are material consideration in accordance with the policy tests identified in paragraphs 144 and 147 of the NPPF.

On balance, it is considered that the benefits of the Proposed Development outweigh the temporary and reversible harm by reason of inappropriateness and any other harm identified. As such very special circumstances exist to justify the Proposed Development in the LMGB.

6 Conclusion

For the reasons outlined in this Planning Statement, it is considered that the Proposed Development is in accordance with the relevant planning policies and guidance at both the national and local levels.

The Site is located within the Green Belt and therefore in line with policy tests in paragraph 144 of the NPPF, harm resulting from the Proposed Development must be clearly outweighed by other considerations.

The Proposed Development represents a clear form of sustainable development, generating clean renewable energy and helping reduce carbon emissions which are required to meet the Climate Act 2050 net zero target. Paragraph 147 goes further to state that such very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.

The Proposed Development would supply up to 49.9MW to the National Grid, providing the equivalent annual electrical needs of approximately 15,600 family homes in Hertsmere. The anticipated CO_2 displacement is approximately 25,400 tonnes per annum, which represents an emission saving equivalent of a reduction in c. 8,100 cars on the road every year. It is also estimated the solar farm will increase the total amount of renewable electricity generated in Hertsmere from 5.4% to 20%, bringing Hertsmere closer to the national average of 33% electricity generated from renewable sources. This is afforded substantial weight.

The Proposed Development will also provide significant biodiversity enhancements of 39.54% habitat biodiversity net gain and 23.30% hedgerow biodiversity net gain, allow for soil regeneration, greatly improve Green Infrastructure corridors and connectivity and represent an important farm diversification project, with indirect socio-economic benefits, at a time challenging to the UK farming industry.

Overall, there is an urgent requirement for the Proposed Development; it is entirely suitable to the Site and its surroundings; it accords with national and local planning policy and all relevant material planning considerations; and will deliver significant environmental benefits.

Given the urgent need to ensure the introduction of measures to meet both government and local Climate Change commitments, the Council considered it both prudent and necessary to publish a position statement which clarifies how Hertsmere as the Local Planning Authority will interpret its existing development plan policies in the context of updated material considerations and circumstances until the new Local Plan is published and subsequently adopted.

The position statement is a material planning consideration to be taken into account when determining planning applications (and appeals) until the new Local Plan is published and as concluded in the statement itself, it should be given significant weight in reaching planning decisions.

In summary, based on the Proposed Development and assessments undertaken, the Site is deemed suitable for a development of this nature in terms of planning policy and guidance and planning permission should be granted. It is considered that in line with paragraphs 11 and 47 of the NPPF (2019) and Section 38(6) of the Planning and Compulsory Purchase Act 2004, when undertaking the planning balance, the Proposed Development would accord with the local development plan and that there are no material considerations which indicate otherwise.

Appendix 1: Green Belt Statement

LDĀDESIGN

Hilfield Solar Farm and Battery Storage

Green Belt Assessment
December 2020

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Contents

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This document has been prepared and checked in accordance with ISO 9001:2015.

1.0 Introduction

This Green Belt Assessment report has been prepared by LDA Design on behalf Elstree Green Ltd to accompany a planning application for the construction, operation, management and decommissioning of a grid connected solar farm with battery storage and associated infrastructure ('the Proposed Development') on Land to the North East and West of Elstree Aerodrome (the 'Site').

The Site is situated within the Metropolitan Green Belt (MGB), which covers an extensive area around Greater London. The MGB encompasses the large parts of Hertfordshire and 80%[1] of Hertsmere Borough in which the Site lies. Large settlements such as Watford, Radlett, Borehamwood and Bushey are excluded from the MGB but smaller settlements including Letchmore Heath and Patchetts Green are 'washed over' by MGB and included within it.

The extent of the Site and its location within the MGB is shown on **Figure 1: Site Location and Green Belt Context**.

This report considers the potential harm of the Proposed Development on four of the five purposes of Green Belt as defined in paragraph 134 of the National Planning Policy Framework (2019) (NPPF). The fifth purpose – *"assisting in urban regeneration, by encouraging the recycling of derelict and other land"*, is not assessed as this purpose of Green Belt is delivered by a combination of factors and policies beyond the scope of this assessment.

1.1. The Purpose of Green Belt

Paragraph 133 of the NPPF states "*the fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open; the essential characteristics of Green Belts are their openness and their permanence."*

The five purposes of Green Belt as set out in paragraph 134 of the NPPF are:

a) *"to check unrestricted sprawl of large built-up areas;*

b) *to prevent neighbouring towns merging into one another;*

c) *to assist in safeguarding the countryside from encroachment;*

d) *to preserve the setting and special character of historic towns; and*

e) *to assist in urban regeneration, by encouraging the recycling of derelict and other urban land."*

Under paragraphs 145 and 146 of the NPPF, solar farms are considered to be "*inappropriate development"* within Green Belt. Paragraph 143 of the NPPF confirms that *"inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances."*

Paragraph 144 advises "*local planning authorities should ensure substantial weight is given to any harm to the Green Belt. 'Very special circumstances' will not exist unless the potential harm to*

[1] Hertsmere Local Plan (2013)

the Green Belt by reason of inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations".

Paragraph 147 of the NPPF adds *"where located in Green Belt, elements of many renewable projects will comprise inappropriate development. In such cases developers will need to demonstrate very special circumstances if projects are to proceed.* ***Such very special circumstances may include wider environmental benefits associated with increased production of energy from renewable sources.****"* [own emphasis]

Paragraph 141 adds, in relation to the improvement of the Green Belts, *"Once Green Belts have been defined, local planning authorities should plan positively to enhance their beneficial use, such as looking for opportunities to provide access; to provide opportunities for outdoor sport and recreation; to retain and enhance landscapes, visual amenity and biodiversity; or to improve damaged and derelict land."*

1.2. Harm to Green Belt, any other harm and very special circumstances (VSC)

The courts have established Green Belt is an *'open textured policy'*[2]. Therefore, in considering the harm to Green Belt and the balancing exercise for Very Special Circumstances (VSC), this Green Belt Assessment report should be read in conjunction with the following documentation submitted as part of the planning application:

- **Planning Statement** (Document Ref. R003) – which includes the consideration of alternative sites; the harm to Green Belt openness; and the balancing exercise of VSC; which considers the potential harm to the Green Belt and any other harm.
- **Design and Access Statement (DAS)** (Document Ref. R004) – which details the design evolution of the Proposed Development with the aim of reducing harm and impact wherever possible.
- **Landscape and Visual Impact Assessment (**Document ref. R018**)** – which includes a consideration of the visual impact of the Proposed Development, including the provision of fully rendered photomontages (see **Figures 9.1 – 9.6**).
- **Landscape and Ecology Management Plan (LEMP) (**Document Ref. R009**)** – which details the long-term future management for the Proposed Development and includes the Landscape Ecological Enhancement Plan (LEEP) illustrating the location and typologies of planting and habitats proposed.
- **Other technical documentation** - including the Ecological Impact Assessment Report (including Biodiversity Net Gain Statement) (Document Ref. R012), Heritage Desk Based Appraisal (Document Ref. R016), and Flood Risk Assessment and Drainage Strategy (Document Ref. R010).

1.3. Proposed Development

The Proposed Development would supply 49.9MW of clean renewable electricity to the National Grid, providing the equivalent annual electrical needs of approximately 15,600 family homes. The anticipated CO2 displacement is around 25,400 tonnes per annum, which represents an emission saving equivalent of a reduction in c.8,100 cars on the road

[2] Turner v Secretary of State for Communities and Local Government [2016] EWCA Civ 466

every year. It is also estimated the solar farm will increase the total amount of renewable electricity generated in Hertsmere from 5.4% to 20%, bringing Hertsmere closer to the national average of 33% electricity generated from renewable sources.. Panels would be a fixed tilt system and bi-facial allowing solar irradiation to be absorbed from the underside of the panel. Bi-facial technologies increase panel efficiencies and represent best available technology. The battery storage facility would be utilised to reinforce the power generation of the solar photovoltaic (PV) panels, storing energy at times of low demand and releasing to the grid in periods of higher demand or when solar irradiance is lower, as well as providing balancing services to maintain National Grid stability. The connection to the grid will be made at the National Grid Substation at Elstree on Hilfield Lane, which is located adjacent to the north of the western parcel of the Site.

The proposed operational phase of the Proposed Development would be for 35 years. When it ceases to be operational, all built features would be removed and the areas that they have affected would be reinstated to its former condition. Landscape and ecological enhancements proposed as part of the proposed Landscape and Ecological Management Plan (LEMP) (Document Ref: R009) would be retained and left to continue the Biodiversity Net Gain (BNG) achieved on-site.

Solar farms are relatively low in terms of height, and as installed units, small, slender and regular in terms of massing in comparison to other forms of development such as residential or commercial developments – as a general comparison, a solar farm is slightly lower than a typical single storey bungalow with a maximum panel height of 3m at its highest point. Panels at the Proposed Development would be fixed tilt systems with gaps of 3 to 4.5m between panels. The ancillary infrastructure such as the substation, battery storage and central inverters have been located and designed with the aim of reducing the potential visual impact they may have.

Full details of the Proposed Development are provided in the Design and Access Statement (Document Ref. R004) and planning drawings submitted as part of the Planning Application Drawing Pack (Document Ref. R002).

2.0 Local Planning Policy and Relevant Local Development Framework Studies

As set out in **Section 1.0**, the Site lies within the administrative boundary of Hertsmere Borough Council (HBC). HBC's current local planning policy is set out in the following Local Plan documents:

- Hertsmere Local Plan Core Strategy (2013)
- Site Allocations and Development Management Policies Plan (2016)

Emerging policy is will be set out in Hertsmere Local Plan which is currently in 'ongoing stakeholder and development engagement'. A first draft of the New Local Plan is scheduled for 2021.

No neighbourhood plans have been adopted by HBC. Radlett Neighbourhood Plan is in formulation but lies beyond the Site to the north.

2.1. Local Planning Policy

Policies of related to Green Belt within the jurisdiction of HBC are outlined below:

2.1.1. Core Strategy (adopted January 2013)

The protection of the Green Belt is identified as Strategic Objective 2 within the Core Strategy.

Green Belt is specifically addressed in Policy CS13 which states:

"There is a general presumption against inappropriate development within the Green Belt, as defined on the Policies Map and such development will not be permitted unless very special circumstances exist. Development proposals, including those involving previously developed land and buildings, in the Green Belt will be assessed in relation to the NPPF."

More generally, Policy CS12 seeks the protection of the natural environment noting:

"All development proposals must conserve and enhance the natural environment of the Borough, including biodiversity, habitats, protected trees, landscape character, and sites of ecological and geological value, in order to maintain and improve environmental quality, and contribute to the objectives of the adopted Greenways Strategy and the Hertsmere Green Infrastructure Plan. Proposals should provide opportunities for habitat creation and enhancement throughout the life of a development."

Policy CS17 'Energy and CO2 Reductions' relates specifically to renewable energy and states:

"The Council will also permit new development of sources of renewable energy generation subject to:

- *local designated environmental assets and constraints, important landscape features and significant local biodiversity;*
- *minimising any detriment to the amenity of neighbouring residents and land uses; and*
- *meeting high standards of sustainable design and construction."*

Paragraph 5.49 of the Core Strategy further adds:

"Larger, commercial renewable energy source developments, whilst broadly acceptable in principle, will need to be considered on their merits including their impact on designated and non-designated landscapes in the Green Belt.

2.1.2. Site Allocations and Development Management Policies Plan (adopted November 2016)

The Site Allocations and Development Management Policies Plan (SADM) provides further policies guidance in relation to development within the Borough. Policy SADM26: 'Development standards within the Green Belt' relates specifically to development within the Green Belt and states:

"The Council will assess all applications for development in the Green Belt, as defined on the Policies Map, in accordance with Core Strategy Policy CS13 and to ensure they comply with the following principles:

(i) developments should be located as unobtrusively as possible and advantage should be taken of site contours and landscape features in order to minimise the visual impact;

(ii) buildings should be grouped together: isolated buildings in the countryside should be avoided;

(iii) existing open and green space in the area, including garden areas, should be retained;

(iv) the scale, height and bulk of the development should be sympathetic to, and compatible with, its landscape setting and not be harmful to the openness of the Green Belt;

(v) developments should use materials which are in keeping with those of the locality, and, where modern materials are acceptable, they should be unobtrusive;

(vi) existing trees, hedgerows and other features of landscape and ecological interest should be retained and enhanced in order to enrich the character and extent of woodland in the Community Forest in line with Policy SADM12;

(vii) the viability and management of agricultural sites should not be undermined, there also being a strong presumption against development which would fragment a farm holding."

2.1.3. Other Guidance and Evidence

Hertsmere Green Belt Assessment (Stage 1) (2017) provides a strategic review of Green Belt across the borough and forms the current evidence base for the emerging Local Plan. The assessment seeks to ascertain:

- *"Whether all land designated fulfils clear Green Belt purposes;*
- *The degree of significance attached to various parts of the Green Belt in strategic terms; and;*
- *The extent to which some Green Belt could be considered for release without compromising its overall purpose."*

It should be noted the assessment does not seek to identify areas for Green Belt release or development. Neither does it consider the potential harm to Green Belt as a result of renewable energy development such as larger scale solar.

The Site occupies parts of parcels 9 and 19 identified as part of this study (**Appendix 1**) the findings of which are summarised in **Table 1**. Each parcel is assessed against the purpose of Green Belt as set out within paragraph 134 of the National Planning Policy Framework (NPPF) and given a score from one (*"does not meet criterion"*) to five (*"meets criterion strongly / very strongly"*). In addition, the assessment uses two criteria 1a and 1b for purpose one with either a pass or fail assigned. Criterion 1a) is purely geographical and determines if the parcel is at the edge of one or more built up areas (if it is, a 'pass' is concluded). The following 2b) criterion then provides a qualitative judgement.

The assessment considers *"a parcel fulfilling the criteria relatively weakly, weakly or very weakly* [given a score of] *(1 or 2) across all purposes is deemed to be weaker Green Belt."*

Purpose 5, the 'to assist in urban regeneration…' was not used in the Stage 1 assessment as a criterion for assessment as it was considered *'not helpful in terms of assessing the relative value of parcels'.*

Table 1: Summary of Stage 1 Green Belt Assessment for Parcels 9 and 19 (2017)

Purposes	**Parcel 9**		**Parcel 19**	
(1) To check the unrestricted sprawl of large built up areas	1a) FAIL	1b) 0	1a) FAIL	0
(2) To present neighbouring towns merging into one another	3		3	
(3) To assist in safeguarding the countryside from encroachment	3		5	
(4) To preserve the setting and special character of historic towns	0		3	
Summary of Findings	**MODERATE** The parcel scores moderately against purposes 2 and 3. Although the villages of Patchetts Green and Letchmore Heath diminish the openness of the Green Belt slightly, the Green Belt designations maintains their rural, low density		**STRONG** The Parcel meets Purposes 2 and 4 moderately, maintaining the historic setting of Radlett and the overall scale and openness of the gap between Radlett and Bushey Heath/Bushey Village and Elstree. It also plays	

	character and restricts further encroachment. There are no readily identifiable sub-areas for further consideration and the parcel should not be considered further.	a particularly important role in preventing encroachment into an area of particularly unspoilt countryside. There are no identified sub-areas that would score less strongly against the purposes and it is recommended that the site is not considered further.

Putting these findings into context, the assessment concludes out of a total of 52 assessed for the Borough parcels:

- *"35 Green Belt Parcels are judged to be strongly scoring Green Belt, meeting at least one of the purposes strongly (4 or 5);*
- *14 Green Belt Parcels are judged to be moderately scoring Green Belt, with a moderate score (3) against at least one purpose and failing to score strongly against any purpose (4 or 5);*
- *Two Green Belt Parcels are judged to be weakly scoring Green Belt, failing to meet or weakly meeting all purposes (scoring 1 or 2); and*
- *One Green Belt Parcel does not meet any Green Belt purpose, scoring 0 against all purposes."*

HBC's Stage 2 Green Belt Assessment (2019) identifies further sub parcels within the strategic parcels, whilst the Stage 3 Assessment (2020) considered villages washed over by the Green Belt. None of the Site is included within either of these studies.

3.0 Assessment of Green Belt Purposes

Table 2 below provides an assessment of the proposed development against the first four purposes of Green Belt as defined in paragraph 134 of the NPPF.

The assessment is based on guidance provided by the NPPF, National Planning Policy Guidance (NPPG) and guidance produced by the Planning Advisory Service (PAS) and Local Government Association (LGA) in relation to Green Belt (2015).

As noted in **Section 1.1** the consideration of any other harm and balancing exercise of VSC is provided by other technical documents and the Planning Statement submitted as part of the planning application.

Table 2: Assessment Green Belt Purposes (1 – 4)

Assessment Criteria	Assessment
GB Purpose 1: To check the unrestricted sprawl of large built up areas	
The proximity and visual connectivity of the area / site to the settlement's edge.	The closest settlements to the Site are as follows: • Bushey – approx. 250m to the west; • Letchmore Heath – approx. 530m to the north; • Borehamwood – approx. 750m to the east • Radlett – approx. 790m to the north; • Patchetts Green – approx. 1km northwest; and • Elstree – approx. 1.7km to the southeast. The Site forms part of a wider network of farmland that is characterised by large-scale fields delineated by an extensive network of field hedgerow boundaries. Woodland blocks and copses are present throughout the landscape, some of which are located within and in close proximity to the Site. Urban fringe influences, such as Elstree Aerodrome, Elstree Substation and overhead power lines and educational institution's sport complexes are present within the Site and surrounding area. The Site's visual connectivity to the wider landscape is, in general, limited to its local context up to 1km – as assessed in the Landscape and Visual Impact Assessment (LVIA) (Document Ref. R018). Whilst the Zone of Theoretical Visibility (ZTV) Study (shown on **Figure 4**) indicates an extensive spread of theoretical visibility, fieldwork observations have shown that the visibility on the ground is restricted to a greater degree. Views to the edges of the settlements from the Site to the south such as Bushey and Letchmore Heath are generally screened by a combination of vegetation and landform in the intervening landscape, with only filtered glimpses to small areas of the Proposed Development possible. Views from other settlements such as

	Borehamwood, Radlett, Patchetts Green and Elstree are not possible owing to intervening vegetation and landform.
The extent to which the area / site is contained.	The Site, in general, is visually well-contained by a combination of existing hedgerows, shrubs, tree belts and woodland vegetation that are located within and along the Site's boundaries. In particular, the bowl like topography and field boundaries of the western parcel limit views whilst woodland and field boundaries along Butterfly Lane limit views of the eastern site parcel, providing a strong degree of visual containment. Existing views from the surrounding landscape of the Site are presented in the LVIA and accompanying photograph panels (see **Figures 7 and 8**, Document Ref. R018) and illustrate the degree of visual containment afforded to the Site. Photomontages of the Proposed Development are presented in **Figures 9.1 – 9.6** of the LVIA. The design of the Proposed Development has been informed by a sensitive siting of the PV panels and associated infrastructure, alongside a comprehensive landscape and ecological management plan that seeks to enhance the screening properties of new and existing vegetation through planting and management. The landscape-led, iterative design process of the Proposed Development has sensitivity sited various built elements of the scheme to reduce potential visibility from views towards the Site. This has involved the omission of PV panels from areas near to residential properties, setbacks from existing public rights of way and appropriate planting and the siting of the substation and battery storage areas in lower lying areas in the western site parcel near to existing built form along Hilfield Lane. Full details of the design evolution are provided in the **Design and Access Statement** (DAS) (Document Ref. R004). The Proposed Development would retain the existing vegetation on the Site in combination with proposals to strengthen it with new planting where necessary. This would be positively managed (through the relaxation of cutting and management) to allow them to grow out and further restrict potential visibility of the Proposed Development. Details of the long-term management and maintenance of the Site are set out in the accompanying **LEMP** (Document Ref. R009).
Purpose 1 Conclusion: The Site lies within three parcels of the MGB identified in HBC's Green Belt Assessment as making no contribution to this purpose of the Green Belt (**Table 1**).	

The site-specific analysis presented in **Table 2** corroborates this finding in that the Site and development within it would not result in unrestricted sprawl of built up areas given the distance and lack of intervisibility from existing settlements. The topography and vegetative network of the Site physically and visually separate the Site from existing settlements and would contain the Proposed Development. In light of the above, it is concluded there would be no harm to this purpose of the Green Belt designation as a result of the Proposed Development.	
GB Purpose 2: To prevent neighbouring towns merging into one another	
The degree to which development would physically reduce the distance between the urban edge and neighbouring settlements.	Given the distances noted above between the Site and the nearest surrounding settlements of relevance, there would be a reduction in the physical distance between each settlement. At a strategic level, the distances between the Site and the larger settlements (i.e. cities and towns) would be as follows (**Figure 1**): • Bushey – approx. 250m to the west; • Borehamwood – approx. 750m to the east; and • Radlett – approx. 790m to the north.
The degree to which the development would result in the perception that distances between settlements have reduced.	In relation to Radlett and Borehamwood there would remain sufficient distance between these settlements to maintain the perception of distance and separation between them. In relation to Bushey, this settlement is nearby to the western parcel albeit separated by the M1 and A41 which provide a strong physical boundary to the settlement. The vegetation belt planting along the M1, A41 and Hilfield Lane further enforce this physical boundary and containment of Bushey. Separation between villages such as Patchetts Green and Letchmore Heath and larger settlements would remain given the distance of the Site from these settlements. There would be a limited degree of perceptible reduction in the distances between Bushey and the Proposed Development but this would not perceivably affect the separation of Bushey from Borehamwood to the east nor Radlett to the north. The detailed assessment for parcel 9 which this area to the east of Bushey relates to (**Appendix 1**) observes *"the parcel is compartmentalised in some areas, particularly in the centre around the Green Belt settlement of Patchett's Green, and may be less important for preventing coalescence."* In relation to parcel 19 the HBC assessment records *"The very south of the parcel* [in which the Site is located] *is less important for preventing coalescence*" whist for parcel 19 the HBC's assessment states *"The parcel forms part of the wider gap between Radlett, Borehamwood, Elstree, Bushey Heath/Bushey Village and North Bushey, where the scale of the gap is such that there is little risk of settlements*

	coalescing, but where the overall openness is important to preserving the perceived gap between settlements." In combination with the comprehensive landscape and ecological strategy, enhancement planting would further reduce intervisibility between the Proposed Development and the surrounding settlements and further lessen the perception of reduced distances. In addition, the provision of the 'Hilfield Green Wedge' in the western parcel, along with other undeveloped fields adjacent to the M1 would retain the sense of undeveloped land to the east of Hilfield Lane, maintaining an undeveloped green corridor from the edge of Bushey to Elstree Aerodrome. It is concluded there would be no change to the perception that distances between settlements have been reduced as a result of the Proposed Development.
The degree to which the site / area relates to the scale and separate identity of the settlement.	Settlements such as Borehamwood and Bushey are substantially larger than the Site. The Site is of comparable size to Radlett in terms of area although actual built development is considerably less. **Figure 1** places the Site in context with neighbouring settlements and demonstrates a sufficient physical distance would remain between these so that their separate identity is maintained.

Purpose 2 Conclusion:

Given existing distances between settlements, the strong vegetative network of the area, topography limiting visibility and existing clear physical boundaries formed by the road network there would be no perception that existing towns would merge should the Site be developed for clean, renewable solar energy.

Therefore, no harm to this purpose of the Green Belt designation as a result of the Proposed Development is concluded.

GB Purpose 3: To assist in safeguarding the countryside from encroachment	
The existence and scale of existing development within the Green Belt in the vicinity of the area / site.	The Site is situated within a local context that contains a number of man-made features that are visible in the landscape. These include: • Elstree National Grid Substation, Hilfield Lane (50m, north) A large electrical infrastructure installation. It is well-screened from the west by vegetation along Hilfield Lane. • Elstree Aerodrome (adjacent, south) The control tower, hangers and associated commercial buildings are visible in close proximity but generally well screened by vegetation. • Aldenham School (240m, north) A large, private educational complex of buildings, sports halls and synthetic floodlit playing pitches. • Haberdasher Aske's School (250m, south)

	A large, private educational complex of buildings, sports halls and synthetic floodlit playing pitches. • A41 (adjacent, west) Busy A road running parallel to M1 linking Watford with Edgeware and Greater London. Lined by vegetation belt planting. • M1 (165m, west) Main motorway route north from London with several large interchanges in the wider area at Watford and Elstree. Lined by vegetation belt planting. • Slades Farm (adjacent, south) A collection of small industrial units, barns and storage yards on relatively well screened from Butterfly Lane but more visible from the north within the Site. • Pylons and overhead cables (within Site) Numerous pylons and overhead cables traverse the Site in both the eastern and western site parcels. Other pylon routes converge on the Elstree substation to the west of the Site. Consequently, the Site and its local context display urban fringe characteristics. These urban fringe characteristics have less influence further east beyond Aldenham Road.
The degree to which the character of the area / site is 'settlement fringe' rather than 'open countryside' or of rural character.	It is considered the Site is characteristic of the area on the fringes of Greater London within the M25 comprising a mixture of arable fields, woodland and hedgerows but strongly influenced by large scale settlement and industry. The western Site parcel is influenced by nearby built form and settlement, notably the Elstree National Grid Substation and the pylons that converge on it, the fringes of Bushey and the busy road corridor of the M1 and A41. HBC's assessment for parcel 9 (**Appendix 1**) notes "*The southern area of the parcel, as well as the area around Letchmore Heath / Patchett's Green, have been subject to a greater level of encroachment. Built form in the south includes commercial and research facilities along Dagger Lane and the Elstree Aerodrome, though it should be noted that these developments do not substantially detract from the general rurality of the wider parcel.*" The eastern Site parcel, to the east of Aldenham Road, is less developed in character, and although built development in the form of educational institutions, pylons and small-scale light industry is present, it maintains the sense of generally agricultural land. This is attested by HBC's assessment for parcel 10 (**Appendix 1**) which records *"The only significant development in the parcel is at Letchmore Heath at the western boundary and Aldenham School and Aldenham School Sports Centre at the south-western boundary. There is a small number of*

	agricultural buildings throughout the parcel and Battlers Green Shopping Village in the north adjacent to Radlett." The visibility of the Site is limited to its local context (up to approx. 1km), as evidenced in the LVIA (Document Ref. R018) meaning that visual inter-connectivity to the wider landscape is limited. The separation of the Site into two distinct parcels of land (eastern and western) which cannot be seen in tandem helps to break the massing of the Proposed Development reducing its impact. In addition, the landscape-led, iterative design process of the Proposed Development has evolved to take account of a number of environmental considerations, including key structing components in the form of Hilfield Green Wedge and Aldenham Brook Green Corridor, drawing -back of PV panels from residential properties and creation of parklands, orchard and skylark enhancement area, and additional structure planting and retention of vegetation throughout the Site. The 'fragmentation' of Proposed Development within both the eastern and western parcel as a result of the landscape-led design process can be appreciated in **Figure 1**. Full details of the design evolution are provided in the Design and Access Statement (Document Ref. R004). These measures (detailed within the LEMP) (Document Ref.R009) assist in the assimilation of the Proposed Development into its context reducing as far as possible the potential perception of encroachment into the countryside.
The nature of the existing settlement edge, i.e. whether it is a soft edge or a hard urban edge.	All neighbouring settlements are sufficiently distanced from the Site to as assessed under purposes 1 and 2 to be unaffected by the Proposed Development. In general, they all have relatively defined settlements edges formed by either built form or vegetation.

Purpose 3 Conclusion:

The Site is characteristic of the agricultural land found in the north of Greater London within the M25, comprising predominately rolling arable farmland with established hedges and woodland blocks. It is acknowledged given the close proximity of Greater London these areas are under pressure from a number of forms of development.

Every effort has been made to assimilate the Proposed Development as sensitively as possible in the existing landscape context. Given the nature of the Proposed Development, appreciation of the landscape as 'countryside' in terms of its fabric, including vegetation network and field patterns and in terms of its geomorphology and topography, would still be possible and it is considered the Proposed Development is less intrusive and therefore results in less harm to this purpose of Green Belt that other forms of development such as residential or commercial. The separation of the Site into east and west parcels, linked by an

underground connection is also beneficial in reducing effects and it is of note that both Sites cannot be seen in together in any one location.

In addition, substantial enhancements to the Green Belt, as advocated by paragraph 141 of the NPPF, in terms of biodiversity, outdoor recreation and interpretation and improving damaged land are key design aims of the Proposed Development.

Nonetheless, the Site does make a contribution to this purpose of the MGB and there would be limited harm to this purpose as a result of the Proposed Development. This harm would be limited given the design of the Proposed Development and its limited visibility, being well contained by field boundaries and woodland within the Site and wider landscape.

It should also be noted the Proposed Development is reversible and any potential harm to this purpose of the Green Belt could be fully reversed on decommissioning of electricity generation.

Purpose 4: To preserve the setting and special character of historic towns	
The Site's contribution to any historic approaches	The Site is adjacent to Hilfield Lane, Aldenham Road and Watling Street, all historic routes to greater or lesser degree within the landscape. However, none of these routes, when they pass the Site, are immediate approaches to historic settlements. In addition, planting and management proposed as part of LEMP (Document Ref. R009) would limit any visibility of the Proposed Development from these routes.
The Site's relationship to the historic core. Are there views of the historic core and / or settlement landmarks from the Site?	There are no historic settlements in close proximity to the western parcel as confirmed by HBC's assessment of parcel 9 which assigns a score of 0 for this purpose. Letchmore Heath, the core of which is designated as a conservation area, is approximately 520m to the north of the western site parcel and no views of the Proposed Development are possible as concluded by the LVIA (Document Ref. 018). In relation to the eastern parcel and parcel 19 in which it lies, HBC's assessment assigns a score of 3 based on its proximity to Radlett. However, HBC's assessment does note *"There are views between Radlett's historic area and the parcel although they are mostly obscured by tree cover."* Given the western site parcel is smaller than that of parcel 19 and is located approximately 790m from the settlement edge of Radlett with no intervisibility it is concluded the western site area does not contribute to the setting of this village and would not affect its appreciation as a historic settlement. Hilfield Castle is a local landmark but represents an isolated country estate and not a landmark for settlement.
The physical distance to the historic core	The closest historic settlement cores (taking their conservation areas) are Letchmore Heath approximately 520m to the north; Radlett

	approximately 700m to the north; and Bushey approximately 1.4km to the west and of the Site. These historic cores are sufficiently distant from the Site for them to be unaffected by the Proposed Development.

4.0 Conclusions

In accordance with the National Planning Policy Framework (NPPF) paragraph 147 development of a solar farm and battery storage is 'inappropriate development' within the Green Belt and therefore 'very special circumstances' will need to be demonstrated if the project is to proceed.

In considering very special circumstances paragraph 144 of the NPPF directs that a consideration of harm to the Green Belt, and any other harm, must be considered.

The Site lies in Green Belt parcels 9 and 19 as identified and assessed as part of Hertsmere Borough Council's Green Belt Assessment (2017). This assessment concluded that overall these larger parcels made a 'moderate' contribution to the Green Belt designation (**Table 1** and **Appendix 1**).

Assessment of the Proposed Development specifically, which occupies a smaller area than parcels 9 and 19, in this Green Belt report concludes there would be no harm to purposes 1 - to check the unrestricted sprawl of large built up areas; purpose 2 – to prevent neighbouring towns merging into one another nor purpose 4 - to preserve the setting and special character of historic towns of the Green Belt designation as set out in paragraph 134 of the NPPF.

The site-specific Green Belt assessment within this report (**Table 2**) concludes there would be limited harm to purpose 3 – To assist in safeguarding the countryside from encroachment. In placing this harm in context, the Site in general is visually well-contained by a combination of existing hedgerows, shrubs, tree belt and woodland vegetation that are located within and along the Site's boundaries, which assist in reducing the visibility of the Site. As evidenced in the analysis contained within the **LVIA** (Document Ref. R018), the Site's visual connectivity to the wider landscape is, in general, limited to its local context up to 1km.

Every effort has been made to assimilate the Proposed Development sensitively in its landscape context through a landscape-led, iterative design process. This has included siting of various elements of the scheme to reduce landscape and visual effects and potential harm to the Green Belt; the confinement of PV panels to the existing fields present within the Site; the pull back of PV panels from neighbouring residential properties and the provision of key structuring landscape elements including the Hilfield Brook Green Wedge and Aldenham Brook Green Corridor. The separation of the Site into eastern and western site parcels also further mitigates potential harm.

The Proposed Development would also retain the existing vegetation onsite in combination with proposals to strengthen it with new planting where necessary. This would be positively managed (through the relaxation of cutting and management) to allow them to grow out and further restrict potential visibility of the Proposed Development. The nature of the Proposed Development means that site fabric and characteristics of the Site such as the vegetative network, field pattern and topography would remain intact and legible.

Notwithstanding the above, the duration of the Proposed Development would be entirely reversible after its 35-year operational phase. Environmental (and social) benefits as set out within the LEMP (Document Ref. R009) such as new planting and creation of new nature

areas, parkland and orchard, would endure beyond the operational lifespan of the Proposed Development.

Figures

X:\JOBS\7533_ELSTREE_SOLAR_FARM\8GIS\PROJECTS\7533_GB_001_SITE_LOCATION.MXD

LEGEND

- Site Boundary
- Green Belt
- Proposed Development - Solar Panels and Battery Storage

LDĀDESIGN

PROJECT TITLE

HILFIELD SOLAR FARM AND BATTERY STORAGE

DRAWING TITLE

Figure 1: Site Location and Green Belt Context

ISSUED BY	Oxford	T: 01865 887050	
DATE	10 Dec 2020	DRAWN	SG
SCALE @A3	1:25,000	CHECKED	BC
STATUS	Final	APPROVED	BC

DWG. NO. 7533_GB_001A

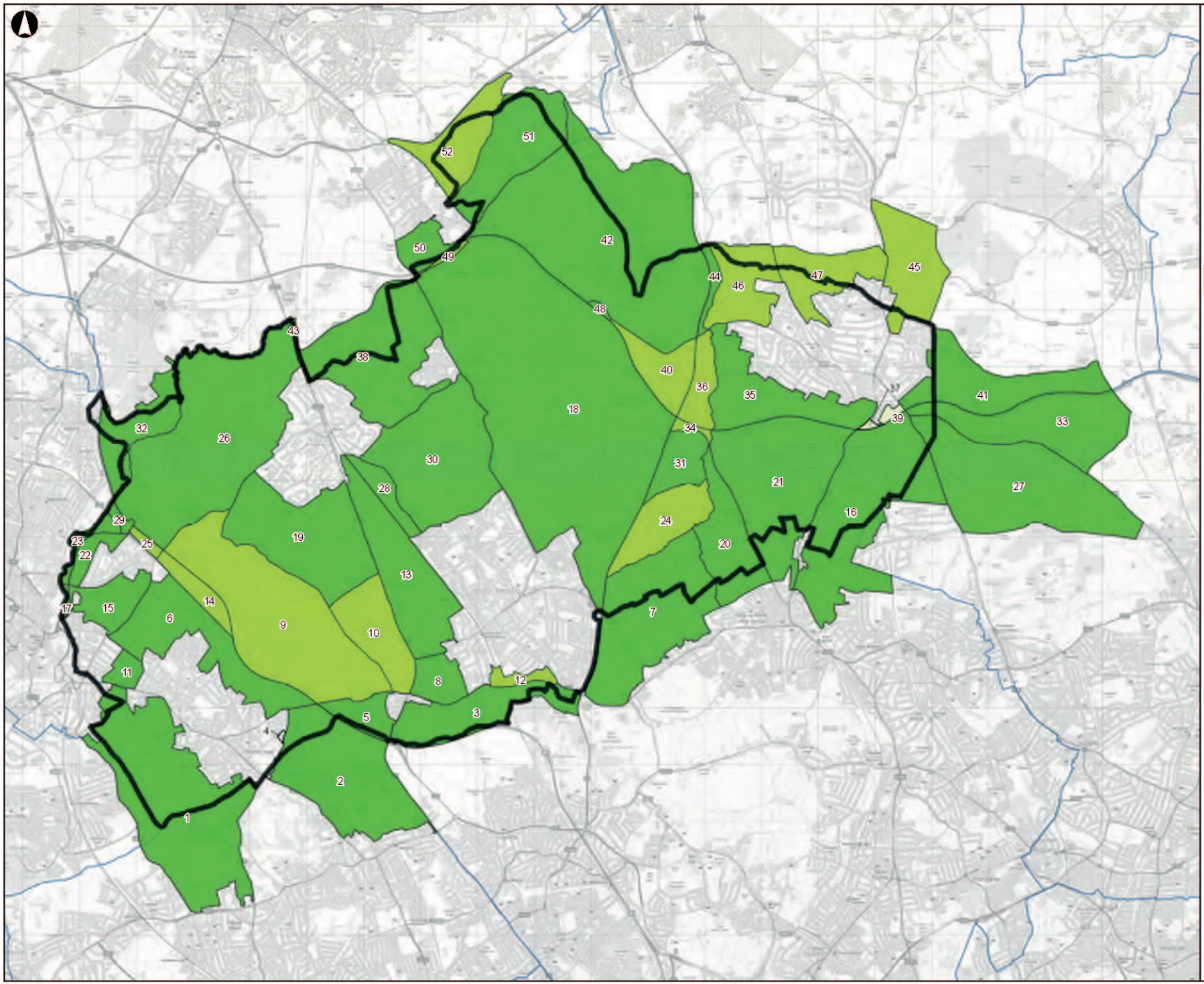
No dimensions are to be scaled from this drawing.
All dimensions are to be checked on site.
Area measurements for indicative purposes only.

Sources: Ordnance Survey, MHCLG.

Appendices

Appendix 1: Extracts from Hertsmere Borough Council Green Belt Assessment (Stage 1) (2017)

A3



Legend

Overall Score

- Does not meet Green Belt purposes
- Weak
- Moderate
- Strong
- Green Belt Parcel
- Neighbouring District Boundary
- Hertsmere District Boundary

Issue	Date	By	Chkd	Appd
P1	30-11-16	CG	ML	AB

Metres
0 800 1,600 3,200

ARUP

13 Fitzroy Street
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www.arup.com

Client
Hertsmere District Council

Job Title
Hertsmere Green Belt Assessment (Stage 1)

Map 5.5 Overall Assessment Scores

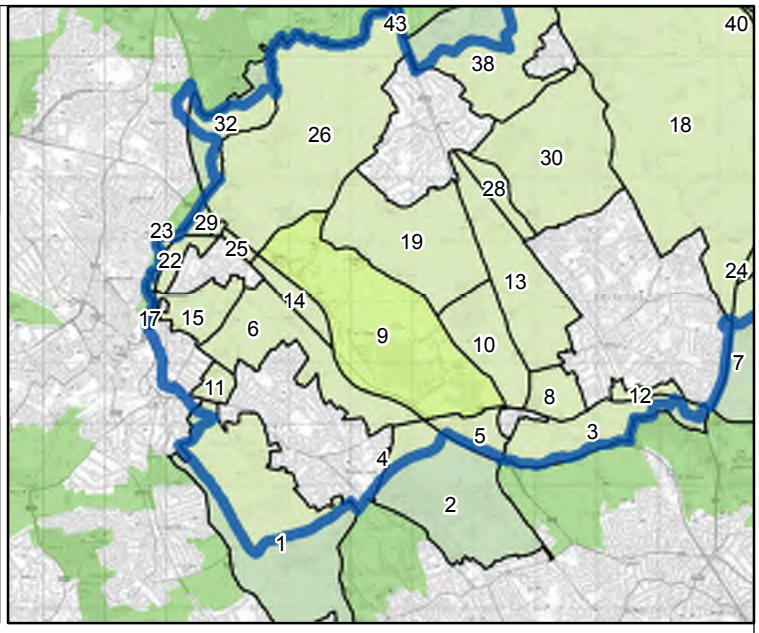
Scale at A3
1:63,000

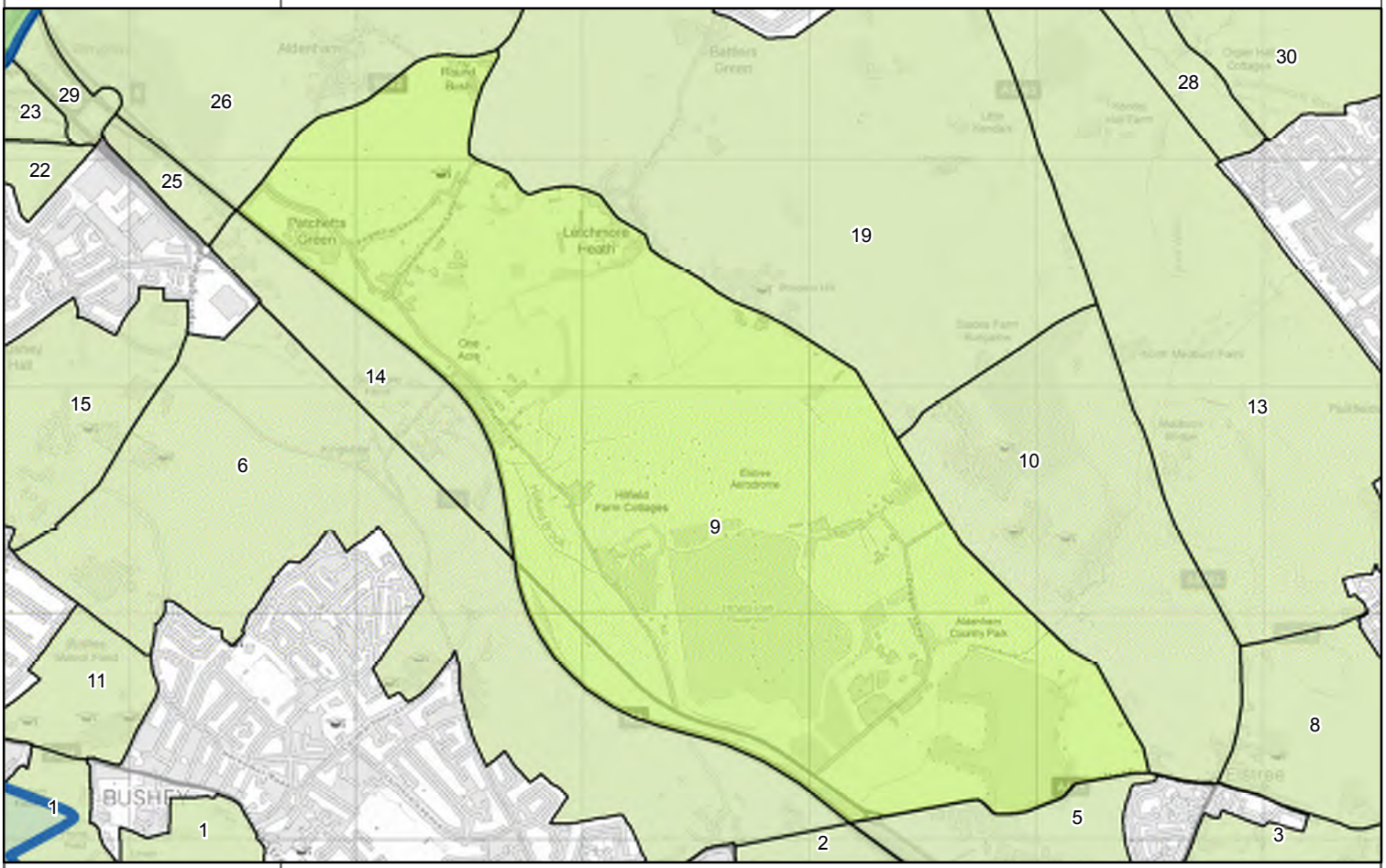
Job No	Drawing Status
249570-00	Issue

Drawing No	Issue
5.5	P1

MXD Location

Green Belt Parcel	9
Area (ha)	553.1
Local Authority	Hertsmere





Description

The parcel is located to the east of Bushey Heath/Bushey Village and North Bushey, to the north-west of Elstree and the west of Borehamwood. It is bounded to the north by the B462 (Radlett Road), to the west by the M1, to the south by the A411 (Elstree Road / Watford Road) and to the east by Aldenham Road/Grange Lane.

Purpose 1 Assessment

Purpose	Criteria	Assessment	Score
(1) To check the unrestricted sprawl of large built-up areas	(a) Parcel is at the edge of one or more disctinct large built-up areas	The parcel is not at the edge of a distinct large built-up area.	FAIL
	(b) Prevents the outward sprawl of a large built-up area into open land, and serves as a barrier at the edge of a large built-up area in the absence of another durable boundary		0
Purpose 1 Total Score			0 / 5

Purpose 2 Assessment

Purpose	Criteria	Assessment	Score
(2) To prevent neighbouring towns from merging	Prevents development that would result in merging of or significant erosion of gap between neighbouring settlements, including ribbon development along transport corridors that link settlements	The parcel forms a small part of the essential gap between Borehamwood and Bushey Heath/Bushey Village and part of the wider gap between Bushey Heath/Bushey Village and North Bushey, and Borehamwood and Radlett. The parcel plays an important role in maintaining the general scale and openness of these gaps, with the gently undulating character of the parcel affording some distant views northwards towards Watford and south-westwards towards Bushey Heath/Bushey Village. In particular, the very north and south of the parcel are important for preventing ribbon development along the B462 (Radlett Road) and the A411 (Elstree Road / Watford Road), which would reduce the perceptual distances between these settlements. However, the parcel is compartmentalised in some areas, particularly in the centre around the Green Belt settlement of Patchett's Green, and may be less important for preventing coalescence.	3
Purpose 2 Total Score			3 / 5

Purpose 3 Assessment

Purpose	Criteria	Assessment	Score
(3) Assist in safeguarding the countryside from encroachment	Protects the openness of countryside and is least covered by development	Approximately 7% of the parcel is covered by built form. The parcel maintains a largely open character, particularly the far northern and central parts which consist of open arable fields bounded by hedgerows of varying density and consistency. This landscape, together with the gently undulating topography, allows for some long views across open countryside to the edges of settlements. The southern area of the parcel, as well as the area around Letchmore Heath / Patchett's Green, have been subject to a greater level of encroachment. Built form in the south includes commercial and research facilities along Dagger Lane and the Elstree Aerodrome, though it should be noted that these developments do not substantially detract from the general rurality of the wider parcel. The villages in the north represent a more substantial concentration of residential built form, which is clustered around The Green and dispersed more widely along Aldenham Road and Grange Lane, including the extensive Bhaktivedanta Manor site.	3
Purpose 3 Total Score			3 / 5

Purpose 4 Assessment

Purpose	Criteria	Assessment	Score
(4) To preserve the setting and special character of historic towns	Protects land which provides immediate and wider context for historic settlement, including views and vistas between the settlement and the surrounding countryside	The parcel does not abut an identified historic settlement core and does not meet this purpose.	0
Purpose 4 Total Score			0 / 5

Site Photos

Photograph 1 Facing west across Elstree Aerodrome, located in the south of the parcel

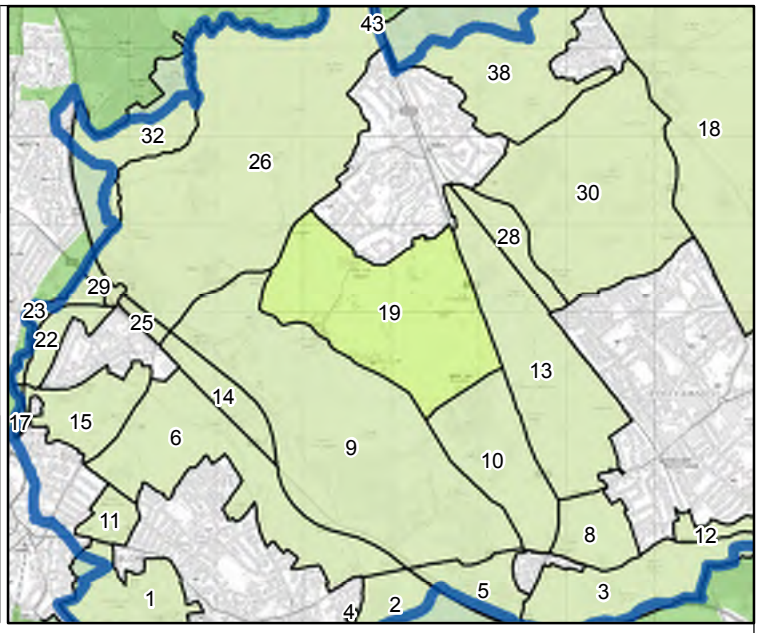
Photograph 2 Letchmore Heath pond

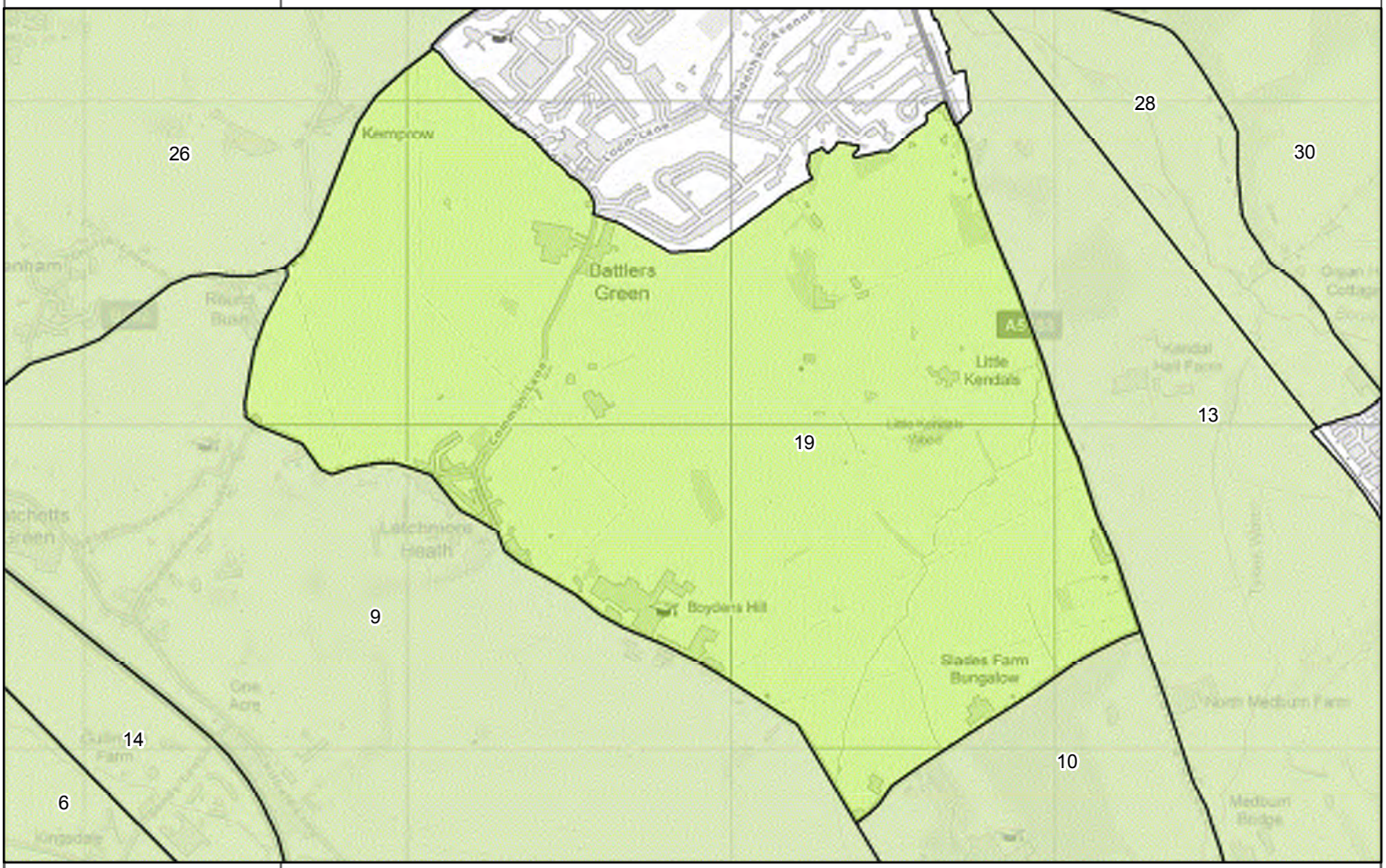
Site Photos

Photograph 3 Facing west from Summerhouse Lane with pony paddocks in the foreground and longer views towards Watford

Photograph 4 Facing north from the Bhaktivedanta Manor access road across open, undulating field

Green Belt Parcel	19
Area (ha)	349.6
Local Authority	Hertsmere





Description

The parcel is located immediately south of Radlett, north-west of Borehamwood, north-east of Bushey Heath/Bushey Village and east of North Bushey. It is bounded by Radlett to the north, the A5183 (Cobden Hill / Watling Street) to the east, Butterfly Lane to the south-east, Aldenham Road, The Green and Grange Lane to the south-west and Primrose Lane and Radlett Road to the north-west.

Purpose 1 Assessment

Purpose	Criteria	Assessment	Score
(1) To check the unrestricted sprawl of large built-up areas	(a) Parcel is at the edge of one or more disctinct large built-up areas	The parcel is not at the edge of a distinct large built-up area.	FAIL
	(b) Prevents the outward sprawl of a large built-up area into open land, and serves as a barrier at the edge of a large built-up area in the absence of another durable boundary		0
Purpose 1 Total Score			0 / 5

Purpose 2 Assessment

Purpose	Criteria	Assessment	Score
(2) To prevent neighbouring towns from merging	Prevents development that would result in merging of or significant erosion of gap between neighbouring settlements, including ribbon development along transport corridors that link settlements	The parcel forms part of the wider gap between Radlett, Borehamwood, Elstree, Bushey Heath/Bushey Village and North Bushey, where the scale of the gap is such that there is little risk of settlements coalescing, but where the overall openness is important to preserving the perceived gap between settlements. The parcel plays a role in preventing ribbon development between Radlett and Elstree Village at Cobden Hill and Watling Street.	3
Purpose 2 Total Score			3 / 5

Purpose 3 Assessment

Purpose	Criteria	Assessment	Score
(3) Assist in safeguarding the countryside from encroachment	Protects the openness of countryside and is least covered by development	Approximately 3% of the parcel is covered by built form and it is characterised by a strong rural character throughout. The only significant development in the parcel is at Letchmore Heath at the western boundary and Aldenham School and Aldenham School Sports Centre at the south-western boundary. There is a small number of agricultural buildings throughout the parcel and Battlers Green Shopping Village in the north adjacent to Radlett. The remainder of the parcel consists of very open agricultural fields with long views and very little development.	5
Purpose 3 Total Score			5 / 5

Purpose 4 Assessment

Purpose	Criteria	Assessment	Score
(4) To preserve the setting and special character of historic towns	Protects land which provides immediate and wider context for historic settlement, including views and vistas between the settlement and the surrounding countryside	The parcel protects open land which has a strong connection to the historic core, contributing to its immediate historic setting. The parcel's historic character is defined not by the town's historic setting, but the historic field pattern and soft edge between the settlement and countryside in the north-east of the parcel. There are views between Radlett's historic area and the parcel although they are mostly obscured by tree cover.	3
Purpose 4 Total Score			3 / 5

Site Photos

Photograph 1 Facing north towards the historic area of Radlett in the right rear of the photograph

Photograph 2 Facing north across the parcel from Butterfly Lane