



# **Planning, Design and Access Statement**

Grimethorpe Solar Farm

December 2024

Prepared for:  
Enviromena Project Management UK Ltd

Project Number:  
333101598

## Planning, Design and Access Statement

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## Planning, Design and Access Statement

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# 1 Introduction

## 1.1 Overview

- 1.1.1 This Planning Statement has been prepared by Stantec, on behalf of Enviromena Project Management UK Ltd (the 'Applicant') to accompany a full planning application to Barnsley Metropolitan Borough Council (the 'Council'), for a proposed solar photovoltaic (PV) farm (the 'Proposed Development') on land to the east and west of Engine Lane, Grimethorpe (the 'Site').
- 1.1.2 The Proposed Development comprises the construction, operation, and decommissioning of a ground mounted solar farm with associated infrastructure, access, and landscaping providing a reliable source of clean, renewable energy to the National Grid.
- 1.1.3 This Statement sets out the planning policy context relating to the planning merits and acceptability of the principle of the development and how environmental issues relating to the development are addressed. This Statement should be read in conjunction with the drawings and information accompanying the planning application (Table 1.1) to fully understand the Proposed Development, its potential impacts and planning merits.

## 1.2 Application Submission Documents

- 1.2.1 Table 1.1 sets out the plans and documents that are submitted with the application.

Table 1.1: Planning Application Package

Document	Reference
<b>Drawings</b>	
Site Location	P007033-04-SiteLocation Rev A
Site Layout	P007033-11-PlanningLayout Rev G
Array Sections	P007033-20-ArraySections Rev B
EHV Substation Section Views	P007033-21-EHVSubSections Rev A
Fence Sections Views	P007033-22-FenceSections Rev A
Customer Substation Section Views	P007033-23-CustSubSections Rev A
T-Boot Section Views	P007033-24-TBootSections
<b>Reports</b>	
Planning, Design and Access Statement	Stantec, December 2024
Statement of Community Involvement	Alpaca, December 2024
Landscape and Visual Assessment	FPCR, December 2024
Landscape Strategy	FPCR-ZZ-XX-DR-L-0001 Rev P14 and FPCR-ZZ-XX-DR-L-0002 Rev P14
Heritage Statement	BWB, December 2024
Flood Risk Assessment	BWB, December 2024
Drainage Statement	BWB, December 2024
Tree Survey and Arboricultural Impact Assessment	Iain Tavendale, December 2024
Agricultural Land Report	Roberts Environmental, December 2024
Preliminary Ecological Appraisal	Arbtech
Biodiversity Net Gain Report and Metric	Arbtech, December 2024
Breeding Bird Report	Witcher Wildlife, 2023
Newt eDNA Report	Arbtech, 2023
Bat Preliminary Roost Assessment	Arbtech, 2023
Glint and Glare Study	Pager Power, December 2024
Transport Statement	Motion, December 2024

### 1.3 Environmental Impact Assessment

- 1.3.1 A request for a Screening Opinion under Regulation 6 of The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 was submitted to the Council on 23 December 2022.
- 1.3.1 The Council's Screening Response was issued on 28 March 2023 (reference: 2022/ENQ/00540). The response states that given the scale, nature, and setting of the proposal, the environmental impacts are not anticipated to warrant an EIA.
- 1.3.2 Consequently, no Environmental Statement has been prepared to accompany the application.

### 1.4 Context

- 1.4.1 Climate change is regarded by many as the most serious threat facing the global environment, economy, and society. The overwhelming scientific consensus is that there is a link between human actions and climate-related issues such as rising sea and air temperatures, rising sea-levels, melting ice caps and changes in the pattern and severity of a weather systems.
- 1.4.2 The Climate Change Act 2008 is the basis for the UK's approach to tackling and responding to climate change. Through the Act, the UK Government has set a target to significantly reduce greenhouse gas emissions, committing in law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050, and there is an expedited commitment for the UKs energy sector to be carbon neutral by 2035.
- 1.4.3 Solar energy is seen by the Government as being central to achieving net zero providing a significant portion of the UKs energy needs going forward as we transition from heavily polluting fossil-fuel generated power to a green, renewable grid. Solar-generated output is required to quadruple to 70GW by 2035 if we are to keep up with increasing UK electricity demands.
- 1.4.4 There is an unequivocal and urgent need for considerable upscaling in renewable energy deployment to support the UK's switch to a low-carbon energy system and achieve net zero targets to mitigate climate change effects.
- 1.4.5 The Energy White Paper (2020), British Energy Security Strategy (2022), National Policy Statements (particularly NPS EN-1 and EN-3, 2023), Clean Power 2030 Action Plan (December 2024) and the National Planning Policy Framework (2024) set out the Government's approach to the essential place of renewables in the energy supply system and emphasise the key role that the planning system has in delivering the increasing proportion of renewables. They contain a clear steer to local authority decision-makers that they should look favourably on renewable energy developments. One of the key features of the advice was that the wider environmental and economic benefits of all proposals, whatever their scale, are material planning considerations to be given significant weight in deciding whether to grant consent.

### 1.5 The Applicant

- 1.5.1 Enviromena is committed to leading the transition to a world powered by clean energy by providing safe, affordable, and reliable clean energy solutions to customers across the UK and Europe.
- 1.5.2 The company has one of the largest footprints of clean energy projects, has installed more than 17,000 solar systems, and currently has more than 250MWp under management. Additionally, Enviromena currently has a further 2.3GW in construction and development across the UK and Europe.

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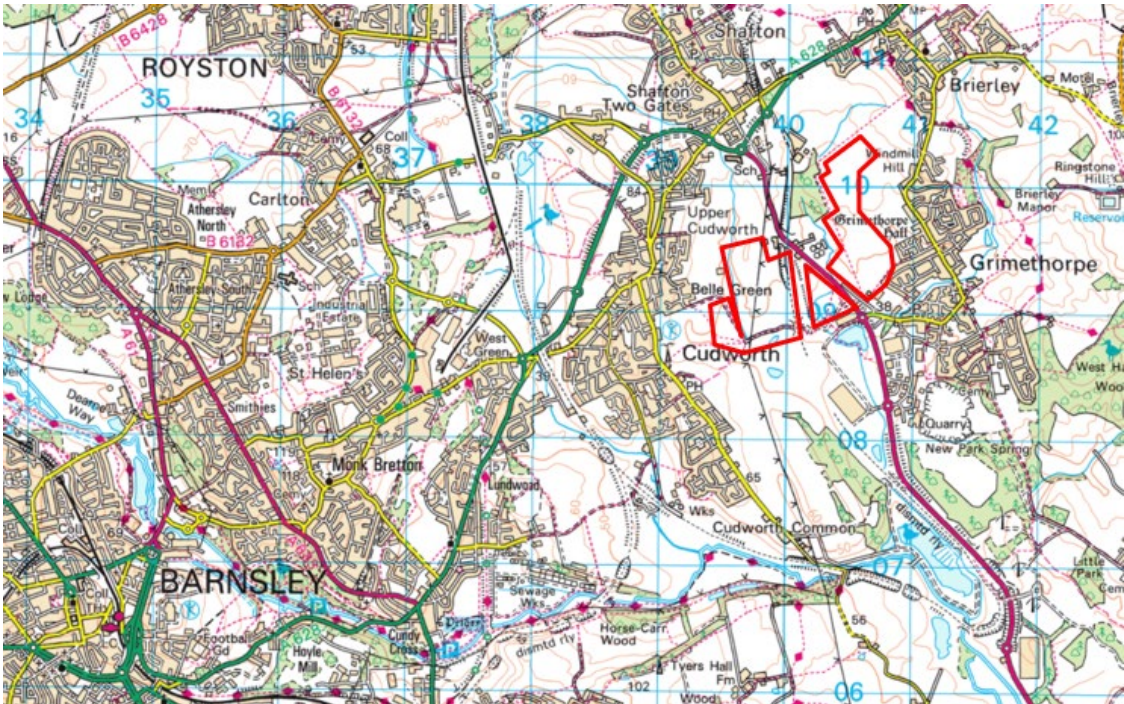
Enviromena is a trusted renewable energy partner with a strong track record of delivering and maintaining renewable energy projects. It is committed to making a positive and significant impact on the causes of climate change and to achieving biodiversity net gain.

## 2 The Site and Surrounding Context

### 2.1 Site Location

- 2.1.1 The Site is located approximately 6km (3.8miles) to the north east of Barnsley town centre, between the settlements of Grimethorpe (to the east), and Cudworth (to the west); Figure 2.1.
- 2.1.2 The Site lies wholly within the administrative boundaries of Barnsley Metropolitan Council as Local Planning Authority.

Figure 2.1: Site Location



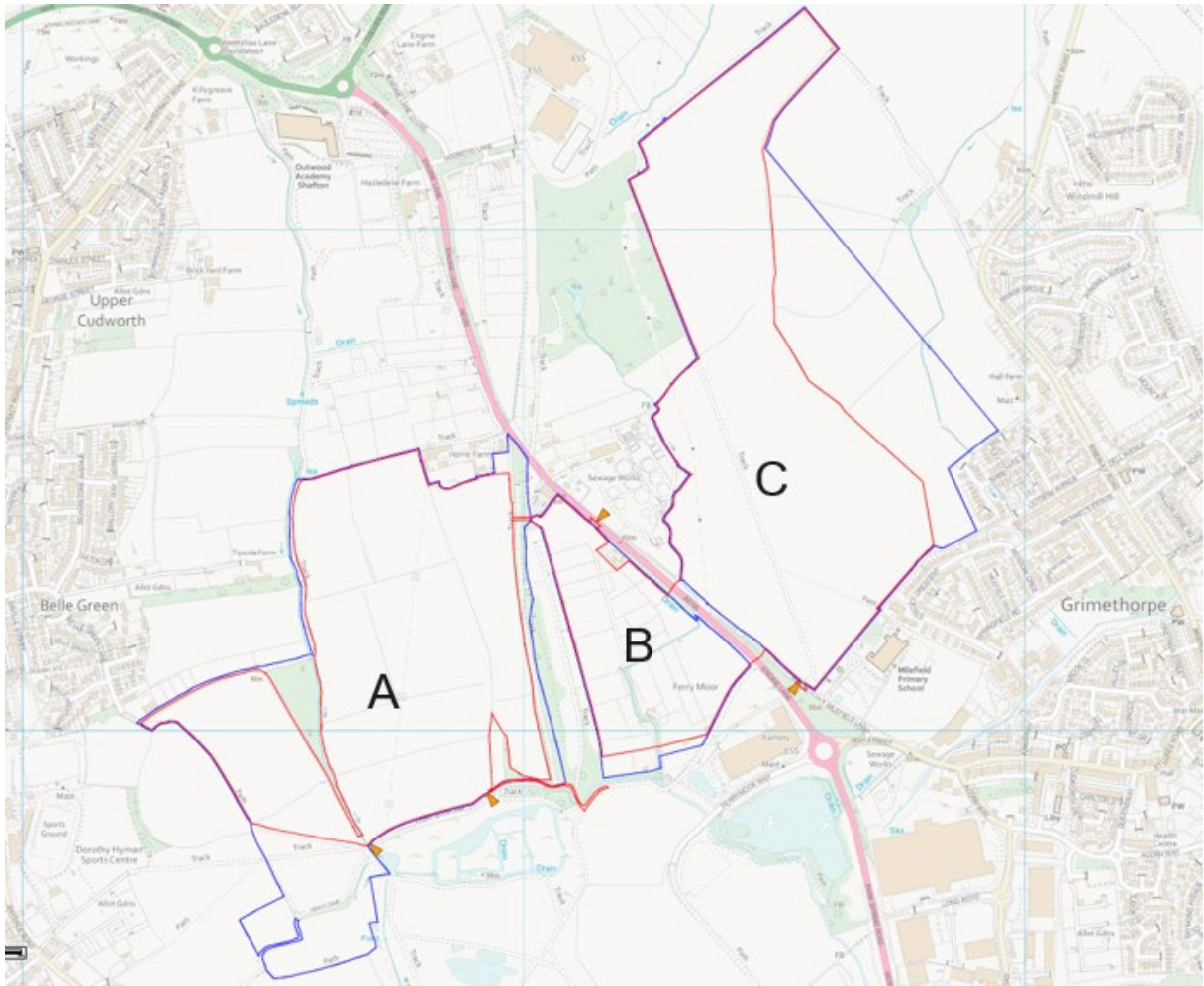
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### 2.2 Site Description

- 2.2.1 The Site comprises of three parcels of agricultural land extending to either side of the A6195 'Engine Lane'. For ease of reference the three land parcels are referred to as Parcel A, Parcel B and Parcel C where appropriate within this Statement and illustrated at Figure 2.2. A breakdown of the total site area can be found below.

- Total fenced area 65.13 Hectares (ha) / 160.94 acres
- Total red line area 90.49 Hectares (ha) / 223.61 acres

Figure 2.2: Site Parcels



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2.2.2 A summary of the three parcels is as follows.

### 2.3 Parcel A – Land to the East of Cudworth

2.3.1 Parcel A is adjacent to the built form of Cudworth and comprises of several agricultural fields bound by trees, hedgerows and woodland blocks.

2.3.2 The parcel lies to the north of Ferry Moor Lane and remediated land associated with the former Grimethorpe Colliery to which the southern extent of the parcel also formed part. To the east the parcel is bound by a woodland belt with Parcel B beyond. Agricultural land bounds the parcel to the north and west leading towards built extent of Cudworth.

2.3.3 The parcel is gently undulating, rising slightly to the north.

2.3.1 There are several Public Rights of Way (PRoW) within and adjacent to the parcel. To the south a PRoW travels westwards from Grimethorpe towards Cudworth along Ferry Moor Lane. Another PRoW, located towards the west of the parcel, travels approximately 400 metres northwards from the southern boundary before heading 270 metres westwards whereby it leaves the site boundary to meet the built form of Cudworth.

2.3.2 Vehicular access to the parcel is from Ferry Moor Lane at the southern boundary via the A6195 Engine Lane.

### 2.4 Parcel B – Land to the West of Engine Lane

- 2.4.1 Parcel B is located to the west of Engine Lane and to the north of Ferry Moor Lane from which vehicular access is available.
- 2.4.2 The land is triangular in shape and currently used for the grazing of horses with a small stable block present. Large industrial units of Grimethorpe Industrial Estate are located to the south of the parcel. Trees and hedges are present at the boundaries and across the parcel delineating field boundaries. A Traveller site is located immediately adjacent to, but outside, the southern boundary.
- 2.4.3 Two public rights of way cross the parcel, although one has been curtailed by the Traveller site. The Applicant has not been able to establish if this route has been officially extinguished.

### 2.5 Parcel C – Land to the East of Engine Lane

- 2.5.1 Parcel C, the largest of the three parcels, is located to the east of Engine Lane, west of Grimethorpe and is formed of several agricultural fields delineated by trees and hedgerows. A waste water treatment works forms part of the parcel's western boundary with agricultural fields to the north and west leading to the village of Brierly and the built edge of Grimethorpe respectively.
- 2.5.2 The parcel is generally level with some undulation towards the centre.
- 2.5.3 An overhead electricity power line traverses the parcel following a route from the southwestern corner to the eastern boundary. A PRoW traverses the parcel, travelling 1km from the southern boundary to the north whereby it follows the site boundary for approximately 750 metres to the east before meeting the built-up area of Grimethorpe.
- 2.5.4 Vehicular access to the parcel is via Milefield Lane at the parcel's southern extent.

### 2.6 Technical considerations

- 2.6.1 With regards to key statutory designations and policy considerations, the Site:
- Is located wholly within the Barnsley Metropolitan Green Belt;
  - The Site is located in Flood Zone 1, which is land at low risk of fluvial flooding. Parcel A and B's access road is shown to be partially located within Flood Zone 2, attributed to a tributary of the River Dearne however, there is no development proposed at this location, simply the preservation of existing access/egress routes. With regards to surface water, all parcels are shown to be largely at very low risk of surface water flooding with localised areas of low to high risk of surface water ponding within each parcel where levels are lowest. It is anticipated that surface water flooding is likely to be overestimated due to limitations associated with the modelling approach whereby structures (such bridges, culverts and weirs) are not represented (discussed in Section 6 of this Statement).
  - Is not subject to any statutory landscape designations; it is not in a National Park or within a National Landscape area; nor are there such designations within 2km;
  - Is not covered by any statutory heritage designations nor are there any designated heritage assets within the boundaries. It is acknowledged however, that several listed structures (Grade II\* and II) are situated within a 2km radius, the nearest of which, the Grade II\* Grimethorpe Hall is situated c.200m east of Parcel C; and
  - Is not covered by any ecological designations nor are there any within 2km.

## 2.7 Planning History

- 2.7.1 The Site has limited planning history, principally related to its part use for open cast mining and the erection of overhead power lines:

Table 2.1: Planning History of the Site

Application Reference	Description	Decision
<b>Parcel A</b>		
B/99/0579/HR	Extraction of coal by opencast mining, reclaim colliery site by restoration to agriculture, amenity uses and future development land (Environmental Statement)	Approved (August 1999)
B/98/0827/HR	Extraction of coal by opencast mining and reclamation of the colliery site with restoration to agriculture, amenity uses and future development of land	Refused (March 1999)
B/02/0934/HR	Variation of Conditions 1& 2 of Planning Consent B/99/0579/HR to vary permitted timescale and mineral extraction areas (with Environmental Statement).	Refused (January 2003)
B/03/0171/HR	Vary Condition 1 of Planning Consent B/99/0579/HR to vary permitted timescale.	Unknown (April 2004)
<b>Parcel B</b>		
B/93/1497/HR/EL	33kv overhead powerline system replacement	Approved (January 1994)
<b>Parcel C</b>		
2015/0965	Rebuild 66kv overhead powerline (OHL)	Approved (September 2015)

## 2.8 Other Solar Farm Applications

- 2.8.1 A search of the Council's online planning records revealed that no previous applications for commercial-scale solar farm development in the Borough.
- 2.8.2 Application reference 2023/0845 was approved with conditions on the 8<sup>th</sup> April 2024. It has the largest capacity set of solar arrays (2MW) within the Borough. The arrays will help supplement energy needs for the adjoining Premier Foods processing plant. Whilst any surplus generated energy is proposed to be exported to the national grid energy generated will principally be used to directly power the commercial plant.

### **3 The Proposed Development: Design and Access Statement**

3.1.1 A summary of the key elements of the Proposed Development is set out below.

#### **3.2 Use and Amount**

3.2.1 The Proposed Development is for a solar photovoltaic farm generating clean, renewable electricity for export to the Grid. The solar farm will have an export capacity of up to 49.9MW of electricity at peak operation and is proposed for a period of 40 years.

3.2.2 The proposed solar farm is intended to support the Government's commitments to reduce emissions of greenhouse gas emissions to combat the effects of climate change.

3.2.3 The extent of development is determined largely by the available capacity on the grid network, technological and legislative requirements (especially in respect of health and safety measures) and operational requirements. Overall, the proposed intrusive footprint of the Proposed Development is expected to be less than 5% of the Site area.

3.2.4 The panels will be supported by associated infrastructure including:

- Inverters: these convert the Direct Current (DC) electricity collected to the Alternating Current (AC) used in electricity distribution / transmission and are secured to the rear of the PV module framework mounting structures;
- Transformers: these control the voltage of the electricity generated and are at several locations within the array layout;
- Switchgear: a combination of electrical disconnect switches, fuses or circuit breakers used to control, protect, and isolate electrical equipment;
- Customer Substation: A substation is an electrical system with high-voltage capacity and can be used to control the apparatus, generators, electrical circuits, etc. contained within a small building measuring 3.07m in height and 6.61m length;
- Grid Substation: the grid substation receives power generated from the solar panels and lowers the voltage with a step-down transformer. The grid substation covers 52m x 27m.
- Means of enclosure: For security purposes there will be a requirement to enclose the solar panels, it is proposed to install deer fencing, which comprises of timber posts and wire meshing. Such fencing is designed to ensure most wildlife can continue to travel through and use the site.
- CCTV: The site will be protected by CCTV security systems with pole-mounted cameras situated along the Site perimeter.

3.2.5 No lighting is required during the operational phase of the development, apart from lighting for the substation to illuminate access to the building in the event of an emergency. The lighting will be triggered by PIR Motion Sensors which will be located directly in front of the substation entrance.

3.2.6 This is the appropriate quantum of development to ensure the efficient and effective generation of electricity from the Site.

**3.3 Layout and Scale**

- 3.3.1 The layout and scale of the development responds positively to the required amount of land to make the scheme viable and efficient and to accommodate the industry standard dimensions of the solar panels and associated infrastructure.
- 3.3.2 The proposed layout is shown on the enclosed Planning Layout Plan (Rev G), replicated at Figure 3.1.

Figure 3.1: Proposed Site Layout



- 3.3.3 Key features of the layout are illustrated at Figures 3.2 to 3.4, and include:
  - Solar panels laid out in south-facing arrays;
  - Arrays located wholly within existing field enclosures, meaning no merging of fields is required and so maximised retention of trees and hedges, value habitats and other landscape features;

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- Minimum distance of 4m between edge of panels and perimeter fencing to allow maintenance access;
- A gap of at least 3.2m between each row of arrays and maximum top height of the solar panels of 2.5m;
- Perimeter fencing of deer-proof design comprising of wooden posts and wire mesh at a height of 1.9m;
- Retention and enhancement of existing PRowS and greenways subject to enhanced planting; and
- Customer Switchgear and DNO Substation positioned at the southern extent of Parcel A, away from sensitive receptors and screened by existing vegetation.

Figure 3.2: Array Section

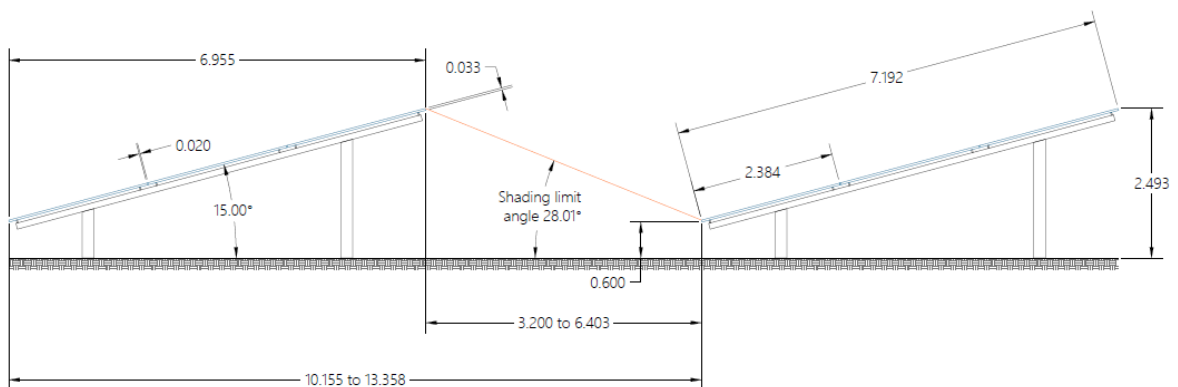


Figure 3.3: Grid Substation Section

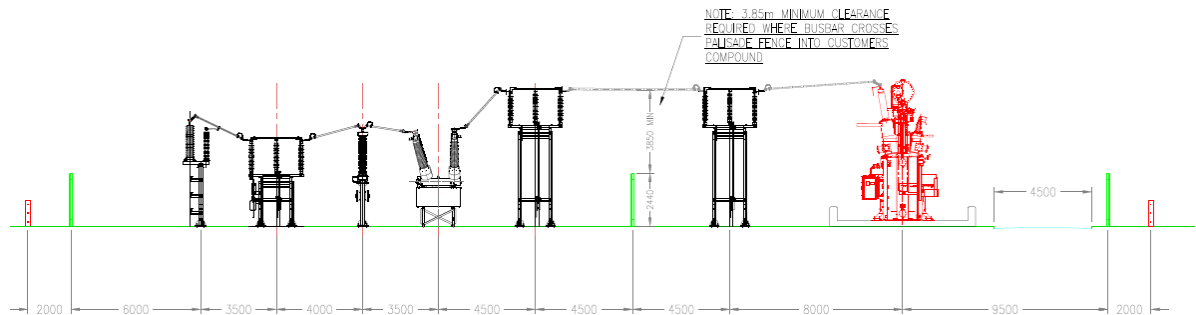
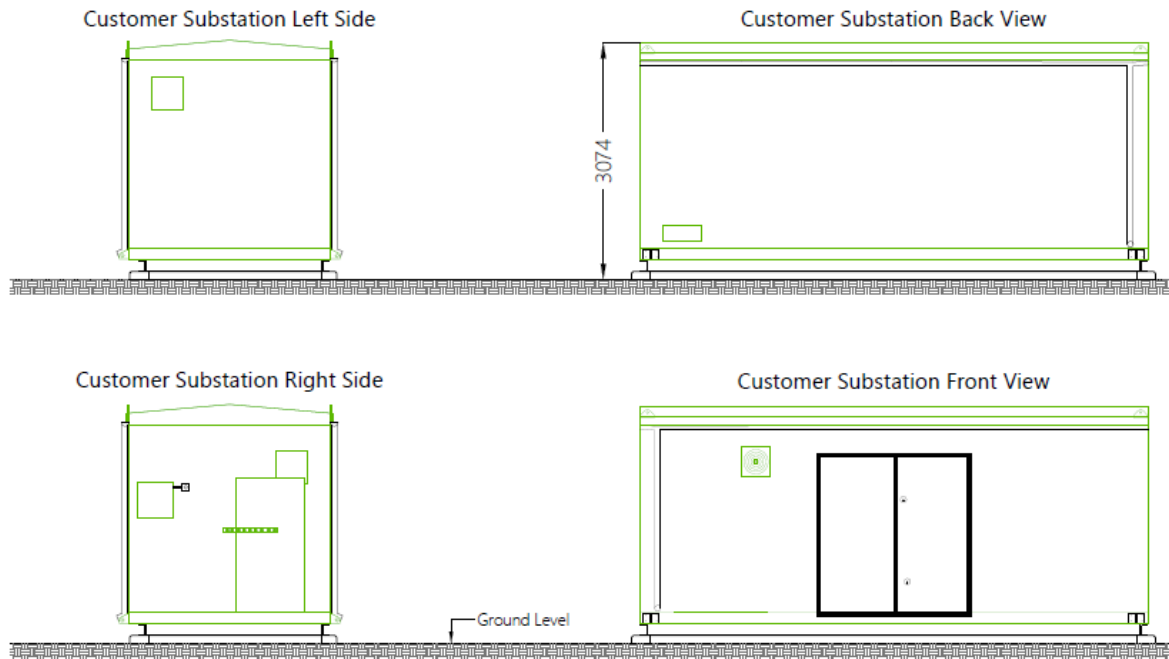


Figure 3.4: Customer substation enclosure



- 3.3.4 Overall, the development is of an appropriate scale and layout to meet operational requirements to generate electricity efficiently and effectively whilst also responding appropriately to the Site and surroundings to minimise potential impacts.
- 3.3.5 The largest building, the Customer Substation is also visually unobtrusive being a single-storey structure measuring c.3.45m high and 18m in length. The DNO grid substation and customer compound are situated at the south of Parcel A, away from sensitive receptors and surrounded by existing and enhanced vegetation to screen and filter views.

### 3.4 Appearance

- 3.4.1 The overall appearance of the proposed development will be functional, reflecting its use for the generation of electricity. The solar panel modules will be of a high standard and will be covered with non-reflective material to allow as much light as possible through to the PV cells whilst minimising glare. The panels will be of dark colour (blue, black, or grey) and will be mounted on a galvanised steel frame.
- 3.4.2 Other small buildings and structures required for ancillary infrastructure requirements are also functional in appearance but can be appropriately coloured or clad to minimise any visual impact.
- 3.4.3 The proposed DNO substation and customer compound has been appropriately located at the south of Parcel A and is contained within an area surrounded by existing mature vegetation away from residential dwellings, meaning any views are heavily screened.

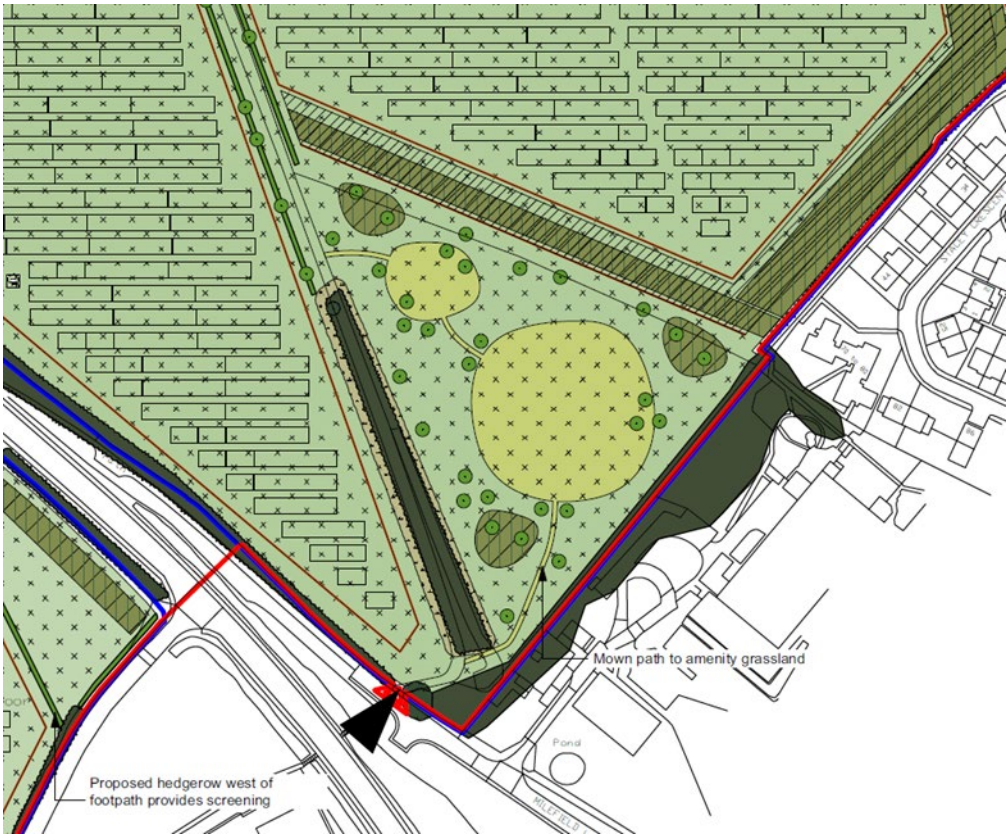
### 3.5 Landscaping and Biodiversity

- 3.5.1 Landscape enhancement measures are proposed to provide screening and increase biodiversity at the site. These include native hedgerow and tree planting and the introduction of native grasses and wildflowers throughout the Application Site, providing additional habitat and food resources for the local wildlife as well as providing mitigation screening for the Proposed Development, reducing the potential for inward views from nearby receptors.

### 3.6 Community Garden

3.6.1 An area of land measuring c.2ha highlighted is provided within Parcel C adjacent to Milefield Primary School, for the use and enjoyment of the local Grimethorpe community. The land will be subject to detailed planting proposals will include wildflower and meadow grassland, trees and shrubs.

Figure 3.5: Proposed Community Garden



### 3.7 Access and Permeability

3.7.1 Access to each parcel will be via existing access points currently utilised by agricultural vehicles and as such are appropriate for use by construction and maintenance traffic. The access points will be upgraded where necessary to accommodate safe entrance and exit by both operative and construction vehicles and permit vehicles to enter and exit in forward gear.

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- 3.7.2 The construction phase of the development would lead to a temporary increase in traffic on the road network surrounding the Site for an anticipated c.60-week period. On average during this period, it is expected that there will be an increase in traffic movements of (on average) three two-way HGV movements per day and c.30 light vehicle movements associated with workers. Due to the proximity of the strategic road network, and adjacent industrial estate it is anticipated that this limited increase in daily vehicle movements will not impact on the continued safe operation of the surrounding road network.
- 3.7.3 During the operational phase of the development, there would be a negligible increase in traffic volumes with operational traffic (one van) expected to access the application site on two occasions per month.
- 3.7.4 PRow and Greenways are retained and will remain accessible throughout the operational phase of the Development. The landscape strategy employed will ensure that a green aspect will be maintained for users of the routes.

### **3.8 Construction Period**

- 3.8.1 It is envisaged that a Construction Environmental Management Plan (CEMP) would be provided as a Pre-Commencement Condition of any planning consent.
- 3.8.2 Construction is estimated to be approximately 60 weeks, consisting of the following principal operations:
- Erection of security fencing;
  - Delivery of solar panels and mounting frames;
  - Installation of the mounting system and solar panels;
  - Cable trenching, ducting and backfilling;
  - Commissioning of the generating station equipment and grid connection; and
  - Site reinstatement, landscape planting and ecological enhancements.
- 3.8.3 If ground conditions dictate, wheel washing facilities will be provided to ensure no mud or loose material is transferred onto the local highway network by construction vehicles.
- 3.8.4 The construction hours will be agreed with the local planning authority through the CEMP, which can be secured through a suitable condition in the event planning permission is granted.

### **3.9 Grid Connection**

- 3.9.1 The project benefits from an onsite connection – the point of connection is in parcel A connecting into the existing 132kV overhead line infrastructure.

### **3.10 Maintenance and Operation**

- 3.10.1 Once operational, the Proposed Development will be monitored remotely. Occasional maintenance activities will be required for groundskeeping, cleaning of the solar panels, and checks on equipment. It is expected that the operational development could require up to two maintenance visits per month in transit van-type vehicles.
- 3.10.2 The Applicant is supportive of utilising the Site for light grazing of livestock, discussions regarding this will be held with the landowner. As such the land could retain an agricultural function.

**3.11 Decommissioning**

- 3.11.1 At the end of the temporary operational lifespan (40 years) the solar panels and other infrastructure would be removed, and the Site will be fully reinstated to its previous state and returned to agricultural use. The decommissioning process will ensure that the land is restored to the same quality, or better, than prior to the development. This can be secured through a suitable condition in the event planning permission is granted.

## 4 Site Selection Process

4.1.1 The Applicant has undertaken a site selection exercise to identify suitable areas for solar development to meet the electricity demand within this network area.

4.1.2 The site selection process that the Applicant has undertaken is outlined below.

### 4.2 Location Requirements for Solar Farms

4.2.1 Solar farms have very specific locational requirements which mean they cannot be sited just anywhere with suitable locations limited around the country.

4.2.2 Principal requirements for a viable and efficient solar farm include:

- Grid Connection Capacity - The DNO must be able to offer a Point of Connection (POC) with capacity to accept additional output to the network. POC with capacity to accept additional loading are limited and is one of the biggest challenges facing renewable energy development.
- Avoiding Energy loss – The site must be located close to a POC to avoid transmission losses; the greater the distance, the more energy is lost. A site at considerable distance from a POC is not an efficient use of land; it means there is less energy getting to the grid from the same area, undermining the principles of sustainable development.
- Route to Connection: There are often technical considerations and land constraints which mean that cable paths cannot follow a linear, direct route. The more convoluted the route the greater financial implications, time delays and transmission losses.
- Land Availability: Site options are heavily restrained by land availability. A willing landowner is another major challenge facing renewable energy development.
- Environmental Designations: Consideration of proximity to areas subject to ecological designation like SSSI, RAMSAR, LNR<sup>1</sup>, Special Areas of Conservation, and Special Protection Areas. Development in such areas is generally to be avoided.
- Planning Policy: Site selection is mindful of national and local planning policy. This ranges from requirements in the NPPF, Local Plan, and Neighbourhood Plans.
- Sustainable Development: A site must be capable of multifunctional enhancements to support the economic, environmental, and social dimensions of sustainable development.

4.2.3 Furthermore, due to the land take required for utility-scale solar farms i.e., those proposing to export electricity to the National Grid to power UK homes and businesses, they usually require an open countryside location.

4.2.4 In summary, when factors such as suitable grid connection, viability and feasibility and environmental designations are considered there are very few sites where solar farms can be located.

### 4.3 Grimethorpe Solar Farm Site

4.3.1 Following the above site selection methodology, the Site was considered a suitable location to accommodate a solar farm, owing to:

- Onsite POC – The proposed solar farm will export electricity to the National Grid via an onsite POC through the existing 132kV overhead infrastructure present which has available capacity to accept additional loading. This is a significant benefit of the Site;

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<sup>1</sup> Site of Special Scientific Interest, Local Nature Reserve.

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on-site connection minimises transmission losses and maximises the viability and efficiency of the development. This was the principle starting point for selecting the Site.

- Availability of land – The Site has interested landowners, who are agreeable to leasing their land for a solar farm for the 40 years.
  - Topography and Overshadowing – The Site is generally level which makes it particularly suitable for solar and there are no tall adjacent structures which would cause significant overshadowing across the Site.
  - Solar gain – the Site benefits from positive levels of solar gain.
  - Accessibility – The Site has good connections to the strategic road network to allow for construction and maintenance operations.
  - Planning and environmental considerations – The Site is not subject to any statutory protected landscape, heritage, or ecological designations which would significantly constrain its ability to accommodate the Proposed Development. It is acknowledged that the Site lies within the Green Belt and as such Very Special Circumstances (VSCs) are required to be demonstrated. Renewable energy generation is a well-established VSC in planning, as discussed further in Section 6.
  - Agricultural Land Value – the Site does not comprise of Best and Most Versatile (BMV) land for which policy generally seeks to steer development away from. against loss to development.
  - Ecological Enhancements – the Site as agricultural land has the potential to deliver considerable net gains for biodiversity through conversion to grassland, additional planting opportunities and allowing soil and watercourse health to recover by leaving the land fallow.
- 4.3.2 In summary, the Site has several physical and policy advantages that make it particularly appropriate and viable for solar development. It benefits from an onsite POC to the Grid which maximises viability and efficiency of the scheme, avoiding need for extensive off-site cable routes. Such sites are rare.
- 4.3.3 Following the above site selection methodology, the Site was considered a suitable location to accommodate a solar farm. Given the onsite POC which maximises sustainability objectives and an agreeable landowner the Applicant did not seek to search for alternative sites.

## 5 Planning Policy Context

- 5.1.1 Section 70 (2) of the Town and Country Planning Act and Section 38 (6) of the Planning and Compulsory Purchase Act 2004 together require that planning applications be determined in accordance with the Development Plan unless material considerations indicate otherwise.
- 5.1.2 With the absence of any made Neighbourhood Plans, the Development Plan covering the Site comprises of the Barnsley Local Plan, adopted January 2019.
- 5.1.3 Additional material policy considerations for the Proposed Development are derived from global and national energy policy and planning policy as set out in the National Policy Statement (NPS), the National Planning Policy Framework (NPPF) (December,2024), and the online Planning Policy Guidance (PPG).

### 5.2 Development Plan

#### Barnsley Local Plan (2019)

- 5.2.1 The Barnsley Local Plan is a main consideration in the determination of planning applications in the borough. Promoting sustainable development and reducing the borough's impact on climate change are overarching principles of the Local Plan. Development will be assessed against the objective of securing sustainable development within Barnsley to meet its environmental, economic, and social needs. Notably the Plan states that proposals will be supported where they deliver, amongst others, renewable energy generation to reduce the climate change (paragraph 3.3).
- 5.2.2 In November 2022 an assessment of the Local Plan was undertaken where it was considered that the Local Plan remains fit for purpose and no update is required until c.2027.
- 5.2.3 The Local Plan Policies Map was adopted alongside the Local Plan to provide an illustrative overview of the policies applicable to areas within the Borough, the Policies Map indicates that the following policies apply to the Site.
- **Policy GB1 Protection of Green Belt** designates the extent of the Barnsley Metropolitan Green Belt. The Policy states that the: "*Green Belt will be protected from inappropriate development in accordance with national planning policy.*" Over 75% of the borough is covered by the Green Belt designation, including the Site in its entirety.
  - **Policy GS2 Greenways and Public Rights of Way** seeks to protect PRoW and designated 'greenways' from development that may harm their form or function. Where such routes cross a development site the policy requires that they are retained, or if not possible, that an equally convenient and attractive alternative route is provided. Several PRoW and 'greenways' cross the Site or are in proximity to boundaries.
- 5.2.4 Other policies of relevance to the determination of the Proposed Development include **Policy CC1 Climate Change** which seeks to reduce the causes of climate change and adapt to the future impacts of climate change by, amongst others, supporting the delivery of renewable and low carbon energy. The policy also promotes investment in Green Infrastructure to encourage biodiversity gain.
- 5.2.5 Policy **CC2 Sustainable Design and Construction Development** expects developments to minimise resource and energy consumption through the inclusion of sustainable design and construction features, where this is technically feasible and viable.
- 5.2.6 **Policy CC3 Flood Risk** seeks to restrict development to areas at lowest flood risk.
- 5.2.7 **Policy RE1 Low Carbon and Renewable Energy** requires all developments to incorporate appropriate design measures and renewable or low carbon energy sources to reduce carbon

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dioxide emissions. The policy states that development for renewable energy generation will be permitted providing there are no significant harmful effects which cannot be prevented or mitigated, on:

- Character and landscape appearance of the area
- Living conditions
- Biodiversity, geodiversity and water quality
- Heritage assets
- Key views of landscape features
- Highway safety
- Infrastructure including radar.

5.2.8 **Policy BIO1 Biodiversity and Geodiversity** requires new development to conserve and enhance the biodiversity and geological features of an area, by amongst others, maximising biodiversity and geodiversity opportunities protecting ancient and veteran trees, encouraging biodiversity enhancements.

5.2.9 **Policy SD1 Presumption in favour of Sustainable Development** sets out a positive approach that reflects the presumption in favour of sustainable development contained in the National Planning Policy Framework. It sets out that the Council will work proactively with applicants jointly 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.

5.2.10 **Policy GD1 General Development** sets out that development will be approved so long as there is no significant adverse effect on residential amenity, will not prejudice use of neighbouring land, includes quality and sufficient landscaping, minimises pollution, existing trees are retained and existing features (drains, pylons etc.) are considered and incorporated.

5.2.11 **Policy LC1 Landscape Character** requires developments to retain and enhance the character and distinctiveness of the individual character area in which it is located. The Site is located within the Grimethorpe Settled Wooded Farmland Landscape Character Area

5.2.12 **Policy HE1 The Historic Environment** Supports proposals which conserve and enhance the significance and setting of the borough's heritage assets, paying particular attention to those elements which contribute most to the borough's distinctive character and sense of place.

### Supplementary Planning Documents

5.2.1 Supplementary Planning Documents (SPDs) form part of the statutory Development Plan, giving detailed guidance on how policies or proposals in development plan documents will be implemented.

5.2.2 Of relevance to the Proposed Development is the recently adopted Sustainable Construction and Climate Change SPD (July 2023). The Sustainable Construction and Climate Change SPD sits behind Local Plan Policies SD1, CC1 and CC2 which require development to minimise resources and energy consumption through sustainable design and construction features. The SPD, however, is strongly focused on sustainable methods of construction for buildings (houses and commercial units) and so little is directly applicable towards solar schemes. Nevertheless, the overarching ambitions of the document are for reductions in carbon emissions over the lifetime of a development and that the use of renewable and recyclable resources should be prioritised.

### 5.3 Other Considerations

- 5.3.1 In December 2019, the Council announced a climate emergency with a commitment to become a net zero Borough by 2045. Subsequently the Council have adopted the 'Barnsley Zero Carbon Sustainable Energy Action Plan' (adopted September 2020) which identifies a need for renewable energy production within the Borough, stating that:

**“We want to increase the proportion of renewable energy that is generated within the borough and to increase the proportion of this energy that is owned within the borough - retaining a greater proportion of our energy spend will have a significant impact including on fuel poverty.”**

- 5.3.2 In addition, the Council's Energy Strategy 2015-2025 sets out the low carbon goals for the borough. The wider use of renewable energy is a key component of the strategy which contains an ambition for 20% of the energy consumed by the borough to be derived from renewable sources by 2025.

### 5.4 Material Considerations

#### National Planning Policy Framework

- 5.4.1 The NPPF (2024) sets out the Government's planning policies for England and how these should be applied. This section identifies key policies of relevance to the Proposed Development, it is not an exhaustive list.

- 5.4.2 The NPPF emphasises the importance of sustainable development. Paragraph 7 states:

**“The purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs.”**

- 5.4.3 Paragraph 8 sets out the three overarching objectives of achieving sustainable development through the planning system:

**“an economic objective - to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right type 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.”**

- 5.4.4 NPPF paragraph 10 advises that:

**“So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development.”**

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5.4.5 Paragraph 11 of the NPPF sets out the presumption in favour of sustainable development, which for decision-taking means the following:

**“c) approving development proposals that accord with an up-to-date development plan without delay; or**

**d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:**

**i. the application of policies in this Framework that protect areas or assets of particular importance provides a strong 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, having particular regard to key policies for directing development to sustainable locations, making effective use of land, securing well-designed places and providing affordable homes, individually or in combination.”**

5.4.6 Paragraph 39 sets out that Local planning authorities should approach decisions on proposed development in a positive and creative way. They should use the full range of planning tools available, including brownfield registers and permission in principle, and work proactively with applicants to secure developments that will improve the economic, social and environmental conditions of the area. Decision-makers at every level should seek to approve applications for sustainable development where possible.

5.4.7 Paragraph 56 requires Local Planning authorities to consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. Planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition.

5.4.8 Within Section 13, 'Protecting the Green Belt' paragraph 142 states 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.”**

5.4.9 Paragraph 143 sets out that the 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.**

5.4.10 Paragraph 153 advises that:

**“When considering any planning application, local planning authorities should ensure that substantial weight is given to any harm to the Green Belt, including harm to its openness. Inappropriate development is, by definition, harmful to the Green Belt and should not be approved except in very special circumstances. ‘Very special circumstances’ will not exist unless the potential harm to the Green Belt by reason of**

**inappropriateness, and any other harm resulting from the proposal, is clearly outweighed by other considerations.”**

5.4.11 Paragraph 154 sets out that development in the Green Belt is inappropriate unless following exclusions apply:

- a) **buildings for agriculture and forestry;**
- b) **the provision of appropriate facilities (in connection with the existing use of land or a change of use), including buildings, for outdoor sport, outdoor recreation, cemeteries and burial grounds and allotments; as long as the facilities preserve the openness of the Green Belt and do not conflict with the purposes of including land within it;**
- c) **the extension or alteration of a building provided that it does not result in disproportionate additions over and above the size of the original building;**
- d) **the replacement of a building, provided the new building is in the same use and not materially larger than the one it replaces;**
- e) **limited infilling in villages;**
- f) **limited affordable housing for local community needs under policies set out in the development plan (including policies for rural exception sites); and**
- g) **limited infilling or the partial or complete redevelopment of previously developed land (including a material change of use to residential or mixed use including residential), whether redundant or in continuing use (excluding temporary buildings), which would not cause substantial harm to the openness of the Green Belt.**

5.4.12 Paragraph 155 states that *“The development of homes, commercial and other development in the Green Belt should also not be regarded as inappropriate where”*:

- a) **The development would utilise grey belt land and would not fundamentally undermine the purposes (taken together) of the remaining Green Belt across the area of the plan;**
- b) **There is a demonstrable unmet need for the type of development proposed;**
- c) **The development would be in a sustainable location, with particular reference to paragraphs 110 and 115 of this Framework; and**
- d) **Where applicable the development proposed meets the ‘Golden Rules’ requirements set out in paragraphs 156-157.**

5.4.13 NPPF Annex 2 Glossary defines Grey Belt Land as:

**“...land in the Green Belt comprising previously developed land and/or any other land that, in either case, does not strongly contribute to any of purposes (a), (b), or (d) in paragraph 143. ‘Grey belt’ excludes land where the application of the policies relating to the areas or assets in footnote 7 (other than Green Belt) would provide a strong reason for refusing or restricting development.”**

5.4.14 Paragraph 156 reads:

**“Where major development involving the provision of housing is proposed on land released from the Green Belt through plan preparation or review, or on sites in the Green Belt subject to a planning application, the following contributions (‘Golden Rules’) should be made:**

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a. affordable housing which reflects either:

(i) development plan policies produced in accordance with paragraphs 67-68 of this Framework; or

(ii) until such policies are in place, the policy set out in paragraph 157 below;

b. necessary improvements to local or national infrastructure; and

c. the provision of new, or improvements to existing, green spaces that are accessible to the public. New residents should be able to access good quality green spaces within a short walk of their home, whether through onsite provision or through access to offsite spaces.”

5.4.15 Paragraph 160 however identifies:

“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.”

5.4.16 Section 14 Meeting the challenge of climate change, flooding and coastal change, Paragraph 161 states:

“The planning system should support the transition to net zero by 2050 and take full account of all climate impacts including overheating, water scarcity, storm and flood risks and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; and support renewable and low carbon energy and associated infrastructure.”

5.4.17 Paragraph 165 states:

“To help increase the use and supply of renewable and low carbon energy and heat, plans should:

- a) provide a positive strategy for energy from these sources, that maximises the potential for suitable development, and their future re-powering and life extension, while ensuring that adverse impacts are addressed appropriately (including cumulative landscape and visual impacts);
- b) consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure their development;..”

5.4.18 Paragraph 168 identifies that:

“When determining planning applications for all forms of renewable and low carbon energy developments and their associated infrastructure, local planning authorities should:

- a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and give significant weight to the benefits associated with renewable and low carbon energy generation and the proposal’s contribution to a net zero future;
- b) recognise that small-scale and community-led projects provide a valuable contribution to cutting greenhouse gas emissions;

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c) in the case of applications for the repowering and life-extension of existing renewable sites, give significant weight to the benefits of utilising an established site.

5.4.19 Section 15 Conserving and enhancing the natural environment, at Paragraph 187, states:

**“Planning policies and decisions should contribute to and enhance the natural and local environment by:**

- a) **protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);**
- b) **recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;...**
- c) **minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;...**
- d) **remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.”**

5.4.20 Paragraph 93(a) directs that if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused.

5.4.21 Section 16 considers conserving and enhancing the historic environment and sets out at paragraph 207:

**“In determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any 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 have been consulted and the heritage assets assessed using appropriate expertise where necessary. Where a site on which 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.”**

### 5.4.22 National Planning Practice Guidance

5.4.23 In March 2014, the Government published its online Planning Practice Guidance (‘PPG’). This web-based resource brings together planning guidance on various topics including renewable and low carbon energy.

5.4.24 PPG Paragraph 001 (Reference ID: 5-001-20140306) sets out why planning for renewable and low-carbon energy is important. It advises:

**“increasing the amount of energy from renewable and low carbon technologies will help to make sure the UK has a secure energy supply, reduce greenhouse gas emissions to slow down climate change and stimulate investment in new jobs and businesses. Planning has an important role in the delivery of new renewable and**

**low carbon energy infrastructure in locations where the local environment impact is acceptable.”**

5.4.25 PPG paragraph: 010 (reference ID: 5-010-20140306) states renewable energy developments should be acceptable for their proposed location. Along with factors applicable to acceptability for any form of renewable energy development, there are considerations for each technology.

5.4.26 PPG paragraph 013 (Reference ID: 5 – 013 – 20150327) states that the visual impact of a well- planned and well-screened solar park can be properly addressed within the landscape if planned sensitively. Factors include:

**“Encouraging the effective use of land by focussing large scale solar parks on previously developed and non-agricultural land, if it is not of high environmental value;**

**Where a proposal involves greenfield land, whether 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**

**the proposal allows for continued agricultural use where applicable and/or encourages biodiversity improvements around arrays;**

**That solar parks 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;**

**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 parks on such assets. Depending on their scale, design and prominence, a large-scale solar park within the setting of a heritage asset may cause substantial harm to the significance of the asset;**

**The potential to mitigate landscape and visual impacts through, for example, screening with native hedges;**

**The energy generating potential, which can vary for several reasons including, latitude and aspect.”**

5.4.27 Paragraph: 013 goes on to state:

**“the approach to assessing cumulative landscape and visual impact of large-scale solar parks 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.'**

### National Policy Statements

- 5.4.28 NPPF Paragraph 5 states that National Policy Statements (NPS) '*form part of the overall framework of national planning policy, and may be a material consideration in preparing plans and making decisions on planning applications.*' As such, NPS for Energy (EN-1) and the NPS for Renewable Energy Infrastructure (EN-3) are part of national planning policy and are material considerations in the determination of this application.
- 5.4.29 The updated NPS EN-1 was published in November 2023 and sets out the UK Government's commitment to increasing renewable generation capacity. Paragraph 1.2.1 confirms that "*In England and Wales this NPS is likely to be a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended)*".
- 5.4.30 Paragraph 2.1.2 states that to produce enough energy required for the UK and ensure it can be transported to where it is needed, a significant amount of infrastructure is needed at both local and national scale. It highlights that high quality energy infrastructure is crucial for economic growth, boosting productivity and competitiveness. Paragraph 2.3.6 goes on to state that we need to transform the energy system, tackling emissions while continuing to ensure secure and reliable supply, and affordable bills for households and businesses. This is to be achieved by increasing domestic supply of clean energy from renewables, nuclear and hydrogen.
- 5.4.31 The Government acknowledges the contribution community and decentralised energy systems can contribute to the achievement of a decarbonised UK energy system but concludes that micro-generation is insufficient to replace the need for new large-scale electricity infrastructure if energy objectives are to be met. This is because connection of large-scale, centralised electricity generating facilities enables the pooling of both generation and demand, which in turn offers a number of economic and other benefits, such as more efficient bulk transfer of power and enabling surplus generation capacity in one area to be used to cover shortfalls elsewhere (Para 3.3.12).
- 5.4.32 To ensure that there is sufficient electricity to meet demand, new electricity infrastructure will have to be built to replace output from retiring plants and to ensure we can meet increased demand. Analysis suggests that even with major improvements in overall energy efficiency, and increased flexibility in the energy system, demand for electricity is likely to increase significantly over the coming years and could more than double by 2050 as large parts of transport, heating and industry decarbonise by switching from fossil fuels to low carbon electricity (Para 3.3.3).
- 5.4.33 If energy demand doubles by 2050, a fourfold increase in low carbon generation will be required accompanied by a significant expansion of the networks that transport power to where it is needed. In addition, the UK has committed that by 2035, all our electricity will come from low carbon sources, whilst meeting a 40-60 per cent increase in electricity demand. This means that most of the new generating capacity needs to be low carbon (Para 3.3.16).
- 5.4.34 In this regard it is highlighted that wind and solar are the lowest cost ways of generating electricity, helping reduce costs and providing a clean and secure source of electricity supply (as they are not reliant on fuel for generation). A secure, reliable, affordable, net zero consistent system in 2050 is likely to be composed predominantly of wind and solar (para 3.3.20).
- 5.4.35 Section 5 of EN-1 acknowledges 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, cultural heritage etc., but that it should be possible to mitigate the most significant potential negative effects.
- 5.4.36 NPS for Renewable Energy Infrastructure (EN-3) (2023) sits alongside EN-1 and focuses on renewable energy Infrastructure. It begins by reiterating that there is an urgent need for new

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electricity generating capacity to meet our energy objectives and that electricity generation from renewable sources is an essential element of the transition to net zero (Para 1.1.1-2). Demand for electricity is likely to increase significantly over likely to more than double by 2050, requiring a fourfold increase in low carbon electricity generation, with most of this to come from renewables (para 1.1.2).

- 5.4.37 With specific regard to solar PV generation para 2.10.9 sets out the governments commitment to “*sustained growth*” in solar capacity to ensure net zero targets are achieved. Solar farms are one of the most established renewable electricity technologies in the UK and the cheapest form of electricity generation (Para 2.10.13) and can be deployed quickly (Para 2.10.14). As such solar is a “*key part of the governments strategy for low-cost decarbonisation of the energy sector*”(Para 2.10.9).
- 5.4.38 Crucially solar is identified as having an important role in delivering greater energy independence with a five-fold increase in combined ground and rooftop solar deployment by 2035 (up to 70GW) expected to be delivered (Para 2.10.10).
- 5.4.39 As such large-scale ground-mount solar deployment across the UK will be required. But sets out that solar and farming can be complementary, supporting each other financially, environmentally and through shared use of land and encourages deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement (Para 2.10.11).
- 5.4.40 EN-3 contains a section (2.10) dedicated to solar which details factors that influence site selection by applicants, these are:
- Irradiance and site topography
  - Proximity of a site to dwellings
  - Capacity of a site
  - Grid connection
  - Agricultural land classification and land type
  - Accessibility
- 5.4.41 Matters to be considered in the decision-making process include (at section 2.10):
- Access tracks;
  - Site layout, design, and appearance (including any flood risk);
  - Security and lighting;
  - Project lifetimes;
  - Flexibility (to account for technology types and advancements);
  - Biodiversity and nature conservation;
  - Landscape, visual and residential amenity;
  - Glint and glare;
  - Cultural heritage; and
  - Construction impacts including traffic and transport noise and vibration.
- 5.4.42 It also goes on to state at paragraph 2.10.30 that:

**‘the development of ground mounted solar arrays is not prohibited on Best and Most Versatile Land’ or sites designated for their natural beauty, or recognised for ecological or archaeological importance, but the impacts of such are expected to be appropriately**

considered and at paragraph 2.10.29 that: *'land type should not be a predominating factor in determining the suitability of the site location'*.

### **Climate Change Legislation and Policy**

#### **Kyoto Protocol (2005)**

- 5.4.43 In 2005, the Kyoto Protocol came into effect providing the first ever framework for international climate action. Under the Protocol, the United Kingdom, together with 37 other industrialised countries, committed to reducing greenhouse gas emissions by 5.2% from 1990 levels by the year 2012.

#### **UN Framework Convention on Climate Change: The Paris Agreement (2015)**

- 5.4.44 The central aim of the Paris Agreement is to strengthen the global response to the threat of climate change by keeping a global temperature rise below 2 degrees and to pursue efforts to limit the temperature increase even further to 1.5 degrees. Additionally, it aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals appropriate financial flows, a new technology framework, and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust framework.

#### **Climate Change Act (2008) - Net Zero 2050 (2019)**

- 5.4.45 The Climate Change Act (2008) (2050 Target Amendment) Order 2019iii sets a legally binding target for reducing greenhouse gas ('GHG') emissions, in particular carbon dioxide ('CO<sub>2</sub>'). As originally enacted, these targets include a reduction of GHG by 100% (on 1990 levels) by 2050 and a requirement that domestic emissions are reduced by no less than 3% each year. In setting these targets, the Act established the Committee for Climate Change ('CCC'), which is responsible for setting interim binding targets over five-year periods.
- 5.4.46 In May 2019, the CCC recommend a new emissions target for the UK: a 100% reduction ('net zero') of emissions by 2050. This change in legislation mandating a 100% reduction in CO<sub>2</sub> emissions by 2050 was approved by the House of Commons on 24th June 2019 and the House of Lords on 26th June 2019 and is now the Government's statutory carbon reduction obligation.
- 5.4.47 Chapter 6 of CCC's 'Net Zero – The UK's Contribution to stopping global warming' report refers to delivering a net zero emissions target. It sets out actions, including the transition to a net zero economy and what is needed to underpin net zero delivery. 'Part B' sets out key near-term actions to put the UK on track and recommends that more rapid electrification must be accompanied by greater build rates of low carbon generation accompanied by measures to enhance the flexibility of the electricity system.

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

- 5.4.48 An IPCC Special Report was prepared discussing the potential impacts of global warming of 1.5°C above pre-industrial levels and related global GHG emission pathways in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. The report sets out that pathways limiting global warming to 1.5°C with no or limited overshoot requires rapid and far-reaching transitions in energy, land, and infrastructure, and deep emissions reductions in all sectors. A 'wide portfolio' of mitigation options and a significant upscaling of investments in those mitigation options is needed.

#### **National Infrastructure Strategy – Fairer, Faster and Greener (November 2020)**

- 5.4.49 The National Infrastructure Strategy (NIS) sets out the Government's plans to deliver on its ambition, being 'deliver an infrastructure revolution: a radical improvement in the quality of the UK's infrastructure to help level up the country, strengthen the Union, and put the UK on the path to net zero emissions by 2050'.

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5.4.50 The NIS is relevant to the Development as it sets out how the Government will address the issues we face and how it will build back fairer, faster and greener. The NIS aims to provide investors with clarity over the Government's plans so they can look at the UK with confidence and help deliver the upgrades and projects needed across the country.

### **Energy White Paper (December 2020)**

5.4.51 'The Energy White Paper – Powering our Net Zero Future' (the 'White Paper') was published as a long-term strategic vision for the UK energy system. It establishes the Government's goal of a decisive shift from fossil fuels to clean energy in power, buildings, and industry, whilst creating jobs and growing the economy. The White Paper is clear that: *"Onshore wind and solar will be key building blocks of the future generation mix, along with offshore wind."*

5.4.52 Renewable energy generation from solar has been identified by the White Paper as a key element of the future energy mix in the UK. It states that the UK needs:

**"...sustained growth in the capacity of these sectors in the next decade to ensure that we are on a pathway that allows us to meet net zero emissions in all demand scenarios."**

### **Net Zero Strategy: Build Back Greener (October 2021) (December 2020)**

5.4.53 The Net Zero Strategy sets out policies and proposals which ensure the UK is in accordance with upcoming carbon budgets and Nationally Determined Contributions ('NDC'). NDCs provide a mechanism for countries to voluntarily impose national emission limits under the Paris Agreement. The strategy seeks to realise a decarbonised economy by 2050.

### **British Energy Security Strategy (April 2022)**

5.4.54 The British Energy Security Strategy (BESS) sets out how the UK intends to secure clean and affordable energy for the 'long-term'. Realising the strategy requires 70GW of solar generation capacity by 2035. This is a significant increase from the 13.7GW of solar as of February 2022.

5.4.55 Over the last five-year period until the publication of the BESS, the UK increased its solar capacity by only an estimated 1.8GW, highlighting the extraordinary need for a significant increase in the deployment of decentralised solar energy schemes of the proposed Development's scale if the BESS targets are to be met. The BESS offers clear support for solar development that is co-located with other functions to maximise the efficiency of land use – this includes dual solar and agricultural land use.

### **Energy Security Bill (July 2022)**

5.4.56 The Energy Security Bill builds upon the British Energy Security Strategy to invest in homegrown energy and maintain the diversity and resilience of the UK's energy supply. The Bill establishes the need to accelerate the growth of low-carbon technologies.

### **Climate Emergency Declaration (June 2019)**

5.4.57 In June 2019 the United Kingdom (UK) became the first country to declare a climate emergency and legislate long-term climate targets. The resultant legislation amended the Climate Change Act 2008 (c.27) and introduced a legally binding target to achieve 'net zero' by 2050. Paragraph 1 of the Climate Change Act (as amended) sets out the target to 2050 and states that:

**"it is the duty of the Secretary of State to ensure that the net UK carbon account for the year 2050 is at least 100% lower than the 1990 baseline (which means the aggregate amount of net UK emissions of carbon dioxide for that year and net UK emissions of each of the other targeted greenhouse gases for the year that is the base year for that gas)"**

### **Powering up Britain: Main Summary, Net Zero Growth Plan and Energy Security Plan (March 2023)**

- 5.4.58 As part of ‘Energy Security Day’, in March 2023 the Government released a suite of documents mapping out their proposals to strengthen energy security and independence as part of the UK’s mission to achieve net zero by 2050.
- 5.4.59 The plans strongly recognise the importance of solar deployment at all scales in decarbonising the power sector, achieving UK energy security and delivering net zero more widely. The Government’s commitment to quintuple solar generation to 70GW by 2035 is re-stated and supported through a ‘solar taskforce’, designed to further enable the delivery of the solar target and publish a solar roadmap in 2024.
- 5.4.60 The net-zero growth and energy security plans reaffirm previous ministerial commitments that agricultural land classification will not be changed. Support for ground mounted solar is more explicit than in previous Government documentation but with regards to food security states:

*“We consider that meeting energy security and climate change goals is urgent and of critical importance to the country and that these goals can be achieved together with maintaining food security for the UK. We encourage deployment of solar technology that delivers environmental benefits, with consideration for ongoing food production or environmental improvement.”*

### **Clean Power 2030 Action Plan (December 2024)**

- 5.4.61 On 13 December 2024, the UK Government published its Clean Power 2030 Action Plan (CP30 Action Plan), responding to advice from the National Energy System Operator (NESO) on how to achieve a GB clean power system by 2030. The CP30 Action Plan focusses on energy security, the creation of new energy industries and skills, and reduced greenhouse gas emissions.
- 5.4.62 To achieve Clean Power 2030 plan, the UK Government has outlined a need for 43-50 GW of offshore wind, 27-29 GW of onshore wind, and 45-47 GW of solar power by 2030 to reduce fossil fuel reliance. These sources of renewable energy generation will also need to be supported by 23-27 GW of battery capacity, 4-6 GW of long-duration energy storage (LDES), and the further development of carbon capture technologies. At present (2024) the UK has only 16.6GW installed capacity<sup>2</sup> consequently a considerable uplift is required if the recommended target of 47GW is to be achieved.
- 5.4.63 Skills in the renewables sector are also a key focus in the government’s Clean Power 2030 plan. The wider transition to net zero is expected to create hundreds of thousands of jobs over the coming years, with Clean Power by 2030 playing a significant role in stimulating these jobs and opportunities. In particular, jobs created by the Clean Power 2030 plan will be technical engineers, electrical welders, and mechanical trades. Managerial roles are also anticipated to see an increase, with project managers needed to support delivery of renewable energy projects.

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<sup>2</sup> Table 1, Page 32.

## 6 Planning Assessment

- 6.1.1 This section identifies the main planning issues and provides an analysis of how the development proposals accord with planning policy at national and local levels.
- 6.1.2 The proposed Solar PV Farm on land at Grimethorpe has been informed by a series of technical assessments and through consultation with Parish Council members and the local community.
- 6.1.3 This section contains a detailed analysis of the Proposed Development against the identified relevant national and local planning policies and other material planning considerations. Key issues for the determination of the application that are assessed in this section are as follows:
- The Principle of Development;
  - Green Belt;
  - Grey Belt;
  - Carbon Lifecycle;
  - Ecology and Trees;
  - Use of Agricultural Land;
  - Environmental Health;
  - Flood Risk and Drainage;
  - Transport and Access;
  - Landscape and Visual; and
  - Heritage.

### 6.2 The Principle of Development

- 6.2.1 The principle of the Proposed Development is supported by the Local Development Plan, with support for commercial large scale solar developments, sustainable development and the diversification of rural land promoted by Policies SD1, CC1 and RE1
- 6.2.2 Consideration is given to the Proposed Development under the following subheadings:
- Urgent need for renewables development; and
  - Sustainability benefits;

#### **Urgent Need for Renewables Development**

- 6.2.3 In the UK the main strategy for tackling climate change is to significantly reduce greenhouse gas emissions by creating a low carbon economy. As more than two thirds of the world's carbon dioxide emissions come from the way we produce and use energy, energy policy must play a major part in meeting the climate change challenge.
- 6.2.4 Although the Government is implementing measures to save energy at the same time energy demand worldwide continues to increase. Therefore, a key element of the Government's energy strategy is to provide support for low carbon technologies and incentivise the development of renewable technologies used to generate electricity.
- 6.2.5 Considering the risk posed by climate change and depleting fossil fuel reserves the Proposed Development represents an important part of the UK's strategy to reduce carbon dioxide emissions and improve security of energy supply.

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- 6.2.6 The need is compelling and urgent with significant step change in renewable energy deployment required as soon as possible where there is grid capacity to deliver Net Zero and a stable, secure energy supply for the UK. With solar identified as the key technology to achieve this.
- 6.2.7 This energy objective is also echoed at the local level, with Barnsley Council setting a commitment to become a net zero borough by 2045. The Council have adopted the Barnsley Zero Carbon Sustainable Energy Action Plan which identifies a need for increased renewable energy production within the borough if they are to achieve their Net Zero target. Local Plan Policy CC1 reiterates this, setting a principle that renewable energy schemes will be approved unless there are significant adverse impacts in doing so.
- 6.2.8 NPPF Paragraph 153 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 159 goes on to state that when determining planning applications for renewable and low carbon development, LPAs should “*not require applicants to demonstrate the overall need for renewable or low carbon energy...*” and “*approve the application if its impacts are (or can be made) acceptable*”.
- 6.2.9 There is unequivocal support at national and local levels for the maximisation of renewable energy generation and, specifically support for solar developments.
- 6.2.10 The development’s contribution of up to 49.9MW of clean renewable electricity is significant in meeting both national and local renewable energy targets. Providing significant environmental benefits in meeting the electrical needs of approximately 25,150 homes and providing a CO2 displacement of 14,060 tonnes compared to the same energy from fossil fuel sources. The renewable energy produced by the Proposed Development is thus far unprecedented within the borough and approval of this development would mark a substantial contribution to much needed renewable energy.
- 6.2.11 Moreover, the development would feed energy into the local DNO Grid (as opposed to the National Grid transmission network) which means it would provide clean electricity directly to the immediate locality. This therefore directly contributes to Barnsley energy security and climate change targets, whilst also helping to reduce national emissions. The development will be delivering quantifiable benefits at a local level, and offsetting emissions associated with centralised power from plants that rely on fossil fuels.
- 6.2.12 The principle of the development, therefore, fully accords with national energy carbon reduction objectives, NPPF Paragraph 153 and local planning policies SD1, CC1 and RE1. Very significant, positive weight can be placed on the benefits of renewable energy generation and the associated reduction in carbon emissions.

## Sustainable Development

- 6.2.13 Local Policy SD1 states that the Council will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. It adds that the Council will work jointly and proactively with applicants to find solutions that mean proposals can be approved wherever possible and to secure development that improves economic, social and environmental conditions, these are considered below:

### **i. Economic benefits**

- 6.2.14 The Proposed Development would support the economic objective by providing a stable, secure and low-cost energy supply that is consistent with the Government’s objective to decarbonise the electricity generation sector by 2035 and achieve British energy security. This in turn will reduce the UK’s reliance on fossil fuels and in combination with other schemes, reduce energy bills for consumers.
- 6.2.15 The Government’s Clean Power 2030 Action Plan is clear that supporting a significant increase in renewables projects (of which solar is a key component) across the country is imperative to reap the economic benefits of green growth. At present, the energy market is highly dependent

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on fossil fuels, and this reliance on fossil fuels has been exposed following Russia's invasion of Ukraine in 2021. The fluctuating international fossil fuel markets since that time have resulted in substantial increases to energy costs for UK consumers. This is the principal reason the UK Government published the British Energy Security Strategy in April 2021, recognising the need to transition as quickly as possible away from fossil fuels to build an energy system that is more self-sufficient, and not dependent on foreign energy imports.

- 6.2.16 The Proposed Development will support the transition to renewables and in turn contribute to reducing reliance on fossil fuels and reducing energy bills for consumers. Assisting in securing a more stable and predictable economy more attractive to investment, which in turn should deliver growth. The Proposed Development will also create business opportunities and economic activity which will contribute to the country's green recovery, as recognised in the Government's CP30 Action Plan, which highlights the importance of the renewables sector in skilled job creation for the country going forward. The Applicant is committed to using local suppliers and contractors during construction and long-term operation of the project, which will benefit the local economy, and provide jobs to people in the local area.
- 6.2.17 In terms of employment opportunities, research recently produced by the BRE National Solar Centre shows that there are approximately 7 FTE jobs created per MW installed for ground mounted projects<sup>3</sup>. In the case of the Proposed Development, this would result in up to 350 FTE jobs created directly or indirectly through the UK supply and construction chain.

### ii. Social benefits

- 6.2.18 The social objective of sustainable development would be delivered by supplying low carbon energy that over time would reduce fossil fuel generation, improve long-term air quality and reduce the impacts of climate change. Linked to the economic benefits, the national reduction in consumer bills from the transition away from a fossil fuel-based economy will improve livelihoods as people pay less to keep the lights on. This will undoubtedly have social, health and wellbeing benefits.

### iii. Environmental benefits

- 6.2.19 The Proposed Development will deliver net beneficial gains for biodiversity. Solar farms have a small development footprint, with over 95% of land unaffected, leaving considerable scope for biodiversity enhancements. Existing trees and hedgerows will be mostly retained, protected, and supplemented by additional native species.
- 6.2.20 The environmental objective of sustainable development would be delivered in a number of ways, including:
- meeting electrical needs of approximately 25,150 homes and providing a CO2 displacement of 14,060 tonnes compared to the same energy from fossil fuel sources. and an increase in carbon sequestration that will tackle the root cause of climate change;
  - delivering a significant biodiversity net gain of +175.66% in Habitat Units, +10.61% in Hedgerow Units and +86.72% in Watercourse units, far above the mandatory requirement of 10% set by the Environment Act; and
  - delivering nature recovery benefits through the network of green infrastructure integrated with the layout that improves not only habitats, but habitat connectivity.

## 6.3 Green Belt

- 6.3.1 The Site is located within the Barnsley Metropolitan Green Belt.

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<sup>3</sup> <https://www.bre.co.uk/news/BRE-National-Solar-Centre-measures-job-growth-in-the-solar-sector-965.html>

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- 6.3.2 The NPPF states that, with very few exceptions, development in the Green Belt is inappropriate. Barnsley Local Plan Policy GB1 states that development on Green Belt will be resisted and only allowed where it conforms with national policy. It is acknowledged that the Proposed Development does not fall within the types of development included at NPPF Para 154 and is therefore represents inappropriate development in policy terms.
- 6.3.3 However, NPPF Paragraph 153 notes that it is possible, when very special circumstances (VSCs) are demonstrated, that potential harm to the Green Belt could be outweighed by other considerations.
- 6.3.4 Paragraph 160 of the states, with specific regard to renewable energy proposals:
- “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.**”* (emphasis added)
- 6.3.5 It is important to highlight that only elements of a renewable energy schemes may comprise inappropriate development, not that renewable projects constitute inappropriate development in principle. In short, renewable energy projects in the Green Belt are to be judged based on their individual merits and circumstances and scale of any harm.
- 6.3.6 The starting point for assessing development in the Green Belt is NPPF paragraph 142 which sets out that the fundamental aim of the Green Belt is to prevent urban sprawl by keeping land permanently open.
- 6.3.7 Paragraph: 001 Reference ID: 64-001-20190722 of the PPG details the following factors to be taken into account when considering the potential impact of development on the openness of the Green Belt:
- spatial and visual aspects – the visual impact of the proposal may be relevant, as could its volume;
  - the duration of the development, and its remediability – considering 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.
- 6.3.8 These considerations are each discussed in turn below.

### **i. Openness**

- 6.3.9 Case law on the principle of openness is provided in R (on the application of Samuel Smith Old Brewery (Tadcaster) and others) (Respondents) v North Yorkshire County Council (Appellant), a supreme court decision following the granting of planning permission for the expansion of a quarry.
- 6.3.10 The facts of the case required the Council to consider if the expansion of a quarry was appropriate development on the basis that it had no impact on the openness of the Green Belt, despite having a visual impact. The relevant paragraphs that form the Supreme Court judgement are paragraphs 22 and 29 and are replicated below for ease.

*“22. The concept of “openness” in para 90 of the NPPF seems to me a good example of such a broad policy concept. It is naturally read as referring back to the underlying aim of Green Belt policy, stated at the beginning of this section: “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. As PPG2 made clear, it is not necessarily a statement about the visual qualities of the land, though in some cases this*

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*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. Paragraph 90 shows that some forms of development, including mineral extraction, may in principle be appropriate, and compatible with the concept of openness. A large quarry may not be visually attractive while it lasts, but the minerals can only be extracted where they are found, and the impact is temporary and subject to restoration. Further, as a barrier to urban sprawl a quarry may be regarded in Green Belt policy terms as no less effective than a stretch of agricultural land.'*

*'39. With respect to Lindblom LJ's great experience in this field, I am unable to accept his analysis. The issue which had to be addressed was whether the proposed mineral extraction would preserve the openness of the Green Belt or otherwise conflict with the purposes of including the land within the Green Belt. Those issues were specifically identified and addressed in the report. There was no error of law on the face of the report. Paragraph 90 does not expressly refer to visual impact as a necessary part of the analysis, nor in my view is it made so by implication. As explained in my discussion of the authorities, the matters relevant to openness in any particular case are a matter of planning judgement, not law'.*

- 6.3.11 In summary the case confirms that openness is the counterpart to urban sprawl, it is not necessarily a visual statement about the land albeit that may be an aspect of the planning judgement, and it does not imply freedom from any form of development.
- 6.3.12 Renewables schemes can only take place where there is a viable and available POC to the Grid, whilst there would be an reduction in the openness of the Green Belt this would be limited due the physical nature of solar development and features of the Site which ensure that harm to openness is mitigated.
- 6.3.13 Solar built components are low-level, with panels under 3m in height and supported on metal frames which allow visibility through, and under the panels. In addition, rows are spaced apart and set back from boundaries to prevent overshadowing and allow for maintenance activities. Limiting the perceived visibility and massing of the structures.
- 6.3.14 Whilst some taller elements are proposed, these are limited in height and where feasible are interspersed within the arrays and/or positioned adjacent to established landscape features and as such will not be overly visually prominent features.
- 6.3.15 It is highlighted that the impetus behind Green Belt policy is to prevent 'urban' or 'permanent' forms of development, such as residential and commercial, which are typified by significant massing, associated infrastructure (e.g. roads and footpaths) and with a multigeneration level of permanence. Solar development is very different and does not readily or easily reflect such 'urban' development characteristics. The Inspector of the Kemberton decision, shared this view stating (at para 33) that solar development has

*"...a completely different character and form to either the industrial units on the edge of Telford or buildings in Kemberton."*

- 6.3.16 This was also echoed by the Inspector of the Harlow solar appeal<sup>4</sup> (para 18):

*"Bringing the spatial and visual aspects of the resultant openness reduction together, when having regard to purpose 138 (a) functionally and characteristically, I accept that the solar farm would be different to other forms of development which would be usually characterised as 'urban'."*

- 6.3.17 The effect on openness is also further mitigated by the extent and retention of existing and proposed hedgerows and trees and the consideration of layout within existing field boundaries, as acknowledged in the Cray's Hall solar decision<sup>5</sup>. The design of the proposed layout is wholly

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<sup>4</sup> APP/J1535/W/23/3334690: 'Harlow'. Appeal Allowed: 3 May 2024.

<sup>5</sup> APP/V1505/W/23/3318171 'Crays Hall'. Appeal allowed: 22 March 2024

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within existing field boundaries which are to be retained and enhanced through additional planting to filter and screen views and mitigate visual effects.

6.3.18 In this regard it is noted that multiple solar appeal decisions have allowed solar farms within the Green Belt where Inspectors have concluded that the harm to openness overall is limited given the minimal development footprint, limited visual massing and considerable landscape planting that accompanies solar schemes. Including, but not limited to:

- APP/J1535/W/23/3334690 'Harlow', Paragraph 17:

*"The design parameters of the proposed solar farm arrays enable the retention of open agricultural land beneath and surrounding them. Although there would be a clear reduction in spatial and visual openness of the Green Belt from the presence of the solar arrays and associated equipment, **the level of openness reduction would otherwise be tempered by substantial swathes of undeveloped greenery remaining in situ.**"*

- APP/L3245/W/23/3329815 'kemberton, paragraph 18:

*"As a result, I consider that the proposal would **slightly diminish the openness of the Green Belt spatially**".*

- APP/L3245/W/23/3329815 'Sherbourne, Paragraph 34:

*"**The impact on the openness of the Green Belt and the effect on the landscape would be limited**, whether this site is considered on its own or in conjunction with the nearby permitted scheme"*

- APP/V1505/W/23/3318171 'Crays Hall, paragraph 11:

*"However, the existing Outwood solar farm to the north of the appeal site lies in similar sized fields and this provides a useful comparative reference point and indicates that the effect on **openness would be mitigated by the limited field sizes and odd shapes, undulating ground, frequent hedges with mature trees and the proposed biodiversity enhancements**"*

6.3.19 There would be some harm to the openness of the Green Belt but this would be limited given the unique characteristics of solar development, the specific character and context of the Site, the proposed landscaping mitigation and, as discussed further next, the fact any harm to the Green Belt is temporary and would be entirely removed upon decommissioning.

### **i.i. Duration and Remediability**

6.3.20 The second point of the PPG relates to the duration of the development, and its ability to be adequately remediated.

6.3.21 The Government considers solar developments with a time limited consent to be temporary development. In the context of the Green Belt, a solar development with a time limited consent would therefore not result in a permanent loss of Green Belt.

6.3.22 For instance, the NPPG on Renewable and Low Carbon Energy sets out several factors a local planning authority will need to consider, including:

*"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" (013 Reference ID: 5-013-20150327).*

6.3.23 Furthermore, NPS EN-3 Renewable Energy Infrastructure Section 2.10 sets out national policy in relation to solar farms and states that:

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*“Applicants should consider the design life of solar panel efficiency over time when determining the period for which consent is required. An upper limit of 40 years is typical, although applicants may seek consent without a time-period or for differing time-periods of operation” (Paragraph 2.10.65).*

6.3.24 This has been confirmed by several appeal decisions, including the Chelmsford decision<sup>6</sup> in which the Inspector concluded:

*“...the scheme would be in place for a temporary 40-year period. It would then be fully demounted, and land returned to its former condition, at the end of its use. As such, whilst 40 years is a long period of time, it is not permanent. Therefore, the impact on the openness of the Green Belt would be reduced with the site ultimately reinstated to its former open character.”*

6.3.25 Solar farm development is temporary and fully reversible and therefore can assure the requirement for land to be kept permanently open. Planning permission is sought for a period of up to 40 years, following which, the Site will be decommissioned and restored to its current state. Should planning permission be granted a suitable condition can be applied to secure decommissioning remediation of the land at the end of the temporary period.

6.3.26 The Proposed Development therefore cannot be considered permanent in a Green Belt context. It would therefore not result in any harm to the permeance of the Green Belt which is an essential characteristic of the Green Belt as defined in NPPF paragraph 142 and so reduces the level of harm to the Green Belt considerably. Given the impact on openness would only be temporary and the harm limited, both the openness and permanence of the Green Belt for future generations is secured.

### **iii. Activity Generated**

6.3.27 The third criteria in the PPG for assessing impact on openness is *“the degree of activity likely to be generated, such as traffic generation”*.

6.3.28 As detailed within the Transport Statement accompanying the application, during the operational phase the site will generate negligible associated traffic movements, due to minimal on-site activity being required. Vehicle trips will be limited to period inspections, repair, and habitat management. The frequency of vehicle trips during the operational phase is predicted to be two maintenance visits per month, typically be made by small vans.

6.3.29 Due to the very low number of vehicle movements predicted during the operational period, the proposed development will have a de minimis impact on the operation of the local highway network. The minimal activity generated will therefore have a negligible impact on the openness of the Green Belt.

### **iv. Other Harm**

6.3.30 Consideration has been given to ‘other harm’ potentially arising from the Proposed Development, regarding landscape and visual impact, heritage, biodiversity, agricultural land, environmental health, flood risk, and traffic and access. The supporting assessments are set out in the subsections below, setting out the present situation and identifying, where necessary, any mitigation measures to reduce harm arising from the Proposed Development.

6.3.31 In summary, the limited harm identified is localised and can be appropriately mitigated through a range of measures. These mitigation measures are offered and can be secured via appropriately worded condition to any planning permission granted to ensure their implementation. It is concluded from the following sub-sections that limited weight should be applied to “other harm” when undertaking the planning balance in accordance with paragraph 153 of the NPPF and local policies. In this regard it is noted that the Proposed Development is

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<sup>6</sup> APP/W1525/W/22/3300222: ‘Chelmsford’, Appeal Allowed 06 February 2023

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in full accordance with the provisions of Local Policy RE1 in that harm can be appropriately mitigated.

### **Impact on Green Belt Purposes**

6.3.32 The NPPF at paragraph 143 confirms that Green Belt is intended to serve five purposes. How the Proposed Development impacts on these purposes is discussed below.

#### **a. Unrestricted sprawl of Built-up Areas**

6.3.33 It is reiterated that solar farms are temporary installations that are very different to forms of urban or permanent development in terms of character and form. The solar farm would be functionally, visibly and characteristically different to Grimethorpe or Cudworth, as recognised in the Kemberton and Harlow appeal decisions referenced above. Solar development does not display the characteristics of 'urban' development given its temporary nature and limited visual massing. As per the Kemberton and Harlow decisions, the proposed development will not reflect the built form of either Cudworth or Grimethorpe in scale, design or permanence. Minimally intrusive construction methods require limited ground-breaking activities, and new impermeable ground cover, typically, the footprint of solar farms takes up less than 5% of the site area, consequently the vast majority of the land remains physically unaltered by the development and will be covered by vegetation

6.3.34 Furthermore, the Site could continue to fulfil some agricultural/food production function with the potential for light livestock grazing being investigated. In this regard solar farms are not dissimilar from other forms of agricultural diversification and agricultural uses considered acceptable in countryside and Green Belt locations such as glasshouses and polytunnels.

6.3.35 Rather however, the solar arrays will act as a physical restraint to urban development (i.e. residential, commercial) in this location echoing the objectives of the designation. As such, there is no conflict or harm associated with Green Belt purpose 'a'.

#### **b. Merging of Towns**

6.3.36 Whilst there could be some perceived reduction in the in the distance between Grimethorpe and Cudworth the Proposed Development would not result in the actual erosion of the distance between the settlements as set out above. Solar development does not by its nature represent urban development characteristics, the built extent of the settlements are not altered by the proposals.

6.3.37 The Proposed Development is temporary and fully reversible, no land will be lost in perpetuity, therefore there will be no merging of towns. As such, there is no conflict or harm associated with Green Belt purpose 'b'.

#### **c. Safeguard the Countryside from Encroachment.**

6.3.38 It is acknowledged that as the Site is agricultural farmland the temporary erection of a solar farm represents a temporary change to the countryside.

6.3.39 Whilst the Site comprises of agricultural fields there are several man-made infrastructure encroachments in its immediate surrounds that detract from the local landscape quality including electricity pylons and overhead lines, a water treatment plant, large industrial warehouse sheds, road infrastructure, agricultural buildings, and residential properties. As such the Proposed Development would not appear as an isolated feature within a pristine open countryside setting. It is influenced by surrounding man-made structures.

6.3.40 It is inevitable that the Proposed Development, which by its nature, necessitates a countryside location, would result in encroachment, however, the harm of this is limited, due to limited build footprint, low visual profile, and significant level of retained and new landscape planting associated with solar development. This consideration is consistent with the Kemberton decision (paras 37 and 38):

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*“...Nonetheless, the solar arrays would be located within the existing field pattern and the scheme would retain and enhance the existing field boundaries which would result in minimal visibility of the scheme from outside the site. Furthermore, the solar arrays would be low-lying, open sided features, that would be temporary in nature, limiting the overall effect on the countryside. Therefore, the proposal would cause encroachment into the countryside, contrary to this purpose. However, the degree of harm it would cause would be limited.”*

- 6.3.41 Furthermore, the Proposed Development is temporary and fully reversible, no land is lost in perpetuity. When considered in the round, the limited development footprint, improved vegetation cover and the temporary and reversible nature of the Proposed Development minimises the impact of encroachment into the open countryside and so consequently there is limited harm to purpose ‘c’.

### **d. Preserve setting of Historic Towns**

- 6.3.42 The Site is not located adjacent to or within a historic town. Furthermore, there are no conservation areas adjoining. The Heritage Statement that accompanies the application, detailed further below, confirms that the Proposed Development will have negligible impact on heritage assets. As a result, the Site does not make any contribution to preserving the setting and special character of historic towns and so no harm to purpose ‘d’.

### **e. Urban regeneration**

- 6.3.43 The Applicant reiterates the NPS (EN-1 and EN3) and CCCs conclusions that electricity from renewable sources, including solar, will need to quadruple for the UK to achieve the legally binding net zero target. NPS EN-3 identifies that 70GW of electricity will need to be generated through solar development by 2035 if the UK is to accommodate anticipated increased domestic energy demand. Whilst it is acknowledged that micro-generation and use of brownfield land will make a positive contribution to achieving this, the required upscaling of renewable energy production cannot be accommodated on small brownfield or roof-top sites alone, large commercial-scale projects are central to meeting this need. Given the locational needs of solar developments (in particular aspect and overshadowing) large sites are inevitably likely to be on agricultural land.
- 6.3.44 In this regard the Inspectors conclusions in respect of recent Minchens Lane planning appeal<sup>7</sup> are highlighted. The Inspector confirmed that solar on previously developed land would “*not secure the most efficient of optimum uses of such land for a temporary period of time*”<sup>8</sup>. Accordingly, development of a solar farm on a greenfield land would not conflict with the purpose ‘e’.

### **Very Special Circumstances**

- 6.3.45 The NPPF requires VSCs to be demonstrated, for ‘inappropriate development’ to be approved in the Green Belt. VSCs will not exist unless the harm to the Green Belt and any other harm are clearly outweighed by other material considerations.
- 6.3.46 As set out extensively above, due to the nature, characteristics and form of solar development any perceived conflict or harm associated with Green Belt purposes as per NPPF paragraph 153 would only be temporary, of a limited degree and fully reversible. There would be limited harm to the visible and spatial openness of the Green Belt which would reduce as planting establishes and that limited harm too, is time limited.
- 6.3.47 In this regard it is highlighted that NPPF Paragraph 160 goes on to identify that “*very special circumstances may include the wider environmental benefits associated with increased production of energy from renewable sources.*”

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<sup>7</sup> APP/C1950/W/22/3300222. ‘Minchins Lane’. Appeal allowed 18 Oct 2022

<sup>8</sup> Paragraph 17 of the Appeal Decision

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- 6.3.48 The UK has committed to becoming carbon neutral by 2050 and Barnsley Council declared a Climate Emergency in 2019 instituting a commitment for the borough to be carbon neutral by 2045. The NPPF further supports these aspirations by stating (at Paragraph 161) that *“the planning system should support transition to net zero by 2050...It should help to 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”*.
- 6.3.49 The Proposed Development will generate up to 49.9MW of clean renewable energy to the grid, powering the equivalent of 25,150 homes and saving 14,060 tonnes of CO<sub>2</sub> per year, making a significant contribution to meeting global, national and local carbon reduction targets
- 6.3.50 It is considered that very substantial positive weight should be accorded to the scale of generation of renewable energy and associated significant reduction in carbon emissions. This constitutes VSCs which significantly outweigh the very limited harm to the Green Belt.
- 6.3.51 Consequently, the Development accords with relevant NPPF and PPG policy relating to renewable energy development, the Green Belt, use of agricultural land and sustainable development, as well as with Barnsley local Plan Policies GB1, CC1, CC2, LC1, and RE1.

### 6.4 Grey Belt

- 6.4.1 Amongst the Governments recent refresh of the planning system is the introduction of a subcategory of Green Belt land referred to as the ‘Grey Belt’.
- 6.4.2 The Grey Belt is defined (within NPPF Annex 2) as:
- “...land in the Green Belt comprising previously developed land and/or any other land that, in either case, does not strongly contribute to any of purposes (a), (b), or (d) in paragraph 143. ‘Grey belt’ excludes land where the application of the policies relating to the areas or assets in footnote 7 (other than Green Belt) would provide a strong reason for refusing or restricting development.”*
- 6.4.3 NPPF paragraph 155 identifies that homes, commercial and other development in the Green Belt should not be regarded as inappropriate where the following four conditions are met:
- a. The development would utilise grey belt land and would not fundamentally undermine the purposes (taken together) of the remaining Green Belt across the area of the plan.
  - b. There is a demonstrable unmet need for the type of development proposed;
  - c. The development would be in a sustainable location, with particular reference to NPPF paragraphs 110 and 115; and
  - d. Where applicable, the development meets the ‘Golden Rules’ requirements.
- 6.4.4 As set out in the preceding subsection, the Applicant has set out justification as to why the Proposed Development does not conflict with, but rather reinforces, the five Green Belt purposes including ‘a’, ‘b’ and ‘d’. The Applicant contends therefore that the Site and proposals represent ‘Grey Belt’ development and as such paragraph 155 is applicable. As ‘other development’ the proposed solar farm would meet the five conditions as follows:
- a) The Proposed Development by its nature will continue to restrict urban sprawl from large built up areas and given the modest scale of the Site and mindful that the Green Belt covers over 75% of the LPA it will not fundamentally undermine the Green belt across the Plan area.
  - b) Sections 5 and 6 of this Statement identify the urgent need for renewable energy generation in the UK to meet net zero requirements and to combat impacts of climate change. If the

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legally binding carbon emission targets are to be met then all areas of the UK will be required to contribute where feasible.

- c) The scheme accords with the principles of sustainable development outlined in paragraphs 110 and 115 in that the Proposed Development will not generate significant amounts of traffic, will not result in the dependence of private car and is sympathetically designed to relate to surrounding context.
- d) The 'Golden Rules' only apply to housing development (NPPF Para 156). The Proposed Development is therefore exempt from these requirements. However, it is noted that the proposed layout includes a significant area of open space for community use within parcel C, immediately adjacent to the built extent of Grimethorpe by Milefield Primary School. This proposed new 'community garden' area will be subject to landscape planting and include identified walkways to promote permeability and accessibility between Grimethorpe and the wider Site. In this regard the proposed Development will nevertheless deliver Golden Rule 'c' "*the provision of new, or improvements to existing, green spaces that are accessible to the public.*"

6.4.5 In summary, notwithstanding the extensive Green Belt justification presented, the Applicant highlights that the Proposed Development accords with recently implemented 'Grey Belt' provisions, and so represents appropriate development within the Green Belt.

### 6.5 Carbon Lifecycle

- 6.5.1 The Council's sustainable construction and climate change SPD sits behind Local Plan Policies CC1 Climate Change and CC2 Sustainable Design and Construction and requires development to minimise resources and energy consumption through sustainable design and construction features. There should be in general reduction in carbon emissions over lifetime of a development and use of renewable and recyclable resources should be prioritised.
- 6.5.2 Solar energy makes up an ever-growing amount of total energy consumption and plays a vital role in combatting climate change. The government considers solar central to achieving the UK's energy objectives and carbon neutral targets. It is by its inherent nature will assist in reducing greenhouse gas emissions, and reliance on heavily polluting fossil fuel power stations for electricity.
- 6.5.3 Research<sup>9</sup> published in the journal Nature Energy, measured the full lifecycle greenhouse gas emissions of a range of sources of electricity to 2050. It found that the carbon footprint of solar, wind and nuclear power are many times lower than coal or gas and this remains true after accounting for emissions during manufacture, construction, and fuel supply. Solar PV power emits only 5% of the carbon emissions of coal. In comparison the emissions produced by electricity from gas are ten times higher than emissions produced by a kWh of solar electricity.
- 6.5.4 Research<sup>10</sup> has shown that for solar panels the carbon 'payback period' – that is the length of time they must operate to recover the energy, associated pollution and CO<sub>2</sub> that went into their manufacture - is on average 4 years. Consequently, each PV panel will generate zero-carbon and zero-pollution electricity for decades after any carbon emitted in its production has been paid back.
- 6.5.5 At the end of its operational lifespan the development will be decommissioned, and the Site fully remediated. At present 99% of a solar panel is recyclable and there are established industrial processes and companies who will undertake this. As this is a growing sector it is anticipated that more companies will enter the market in recycling solar PV panels increasing choice of operators and improving efficiencies and technologies used.

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<sup>9</sup> Pehl, M *et al* (2017) 'Understanding future emissions from low-carbon power systems by integration of life-cycle assessment and integrated energy modelling' (2017) Nature Energy, Vol 2. Macmillan Publishers.

<sup>10</sup> US Department of Energy briefing 'Energy Efficiency and Renewable Energy, accessed: <https://www.nrel.gov/docs/fy04osti/35489.pdf>

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- 6.5.6 As such, the Proposed Development is considered to fully embody the carbon reduction principles set out in the Sustainable Construction and Climate Change SPD and Local Plan Policies CC1 *Climate Change* and CC2 *Sustainable Design and Construction*.

### 6.6 Ecology and Trees

- 6.6.1 A Preliminary Ecological Appraisal (PEA) undertaken by Arbtech accompanies the planning application. The appraisal found The Site consists of habitats of low ecological value with no notable flora or protected species identified. that the Proposed Development will have minimal ecological impact on the Site and its surroundings.
- 6.6.2 As the arrays will be sited within existing field boundaries maximised retention of existing vegetation is achieved. Small extents of existing hedgerow will be required to be removed to facilitate site access to parcels A and B but this has been kept to the minimum required and will be mitigated by replacement and supplementary hedgerow planting. No trees will be removed.
- 6.6.3 The proposed ecological enhancements which include seeding of species rich meadow grassland mix underneath the solar arrays, maximised tree and hedgerow retention and overall increased landscape planting will greatly enhance the ecological value of the Site.
- 6.6.4 The Biodiversity Net Gain (BNG) evaluation that accompanies the application (using DEFRA Biodiversity Metric 4.0) calculates that overall, the Proposed Development will deliver significant biodiversity gains, comprising net gains of 175.65% in habitat units, 10.61% in linear units (hedgerows) and 86.72% in watercourse units.

### 6.7 Use of Agricultural land

- 6.7.1 NPPF (para 187) seeks to prevent the loss of best and most versatile (BMV) land, defined as Grades 1, 2 and 3a (NPPF Annex 2). Policy recommends that the proposed use of any agricultural land to be demonstrated to be necessary and for poorer quality land to be used in preference to higher quality land.
- 6.7.2 A ground mounted commercial scale solar renewable energy scheme can typically only be positioned in the open countryside as they have specific locational and physical requirements (see Section 4) which is reflected in required land take, the size of which is generally not available within urban areas. The Applicant acknowledges that using brownfield land and fitting PV cells and wind turbines on buildings will make a positive contribution to meeting domestic energy needs, however the required upscaling of renewable energy production cannot be accommodated by micro-generation projects alone. Larger sites will be required, and inevitably large sites will be in open, less developed locations (as recognised by NPS EN-1 and EN-3).
- 6.7.3 Section 4 of this Statement sets out the site selection assessment undertaken by the Applicant. In short, the Site has physical attributes that allow for a feasible and efficient layout to be developed, benefits from onsite POC to the National Grid and has a landowner willing to lease the land for 40 years. The need to utilise agricultural land is therefore demonstrated.
- 6.7.4 An assessment of agricultural land quality was undertaken by Roberts Environmental to determine the land quality which accompanies the application. This confirmed the Site to comprises of Grade 3b and Grade 4 agricultural land. No BMV land is present on the Site.
- 6.7.5 Notwithstanding this, however it is highlighted that the land is not lost from agricultural use, either temporarily or in perpetuity. The Proposed Development is for a temporary renewable energy solar farm which is completely reversible at the end of the 40-year productive lifetime.
- 6.7.6 Whilst this is an extended timeframe it has been established by several Planning appeals that such a period is indeed temporary, and Inspectors have given this weight when assessing the

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impact on agricultural land<sup>11</sup>. In addition, Paragraph 001 Reference ID: 64-00120190722 of the PPG confirms that the reversibility of a scheme is a relevant consideration. The limited number of built components and minimal ground intrusion mean that removing the infrastructure and remediating the Site to its previous state is fully achievable and can be secured through the application of planning conditions.

- 6.7.7 Furthermore, whilst the land cannot be used for growing crops the minimal footprint of solar farms allows for certain farm practices to continue, with grazing of livestock including sheep, chickens and geese regularly undertaken and being investigated with the landowner. As such, the land can continue to provide some productive agricultural function at the same time as being used for energy generation.
- 6.7.8 The duration of the proposed development (40-years) provides a valuable opportunity for the soil health and ground conditions to recover. Once the proposed development is operational, most of the soil will be under perennial cover with no ploughing and only non-intensive grazing/maintenance. This would lead to a soil which would be less vulnerable to wind and water erosion. Leaving the land fallow can have restorative effects on the overall soil health and future agricultural land quality through an increase in soil organic matter, the diversity of soil flora, fauna and microbes, and improved soil structure. After the lifetime of the proposed development the soil health and agricultural qualities of the Site will have improved.
- 6.7.9 Overall, the proposed Development accords with NPPF para 187.

### 6.8 Environmental Health

- 6.8.1 Solar panels do not emit any emissions, fumes, or odours during their operation, nor do they produce any noise. The accompanying inverters, which are required to convert the DC current generated into AC for report to the Grid do emit a low hum which is imperceptible beyond their immediate vicinity, nevertheless these have been placed centrally within the array layout to minimise their impact further. Principal noise impact will be during the construction phase which is expected to take place over approximately 60 weeks, albeit noise from delivery and construction activities will only be for a portion of that time due to the nature of the development. Any potential noise from the construction period will be limited. The construction phase could be subject to management measures which can be secured through a CEMP to ensure it is undertaken without causing undue harm to the amenity of residents.
- 6.8.2 The Site is not required to be lit at night so there will be no light spillage.
- 6.8.3 A Glint and Glare study, undertaken by PagerPower concluded that with the landscape strategy proposed there will be no significant impact on residential dwellings arising from reflections. The study also found that there will be no significant impacts on users of the A628 or any aviation-based activities associated with the identified aerodromes.
- 6.8.4 The Proposed Development will have no significant impacts in terms of air quality, noise impact or glare. Subject to landscape planting and a CEMP which can be secured by appropriately worded conditions, the Proposed Development accords with NPPF Paragraph 135 and Local Policies RE1 and GD1 in terms of ensuring no significant impact on residential amenity, users of surrounding highways network or on the operation of the local aerodrome.

### 6.9 Flood Risk and Drainage

- 6.9.1 A Flood Risk Assessment and Drainage Strategy has been prepared by BWB to determine the potential sources of flooding on the Site, impacts on flooding elsewhere and mitigation measures to reduce any impact.

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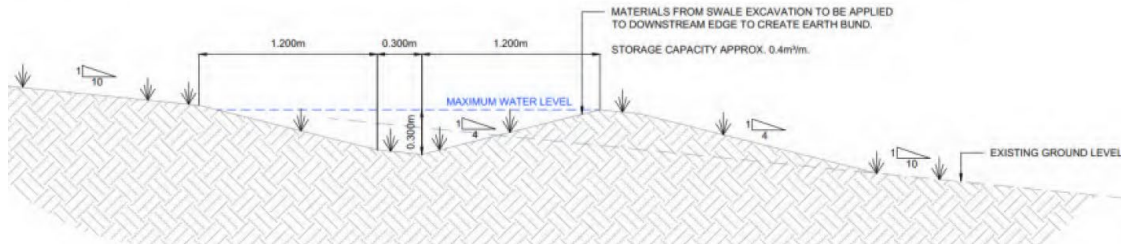
<sup>11</sup> For example APP/W1525/W/22/3300222 - at paragraph 14, the Inspector concluded that a 40 year period was not permanent

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- 6.9.2 The FRA identifies that the Site is located within Flood Zone 1. Parcel A's access road is shown to be partially located within Flood Zone 2, attributed to a tributary of the River Dearne; however, there is no development proposed at this location, simply the preservation of existing access/egress routes. The other nearest extent of Flood Zone 2 is immediately south of Parcel C and is also attributed to a tributary of the River Dearne.
- 6.9.3 A network of ordinary watercourses and drainage features are located within and surround the site. In the absence of detailed hydraulic model information, pluvial extents and depths from the Environment Agency's (EA) Risk of Flooding from Surface Water (RoFSW) dataset have been assessed as a proxy. This dataset is considered conservative due to limitations associated with the modelling approach whereby structures (such bridges, culverts and weirs) are not represented. Surface water is subsequently shown to impound behind raised roads such as Engine Lane and Ferry Moor Lane, where water would otherwise be culverted through.
- 6.9.4 All parcels are shown to be largely at very low risk of surface water flooding with localised areas of low to high risk of surface water ponding within each parcel where topographic levels are lowest. The majority of this ponding, however, is likely overestimated due to the modelling limitations previously outlined. The Proposed Development is not anticipated to have an adverse impact on surface water runoff rates as rainfall will run off the solar panels and infiltrate into the ground.
- 6.9.5 The proposed surface water drainage strategy is based upon a range of recognised research and technical guidance. Research undertaken by Cook and McCuen (2013) found that providing full vegetation cover beneath the solar panels is maintained, the change in runoff characteristics from solar farm sites is likely to be insignificant and that ground cover has a much more important control over runoff. In short, solar farms can be managed most appropriately without the need for formal surface water drainage management.
- 6.9.6 The proposed strategy aims to minimise the compaction of soil during the construction and operation of the proposed development with appropriate seeded vegetation provided below and around rows of the solar panels and under the arrays to promote low erosivity sheet flow during operation of the solar farm. The vegetation will be managed organically and will be mowed periodically or used for light grazing. This means that excluding the access tracks and ancillary buildings the Site will be fully vegetated species rich pastoral grassland. These mitigation measures will be detailed within a landscape strategy and CEMP (which can be conditioned) for the Proposed Development.
- 6.9.7 The Drainage Strategy finds that the proposed solar development will have a negligible impact on the post-development surface water rates and volumes. This is due to the limited extent of impermeable area being introduced at c907m<sup>2</sup> (0.09ha), or 0.10% of the total site area resulting in an increased surface runoff of 48m<sup>3</sup> constituting an increase of approximately 0.6% on existing conditions.
- 6.9.8 Notwithstanding this, as an additional resilience measure, it is proposed that interception swales are constructed at the most downgradient row of panels to act as a form of mitigation and betterment, should the ground beneath the panels become patchy or bare during the lifetime of the development. Collecting the water to be held to allow for infiltration: Figure 7.1 provides an indicative swale cross section for illustrative purposes. It is anticipated that the storage capacity of the swales is approximately 0.4m<sup>3</sup>/m.

**Figure 7.1: Indicative swale cross-section**

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- 6.9.9 The inclusion of the swales within the development will act to provide a betterment to the existing surface water runoff rate and volume that will leave the site onto surrounding land and the surrounding UOWs/drains post-development.
- 6.9.10 The inclusion of the interception swales across the development will also act as a mitigation measure to reduce the likelihood of any pollution incidents leaving the site. As the risk of pollution incidents is more likely to occur during the construction phase as opposed to the operation of the site, it is recommended that the swales are constructed early on during the construction phase and silt fences are utilised on the swales during the entire construction phase.
- 6.9.11 It is also recommended that the associated ancillary equipment is raised 150mm above external ground levels to further mitigate the risk of flooding. External levels adjacent to the ancillary equipment are to be profiled away from the equipment to provide further mitigation. The solar panels are designed to be waterproof and raised 600mm above the surrounding ground level. Where proposed panels are situated in topographical low points, it is recommended that the lower edge of the solar arrays are raised a minimum of a 150mm above the 1 in 100-year surface water flood level.
- 6.9.12 In compliance with the requirements of NPPF, and subject to the mitigation measures proposed, the development could proceed without being subject to significant flood risk. Moreover, the development will not increase flood risk to the wider catchment area subject to suitable management of surface water runoff discharging from the site. The proposals are in accordance with NPPF Paragraph 181 and 182 and Local Plan Policy CC3.

## 6.10 Transport and Access

- 6.10.1 The Transport Statement which accompanies the application assesses the existing access conditions, the impact of the Development in terms of trip generation, vehicle types, routing, and safety. It sets out that the Development generates a low level of vehicular activity, during both the construction and operational phases.
- 6.10.2 Construction Traffic will reach the Site as follows:
- Construction traffic will reach Parcel C of the Site by taking Park Spring Road (A6195) north until the roundabout with High Street. Construction vehicles will then travel east along High Street until the junction with Milefield Lane and then follow Milefield Lane north until the Site is reached.
  - Construction traffic will reach Parcel B by taking Park Spring Road (A6195) north until the proposed access off the A6195 is reached.
  - Construction traffic will reach Parcel A o by taking Park Spring Road (A6195) north until the junction with Ferry Moor Lane is reached. Construction vehicles will then travel west along Ferry Moor Lane until the Site is reached.
- 6.10.3 The construction period of the Development is expected to approximately 60 weeks and generate an average of 3 two-way vehicle trips per day (anticipate 5.5 working days a week) with a further 30 two-way light vehicle movements associated with staff movements etc. Construction of the Development will not require any abnormal loads.

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- 6.10.4 At this scale the Development will not materially impact on the surrounding highway network. On completion of the construction period, construction traffic would cease. There would therefore be no residual traffic related impacts arising from the temporary construction phase of the proposed development.
- 6.10.5 During its operational phase traffic movements are expected to be minimal. Operational traffic would comprise one van accessing the Site up to twice per month amounting to four vehicle movements per month. Traffic volumes of this magnitude would be imperceptible daily there are no residual traffic related impacts arising from the permanent operational phase of the proposed development.
- 6.10.6 In conclusion, the Proposed Development provides an opportunity to provide new, non-carbon energy generating facilities at a location which can be safely accessed by construction and operational vehicles and at which the temporary traffic impacts during construction would be *de minimus*. Traffic management measures can be put in place to reduce or avoid potential residual impacts arising from road traffic during the temporary 60 week construction period. In short:
- The proposals accord with national and local policies relevant to transport;
  - Safe and suitable access to the Site can be achieved by all modes; and,
  - The level of traffic associated with the proposals will not lead to severe impact to the existing operation and free flow of traffic on the adjoining highway network.
- 6.10.7 In accordance with Local Plan Policy LP23 and paragraph 116 of NPPF, there are therefore no transport or highway reasons why planning permission should be prevented or refused.
- 6.10.8 PRow and Greenways that traverse the Site are retained and will remain accessible throughout the operational phase of the Development. No PRow or greenways will be stopped or diverted. The landscape strategy employed will ensure that a green aspect will be maintained for users of the routes.

### 6.11 Landscape and Visual

- 6.11.1 The Application is accompanied by a Landscape Visual Appraisal (LVA) prepared by FPCR.
- 6.11.2 In terms of published Landscape Character Areas (LCA) the site lies within Natural England, National Character Area Profile (NCA) 38 'Nottinghamshire, Derbyshire and Yorkshire Coalfield', at a district level in Barnsley Borough Landscape Character Assessment 2002 'D: Settled Arable Slopes' LCT and 'D1: North East Barnsley Settled Arable Slopes' LCA.
- 6.11.3 The site and immediate context are of medium landscape value. The Site and its wider landscape context are not subject to any national, local or other landscape designations.
- 6.11.4 In terms of visibility there are a number of Public Rights of Way that cross through and adjacent to the site, with clear views into the adjacent parcels. There are views into the Site from the adjacent settlements of Grimethorpe, Brierley and Cudworth. The central parcel B is visually well contained by the relatively flat topography combined with boundary vegetation and vegetation within the surrounding context. Parcel A is relatively well contained, with gently sloping landform and boundary vegetation restricting views. Parcel C is more open visually with the landform sloping with higher land to the north and towards the settlement of Brierley which has views across the majority of this parcel. Grimethorpe also has views across this parcel, however views are more limited from the north and west by the sloping topography and woodland along the north west restricting views. There are some long-range views towards the site from higher land to the south east, however views from this location include the existing settlement context of Grimethorpe, Brierley and Cudworth as well as industrial buildings along the A6195.

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- 6.11.5 Structural planting is proposed along the eastern boundary and within parcels A and B around nearby properties and PRow. Additional hedgerow planting is proposed throughout the solar farm along existing PRow, gapping up existing hedgerows and providing some additional screening along the north eastern boundary. The Site will be seeded with meadow grassland and shade tolerate meadow mixes around existing landscape features and a new area of Public Open Space is proposed adjacent to Milefield Primary School providing an accessible space for nearby residents with amenity grassland and tree planting.
- 6.11.6 In terms of landscape character, the LVA concludes that effect upon the published landscape character assessments will be negligible for National Character Area Profile (NCA) 38 'Nottinghamshire, Derbyshire and Yorkshire Coalfield', at a district level in Barnsley Borough Landscape Character Assessment 2002 'D: Settled Arable Slopes' LCT and 'D1: North East Barnsley Settled Arable Slopes' LCA effects will be minor adverse / negligible and minor adverse respectively in the long-term.
- 6.11.7 For the site and immediate context long term landscape effects will be moderate / minor adverse as there will be a change to the character of the site as a result of the new solar farm due to the scale of change for the site. New planting around the northern and eastern boundaries will provide some mitigation for the scheme reducing the long-term effects.
- 6.11.8 Visually, effects will be greatest for localised receptors, including: Users of Public Rights of Way within the site boundary Public Rights of Way and residents of Grimethorpe adjacent to the site boundary. New planting along the eastern and northern boundary will provide some filtering of views in the long term for receptors located to the east of the Site.
- 6.11.9 Effects in the long term will range from moderate adverse for Users of Public Rights of Way within the site boundary with clearest views of the solar farm to negligible effects for long range receptors with limited and long-range views including road users and Public Rights of Way users to the south east of Grimethorpe.
- 6.11.10 Local Policy RE1 states that proposals for renewable energy schemes will be granted subject to there being "...no significant harmful effects which cannot be prevented or mitigated". Whilst it is acknowledged that there will be some adverse landscape impact after mitigation during the operational phase of the Proposed Development, it is highlighted that the impact is considered to constitute (using ES terminology and reflecting Local Policy wording) less than significant.
- 6.11.11 It is also reiterated that the Proposed Development is temporary and fully reversible. Mitigation planting will remain after the solar farm has been decommissioned providing long term landscape benefits. As such these up-to-moderate impacts will not be experienced in perpetuity. When this time-limited harm is balanced against considerable benefits arising from the scheme; including ecological enhancement and generation of green, renewable energy, this impact could and should be considered acceptable. Indeed, this is the conclusion that has been made in respect of several recent planning appeal decisions (including APP/C1950/W/19/3225810), where moderate landscape harm has been outweighed by the overriding need for renewable energy.
- 6.11.12 Overall, it is considered that the Proposed Development can be considered acceptable within the context of Local Plan Policy RE1 and NPPF Paragraph 187 in terms of landscape character and visual impact.

## 6.12 Heritage

- 6.12.1 The application is accompanied by a Heritage Statement prepared by BWB Consulting. The assessment provides a detailed understanding of the baseline historic environment and built heritage assets within a 1km study area of the Site to assess the potential impact on built heritage and determine the potential for archaeological remains to be present within the site.
- 6.12.2 The Heritage Statement was informed by various sources, including the National Heritage List England and the HER, as well as a site visit. A ZTV (Zone of Theoretical Visibility) analysis was also completed using information for the height of the photovoltaic cells to support the

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assessment on setting. The archaeological baseline and statement on archaeological significance was informed by a geophysical survey of the Site conducted in 2024.

- 6.12.3 The assessment concludes that there will be no direct physical impact on designated heritage assets as a result of the Proposed Development. There will be no impact to the setting of the Brierley Conservation Area, the Church of St Paul and Brierley Hall. The western edge of the Conservation Area comprises modern residential development, which provides an effective buffer between the Site and the Conservation Area. The significance of effect is Neutral. The assessment has concluded that the original setting of Grimethorpe Hall has been comprehensively altered by modern development. The Site, in particular Parcel 4 closest to the asset, does not contribute to the setting or significance of the Listed Building. The significance of effect is Neutral.
- 6.12.4 There will be a Slight Negative significance of effect on the setting of the former Brierley Colliery Tramway (BWB01). The Proposed Development will alter the immediate rural setting of the asset. The significance of this effect will be most evident where the asset runs north to south through the open fields of Parcel 4. The asset is a non-designated asset with low importance.
- 6.12.5 The potential for remains relating to the later Iron Age or Romano-British periods is High, although this is limited to parts of the Site where the geophysical survey has detected probable field systems and enclosures. The initial results of a geophysical survey (ECUS 2024 in prep) suggest there are large parts of the Site, such as the south of Parcel 1, south of Parcel 2, majority of Parcel 3 and some areas in Parcel 4 where these anomalies are not present (in otherwise seemingly good data). In these areas, the potential for features of this kind is Low, although discrete features may be present. The importance of archaeological these features would be Low to Medium.
- 6.12.6 Whilst there will be some impact on the setting of the Brierly Colliery Tramway this is a non-designated asset with low-importance. Overall, in the context of the NPPF the impacts on heritage assets are less than substantial and no mitigation is required.
- 6.12.7 The Proposed Development will last for 40 years during which time, the land will not be ploughed. Ploughing can be detrimental to the survival of archaeological remains and the Proposed Development will ensure that the archaeological remains will not be impacted by cultivation or any other future development during its lifetime.
- 6.12.8 Impacts on archaeological remains would only occur if the archaeological horizon were reached and the impact would be limited to the footings or cable trenches. Further detail will be provided on design and in particular the depth of any invasive groundworks. However, by their nature, the footprint of solar farms and the amount of ground-breaking that is required is generally limited. Impacts depend on the depth of the archaeological horizon and their significance. Due to the limited nature of the ground-breaking required, the impact is likely to be less than substantial in NPPF terms.

## 6.13 Planning Appraisal Summary

- 6.13.1 National policy strongly supports renewable energy developments as a means of meeting increasing energy demands, tackling climate change, addressing energy security, and transitioning to a sustainable low-carbon economy. To achieve Net Zero 2050, the UK's energy system must be carbon-free and significantly larger to cope with additional demand. Large-scale solar developments are recognised as being not just necessary but central to meeting this urgent need.
- 6.13.2 The proposed solar farm would generate up to 49.9MW of solar generated electricity providing a substantial contribution towards national and local net zero goals. Renewable Energy developments are inherently supported by policies within the Barnsley Local Plan (namely CC1, CC2 and RE1) provided that the set criteria are met and no adverse impacts are experienced as a result of the implementation and operation of the renewable energy development. The

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Proposed Development satisfies the criteria set out within policy RE1 as well as other important aspects.

- 6.13.3 The pertinent planning consideration is the Site's location within the Green Belt. Very Special Circumstances exist in this instance by supporting local and national net zero commitments and the limited footprint, temporary, fully reversible nature of the Proposed Development would not undermine the five purposes of the Green Belt. The Applicant also contends that there is also sufficient justification for the Site and Proposals to constitute Green Belt development.
- 6.13.4 The renewable energy produced by the Proposed Development is thus far unprecedented within the borough and approval of this development would mark a substantial contribution to much needed renewable energy.
- 6.13.5 Overall, there are significant benefits to the Proposed Development (renewable energy generation and considerable social, environmental and economic gains) that would outweigh the limited, time constrained and fully reversible Green Belt and landscape harm.

## 7 Conclusion

- 7.1.1 The Applicant is proposing to develop a solar farm on land to the east and west of Engine Lane, Grimethorpe, within Barnsley Metropolitan Borough. The Development will provide up to 49.9MW of electricity to the grid for a temporary 40-year period.
- 7.1.2 The Proposed Development would provide a clean, renewable, and sustainable form of electricity and will make a valuable contribution meeting national targets for carbon emission reduction and supporting the UK domestic energy supply. The principle of renewable energy is strongly supported by both local and national planning policy and wider UK development policies and strategies supporting the drive to Net Zero. There is therefore a significant, urgent, and demonstrable need for the Proposed Development. Significant weight can be afforded to this in the planning balance.
- 7.1.3 It has also been demonstrated that the Proposed Development complies with other requirements of local and national planning policy and represents sustainable development. Impacts have been demonstrated to be limited in scale and, where necessary, mitigation measures have been set out to reduce potential impacts.
- 7.1.4 Furthermore, as the Proposed Development is temporary (40-year period) at the end of its productive lifetime all infrastructure will be removed and land reinstated. As such any identified impacts, such as the harm to Green Belt and landscape character are temporally limited and fully reversible.
- 7.1.5 In addition to the significant benefits associated with the generation of renewable energy and carbon reduction ambitions, the Proposed Development would deliver further benefits in supporting job creation and significant biodiversity gains through habitat creation and ecological enhancements, which further weigh in favour of granting permission.
- 7.1.6 In summary, the Proposed Development accords with the relevant policies of the Development Plan, NPPF and NPS. It would deliver significant benefits and limited potential impacts have been identified which can be adequately reduced and mitigated with measures that can be secured where relevant through application of planning conditions.
- 7.1.7 The Applicant therefore respectfully requests that planning permission is granted.