



Fairy Hill, Compton Dando: Proposed Solar Farm

Design and Access Statement

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For: BWCE

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ABBREVIATIONS

AONB	Area of Outstanding Natura Beauty
°C	Degrees Celsius
EIA	Environmental Impact Assessment
EMR	Electricity Market Reform
Km	Kilometre
m	Metre
MW	Megawatts
PV	Photovoltaic
RPG	Registered Park and Garden
UNFCCC	United Nations Framework Convention on Climate Change



Fairy Hill Community Solar Farm Design and Access Statement

1 INTRODUCTION

Scope of this Document

- 1.1 This Design and Access Statement has been prepared in support of a planning application for a new solar farm by Bath and West Community Energy (BWCE). The site is located on the outskirts of Compton Dando (Figure 1)
- 1.2 BWCE is a community benefit society, established in June 2010. BWCE's vision is for a local area able to supply decreasing local energy demand with increasing generation from renewable energy, driven by collective action and community ownership. BWCE's local areas covers Bath & North East Somerset (BANES) and parts of Wiltshire and South Gloucestershire.
- 1.3 The planning application is accompanied by technical reports and assessments necessary to demonstrate the acceptability of the proposals. This document sets out the environmental context to the site of the proposed solar farm and describes how the proposal has been designed to be appropriate to the site and its setting.







2 LEGISLATIVE AND POLICY CONTEXT

Scope

- 2.1 The solar farm would constitute 'development' as defined in Article 2 of the *Town* and *Country Planning (Development Management Procedure (England) Order* 2015.
- 2.2 The application is submitted with a Planning Statement, which sets out in detail the proposal in relation to relevant planning policies of the Core Strategy, Placemaking Plan and Local Plan Partial Update, which together make up the local development plan.
- 2.3 The application is submitted in the context of a global, national and local drive to increase the amount of renewable energy generation. The drive to increase the use of renewable sources of energy has its roots in the recognition that the burning of fossil fuels has an adverse effect on global climate, and that local, national and global measures are required to deal with it.
- 2.4 The UK is already affected by rising temperatures. The average temperature in Britain is now 1°C higher than it was 100 years ago and 0.5°C higher than it was in the 1970s. The UK Government advises that if action is now taken to radically reduce greenhouse gas emissions, there is a good chance that we can limit average global temperature rises to 2°C. International policy support for development of renewable sources of energy is far-reaching, however this Design and Access Statement focuses on matters relating directly to the UK.

National Legislation and Policy

The Climate Change Act 2008

2.5 The Climate Change Act 2008 established long-term statutory targets for the UK to achieve reductions in greenhouse gases by 2050 against a 1990 baseline. The Act originally set a legally binding target of an 80% cut in greenhouse gas emissions by 2050.





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2.6 On 12 June 2019, as a direct response to the climate change emergency declaration, the Government laid the draft Climate Change Act 2008 (2050 Target Amendment) Order 2019 to amend the Climate Change Act 2008 by introducing a target for at least a 100% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050. This is otherwise known as a net zero target because some emissions can remain if they are offset by removal from the atmosphere and/or by trading in carbon units.

UK Government Net Zero Strategy 2021

2.7 The UK Committee on Climate Change advises the government on progress on tackling climate change. In May 2019, the Committee on Climate Change published its Net Zero report which responded to a request from the Governments of the UK, Wales and Scotland, asking the Committee to reassess the UK's long-term emissions targets. The report identifies that the supply of low-carbon power must continue to expand rapidly if the UK is to meet its carbon targets. The government's Net Zero Strategy responded by committing to 'take action so that by 2035, all our electricity will come from low carbon sources...'... This brings forward the previous government commitment in the Energy White Paper to a fully decarbonised power system by 15 years. The same strategy goes on to say that 'low-cost, net zero consistent electricity system is most likely to be composed predominantly of wind and solar generation...'.

The proposed solar farm would contribute to the expansion of the supply of lowcarbon power and is thus in accordance with the Net Zero Strategy and the advice of the Committee on Climate Change.

Net Zero in the Power Sector

2.8 The National Infrastructure Commission (NIC), official advisor to the Government on Infrastructure, has published a report (Net-Zero Opportunities for the Power Sector, March 2020) setting out the key infrastructure requirements needed to meet the UK's 2050 net-zero target, including the amount of renewable energy development that would need to be deployed.





2.9 The NIC recommends that in meeting this target, the UK's energy mix needs to be made up of around 90% renewables. To achieve this would require a significant increase in installed capacity across the UK, including over nine times the current installed capacity of solar technologies, which as of October 2020 is around 13.4GW according to the Department for Business, Energy & Industrial Strategy (BEIS).

National Planning Policy Framework

- 2.10 The National Planning Policy Framework (NPPF), revised on 5th September 2023, recognises the need for a reduction in the UK's carbon emissions, which can be met in part through increased renewable energy generation.
- 2.11 Paragraph 152 of the NPPF states that:

The planning system should support the transition to a low carbon future in a changing climate, taking full account of flood risk and coastal change. It should help to: shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience; encourage the reuse of existing resources, including the conversion of existing buildings; <u>and support renewable and low carbon</u> <u>energy and associated infrastructur</u>e.

2.12 The NPPF goes on to state in Paragraph 156 that:

Local planning authorities should support community-led initiatives for renewable and low carbon energy, including developments outside areas identified in local plans or other strategic policies that are being taken forward through neighbourhood planning.

2.13 And in Paragraph 158:

When determining planning applications for renewable and low carbon development, local planning authorities should:





a) not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even smallscale projects provide a valuable contribution to cutting greenhouse gas emissions; and

b) approve the application if its impacts are (or can be made) acceptable

The Environmental Impact Assessment (EIA) Regulations 2017

- 2.14 The proposed development is not a *Schedule 1* development under the EIA regulations and therefore does not automatically require an EIA. It is however an installation for the production of electricity of more than 0.5 hectares, and it therefore constitutes a project under category 3(a) of Schedule 2 of the EIA regulations.
- 2.15 A screening report was submitted, requesting a screening opinion from BANES in June 2022. The screening report set out how the potential environmental impacts of the development proposal have been assessed according to standard guidance. BANES provided a screening response on 30th August 2022, which confirmed that the project is not EIA development.

Local Policy

2.16 The relevant development plan for the project comprises the Core Strategy (including saved policies), the Placemaking Plan and the Local Plan Partial Update and Supplementary Planning Documents.

Design Guidance

2.17 The Building Research Establishment (BRE) provide guidance for the development of ground mounted solar farms. Appendix 1 provides the key elements of this guidance and how the proposal responds to them.







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3 PROJECT DESCRIPTION

The Site

3.1 The site is located approximately 500m north of Compton Dando in the Bath and North East Somerset council area (**Figure 2**). The Ordnance Survey grid reference for the center of the site is ST647651. The site comprises a single agricultural field that slopes from the Fairy Hill Road on its western boundary down to the River Chew along its eastern boundary.



The Development Proposal

- 3.2 The solar farm would consist of:
 - solar photovoltaic panels;
 - transformer substation;
 - switchroom;
 - perimeter security fencing;
 - access track;
 - on site cabling
 - offsite cabling connecting the switchroom to the grid via the road running south towards Compton Dando
 - DNO cabin



- Satellite mast
- CCTV cameras
- The community orchard and nature reserve that will be developed in the field surrounding the solar array
- 3.3 The generating capacity is estimated to be approximately 2.1MW over an area of approximately 2ha. The installed capacity will depend on the technology available at the time of construction. The layout has taken into account topography, ground conditions, ecology, landscape and visual elements of the environment. The layout has also been adjusted to take account of feedback from the local community (**Figure 3** and **Figure 4**)
- 3.4 The solar panels will be orientated to face the south on static frames, with a clearance above ground at the lower (front) edge of approximately 0.7m and a height at the higher (rear) edge of up to 1.908m, at an angle of approximately 15 degrees. The dimensions of each individual panel will be selected prior to construction to take advantage of the most efficient technology available on the market at the time.
- 3.5 The solar panels will be connected to inverters in order to convert the direct current electricity that they generate into alternating current for use in the electricity grid. The inverters will be housed in a small building approximately the size of a shipping container (approximately 2.5m high, 2.5m wide and 12m long). 'String inverters', which are connected to cabling underneath and between the panels, can be used instead of a central inverter building depending on technical design resolution later in the project. The solar farm also requires the construction of a switchroom building and underground cabling to connect into the electricity grid via cabling under the road to a connection point south of the field in which the solar farm would be located.
- 3.6 The solar array and associated infrastructure will not be publicly accessible and will be set behind security fencing that will be approximately 2m high. This typically consists of galvanised steel mesh fencing with wooden posts and a 100mm gap at the bottom for wildlife.





- 3.7 Construction of the solar farm is expected to take approximately four months to complete. Once installed, the solar farm will operate for a period of 30 years. During operation the site is monitored externally and there are no permanent staff on site.
- 3.8 There will be no artificial lighting on site during operation of the solar farm. Security cameras will use infra-red imaging and the infrastructure within the permitter fence does not need to be illuminated.
- 3.9 Scheduled on-site activities will consist of annual vegetation management, regular inspection and cleaning of the panels, and servicing, maintenance or replacement of parts as required.
- 3.10 Once the operational lifetime of the solar farm is complete, it will be possible to remove the panels and above-ground infrastructure and return the site to an alternative use. Any below-ground footings or cabling can either be secured and left *in-situ* or removed, depending on whichever is the most environmentally appropriate option.





4 DESIGN RESPONSES

Site Selection

- 4.1 The site has been selected as a sustainable location for the generation of renewable energy on the basis of factors including:
 - Physical characteristics: the site is orientated suitably for the generation of solar power and there are no topographical constraints to the constriction or operation of the solar farm. Furthermore, the positioning of the solar farm would not require the removal of vegetation or other structures.
 - Location: the proposed solar farm would be able to supply enough renewable energy to power up to 606 homes in Compton Dando via a viable connection point. Compton Dando, which is aiming to be a zerocarbon village by 2030.
 - Accessibility: the site can be accessed directly off an existing public road through an existing field gate, and there is an available grid connection point close to the solar array without necessitating lengthy underground cabling.
 - Landscape: the site is well screened by landform and vegetation such that any impacts on landscape and visual amenity would be minimised.
 - Community benefits: BWCE seek to deliver solar schemes that combine renewable energy generation with wider community benefits. This site is located close to a village and is connected the public right of way network, which offers potential for the local community to benefit from proposed land use improvements that can be combined with the solar farm proposal.
- 4.2 These and other factors (discussed in more detail below) contribute to the acceptability of the Very Special Circumstances to justify development in the Green Belt.





4.3 The location of the solar panels within the site has been adjusted in response to community feedback. The original position of the array (Figure 3) has been moved eastwards within the site (Figure 4) to maximise screening of the array by the existing tall hedgerows and boundary trees.







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Biodiversity

Baseline Characteristics

- 4.4 The majority of the site consists of a cultivated arable field which is bordered by wide field margins occupied by rough grassland characteristic of periodically cultivated fallow ground (Figure 5). The margins are dominated by grass and tall ruderals.
- 4.5 The boundary hedges are tall and bushy and comprise a diverse mix of woody species. There is a large, mature oak tree in the western section of the site. The boundary features and the mature oak tree may be used by various wildlife including birds, bats, reptiles and amphibians. A baseline habitat map is presented below.



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Design Response

4.6 The core principles influencing biodiversity design are application of the 'mitigation hierarchy' (below) and an aspiration to deliver a biodiversity net gain.









- 4.7 The following built-in features of the project will avoid or mitigate impacts on wildlife:
 - The installation of a solar farm has very limited footprint impacts, typically occupying less than 5% of a given site area. This project's footprint impacts will comprise the footings for the panels, the ancillary buildings and the new access track, all or which are located away from the features of ecological value.
 - Site selection: the proposed solar farm is on an arable field, which has negligible habitat value
 - Measures to avoid impacts on wildlife during construction are designed into the Construction Environmental Management Plan (CEMP) that is submitted with the application.
 - The proposal includes habitat creation including the replacement of the arable cropping regime with a managed grassland, and the provision of an orchard, which will provide new habitats for wildlife.





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- There will be no artificial lighting required during the operation of the scheme.
- The site will be subject to a long-term ecological management plan for wildlife.
- 4.8 Taking account of the good practice principles and the constraints and opportunities of the site and the development proposal, the basis of the net gain strategy is to replace the existing arable crop with seeded grassland to create a wildflower meadow, which will deliver a net gain in habitats of over the 10% policy requirement. Around the edges the seed mix will favour pollinators by including a range of flowering plants specifically targeted at this group. Over the remaining areas the seed mix will be a locally appropriate mix of grasses and wildflowers. The net gain is also helped by the decision to provide a community orchard on site, which can be formed of traditional apple tree varieties over a wildflower sward.

Noise

- 4.9 The site is located in a quiet rural area where the primary sources of noise are road traffic on Fairy Hill and agricultural operations on the site and in surrounding fields. Typical low-level background noise in such settings are in the range of 25-30dB, compared with a typical urban level of 30-40dB.
- 4.10 The nearest residential property is approximately 80m to the south of the site boundary.
- 4.11 During construction, noise will be generated during deliveries to the site, the installation of foundations, panels and infrastructure.
- 4.12 During operation, solar farms generate little noise as there are few moving parts or machinery. Inverters generate noise equivalent to a small domestic appliance and will be housed within an enclosed structure. The table below provides indicative noise levels for solar farm equipment.

Source	Sound Power Level, dB
Solar Inverter	66





Transformer	86
Substation Switchgear	84
Main Substation Transformer	80

- 4.13 The fixed infrastructure including the switchgear and transformer are located in the northern boundary of the site, approximately 200m away from the nearest dwelling and from the Public Right of Way. At this distance and in consideration of the noise levels stated above there is not likely to be an impact on residential amenity or users of the Public Right of Way. There are no wildlife receptors that would be sensitive to low-level noise generated by the fixed infrastructure.
- 4.14 Routine maintenance visits and land management would generate noise equivalent to typical agricultural operations and would therefore not elevate noise levels against the baseline.
- 4.15 A pre-construction planning condition requiring the provision of a noise impact assessment can be attached to any planning consent.

Hydrology

Flood Risk and Surface Water Drainage

4.16 The field in which the solar panels would be located slopes gently down to the River Chew, which forms the eastern boundary of the field. Approximately 90% of the field, and all of the proposed development is in Flood Zone 1 i.e. it has a low probability of flooding. The lowest lying area adjacent to the River Chew is in Flood Zone 3 i.e. this area has a high probability of flooding.

Design Response

4.17 During construction, the risk of pollution or flooding will be controlled by the implementation of a CEMP. This will comprise standard methods for the control of risk, using well established principals that have successfully been applied on similar developments.







- 4.18 The site will be seeded with a wildflower seed mix under and around the panels. This will bind the soils and contribute towards slowing the flow of surface water, thus reducing the existing runoff rates and protecting the soils from erosion.
- 4.19 In terms of the hydrology receptors, the electrically sensitive infrastructure, such as the inverters, will be designed to be flood resistant to a 1:200-year flood event plus an allowance for climate change.
- 4.20 The Flood Risk Assessment that accompanies the application identifies that the changes to landscaping and permeable area, including the provision of berms for control of surface water, will offer improvements to flood risk and water quality.

Heritage

Potential Impacts on Heritage Assets

- 4.21 There is no intervisibility between the site and any Listed Buildings. The nearest Scheduled Ancient Monuments are Compton Dando bridge (which is screened from the development site), sections of the Wansdyke (from which small parts of the site may be glimpsed at distance but the LVIA concludes the effect on views will be negligible and there will be no impact on this heritage asset) and Stantonbury Camp (from which the development will be barely visible, the visual effect would be negligible and there would be no impact on this heritage asset).
- 4.22 There are two Designated Parks and Gardens within 5km of the site but given the distance and landform there is no intervisibility with the site and there would be no impact upon them.
- 4.23 Woolard Conservation area is 2.7km away from the site and given the distance and landform there is no intervisibility with the site and there would be no impact upon the Conservation Area.
- 4.24 The site has been in use as arable farmland for a substantial length of time and there is no evidence to suggest that the proposals would have any impact on buried assets.





Design Response

4.25 The proposed landscape planting and management will serve to improve the screening of the development from close and long-range views.

Landscape and Visual Amenity

Potential Impacts on Landscape and Visual Amenity

- 4.26 The site of the proposed solar farm is an arable field on a gently sloping field facing east, surrounded by mature tree lines and hedges on the upper slopes of the valley of the River Chew. The landscape surrounding the site is characterised by irregularly shaped fields bounded by mature hedgerows, woodland and steeply sloping valleys with flatter landforms above.
- 4.27 The site is within the Bristol & Bath Green Belt and the Forest of Avon Community Forest, the Bristol, Avon Valleys and Ridges National Character Area (NCA 118) and the Chew Valley Landscape Character Area.
- 4.28 The site is in the 'southern green belt', which is of most importance for preserving the identity and character of towns, villages and hamlets¹ (point 2 above).
- 4.29 A preliminary landscape and visual impact assessment was prepared for the project. The project was assessed from three key viewpoints based upon a map of a Zone of Theoretical Visibility:
 - Viewpoint 1: from the public footpath through the site, looking west towards the site of the solar farm
 - Viewpoint 2: from a public footpath on elevated ground approximately 200m west of the site
 - Viewpoint 3: from a public footpath approximately 700m to the east, looking west towards the site of the solar farm.



¹ Bath and North East Somerset Green Belt Review, Stage 1 Report. Arup, 2013.



- 4.30 Photomontages of the solar farm from key viewpoints were produced to inform the assessment of potential impacts on landscape and visual amenity, and these are presented in Appendix 3.
- 4.31 For the full LVIA the Zone of Theoretical Visibility was reviewed, and an increased number of Viewpoints were assessed (**Figure 6**).



4.32 The development proposals will result in harm to the openness of the green belt in terms of encroachment of development and a reduction in openness. There will be impacts on local landscape character at the site level (through the





introduction of built form into an open field) but the LVIA finds that these impacts are not significant, and the proposal will not significantly impact important views.

- Design Response
- 4.33 Existing hedges and boundary vegetation will be retained and managed to ensure they continue to provide a function of screening the solar array from potential views. Where opportunities exist these retained features will be planted up or enhanced to increase their screening function.
- 4.34 The proposed community orchard and tree planting will provide screening to mitigate the visual impact of the solar array, as illustrated in the photomontages in Appendix 1. Tree planting in the western part of the site will largely screen the panels from views into the site from the entrance. Tree planting will also soften the visual impact of the solar array from the Two Rivers Way and from a Public Right of Way crossing Fairy Hill.
- 4.35 Seeding of the field to create a species-rich meadow will soften the visual appearance of the areas outside of the solar arrays, removing the regular pattern of even-height and crops of uniform colour and replacing it with a seasonally variable sward in keeping with pastures in the surrounding landscape. The introduction of sensitively designed landscape features such as the community orchard and wet meadow in the eastern part of the site would blend this area in with the adjacent tree-lined river.
- 4.36 The development proposal will enhance local landscape character (through the proposed planting), landscape features (the boundary hedgerows) and seeks to enhance local distinctiveness through the choice and design of species for the landscape planting. The impacts on landscape character of introducing new built form (the solar panels and infrastructure) are therefore mitigated by the landscape planting and management proposals.

Trees

Baseline Conditions



4.37 There is a large, mature oak tree in the western part of the site. The trunk is over 1m in diameter and there is some dead wood in the canopy. The land is cultivated under the canopy of the tree with the exception of a small area of rough grassland.

Design Response

4.38 Standing advice for the protection of ancient or veteran trees includes this requirement:

A buffer zone around an ancient or veteran tree should be at least 15 times larger than the diameter of the tree. The buffer zone should be 5m from the edge of the tree's canopy if that area is larger than 15 times the tree's diameter

4.39 This translates to a buffer of between 15-20m around the tree, which has been accounted for in the layout of the solar farm. The required buffer zones for trees and hedges are met by the proposed layout, as illustrated in **Figure 7**.





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Access and Public Rights of Way

- 4.40 The site can be accessed through an existing field gate off Fairy Hill Road, which leads north out of the village of Compton Dando. This provides sufficient accessibility for construction and maintenance. The access will be sufficient for emergency vehicles to enter the site and the access track will be suitable for access, turning and egress from the site. There is no known increased risk of fire on solar farms relative to other similar equipment. The provision of adequate access for emergency vehicles and the exclusion of public access through the construction of a secure perimeter fence (with security cameras at regular intervals) are measures that help to manage fire risk during construction and operation.
- 4.41 Fairy Road is approximately 5m wide adjacent to the proposed site access and is subject to a national speed limit, reducing to 30mph approximately 60m downhill from the proposed site access. At the site of the proposed road access the carriageway is bordered by a road verge approximately 2m wide, with the site's boundary hedgerow set back from the road edge by approximately 2m, giving good visibility at the proposed point of access.
- 4.42 A Public Right of Way (BA8/84) crosses the eastern boundary of the site (Figure 8). This footpath leads to / from Compton Dando village to the south, along the River Chew and (via a pair of connected bridleways BA27/66 and BA27/65) into Keynsham to the north.







Design Response

- 4.43 The community engagement exercise explored options around permissive paths and interpretation, following which the project has incorporated proposals for:
 - A pedestrian track allowing access from the public right of way in the south-eastern part of the site, up to the top of the hill and returning on a circular route
 - A sensory track in open space in the south-western part of the site, with varied surfaces and sensory elements
 - Education boards with QR code links to online information, sited on the perimeter fence to provide interpretation and understanding of the purpose, context and function of the solar farm.
- 4.44 These features are enhanced by the provision of new planting, the type and nature of which have been developed as part of the public consultation. These proposals are illustrated in the Landscape Plan (**Figure 9**).







- 4.45 Safe vehicular access to the site during construction will be managed via a Construction Management Plan. This will include the maintenance of the boundary hedge to limit its height and maintain good visibility.
- 4.46 Permissive paths to the site will be restricted to areas outside of the secure perimeter fence. There will be no access to any structures or equipment that would pose a risk to public health and safety, and the Public Right of Way provides a safe means of exit from the site.

Energy and Sustainability

4.47 The proposed project would generate approximately 2.1MW a year of clean, renewable energy. This will contribute to the Council's sustainability targets for renewable energy generation and contribute to reducing the impact of rising prices of fossil fuels on the UK power sector. The proposed solar farm is estimated to be able to provide twice the electricity demand of Compton Dando village. This is an important step in the village reaching net zero. Furthermore, the solar farm would provide 1.9% of the 110MW target for electricity generation imposed by BANES Policy CP3.



- 4.48 Solar farms typically have a lifespan of around 40 years and do not produce waste or emissions during their lifetime. Upon decommissioning, the installation can be removed and the land can continue to be used for appropriate agricultural purposes. Solar panels are manufactured using recyclable materials that can be re-used once a solar farm is decommissioned. PV panels typically comprise approximately:
 - 75% glass
 - 10% plastic
 - 7% aluminium
 - 5 silicon
 - 1% metal
- 4.49 These materials are readily re-used and recycled. The panels are mounted on metal frames, which can also be re-used or recycled at the end of their lifetime.
- 4.50 The construction and operation of a solar farm will contribute to BANES renewable energy targets as set out in relation to Core Policy 2. CP2 also requires standards for sustainable construction to be met, as set out in Table 1 below.

Table 1. CP2 Sustainable Construction Standards

CP2 Standard	Project Response
Maximising energy efficiency and integrating the use of renewable and low- carbon energy (i.e. in the form of an energy strategy with reference to Policy CP4 as necessary)	As a renewable energy installation the proposal would generate locally significant amounts of clean energy and contribute to BANES targets in CP2
Minimisation of waste and maximising of recycling of any waste generated during construction and in operation	The construction of the solar arrays and associated infrastructure will make use of a range of materials including (in approximate order of quantities) glass, concrete, steel, aluminium, silicon,

communitiesfor





CP2 Standard	Project Response
	copper and plastic. All of these materials can be recycled upon decommissioning of the solar array.
Conserving water resources and minimising vulnerability to flooding	The proposed landscaping and management of the site will reduce surface water flows and contribute to flood management associated with the River Chew
Efficiency in materials use, including the type, life cycle and source of materials to be used	Main materials used in the construction and operation of the solar farm are recyclable. The materials will be sourced from the most economically viable sustainable source available
Flexibility and adaptability, allowing future modification of use or layout, facilitating future refurbishment and retrofitting	The installation is temporary in nature and fully reversible, allowing for future adaptation, modification and retrofitting
Consideration of climate change adaptation	The proposal directly addresses the national and BANES climate emergency.

5 CONCLUSION

- 5.1 This Design and Access Statement sets out how the site selection process and design of the proposed development have responded to the environmental context of the site so that the development will be appropriate to the site and its setting.
- 5.2 The design process has also been informed by consultation with the local community, a pre-application enquiry with BANES, and comprehensive



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feedback from BANES provided in the EIA screening opinion dated 30th August 2022.

- 5.3 The proposed design responds to the key elements of design as set out in Appendix 1.
- 5.4 The proposed development would be temporary in nature and has been designed so that it can most easily be remediated at the end of its operational life. Whilst in operation, the project would secure the management of the land for biodiversity benefits, both within the array and on surrounding land. This will be supported by a long-term management and monitoring strategy that will facilitate adaptation of the site management in response to changes in biodiversity, with a secure source of funding.
- 5.5 The proposed development would comply with national planning policy as set out above and in the separate Planning Statement. It will also comply with local planning policy.
- 5.6 It is therefore concluded that the proposed development is an appropriate temporary use of the site designed in keeping with its environmental context, that will assist in meeting the urgent need to reduce carbon emissions, enhance biodiversity and facilitate public access to the new community facilities.





APPENDIX 1 – DESIGN GUIDANCE REVIEW

Design Guidance	Design Response
Solar farms should ideally utilise previously developed land, brownfield land, contaminated land, industrial land or agricultural land preferably of classification 3b, 4, and 5	The site is located on Grade 3b agricultural land.
Construction compounds should be carefully located in order to minimise environmental or amenity impact	The construction compounds will be located away from the eastern end of the site to minimise the risk of impacts on the River Chew
Where it needs to be removed, topsoil and subsoil should be stripped, stored and replaced separately in order to minimise soil damage and to provide optimal conditions for site restoration	Detailed measures for the protection of soils are included in the CEMP, in accordance with this guidance.
The installation and use of access tracks should be kept to an absolute minimum	The project will require only one short section of new access track for construction and maintenance. The location of the access track was modified from the original design to account for community feedback.
A buffer strip of larger than 5 metres between hedges and solar panels is desirable to promote ecological and biodiversity opportunities if it can be achieved	The solar panels are located no closer than 15m from the nearest hedgerow sections.





Design Guidance	Design Response
Solar PV installations which are developed on agricultural ground should be 'reversible', allowing the site to be easily restored to a more intensive agricultural use. Intrusive development, such as trenching and foundations, should therefore be minimised and the use of mass concrete should be avoided. Where possible Solar PV arrays should be installed using 'pile' driven or screw foundations, or pre-moulded concrete blocks (shoes), and capable of easy removal. The use of shoes may be required for archaeological sensitive areas. Where 'pile' driven foundations are proposed applicants should consider impacts during construction on nearby noise sensitive properties	The solar panel installation is designed to be reversible so that the future use of the land is not constrained at the end of the 30-year period or which consent is sought.
The development will need to have regard in both its design layout, and future maintenance plans for the retention of growth of vegetation on any important boundaries	The panels are set back from the boundaries and management of these areas is included in a Landscape and Ecology Management Plan
Any buildings required in order to house electrical switchgear, inverters etc should be designed and constructed in order to minimise their landscape and visual impact	These buildings have been located against the northern boundary hedgerow in a visually discrete location





Design Guidance	Design Response
Design should be informed and influenced by ecological assessments (phase 1 habitat surveys, protected species surveys etc).	The design has been informed by an Ecological Appraisal and Ecological Impact Assessment and is accompanied by a Biodiversity Net Gain plan and a Landscape and Ecological Management Plan.
The project should take account of the results of historic environment assessments in their design, for instance through the sensitive planning of installations.	There are no likely significant impacts on heritage assets. Potential impacts on heritage assets have been considered and described in the Landscape and Visual Impact Assessment accompanying the application. The Zone of Theoretical Visibility, viewpoint photographs and photomontages illustrate the visibility of the site and the proposed solar panels, with and without additional planting. The proposed panels and landscaping would not have any significant impacts on views from any designated heritage assets. The proposal would not alter the field pattern (i.e., there would be no removal of hedgerows or alteration of boundaries). There would be a change to the field system within the site (i.e. the addition of the new planting).
Where access tracks need to be provided, permeable tracks should be used, and localised SUDS, such as swales and infiltration trenches, should be used to control any run-off where recommended.	Permeable surfaces will be used for the new access track.





Design Guidance	Design Response
The potential for solar PV panels, frames and supports to have a combined reflective quality should be assessed. This assessment needs to consider the likely reflective capacity of all of the materials used in the construction of the solar PV farm	The panels will be low-reflectance and consideration is given to this in the LVIA accompanying the application
Community involvement should be considered as an integral part of the development process.	The proposal is a community-benefit project and extensive public consultation has been undertaken in the lead up to the submission of the planning application, and public involvement will continue to be a key feature of the project. A community engagement event was held on site on the 11 th August 2022 and feedback from that event has been incorporated into the project.





APPENDIX 2 – SUSTAINABLE CONSTRUCTION CHECKLIST

Assessing Risk

The development does not potentially increase climate-related risks in the locality in terms of:

- Increased surface water run-off (see Flood Risk Assessment).
- Causing changes to the flood or groundwater regimes elsewhere (see Flood Risk Assessment).
- Increased pressure for new or enhanced flood or coastal defence measures.
- Loss of tree cover that provides wind protection or shade.
- Fragmentation and vulnerability of habitats.
- Increased pressure for water resources.

Design Considerations – adaptation

The development has adopted features that increase resilience and adaptability to climate impacts:

- Flood risk and heavy rain events: all infrastructure and facilities will be designed to be appropriate to the site conditions and the Flood Risk Assessment identifies that the site is not at excessive risk of flooding.
- Storms and strong winds: the equipment is securely fixed and designed to withstand appropriate wind loading.
- Emergency planning: there is sufficient access for emergency vehicles to the site.







Design considerations – mitigating greenhouse gas emissions

The development is inherently contributing to the reduction of greenhouse gas emissions by reducing the need for energy generation using fossil fuel.







APPENDIX 3 – CONSULTATION REFERENCE TABLE

Feedback	Response / Reference
In order to ensure impacts to natural resources are temporary in nature, it would be expected that any eventual application would seek planning permission for a temporary period only, following which a decommissioning and land restoration strategy would be implemented. A decommissioning and restoration strategy would likely be secured by condition in the event of an eventual planning application being granted.	The application is for temporary permission for a period of 30 years.
It is noted that the EIA Screening Report includes limited information in relation to natural resources associated with production of the solar panels and equipment itself. It is unclear if the equipment uses materials/minerals or energy which are non-renewable or in short supply. Information in respect of energy and materials associated with manufacture of the equipment, how natural resources can be recycled following decommissioning and if not, how the equipment will be disposed of avoiding detriment to natural resources would be beneficial.	Further information is provided in the 'Energy and Sustainability' section and Appendix 2 of the DAS
The standalone mature Oak tree at the site is a high-quality natural resource. Limited information has been provided in relation to the tree within the EIA Screening Report. It is unclear exactly how far the perimeter of the solar farm and any associated development would be sited from the tree. No scaled drawings have been provided at screening stage.	The tree is fully retained and protected and scaled drawings are provided in the Root Protection Area and Buffer Plan submitted with the application (and referred to in the relevant section of the DAS).
The Local Planning Authority would be interested to understand whether other construction materials such as frames, cabling, buildings and other infrastructure can also be re-used or recycled following use at the site.	Further information is provided in the 'Energy and Sustainability' section and Appendix 2 of the DAS





Feedback	Response / Reference
Further information in relation to exact noise levels predicted to be	The location of noise generating equipment (the inverters and
associated with operation of the proposed infrastructure would be	substations) are shown on the submitted plans.
valuable. The exact location of noise generating equipment on site is	
unclear given the detail included on plans submitted. Whilst noise levels	Indicative noise levels are set out in Section 4 of this document.
equivalent to a domestic appliance may not be problematic in an urban	
area, the site is located in open countryside where very low levels of	In common with most rural solar installations in the BANES area a
background noise are likely to prevail. It is unclear how noise levels	separate Noise Assessment has not been prepared.
would be perceived by users of the Public Right of Way crossing the land.	
It is also unclear how this noise may impact ecology. Nevertheless, the	
Local Planning Authority accepts that this information can be	
incorporated within a Noise Assessment submitted with an eventual	
application. It is anticipated that there is a good possibility of effectively	
reducing the impact of noise through acoustic insulation and attenuation if	
this is necessary. Subject to further information and mitigating proposals,	
significant environmental impacts as a result of noise generated by the	
development are found unlikely	The second With a second second Park Constants Red and a Street
The EIA Screening Report also lacks information relating to the likelihood	I nere will be no permanent lighting installed on site.
of light and heat emissions. The EIA Screening Report suggests no	
permanent antificial lighting is required.	
However the Local Planning Authomy believes health and salety	
relating to mointenance work, particularly during winter or everyight. It is	
I relating to maintenance work, particularly during winter or overnight. It is	
Similarly, it is updeer how the seler pende will impact the local	There is no ovidence from oveilable studies of color installations and
Similarly, it is unclear now the solar panels will impact the local microalimate surrounding the development on a result of heat reflection	coolegy that migro alignets affects are significant, and the biodiversity
and association radiation. This may have implications for highly and	benefits of sowing an arable field with a wildflower meadow mix outwoigh
and association radiation. This may have implications for blodiversity and accounted for within an eventual full	any concerns in this regard
planning application	





Feedback	Response / Reference
The information included within the EIA Screening Report relating to	All construction work will comply with the relevant health and safety
health and safety risk is found to be limited and somewhat ambiguous.	regulations and all materials will meet the relevant standards.
There appears to have been limited input from relevant specialists and no	
information is included relating to specific health and safety	The site, once operational, is protected by security fencing and CCTV, to
requirements associated with solar farms. Details of relevant national	prevent public access to the equipment.
regulations and requirements to ensure safe operation would be	
beneficial.	
It is highlighted that there have been recent examples of fires at solar	
farms, including one at Verwood, Dorset in July 2022. This example took	
place during a period of high temperatures which will become more	
commonplace given the predicted effects of climate change. A major	
issue with this fire related to access to the site by fire crews. As such, due	
consideration must be given to emergency service access to the site	
which will be a relevant Transport and Access issue.	
It is noted that the BRE National Solar Centre were commissioned by the	
Government in 2018 to undertake a study on lifes involving solar	
photovoliaic systems. The outcome of this study has hot yet been	
to believe that the fire risks accessized with DV systems are any greater	
than those associated with other electrical equipment. The study was	
commissioned due to PV systems becoming more common and to inform	
and minimise risk associated	
It is acknowledged that the density of surrounding population is low given	
the rural location and the site is situated at least 70m from neighbouring	
residential properties. This separation would be beneficial in terms of	
reducing the impact to human health in the event of a fire as well as	
other pollution and emissions based risks at neighbouring properties.	
The position of the Public Right of Way crossing the site is highlighted	
which means the public can access land nearby the development.	





Feedback	Response / Reference
Furthermore, it is indicated that a community orchard and nature reserve (assumedly publicly accessible) are also proposed on site. Therefore, despite the location being separate from neighbouring residential properties, there will be public access to land directly adjacent to the development. This should be taken into account in the design, specification and management of the site to ensure any risk to health and safety is minimised.	
It is highlighted that as the development is more than 1 hectare in area in Flood Zone 1 and therefore a Flood Risk Assessment will be required. Furthermore, as a major development a Sustainable Drainage Strategy will also be required with any eventual application in accordance with local Policy SU1	A Flood Risk Assessment is provided with the application
Ecological surveys will need to ensure that all affected areas of suitable habitat, including compounds and areas required for enabling works such as cabling, have been assessed. Details of any external lighting proposals would also need to be provided with any application.	The Ecological reports submitted with the application address potential impacts on habitat and wildlife. As the site is largely unsuitable for protected species the risk of harm is very low, and measures to avoid harm to wildlife are set out in the ecology reports submitted with the application.
There are also high levels of local surrounding longrange visibility as a result of topography. Whilst some viewpoints in the LVIA provided include some screening, the Local Planning Authority would not support the statement that the development is largely screened from view. The development appears to be visible from the range of surrounding viewpoints presented and it is not clear if a full range of public viewpoints have been assessed.	The solar panels will be visible from a small number of viewpoints – illustrative photomontages are provided in Appendix 3 of the DAS and a full assessment is presented in the Landscape and Visual Impact Assessment submitted with the application.
It is acknowledged that there are Scheduled Ancient Monuments in the area surrounding the site. This includes the Wansdyke located approximately 200m south-west at the nearest point and also Compton Dando Bridge approximately 320m south. The EIA Screening Report	The LVIA submitted with the application includes viewpoints from the route of the Wansdyke





Feedback	Response / Reference
states that there is no intervisibility between Scheduled Ancient Monuments and the site. However it is noted that the Landscape Visual	•
Impact Assessment does not include views from these monuments so this has not been demonstrated at this stage.	
A critical heritage and archaeology asset which is not explicitly acknowledged in the EIA Screening Report is the historic agricultural landscape. This is considered a non-designated heritage asset. The report does assess the field system and pattern as mediaeval, which is probably accurate, although could also easily be more ancient, Iron Age or even earlier, and Is therefore of high historic significance. The field system and pattern will be substantially impacted upon, both in terms of the development site/field itself and the setting of the surrounding historic agricultural landscape, which is considered a non-designated heritage asset. This is both 'built' and archaeological cultural heritage that should form part of the consideration and assessment.	The LVIA submitted with the application assesses impacts on the agricultural landscape
The Landscape Visual Impact Assessment submitted with the EIA Screening Report does not include views to and from the heritage assets which surround the site. This absence of evidence makes it difficult to reach a conclusion in relation to the likelihood and significance of environmental effects. This will need to be resolved in order to confirm compliance with national and local planning policies against which an application for full planning permission would be assessed.	The LVIA submitted with the application contains an assessment of visibility between heritage assets surrounding the site. The conclusions are summarised in Section 4 of the DAS and presented in full in the LVIA.





APPENDIX 4 – EIA SCREENING RESPONSE







APPENDIX 5 – PRE-APPLICATION FEEDBACK