Intelligent Alternatives

A Carbon Neutral Company

SITE SELECTION AND ASSESSMENT OF REASONABLE ALTERNATIVES

SOLAR FARM AND ASSOCIATED DEVELOPMENT LAND WEST OF THE A46, SHERBOURNE

March 2022

1. Introduction

1.1. This document has been prepared by Intelligent Alternatives Limited (IA, the Agent), on behalf of PD412WAR Ltd (the Applicant), to accompany the submission of a detailed Planning Application to Warwick District Council (the Council) for a 'solar farm and associated development' (the Proposals) at 'land west of the A46, Sherbourne' (the Site).

1.2. The purpose of the document is to demonstrate that the Site is the only available and viable location for the Proposals at the time of submission. The arguments and information set out in this document also support the justifications within the Planning, Design and Access Statement (PDAS) for developing the Proposals on greenfield land, on land within Flood Zones 2 and 3, and within the West Midlands Green Belt (WMGB). This document also substantiates the arguments set out in the PDAS to demonstrate Very Special Circumstances (VSCs) exist, and therefore that the Proposals should be approved.

1.3. There is a generally increasing level of detail and area specific information provided, from the Applicant identifying the UK as a suitable area for development/investment down to the decision to choose specific fields close to the 33kV line to which the Proposals will connect:

- United Kingdom (country wide);
- England (national);
- Warwickshire (county/regional);
- Warwick (Council area); and
- 33kV Cable network connecting the Banbury Road 33/11kV substation and the Claverdon 33/11kV substation (local area).

1.4. The site selection process concludes that due to the absence of available land outside the WMGB in Warwick, and noting the energy deficit within Warwick District Council (Warwick) to meet their net zero target, there is a need for the Proposals in Warwick to tackle climate change, and the Site is the only available and viable location at the time of submission.

2. Subsidy Free Solar Economics and Viability

2.1. Solar energy is widely acknowledged as a viable source of renewable energy and solar technology is deployed globally to generate 'clean' electricity. As such, solar farms such as the Proposals play an important role in the transition to a low / no carbon electricity generation sector worldwide.

2.2. Irradiation levels in the United Kingdom have supported subsidised solar farms, predominately in England and Wales, with a small number in Northern Ireland and Scotland. Irradiation is strongest in the south of the country and generally reduces moving north.

2.3. The 'Regional Energy Strategy for the West Midlands' (published November 2018) and the 'Powering West Midlands Growth: A Regional Approach to Clean Energy Innovation' (published 2018) recognise that innovation has driven down the cost of solar energy by 80% within the last decade, and that UK policies have been successful in bringing down the cost of solar and wind to ensure they are commercially competitive solutions to decarbonising the grid.

2.4. The Climate Change Committee's Sixth Budget Report (December 2020) stresses this trend, acknowledging that an unintended benefit of the rise in worldwide innovations driven by

the Net Zero transition has led to reductions in costs of solar panels driven by global deployment, which in turn has enabled greater energy access globally.

2.5. The National Infrastructure Strategy (NIS) (published November 2020) recognises that the cost of renewables has fallen sharply in recent years (as shown in Figure 1 below), but also that "bold action is now needed to transform the UK's infrastructure to meet net zero and climate change commitments." The NIS also states that "the government expects around 65% of electricity generated in Great Britain to come from renewable sources by 2030", which is further reflected in the Government's Ten Point Plan which sets out support and investment for clean energy to lead the UK into a "Green Industrial Revolution".

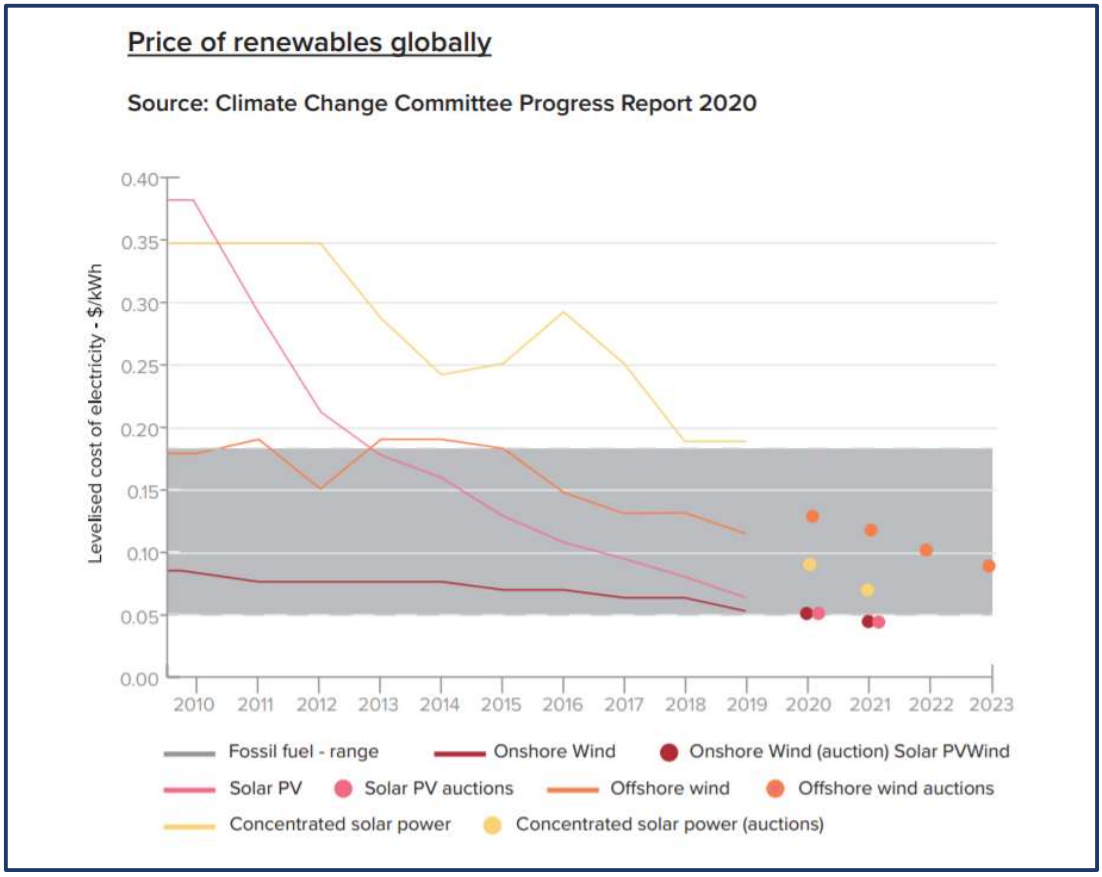

Figure 1 – Climate Change Committee Progress Report 2020, Source: NIS

2.6. The NIS also states that solar development will form part of the next auction for Contracts for Difference (CfD). At this stage it is not guaranteed that the Proposals will benefit from this as each project bids individually and there is a limited 'pot' of money available. There have been major efforts made as an industry to develop subsidy free business models and projects, to reflect the public and political demand for schemes to 'stand on their own feet'. Therefore, the Proposals are developed as such, but an application may be made for a CfD in due course (this is not a material consideration and national policy at all levels makes it clear that there is strong support in principle for solar farms as part of the country's energy generation mix).

2.7. Within the CCC's most recent 'Progress in reduce emissions 2021 Report to Parliament', published in June 2021, the predicted targets require electricity generation from renewables to contribute 70% to the electricity generation by 2035, and 80% by 2050.

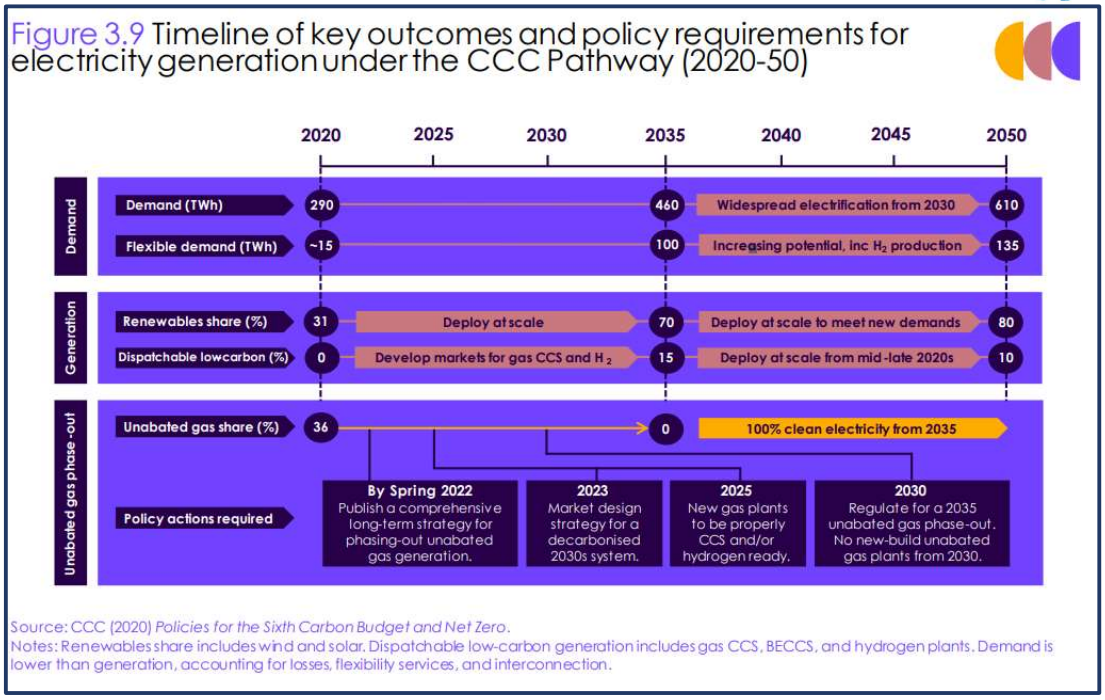

Figure 2 – Progress Report to Parliament 2021, Source: CCC

2.8. The report also referenced analysis undertaken by the International Renewable Energy Agency (IRENA) indicating that:

> "more than half of installed renewable electricity generation capacity in 2019 was cheaper than new coal plant alternatives.[1] IRENA estimated that over half of existing coal capacity in 2020 would produce more expensive electricity than replacement with new utility-scale solar PV generation. Renewables are also now increasingly cost-competitive with gas-fired generation with some solar generation sources now producing the cheapest electricity in history[2]".

2.9. The Applicant requires projects of at the very least 10 MW (in ideal conditions in areas of high irradiation) to meet development and investment criteria. This equals a site of approximately 18 to 20 hectares. Grid connection costs are fundamental. Effectively working without a subsidy, the areas which are viable (in terms of substation capacity and connection distances) have been drastically reduced (making Stage 2 and Stage 8 of the process detailed at Paragraph 3.1 below much more difficult). The Applicant, in conjunction with the Agent, works to a specific set of economic parameters including grid connection costs and rental levels. These are commercially sensitive so cannot be specific in the application documentation[3].

2.10. A finely balanced combination of factors is required for a scheme to be viable, as detailed below at Paragraph 3.1. This means that, overall, solar farm schemes (now effectively subsidy free) are extremely sensitive in terms of their development economics and viability. Finding a site which meets the full range of requirements is a challenging process, as detailed in the following sections. Developing on brownfield sites is even more challenging than when there was a subsidy associated with projects, due to abnormal costs and other development risks rendering schemes more economically sensitive.

[1] IRENA (2020) Renewable Power Generation Costs in 2019
[2] IEA (2020) World Energy Outlook 2020; Lazard (2020) Levelized Cost of Energy and Levelized Cost of Storage.
[3] IA are happy to meet with the Council to discuss confidentially to substantiate the information in this document

3. Site Search Overview

3.1. Generally, the following represents the site search process, with each stage needing to be passed to move on to the following stage:

1. Suitable irradiation level (generally working south to north)
2. Indicative grid availability (a key limiting spatial factor) based on grid heat maps and experience
3. Site characteristics and constraints (topography, shading, access)
4. Planning material considerations
   a. review brownfield and rooftop opportunities
   b. focus on land outside designations (landscape, ecology, heritage including setting and buffer zones)
   c. ideally avoid Grade 1 and Grade 2 land by focussing on Grade 3 and lower land
   d. avoid development plan designations (unlikely to be viable compared to residential/commercial etc)
   e. ideally avoid green belt
   f. ideally avoid flood zones
   g. consider main material considerations – landscape and visual impacts, residential amenity, access issues (Public Rights Of Way (PROW) and highway), ecology
5. Commercially viable, including willing landowner (ideally one), agreed rental level and development costs
6. Submit grid application and EIA Screening Request
7. Consider feedback from EIA Screening process
8. More detailed grid connection cost received (highest cost associated with the development of projects other than construction cost)
9. Start planning application preparation and secure formal land rights through an Option to Lease
10. Review project viability overall based on planning issues (using consultant feedback on ecology, landscape, full land grade assessment, heritage assessment and Flood Risk Assessment), the Screening Opinion, grid connection costs and commercial/landowner status

3.2. Only following successful completion of the above will sites then proceed to the planning application stage when large, and recently increased, planning application fees are incurred, alongside planning and/or environmental consultant and solicitor costs.

4. Need for Renewable Energy in Warwick

4.1. The Council declared a climate emergency in June 2019, following the advice provided by the Intergovernmental Panel on Climate Change (IPCC) which states that there is until 2030 to take urgent action on climate change in order to keep the earth's rising temperature below 1.5 degree Celsius. The motion approved by Warwick Councillors recognised that the current global target to cut carbon emissions by 80% by 2050 is unlikely to be enough to avoid a catastrophic change in our climate, and that "business as usual is no longer an option." It is understood the Council, together with Stratford-on-Avon District Council, are cooperating to become carbon neutral by 2025, and for the joint area of South

Warwickshire to be a carbon neutral district thereafter, and will facilitate decarbonisation in order for the district to be as close to net zero by 2030 as possible.

4.2. Based on the 2021 Council Tax Records[4], it is understood that there are approximately 66,150 homes in Warwick. The Proposals will power the equivalent of c. 6,600 homes a year; approximately 10% of the dwellings in Warwick.

4.3. Figure 3 demonstrates that based on the approximate percentage of homes powered presently by existing operational renewable energy developments in Warwick, taking into consideration the solar and renewable energy proposals currently in planning, and the contribution of the Proposals, 35% of homes in Warwick would still not be powered by renewable or low-carbon energy[5]. In short, the combined energy generated by all the existing and proposed renewable and low carbon energy schemes, including land within the WMGB, still falls short of meeting the Council's Net Zero target. Noting the Council have also not allocated or indicated alternative sites for renewable energy developments, it is considered that the Site is necessary to meet the Warwick's energy demands, and this makes a substantial contribution to there being VSCs which support the Proposals.

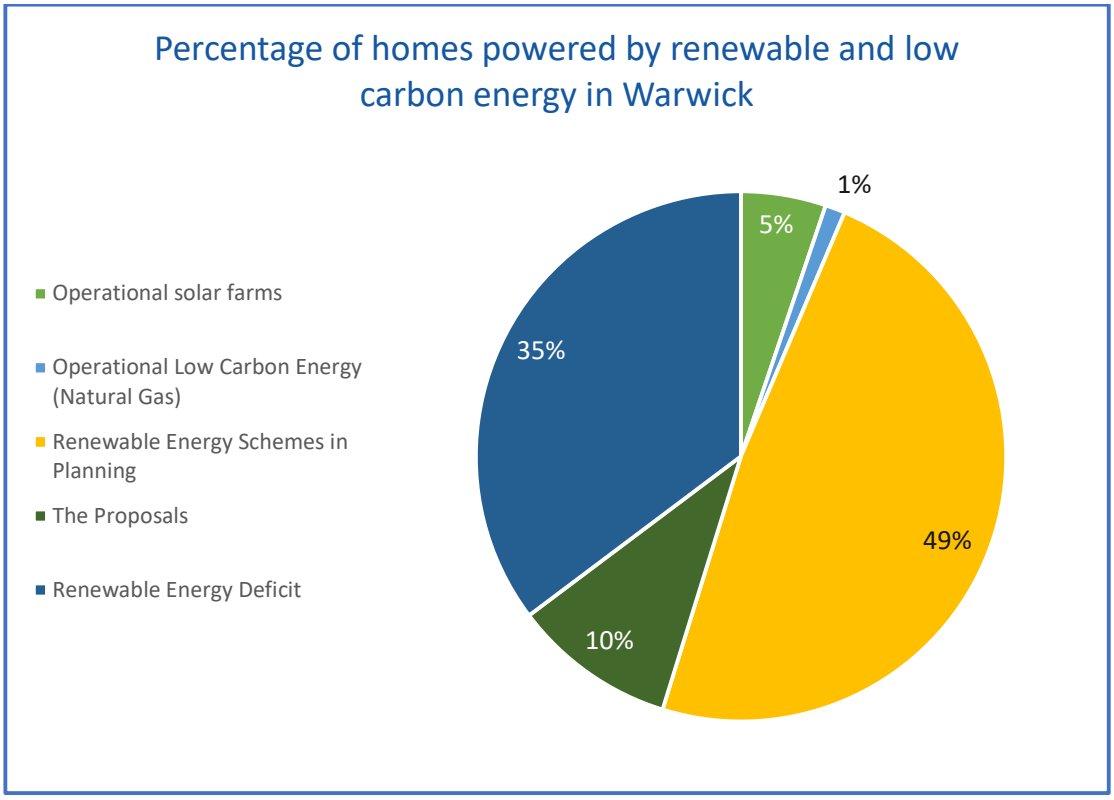

Figure 3 – Percentage of homes powered by renewable energy in the Warwick district: IA

4.4. The Warwick District Council Low Carbon Action Plan (10 February 2012) encourages local energy generation in Warwick to work towards a more resilient and secure energy supply, and ensure energy is cheaper over time for residence and businesses. The Action plan set out the energy demands in Warwick at the time, which are shown in Figure 4 below.

[4] Valuation Office Agency - Council Tax: Stock of Properties: https://www.gov.uk/government/collections/valuation-office-agency-council-tax-statistics

[5] Figures for existing renewable energy generation in the district are based upon data available on the BEIS (December 2021) database, and calculated utilising the typical domestic consumption value of 2,900kV per annum published by Ofgem (Ofgem.gov.uk)

Table 1 – Current energy demands in Warwick District Council

	Domestic Buildings	Non-Domestic Buildings	Transport	Total
Energy use (GWh/a)	1,081	889	1,517	3,487
Carbon dioxide emissions ($ktCO_2/a$)	287	319	457	1,063
Fuel expenditure (£million/a)	£55 m	£42 m	£212 m	£309 m

Figure 4 –Energy Demands in Warwick District Council: Encraft

4.5. In 2012, the energy demands in Warwick amounted to approximately 3,487GWh energy per year. This figure is likely to be significantly higher now as approximately 6,346 homes have been built in the district since 2012[6]. The Proposals will produce c. 20MW which equates to meeting 0.5% of Warwick's energy demands per year (based on these 2012 figures)[7]. Therefore, even with the development of the Proposals in the WMGB, and the approval of the pending applications for proposed solar farms (of which Ref. W/21/2080 is also in the WMGB) there is still a substantial requirement for further renewable energy to address the shortfall. This is considered to be a clear indication that there are VSCs which support the Proposals.

4.6. It is further noted that one of the key strategies within the Regional Strategy for the West Midlands (November 2018) is to deliver the West Midlands' share of national and global carbon by reducing 26% of regional carbon emissions between 2016 and 2030. The Proposals will support the West Midlands' in achieving this target.

4.7. Therefore, to support the delivery of renewable energy projects in Warwick, in line with the net zero aims set out by the Council, energy capacity and land availability was explored within Warwick.

5. Site Selection

5.1. The following section sets out the site selection process, which resulted in concluding that the Site is the only available and viable location for the Proposals at the time of submission. The following sections should be read in conjunction with Maps 1 - 7 provided at the end of this document.

Brownfield and Rooftop

5.2. The Applicant and the Agent have considered rooftop and brownfield opportunities over time with the majority of work undertaken when there was a subsidy available for such schemes. From an economic/viability point of view, recently the UK government have re-emphasised the need to increase the number of homes being built, with a focus on brownfield land and areas within settlement boundaries. At the same time, subsidies for solar farms have effectively been removed.

[6] https://data.warwickshire.gov.uk/housing/reports/#/view-report/7850e0fed7c946f3a7f8e3101bfbab5a/E07000222
[7] Full calculations can be demonstrated on request, and are based on annual average estimates

5.3. This means that compared to recent years when solar farms received a subsidy, it is even more difficult for projects to compete with the land values and rental levels attributed to brownfield land and land within settlement boundaries. Furthermore, and as detailed below, the nature of urban brownfield sites does not lend itself to large scale infrastructure deployment, predominantly due to local impacts.

5.4. The following general points are made with regards to the constraints associated with rooftop and brownfield solar schemes, based on the Agent's experience:

- High abnormal costs associated with structural work (rooftop) and abnormal ground conditions including contaminated land (brownfield) and unexploded ordnance (UXO) assessments and remedies (airfields);
- Abnormally high insurance costs;
- Short lease terms and required flexibility from owners of potentially suitable roofs which precludes a long lease (40 years required);
- Complex, fragmented ownership situations for brownfield and rooftop opportunities, with high development costs and high attrition rates in terms of approaches and proposals;
- Lack of interest from short term tenants;
- Lack of interest from owners due to 'non-core' and higher risk activity of brownfield land or rooftop rental;
- Not all rooftops are suitable (angle and south facing key), and overshadowing issues are key; and
- The development of a scheme can also sterilise development elsewhere, by preventing the owner of an industrial estate from redeveloping or extending which would shade a scheme (prevented under the scheme's lease).

5.5. The brownfield land registers for all of the local authorities in Warwickshire have also been reviewed. It should be noted that these registers have been compiled with a view to identifying suitable residential sites, which means that sites are unlikely to be viable for a solar farm.

<u>North Warwickshire</u>

No land available. Largest area is c. 3.65 hectares.

<u>Nuneaton and Bedworth</u>

No land available. Largest area is c. 6.05 hectares.

<u>Rugby</u>

No land available. Largest area is c. 4.8 hectares.

<u>Stratford-on-Avon</u>

According to the Stratford-on-Avon Brownfield Register (January 2020) there are seven sites sufficiently large enough to accommodate a solar development. However, all have permissioned residential developments on the land. These include:

- Long Marston Airfield (Phase 1) c. 45 hectares – outline planning permission granted for the erection of up to 400 homes
- Meon Vale, Long Marston Storage Depot, Phase 4A c. 98 hectares – outline planning permission for up to 550 dwellings

- Meon Vale, Long Marston Storage Depot, Phase 4b c. 98 hectares – outline planning outline planning permission for up to 550 dwellings
- Meon Vale, Long Marston Storage Depot, Phase 3a c. 25.67 hectares – reserved matters approved for 77 dwellings
- Norgren, Campden Road, Shipston-on-Stour c. 52ha – full planning permission for the erection of 111 dwellings
- Meon Vale, Long Marston Storage Depot, (Phase 3b) c. 98 hectares – full planning comprising erection of 110 homes
- Meon Vale, Long Marston Storage Depot, (Phase 4b) c. 98 hectares – outline permission for 550 dwellings

Warwick

No land available. The largest area is c. 13.1 hectares (Former Sewage Works, South of Harbury Lane) and is allocated within the Local plan for 215 dwellings, and is therefore not appropriate for solar deployment.

5.6. The Rightmove Commercial, Zoopla Commercial and the Estate Gazette's Property Link online search facilities were also used to identify potential brownfield opportunities which could accommodate at least 10 MW of solar (a site area of at least 18 hectares). This is a highly conservative approach.

Rightmove Commercial

Search date: 10 March 2022

Parameters: Warwickshire, Land / Development, minimum size 15 hectares

Results: None

Zoopla Commercial

Search date: 10 March 2022

Parameters: Warwickshire, Land, minimum size 30 acres

Results: None

Estates Gazette Property Link

Search date: 10 March 2022

Parameters: Warwickshire, commercial land, minimum size 15 hectares

Results: None

5.7. Based on the above and the information, and the information below, it is considered that there have been substantial efforts to identify potential rooftop and brownfield development opportunities before concluding, in general terms (whilst keeping an open mind to further opportunities), that the proposed use of agricultural land is necessary for the development of solar farms (subject to the more specific assessment at the regional, local and substation level set out below) and that based on other criteria the Proposals are appropriate.

5.8. Specific information on opportunities explored in the Warwick and the nearby area to the 33kV line into which the Proposals will be connecting are set out below.

Substations and Grid Capacity

5.9. The Applicant, in conjunction with workshops and conversations with the Distribution Network Operators (DNO) across the UK, has assessed the existing grid infrastructure across the UK's electricity network to identify suitable grid connections and availability, to then investigate land availability.

5.10. Capacity was identified within Warwick District Council by Western Power Distribution (WPD, the DNO). Map 1 demonstrates the locations of all the substations within Warwick, and their import capacity based on WPD's online data at the time of submission[8]. Specifically, it sets out the remaining capacity in the substations at present, taking into account the accepted grid connection for the Proposals and the capacity taken by solar farms in planning (Refs. W/21/1801 and W/21/2080).

5.11. It is evident that grid capacity is predominantly located either within the town of Warwick, Royal Leamington Spa, or within the surrounding urban areas such as Kenilworth, where large scale solar development is not viable due to its urban location, and the upfront cost and implications of running longer grid infrastructure out to the countryside. The surrounding land to the north and west of Warwick, and north and east of Royal Leamington Spa is also in the WMGB.

5.12. It should be noted that within the Regional Energy Strategy for the West Midlands (2018) it is recognised that there is little spare capacity in the Warwickshire and Coventry electricity networks, and that the network will require future reinforcement works to raise their capacity.

5.13. The Applicant also seeks to reduce, where possible, additional infrastructure required to connect any future proposed solar farm to the substation by means of overhead power lines, wooden poles and pylons to minimise impacts and improve viability.

5.14. At the time of the Applicant seeking grid capacity, WPD specifically identified capacity on the 33kV line which runs through the Site and connects the Claverdon 33 / 11kV substation to the Banbury Road 33 / 11kV substation as shown in Map 2. Therefore, land was investigated within this area.

5.15. It should be noted that the pre-application response stated the following:

> "When considering other applications for solar farm development, there has not been a need to position the development next to a substation, and the application itself usually includes the provision of a substation. Therefore, I do not consider that the proximity to an existing substation should represent a determining factor in locating the solar farm and need for it to be on the proposed site".

5.16. It should be noted that all new solar farms include a new substation. These new substations do not create any capacity on the grid; rather, they transfer the generated electricity into the grid. Development sites do not need to be next to a substation, but they must be sufficiently close to the substation or electricity lines which lead into it to be viable and deliverable. The availability of grid capacity and the complex factors affecting the ability to connect to the grid are key factors in the viability of renewable energy developments. This is a pivotal determining factor when selecting potential solar development areas.

[8] Taken from WPD's online Network Capacity Map (data downloaded 10 March 2022)

Development Plan Area and Planning Material Considerations

5.17. The brownfield land searches referred to above cover the area of the current development plan for Warwick District Council, which comprises the Local Plan 2011-2029 (adopted September 2017). As brownfield land is not available, it is considered that the Proposals' location on greenfield land is justified.

5.18. The Site is located within the WMGB, which covers approximately 72% of the land within Warwick[9]. The land outside the WMGB within Warwick is therefore limited, and mostly comprises urban areas including the settlements of Warwick, Whitnash, Royal Leamington Spa, Bishops Tachbrook, Wasperton, Barford and Sherbourne, as well as future Housing Allocations.

5.19. The remaining land is subject to a number of planning constraints as shown in Map 3. Map 3 has taken into account a number of statutory planning designations including:

- Registered Parks and Gardens
- Scheduled Monuments
- Conservation Areas
- Listed Buildings
- Best and Most Versatile land
- Emerging Local Plan Call for Sites Map[10]

5.20. The emerging Local Plan Sites Map excludes areas which are now being considered for residential or commercial development. These allocations have also been replicated on to Map 3 for ease of reference.

5.21. Solar developments are unable to compete with the opportunities offered by residential or commercial developments. Therefore, these areas are discounted as they are already being considered for more profitable development and the land in question is not readily available as it is likely already secured by developers/promoters.

5.22. Landowners have been approached in the wider south Warwick area over time. However there is significant residential/commercial/mixed development pressure in this area, and landowners have been unwilling to 'lock up' their land in the medium to long term through a solar development, at the potential cost of a more lucrative opportunity such as house builder approaches along the M40. This is clearly reflected in the sites which have come forwards in the Call for Sites.

5.23. The Adopted Warwick Local Plan policy map (refer to Map 4 at the end of this document) should be viewed in conjunction with Map 3, as it demonstrates that the remaining non-designated WMGB area to the south of the district is constrained by the presence of existing allocations (Village Growth Areas and Housing Allocations).

5.24. High level government data demonstrates that the land within Warwick district, and more widely towards Stratford-on-Avon to the south, is predominantly Grade 3 land (which could be either Grade 3a, best and most versatile (BMV), or 3b, poorer quality). There are also areas of Grade 2 (BMV) land, as shown on Map 3.

5.25. At the time of investigating the grid availability, land to the east of Bishop's Tachbrook was also investigated, but was later discounted the limited residual land potentially suitable for renewable energy generation was taken by the solar farm presently in planning (ref:

[9] Calculations based on spatial data available for Green Belt and district boundaries
[10] https://soadc.maps.arcgis.com/apps/webappviewer/index.html?id=c9f9579706974081a054de1b14a66130

W/21/1801). The cumulative visual and construction impacts of developing another solar farm in this area also weigh against further development.

5.26. Noting the limited grid capacity in the area (as also recognised within the Regional Energy Strategy for the West Midlands), taking all of the above and the information shown on this document's mapping into account, the Applicant investigated two potential areas for the development of a solar farm, within 2km of the proposed grid connection point, as shown in Map 5 and 6 below.

5.27. These areas are outside the WMGB and mostly within FZ1, and were therefore the sequentially preferable from a flooding point of view, and preferable to a Green Belt site in terms of planning policy and guidance (flood zones are shown in Map 7 at the end of this document).

Search Area 1

5.28. 'Area 1' comprises land to the east of Barford, as shown in Map 6 at the end of this document.

5.29. This land is not in the WMBG and is in FZ 1. However, following the completion of site search in this area, it was concluded that there is no available, suitable and viable land for a solar farm in this area on the basis that:

- The majority of the potentially suitable land in this area is owned by a single landowner. This owner was approached by the Applicant but discussions were unsuccessful. This owner also previously refused more competitive residential opportunities[11]. Therefore, and based on discussions between this owner and the Applicant as well as the relative economics between solar and residential development, it is considered that this land is unavailable.
- Paragraph 5.48 of the adopted Barford Final Neighbourhood Development Plan 2014-2029 (Adopted 10 October 2016) notes that "the majority of the Grade 3 land is Grade 3a. Thus nearly all the land is classified as Best and Most Versatile. Most of our land area is in agricultural use. How this important natural resource is used is vital to sustainable development". Therefore, the land around Barford appears to be BMV and is therefore not 'sequentially' preferable to the Site.
- The land south of Hareway Lane, between Hareway Lane and Wasperton Lane towards Watchbury Hill, is recognised in the Barford Conservation Area Appraisal and in the Barford Neighbourhood Plan (paragraphs 5.38 and 5.39) as making an important contribution to the key walks, views and vistas of the Barford Conservation Area. Therefore, it is considered that a solar farm in this location would result in unacceptable harm to the setting of the Conservation Area, and to landscape and visual amenity.
- Notwithstanding this, the topography of the land is otherwise unsuitable for a solar farm, or the land parcels aren't large enough, and there would be some harm to the setting of the Grade II Listed Barn 20 yards south of Gooseberry Hall Farmhouse would need to be taken into consideration.
- Nevertheless, to connect the land to the north of Hareway Lane to the 33kV line, significant infrastructure in the way of potential overhead power cables over the river, and cables through Barford would be required, which would

[11] https://www.warwickshireworld.com/news/developers-want-millions-for-this-field-but-i-want-to-protect-the-countryside-says-barford-landowner-852677

result in significant road and traffic disruption and potential further visual intrusion from the overhead cables.

5.30. Therefore, whilst the land in Area 1 is outside the WMGB and it is sequentially preferable from a flooding point of view, for the reasons set out above it was concluded that there was not suitable and available land for the development of a solar farm.

Search Area 2

5.31. 'Area 2' comprises the land south-west of the town of Warwick and Bishop's Tachbrook and lies mostly in FZ 1, and is shown in Map 6.

5.32. The land within Area 2 was discounted for the following reasons:

- Landowners approached in this area were generally keen to investigate the opportunity for more lucrative development opportunities which solar farms are unable to compete with, so are not willing to engage in discussions relating to solar development opportunities.
- New dwellings at the new Oakley Grove housing development to the north in Heathcote would overlook a solar farm on the land around New House Farm and Brookside Farm, likely resulting in inappropriate landscape and visual impacts.
- A buffer would also need to be implemented to set the panels back from New House Farm and Brookside Farm to minimise the visual impact to residential amenity.
- Windmill Hill is a non-designated Historic Environment Record, and therefore would be a sensitive heritage asset which would need to be avoided and its setting considered, reducing the availability of land.
- The locally designated Tachbrook Country Park is noted to the north of the Tach Brook, the environmental sensitivities of which would need to be taken into account.
- The land to the north of the PROW around New House Farm and Brookside Farm is north-sloping which makes it unsuitable for solar deployment.
- PROW users walking along the PROW which bisects Area 2 would experience cumulative landscape and visual impacts with the existing solar farm (Ref. W/13/1134), and would likely have views over a potential solar farm either side of the PROW, more notably the land to the south of the PROW as it slopes north.
- Should the housing development to the east of the Warwick Castle Park and Garden, and to the west of Bishop's Tachbrook come forward, PROW users would experience limited residual rural views between Bishop's Tachbrook and the new development, which would negatively influence the landscape in this area.
- It is considered that a proposed solar farm in this location would cause coalescence between Heathcote and Bishop's Tachbrook, taking into consideration nearby allocations and proposed housing developments, resulting in inappropriate landscape and visual impacts and residential amenity impacts, especially on the PROW.
- A solar proposal here would likely result in noteworthy harm to the setting of the Grade II Listed 'Barn approximately 30m north west of Newhouse Farmhouse', and the Grade II Listed 'Greys Mallory Including Forecourt Walls

to East and South East' noting the relationship between the listed building and the PROW in terms of views.

- A number of wayleaves would be required to get permission for the grid connection route, which would likely render the development unfeasible.

5.33. Therefore, whilst the land in Area 2 is outside the WMGB and it is sequentially preferable from a flooding point of view, for the reasons set out above it was concluded that there was not suitable and available land for the development of a solar farm.

Selection of the Site

5.34. Therefore, noting the absence of suitable, viable (taking into consideration the grid constraints) and available land which is sequentially preferable in terms of flooding, outside the WMGB, and recognising the pressing need to tackle climate change and reach net zero in Warwick, the potential to develop the Site was pursued. Moving west along the existing overhead line (identified by WPD as being potentially suitable for a connection) into the WMGB, the Site was the first area of land reviewed. Its location on the fringe of the WMGB, in an area already dominated by the main road and motorway network, was considered a strong starting point for further consideration.

5.35. A detailed analysis of the Site and its surroundings was undertaken to determine whether to proceed with incurring the cost of the planning application fee. This included a review of the feedback from the consultants who have prepared the assessments which now accompany the application. Consequently, it was concluded that the Site is appropriate for the Proposals in terms of the following material considerations. Reference should be made to the relevant sections below for full details:

Material Consideration	**Site Conclusion / PDAS Section**
Principle and Need	Support in principle and need for the Proposals, as demonstrated in Section 8 of the PDAS.
Landscape and Visual Impacts	Landscape and Visual effects have been minimised and mitigated through careful site selection, the existing and proposed screening, and residual impacts are clearly outweighed by the benefits of the Proposals. Refer to Section 9 of the PDAS.
Green Belt	It has been calculated that taking the existing and proposed renewable and low carbon energy schemes in Warwick, there is still a renewable energy deficit, and therefore the Proposals are necessary to meet the Council's Net Zero target. Alternative land outside the WMGB was not available at the time of submission and was considered less suitable. Overall, it is considered that these exceptional circumstances, and the benefits of the scheme including BNG uplift and the implementation of a SuDS scheme, outweigh the harm to the greenbelt by reason of inappropriateness and VSCs apply to this Proposal. Refer to Section 10 of the PDAS.
Ecology and Biodiversity	Minor mitigated impacts outweighed by substantial benefits, including new species rich trees and hedgerow to strengthen ecology corridors around the Site. Refer to Section 11 of the

	PDAS.
Flooding and Drainage	Although the northern portion of the Site lies partially within FZ 2 and 3, there are no sequentially preferable sites available to the application. The Proposals are essential infrastructure as defined in the NPPF, and pass the exception test. The Proposals will manage surface water run-off effectively to minimise vulnerability and improve resilience; making the Proposals safe for the duration of its lifetime and without increasing flood risk elsewhere in the locality. Refer to Section 12 of the PDAS.
Cultural Heritage and Archaeology	Negligible harm clearly outweighed by substantial benefits. Refer to Section 13 for more details.
Land Use Issues	The Site is Grade 3b land and will remain in agricultural use through grazing. The land will be reinstated post operation and there will be generous biodiversity enhancements.
Traffic and Transport	Suitable access arrangements via the existing access points off the A46 and the B4463. No inappropriate impacts anticipated during construction, operation or decommissioning. Refer to Section 15 of the PDAS.
Further Material Considerations	The Proposals have no impact on residential amenity on account of their location and the existing screening measures. There will be a negligible impact in terms of construction, operation and decommissioning. No inappropriate impacts on tourism, and provides support for farming diversification. Refer to Section 16 of the PDAS for further material considerations.

Table 1 – Summary of main material considerations

Conclusion

5.36. Solar Farms are generally developed on greenfield land due to the lack of brownfield sites and rooftop opportunities, with planning officers and inspectors generally concluding that the need for such schemes to be located on greenfield land is justified in planning policy terms. With this in mind and based on the preceding information in this section, it is concluded that there are no viable alternatives to using agricultural land for the Proposals.

5.37. Planning Practice Guidance (PPG) states that "where a proposal involves greenfield land… the proposal allows for continued agricultural use and/or encourage biodiversity improvements around the arrays."[12]

5.38. The Site is Grade 3b and therefore poorer quality land. The Proposals will serve a dual use for the duration of the solar farm: agriculture and energy generation. The grassland will be sowed with grass appropriate for sheep grazing, and will be restored to its former condition following decommissioning. Moreover, a biodiversity net gain will also be delivered as part of the Proposals, thereby complying with both elements of the PPG.

[12] Planning Practice Guidance - Paragraph: 013 Reference ID: 5-013-20150327 (27/03/2015)

5.39. Land wholly within FZ 1 has been sought and was not readily available at the time of submission. Therefore, although the northern part of the Site is partly located in FZ2 and FZ3, it has been demonstrated that there are no sequentially preferable sites available due to the absence of landowner aspirations for solar development in those areas and the potential alternative sites were considered less appropriate as set out in the Site Selection. The Proposals are considered essential infrastructure as set out within the NPPF, and also comply with the exception test with the mitigation measures incorporated.

5.40. National UK policy, set out within Section 7 of the PDAS, supports the Government's aims to be Net Zero by 2050. This requires a 'four-fold'[13] increase in provision of energy to meet the energy demands of the future.

5.41. It is noted that the Council have not identified suitable land for renewable energy deployment, and that, as set out in Section 4 of this document, the Council requires renewable energy schemes to be brought forward to achieve their aim of being an almost Net Zero Carbon district by 2030 and support the UK's overall transition to net zero by 2050. It has been demonstrated that land outside of the WMGB was not readily available at the time of submission. Therefore, noting the saturation of the grid supply in Warwick, and the insufficient supply of renewable energy generation schemes (existing and proposed) at present to meet Warwick's net zero targets, the use of the land within the WMGB is considered necessary to deliver these targets.

6. Summary

6.1. Details of the site-search programme have been set out above and in the maps at the end of this document.

6.2. The use of agricultural land has been robustly justified. The land will continue to be farmed and there will be substantial biodiversity enhancements in line with the PPG. The Site is Grade 3b (poorer quality) and not BMV agricultural land.

6.3. Although the northern part of the Site is partly situated in the FZ 2 and 3, it has been demonstrated that there are no sequentially preferable sites available due to availability and lack of constraints in contrast to other land identified in the Site Selection. The Proposals are considered essential infrastructure as set out within the NPPF and comply with the exception test with mitigation measures incorporated. This document explains why areas in FZ 1 were not available at the time of submission, and therefore why the Site is the sequentially preferable location. It is considered the Proposals pass the sequential test.

6.4. The use of land in the WMGB for the Proposals has been demonstrated to be necessary owing to the lack of grid capacity in Warwick and the absence of reasonable alternatives in the remaining land outside the WMGB. The Council have not designated areas within the district to deliver renewable energy, but it is noted the Council declared a climate emergency and are aiming to be carbon neutral by 2030. Noting the renewable energy deficit in Warwick, the need for further renewable energy schemes is evident. Therefore, the location of the Site within the WMGB is necessary, and this document supplements the case set out in Section 7 of the PDAS which concludes that there are VSCs which support the Proposals.

[13] Power Our Net Zero Future (December 2020) Energy White Paper

6.5. Other material considerations have been reviewed in detail as part of the site selection process, and it is **concluded that the Site is the only available and viable option available to Applicant at the time of submission.**

Mapping