



Note

To: Jeff Brown
North Warwickshire Borough Council

From: Stantec/
Enviromena

Project/File: 34573 - PAP/2023/0071

Date: November 2023

Reference: PAP 2023/0071 Land 800 Metres South Of Park House Farm, Meriden Road, Fillongley: Proposed solar farm and associated infrastructure.

Introduction

This Note has been prepared by Stantec on behalf of Enviromena Project Management UK Ltd, the applicant in respect of the above planning application, in response to matters raised by consultees during the public consultation period of the application.

Specifically, the aim of this Note is to provide additional clarity and information to address areas of concern raised by Fillongley Parish Council, Corley Parish Council, and members of the public regarding the proposed development.

Responses to the key matters raised are as follows:

Scale and Need of Development

The Government is clear that an increase in renewable energy generation is of paramount importance if the UK to achieve the legally binding target set under the Climate Change Act, requiring all greenhouse gas emissions to be net zero by 2050.

The development will contribute towards the UK's efforts to tackling climate change and achieving Net Zero emissions and will provide significant environmental benefit by meeting the electrical needs of approximately 17,100 homes providing a CO2 displacement of 11,300 tonnes compared to the same energy from fossil fuel sources.

In this regard the Applicant also acknowledges comments regarding other solar farm proposals in the Borough. If the UK is to meet its climate change targets, then a significant increase in renewable projects is required, all areas of the UK will need to be involved if the carbon-reduction targets are to be reached.

The Applicant also acknowledges that using brownfield land and fitting PV cells and wind turbines on buildings will make a positive contribution to meeting domestic energy needs, however the required upscaling of renewable energy production cannot be accommodated by micro-generation projects alone. Large sites will be required, and inevitably large sites will be in open, less developed locations.

Nevertheless, the Applicant has undertaken everything feasibly available to minimise the impact of the development on residents, the landscape, and local wildlife.

Green Belt Development

It is acknowledged that the Site lies within the Green Belt where new development is restricted by policies set out in the National Planning Policy Framework (NPPF).

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However, the NPPF does allow that when 'very special circumstances' are demonstrated, that certain development can be considered acceptable, namely where the benefits of doing so outweigh the potential harm to the Green Belt¹. The NPPF identifies that the environmental benefits arising from renewable energy generation can be considered as a 'very special circumstance'².

The Planning Statement submitted as part of the application package provides a detailed discussion of the development's impact on the Green Belt and sets out a case for how the development demonstrates very special circumstances. In summary, it is concluded that the development would result in very limited harm to the Green Belt because of:

- The limited landscape and visual impacts, due to containing the arrays within existing field enclosures which will be subject to additional planting;
- The rural location of the Site and the nature of the development will not result in merging of settlements, unrestricted urban sprawl and preserve setting of historic towns;
- The temporary and fully reversible nature of the development i.e., the land is not 'lost' and retains its Green Belt status;
- The potential for continued farming practices allowing for dual agricultural-energy use; and
- Minimal level of activity generated by the development including very minimal traffic generated during its construction and operational phases.

In accordance with local and national policy requirements, very substantial positive weight should be accorded to the scale of generation of renewable energy and associated significant reduction in carbon emissions arising from the proposed development.

This constitutes 'very special circumstances' which significantly outweigh the limited, temporary harm to the Green Belt.

Flood Risk and Drainage

In accordance with national and local policy requirements a Flood Risk Assessment and Drainage Strategy has been prepared by drainage consultants BWB to determine the potential sources of flooding on the Site, impacts on flooding elsewhere and mitigation measures to reduce any impact. BWB have over 20-years' experience in the assessment and management of flood risk and are nationally recognised as prominent experts in the safe delivery of development in the most complex of flood related settings.

The submitted Flood Risk Assessment confirms that the Site is located wholly within Flood Zone 1 and accordingly is at low risk of flooding from fluvial sources. The site is therefore appropriate to accommodate the proposed development from a policy perspective. However, areas at elevated surface water flood risk were identified at the northwest boundary, associated with Bourne Brook and drainage ditches present.

¹ Paragraph 114

² Paragraph 151

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The proposed surface water drainage strategy developed by BWB takes this into consideration and is based around ensuring that the ground under and around the arrays remains vegetated to allow the site to continue to absorb rainfall as it does at present. As an additional measure interception swales will be implemented at the most downward gradients of the site, ensuring surface run off is intercepted and discharged in a controlled manner should the ground beneath the panels become patchy or bare, further managing flood risk.

The drainage strategy demonstrates that all surface water can be adequately and appropriately dealt with and will not result in increased flood risk on or off-site. The drainage strategy is based upon recognised research and technical guidance for managing surface water at solar farm developments has been developed in accordance with the Lead Local Flood Authority's (LLFA) guidance.

At the request of the LLFA borehole testing has been undertaken to confirm the appropriateness of the proposed drainage strategy. The LLFA have confirmed that they have no objections to the scheme, or drainage strategy proposed. Should planning permission be granted several standard pre-commencement conditions have been agreed with the LLFA to ensure the proposed drainage strategy is implemented.

The Applicant is acutely aware of local flood risk concerns and so has tried on numerous occasions to engage with the Local Flood group to establish if any additional measures could be accommodated on the site to minimise existing off-site flooding issues. However, despite repeated requests no information or meetings have been forthcoming.

In addition, the Applicant has been involved in talks with Warwickshire Wildlife Trust to understand potential for the Site to accommodate flood alleviation measures to minimise existing off-site flood issues including those that would also provide additional ecological benefits. Discussions highlighted that onsite swales and additional planting could help in reduce off-site flooding and as can be seen from the application documents, both are featured in our plans.

To summarise, the drainage strategy proposed ensures that there will be no increased flood risk on or off-site resulting from the proposed development. All surface water can be adequately and appropriately managed within the Site.

Use of Agricultural Land

It acknowledged that the Site comprises predominantly of Best and Most Versatile (BMV) agricultural land, for which national and local planning policy states there is a general presumption against loss to development.

Discussion and justification on the use of the Site to accommodate a solar farm is set out in the planning statement and BMV statement which accompany the application. To summarise these documents, that the temporary use of the site to accommodate the solar farm is acceptable for the following:

- BMV land is not a scarce resource in North Warwickshire. Proportionally North Warwickshire has a greater provision of BMV land than found generally across the national, regional, or county geographic levels. Most notably it has, comparatively, significant provision of ALC Grade 1 and Grade 2 land. The ability to find alternative sites of lesser soil quality to accommodate commercial scale solar development is therefore highly constrained. The Site equates to 0.22%

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of the total authority area. At this scale impacts will be highly localised and negligible against provision of BMV land across the district.

- Land proposed to accommodate solar development, is not lost from agricultural use, either temporarily or in perpetuity. The granting of planning permission for solar does not alter its designation as agricultural land, and unlike other forms of development it is wholly reversible and can continue to provide an agricultural function whilst being used for energy generation.
- Through landscape planting and ecological enhancements proposed significant net gains for local biodiversity will be delivered. In addition, by leaving the land fallow, soil health will improve.

In short, the development will not result in the temporary or permanent loss of agricultural land. The development is temporary, all equipment can be fully removed, and the site reinstated with benefit of significant ecological gains. Some agricultural practices such as grazing of livestock (sheep, goats, chickens etc.) and bee keeping can continue concurrently with the energy generation ensuring that the site will continue to fulfil some agricultural purpose.

Public Health Risk

Several comments have been received surrounding public health concerns related to solar farm developments, these are considered below.

Easements

There is no UK or EU legislation or guidance that requires specific easements between residential properties and solar farm developments on grounds of public health risk. Repeated studies have found no causal link between solar farms and ill health.

Proposed developments are however, required to demonstrate that they will not result in unacceptable detrimental impact in respect of amenity or environmental aspects for instance noise, glare, air quality etc. These are grounds that all developments are assessed against and are not specific to solar farms.

The planning application is accompanied by a suite of technical assessments and reports that demonstrate that the proposed development can come forward without significant impact on quality of amenity currently enjoyed by residents. In addition, the proposals include additional landscape planting that will help to screen the development and provide significant local ecological benefits.

Electromagnetic Fields

Solar PV technology uses cells to absorb solar radiation and turn it into electricity. That electricity can then be stored in batteries or in the case of this proposal fed straight into the national power grid.

Electricity from solar panels when transmitted to the power grid emits extremely weak electromagnetic fields. Exposure to low-level electromagnetic fields has been studied extensively, and the World Health Organisation states there is no evidence that it is harmful to human health³.

³ <https://www.who.int/news-room/questions-and-answers/item/radiation-electromagnetic-fields>

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There are however significant benefits related to health because of solar energy, most notably by the offset of carbon emissions, reduced air particulates⁴ and helping mitigate the impacts of climate change.

Noise

Solar panels themselves do not generate noise and the proposed arrays do not include any moving parts, therefore the noise generated is very low. The main noise source associated with a solar farm will be within the inverters which are attached the rear of the arrays where small fans operate during daylight hours only and which is unnoticeable beyond several metres.

In this regard the Applicant highlights the proximity of the M6 motorway which generates significant levels of background noise. Against this context the solar farm during its operational hours will not be acutely perceptible, particularly from residential dwellings which are some distance away (a single farmstead is located 650m with next nearest properties 1.1km away).

Furthermore, solar farms once operational require very little maintenance. It is anticipated maintenance checks will be undertaken up to twice a month comprising of a single van. As such there will be very minimal traffic generated and very little mechanical noise during its operation.

Glint and Glare

A Glint and Glare assessment has been carried out and considers the potential impacts on ground-based receptors such as roads and residential dwellings as well as aviation assets. The assessment is based on computer modelling tracking the movement of the sun across the seasons and based upon local topographic data.

The assessment identified several areas where mitigation, in the form of additional landscape planting is required to alleviate potential impacts on road users and occupants of dwellings. The proposed landscape strategy reflects these recommendations and includes extensive new boundary landscape planting including 'gapping up' of existing hedgerows. The species proposed will ensure a sufficient level of screening across all seasons. With the proposed landscape strategy, which can be secured via application of a planning condition should permission be granted, there is predicted to be no unacceptable effects in terms of glare.

Air Quality

The solar arrays do not produce any emissions and once operational require minimal maintenance, on average consisting of 2no. visits a month (by one van), as such there will be no detrimental impact on local air quality arising from the development.

Light Pollution

Solar farms are not required to be lit at night; no flood lighting is proposed at the Site. Should in rare cases maintenance be required out of hours a small extent of LED PiR lighting will be placed at the DNO compound area, i.e., will only be on when triggered.

⁴ World Health Organisation. *Health Indicators of sustainable energy. Initial findings from a WHO Expert Consultation: 17-18 May 2012.* Accessed: https://cdn.who.int/media/docs/default-source/environment-climate-change-and-health/sustainable-development-indicator-energy.pdf?sfvrsn=468084e7_2

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As such there will be no light pollution or light spillage from the Site.

Fire Risk and Ground Water Contamination

The Applicant acknowledges concerns raised regarding how any fire incidents will be controlled at the Site, particularly given its location within a ground water catchment zone. Notably, concerns raised surround increased fire risk from battery storage facilities.

In this the Applicant highlights that the proposed development comprises of a solar PV farm only. **No battery storage facility is proposed.**

There is very limited infrastructure or material that is flammable on a solar farm. The panels are made from glass and steel and are supported on steel or aluminium framework. Fire risk is limited to the electrical components ancillary to the development such as transformers or switchgear. In this regard fire risk is not specific to solar development. Fires at solar farms are very rare and when they do happen due to the limited combustible materials present and electrical nature, they tend to be highly localised and small scale.

Should planning permission be granted for the scheme then a requirement for a Construction Environment Management Plan will be conditioned, in which details of fire strategy will be set out. Given the limited overall fire risk posed, it is envisaged the strategy will be similar to the following which has been accepted as appropriate by several other Local Planning Authorities in the country:

“Fire Prevention and safety

Fire Extinguishers shall be made available at the site office, refuelling area and within plant. Quantity, locations, and type of fire extinguishers shall be appropriate to the risks.

All personnel will be briefed on the use firefighting equipment and the reporting process during induction and at frequent “Toolbox” safety meetings.

Emergency procedure and emergency contact telephone numbers are posted within the canteens and office notice board.

All Firefighting equipment (extinguishers) are inspected by Project Manager or designated individual monthly to identify conditions that may prevent the use of the appliance during an emergency.

All deficiencies must be corrected immediately.

Project Manager to keep a consolidated record of the location of all extinguisher’s, maintenance received and the conditions relative to the condition and maintenance of fire appliances.

Access to all available fire-fighting equipment shall be maintained at all items.

“What to do in case of fire

In case of fire, call 999, alerting the fire authority to the location and nature of the fire. The emergency services will use the main gate to get to the location of the emergency.

Should a person be on site, they must open the entrance gates to grant free passage to the fire authorities, ground conditions permitting.

Once operational and should there be a potential of fire damage to electrical components on site, the entire site must be isolated at the customer breaker by an SAP onsite or the O&M team via the SCADA system before anyone can access the

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*site. Emergency services must have confirmation of isolation prior to entering the site.
Even with the site isolated, there may still be DC voltage in the cables between the modules and the inverter. These cables will only truly be at 0v when there is no sunlight.”*

The above represents a proportionate and appropriate response to the scale of fire risk from the proposed development. Concerns regarding potential contamination of ground water sources from fire extinguishing compounds are acknowledged but additional measures to mitigate potential impacts are disproportionate to the overall level of fire risk and likely highly localised nature and scale of any potential fire.

Additional measures would be disproportionate and unnecessary given that no battery storage is proposed on the site.

Efficiency of Technology

Despite its reputation for having grey and cloudy weather, the UK has enough sunlight to power solar panels. It gets the same amount of solar irradiation as certain areas in France or Spain, which are typically considered to have a ‘Mediterranean climate’. The UK receives around 60% of the solar radiation found along the Equator.

Even though solar panels produce more power during a sunny day, they can still produce a considerable amount of energy when the days are cloudy. Solar PV uses light to produce electricity, not heat. Furthermore, given the frequent windy periods which the UK experiences, this can assist in the efficiency of the solar panels and associated components by minimising debris mount-up on the PV cells.

Property Value

Material planning considerations are issues that should be discussed when deciding whether to grant planning permission. Whilst there is no definitive list, material considerations are generally determined from the viewpoint that planning is concerned with public interest. As such perceived loss of property value is not considered to be material.

In addition, property value is subjective and can be affected by a range of local and national factors. There is no firm evidence on whether solar farms do or do not affect house prices. Potential impact on local properties, in terms of noise, visibility and glint and glare, have been assessed as part of the preparation of this planning application and mitigation measures have been adopted where appropriate to minimise any potential impacts.