

Planning  
Three Rivers District Council  
Northway  
Rickmansworth

For the attention of Ms S O'Brien

Dear Ms O'Brien

**Site: Bullsland farm, Bullsland lane, Chorleywood**

**Application: Solar Array and utility building**

You will recall planning permission for the conversion and rebuilding of former barns as 4 dwellings at Bullsland Farm (ref 16/2516/FUL).

To support the Government's objective to reducing the carbon footprint of the UK the applicant is proposing a solar array to make these dwellings as carbon neutral as possible in the interests of achieving a sustainable form of development.

In this regard, the applicant proposes a solar array located in the adjacent field to Bullsland Farm as shown on the submitted plans (PL 010 and PL 015 respectively). The proposal includes associated engineering works to lay supporting cabling, a plant building and associated landscaping.

The Local Planning Policy context is found in CP1 (Sustainable Development), CP11 (Green Belt) and CP12 (Design) of the Core Strategy and DM2 (Green Belt), DM3 (The Historic Built Environment), DM4: Carbon Dioxide Emissions and On-site Renewable Energy, DM5: Renewable Energy Developments, DM6: Biodiversity, Trees, Woodland and Landscaping, DM7 Landscape Character of the Three Rivers (Development Management).

### Heritage

The array is located well beyond the historical fabric of the farmstead, which contains the Grade II listed Thresher Barn and Farmhouse, both located a great distance from the proposed development. The most immediate buildings are those that are currently under conversion and renovation, which are curtilage listed only (2016 application).

Neither the plant building nor the array is located in the historic curtilage of the farmstead, which itself is curtilage listed. The 2016 application permitted the agricultural buildings to be converted to dwellinghouses. The overall context of the setting has thus considerably changed. That said, the historical context of the proposed site is that of open fields beyond the main farmstead. Given the context of the farmstead, we do not believe that the addition of the array and plant building have any direct impact on either the Listed Buildings (as they are beyond the converted buildings) or the most immediate ones as these have changed in context.

Although there were no historical buildings in the proposed locations this does not interfere with any historical or established site lines.

We, therefore, consider that the setting of the listed buildings has been maintained. If on the contrary, then the obvious public benefits of the proposal outweigh the harm.

### Green Belt

The application is located in the Green Belt where the presumption is against inappropriate development. This position is supported in CP11 and DM2.

The Core Strategy CP1, however, underlines that the Council is committed to the promotion of renewable energy technology, subject to adequate mitigation of any adverse impacts. The Council also considers that carbon omissions should be reduced through sustainable design and construction...and on-site renewable energy

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generation or alternative solutions, recognising that the Climate Emergency substantially challenges our notions of urban design.

Paragraph 13 of the Planning Policy Guidance also provides specific guidance on solar farms stating that "The deployment of large-scale solar farms can harm the rural environment, particularly in undulating landscapes. However, the visual impact of a well-planned and well-screened solar farm can be properly addressed within the landscape if planned sensitively."

In so far as visual impacts are considered the relative impact is to the immediate buildings on the southwest of the farmstead, which itself will be contained within a tree screen, the array is located in a well-contained field by a combination of existing hedgerows, shrubs, tree belt and woodland vegetation that are located within and along the Site's boundaries, which considerably reduce the visibility of the Site from wider and local vantage points.

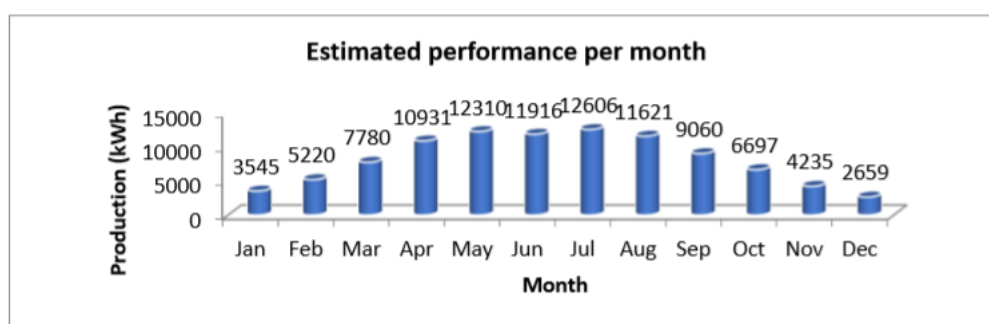
The Site's visual connectivity to the wider landscape is generally limited to its local context up to approx 1km. Coupled with the landscape-led iterative design process, the Proposed Development has been sensitively sited to reduce landscape and visual effects and potential harm to the Green Belt. This has involved the confinement of solar panels to the existing fields present within the Site; being at the lower level within the wider landscape context, and the siting of the proposed plant building is set within the context of the existing built form.

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

It is a key planning policy requirement that very special circumstances need to exist for inappropriate development to be approved in the Green Belt. Every circumstance in itself is 'very special'. Some factors which are quite ordinary in themselves could, cumulatively, become very special circumstances<sup>1</sup>.

The following are benefits of the Proposed Development:

- The Development would supply approx 98,580kWh of electricity, the equivalent of 82.5% electricity demand of the developments associated with Bullsland Farm. This will be the equivalent of removing 27.6 tonnes of CO2 emissions a year. It is estimated that the solar array will bring Three Rivers closer to the national average of 33% electricity generated from renewable sources.



- The panels measure 1680mm x 990mm and will be ground-mounted with a total area coverage of 78m x 7m, making 546sqm.
- The position of the plant building is the optimum location that balances the competing needs of the DHA, the Green Belt and the power connectivity, which is constrained by the BPA fuel line (located west of the site – see BPA plan that supplies fuel to Heathrow Airport). The location and the route of the array infrastructure (the underground pipe presents no harm) has been approved by British Power Association and the distribution network operator DNO). Both elements create the least harm of the proposed development
- As demonstrated above, the UK and HBC are at a time of climate emergency and there is an urgent requirement for renewable energy infrastructure, particularly when considered in the context of the June

<sup>1</sup> R. (on the application of Basildon DC) v First Secretary of State [2004] EWHC 2759

2019 ambitious target to reduce greenhouse gas emissions to net-zero by 2050 following the Climate Change Act 2008. Whilst there is no requirement for an applicant to demonstrate the need for renewable energy in planning policy, national energy policy makes clear that renewable and low carbon energy is vital to our economic prosperity and social well-being and that it is important to ensure that the UK:

- Transitions to a low carbon economy and reduces greenhouse gas emissions to address the predominant challenge of our time, climate change;
- Supports an increased supply from renewables and conforms to the Councils objectives (Objective 2)
- Continues to have secure, diverse and resilient supplies of electricity as the UK transitions to low carbon energy sources and to replace closing electricity generating capacity;
- Reduces the strain on the National Grid and increases the electricity capacity elsewhere to enable our electricity supply to stay ahead of growing demand
- Delivers new low carbon and renewable energy infrastructure as soon as possible- the need is urgent
- Substantial landscaping to generate a net biodiversity gain and provide green infrastructure.

The recent 2020 Progress Report to Parliament<sup>2</sup> on Climate Change states that the path to achieving net-zero emissions by 2050 will necessarily entail a steeper reduction in emissions over the intervening three decades and to reach the UK's new Net Zero target, emissions will need to fall on average by around 14 MtCO<sub>2</sub>e every year, equivalent to 3% of emissions in 2019. The report goes on to state that reaching net-zero emissions in the UK will require all energy to be delivered to consumers in zero-carbon forms (i.e. electricity, hydrogen, hot water in heat networks) and come from low carbon sources (i.e. renewables and nuclear etc).

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

The NPPF and CP1, DM4 and DM5 state that renewable energy and associated infrastructure should be supported in the planning system, as part of working towards a radical reduction of greenhouse gases to tackle climate change. Paragraph 151 encourages local planning authorities to maximise the potential for renewable energy and to approve such applications where their impacts are acceptable.

This should be afforded significant weight in the planning balance and as a VSC.

## Design

The design of the array and plant building is such that it is contained within the existing infrastructure of the surrounding landscape.

There are strict guidelines on how arrays and the associated infrastructure should be constructed these are set out in the appropriate supporting documents.

The utility building is 8m x 4m wide, akin to a large shed. It is to house the necessary plant, machinery and associated equipment required for the array including a 96kw battery pack which enables the continued storage of electricity when demand is low thus reducing the overall load.

The intention is to connect all the buildings on the site to the array including the Threshing barn (see 19/1361/FUL), the existing farmhouse, the approved Class Q Southern barn (19/0638/PDA) and Hayloft in a network. Allowances in the size of the building have been made to accommodate this.

To illustrate how the building will work in practice we also enclose a plan (21-018-04) which shows the internal layout of the building. This shows the disposition of incoming services as well as meters for the various utilities. The plan shows the disposition of an array of Lithium-ion batteries so that in periods of inclement weather and at night, sufficient electricity is stored on site. However, there is, of course, an incoming mains supply should there be issues with the functioning of the solar array and to provide 'back-up' power when required.

To understand the technical standards being sought, I enclose datasheets and plans of the array as well as a technical specification.

Messrs Envirogy Power has provided the following reasons why the array and plant building is per the submission;

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<sup>2</sup> Reducing UK emissions: 2020 Progress Report to Parliament. Committee on Climate Change. June 2020

***The size is – why not make it bigger and collect feed-in tariff***

*The feed-in tariff for domestic PV arrays is circa 5.5p/kWh as the incentives ceased as of 1<sup>st</sup> April 2019, making any sizeable domestic level exportation to the grid non commercially justifiable. The array is designed so that the development should in normal circumstance be large enough to service the buildings even during the winter months. The incorporation of 96kW of batteries will supply residual power to meet demand. There will inevitably be a grid requirement at some points throughout the year, but this should be minimal meaning the development and existing properties should be able to run on 100% renewable electricity.*

***The location is – why can't it be elsewhere in the estate***

*When designing any PV array, distance from the demand is a critical factor for consideration, as the power will diminish the further away from the array the demand is. We also must take into account the numerous public footpaths across the property, access roads and sun paths relative to the location and any shadowing effect of nearby vegetation or buildings. After numerous visits to the site and modelling, the proposed location is the only suitable position for the array taking into the constraints of rights of access, sun paths etc.*

***The size of the building to support it, and what is going in there and the size of each package so we can multiply it by 12 for an overall dimension***

*The utility building is designed to accommodate all the necessary plant, machinery and infrastructure for the array and new grid electricity connection and meters for each unit, the new water supply & meters for each unit, the broadband and telecoms for each unit. 8m x 4m building is sufficient to house all this equipment and the 96kW of batteries 10 x invertors the switching gear and metering for each unit from the residential PV array.*

***The power generated and what happens in the dark/winter for power***

*The array includes 315 x 320w Solarwatt glass/glass panels giving a forecast annual electricity production of 98,482kWh (estimate for year 1). The incorporation of 96kW of batteries within the plant building is to deliver off-grid power when demand is higher particularly at night, during periods of low sun and the winter period when the power input will be less for obvious reasons. We also have a new grid connection coming into the utility building to support the residential array for when the generation and battery storage cannot deliver the demand.*

***Whether any excess electricity is to be put back into the national grid.***

*If excess generation cannot be used on-site or stored within the batteries / ev chargers we would look to export the remaining back to the grid, but see 1 above.*

***Bearing in mind the site is within the Green Belt."***

*We appreciate it is greenbelt land by the array is sympathetic to the current site and also the residential development, the PV array is a 'temporary' installation and can be removed at any point with the land being returned to pre-installation condition. The UK as of June 2019, committed to NET Zero 2050, this installation will ensure that the majority of the electricity used on site will be 100% renewable and does not put an excess demand on the grid.*

It is important to consider, in the planning balance that both aspects of the development present individual and collective benefits and challenges Both the array and the plant building show there will be substantial benefits, not least in terms of additional landscaping to further assimilate the development within the wider landscape, particularly when viewed from the west, north and south.

We believe that overall, the development is carefully considered and responds to the challenges toward carbon-neutral developments which is supported by national and local planning policy and the Council's commitments toward meeting and responding to the Climate Emergency. There is no impact on or to the setting of DHAs, the wider landscape and if any harm does arise these are offset by the benefits outlined.

I trust you will find the application acceptable and worthy of your support, but, if you need further information or clarification on any matter, please, do not hesitate to contact me.

Yours sincerely

*M. S. Crook*

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