

**3rd June 2024**

**Comments on behalf of The Friends of Nethergong Valley Group -  
Canterbury City Council Draft Local Plan 2040 - Climate Change Topic  
Paper Regulation 18 Consultation 2024 (Feb 2024).The Future Of Energy  
In Canterbury District Section 6.4 & 6.5,Renewable energy site  
assessments. Site SLAA280 Marley Lane Solar Farm and Battery Storage  
Facility**

**Introduction**

The purpose of this commentary is to ensure that detailed consideration is given to all aspects of the proposed allocation of land in the CDLP2040 for a 101 hectare solar power generation and battery storage facility together with potential co-location of wind turbines on productive BMV farmland at site reference SLAA280, Marley Lane between Hoath and Chislet. The whole site is made up of predominantly grade 1 and grade 2 farmland with small areas of grade 3 on behalf of The Friends of Nethergong Valley.

Hoath is designated as a local service centre with reference to Policy R11. Under Policy R11 (2) The Council will seek to protect and enhance the sustainability of the local service centre by [amongst others]:

1. Protecting the network of valued open spaces and sports and recreation opportunities at the settlements.
2. Supporting the PRow network at settlements.
3. The development would be well related to and proportionate to the scale of the existing settlement and protects the rural character of the area.

**Policy DS12 3.** The council seeks to protect BMV land for the longer term. Site **SLAA280** is a mixture of grade 1, 2, & grade 3 farmland, in addition, Hoath is described under the council's Landscape Character and Biodiversity Appraisal (2020) as a landscape character area where 'farmland forms a transition between Blean and the marshes / Stour Valley'. The council's local Landscape Designations (2021) includes Hoath parish within the Wantsum Channel designation in an area of high landscape value. Supporting allocation of 101 hectares of this land for industrial solar PV electricity generation and commercial battery storage must be considered as contrary to Policy DS12.

**Policy DS19 Habitats, landscapes and sites of local importance.** SLAA280 on its southern boundary is immediately adjacent to the Nethergong Penn. This is an area of high local importance to the residents of Hoath, Chislet, Hersden and Upstreet, and is connected by a large network of interconnecting public footpaths. Threatened species of birdlife have been recorded there in the last two years, for example Nightingales and Turtle Doves. There has also been recent evidence of beaver activity and the critically endangered water vole.

**SLAA280** will likely have an adverse effect, either directly or indirectly on this site of local interest and recreation

**Policy DS22 Landscape Character** It is difficult to see how, what is effectively, an industrial development not connected with any recognised form of agriculture can measure up against any of the stated aims of this policy. The proposed solar generation and battery storage facility is immediately adjacent to the southern boundary of dwellings in Hoath, and immediately adjacent to the grade 2\* Clayhanger Hall in Chislet.

### **Policy DS25 Renewable Energy & Carbon Sequestration**

The consequence of a SLAA280, in the name of inefficient green energy generation (as opposed to efficient low carbon energy), is to remove high grade farmland from agricultural production for at least 40 years, and possibly for ever.

National policy guidance is clear that solar farms should normally be placed on brownfield sites or use low grade farmland where they are not detrimental to the countryside. The amount of energy produced will be inconsequential. The land of SLAA280 slopes southwards from Marley Lane towards the Nethergong Penn. It then rises to the A28 between Hersden and Upstreet. Clearly within a valley. Consequently the site is protected from prevailing winds. It is difficult to see how wind turbine(s) would be able to operate at anything other than low efficiency given the topography of the site. In light of this the site assessment methodology has to be questioned, it would seem that the site visit that occurred regarding SLAA280 has drawn some very questionable conclusions as set out in table 6.3.1 in the Climate Change Topic Paper.

Policy DS25 encourages, in appropriate locations, proposals for the utilisation, distribution and development of renewable and low carbon sources of energy of all scales, including freestanding installations. It states that In considering such proposals, the council will give significant weight to the carbon emissions reduction and energy resilience that the projects can deliver. Consideration to loss of potential CO2 capture opportunities of growing crops in fields which are repurposed for energy generation must be considered. The implications of this are a significant threat to the countryside.

In addition to the requirements of other policies in this plan, proposals for utility scale development for renewable and low-carbon energy and infrastructure that is primarily for export to the national grid should:

- (a) Demonstrate a renewable energy and carbon reduction benefit to the district over the asset lifecycle - A strict methodology for calculating this carbon reduction must be established.
- (b) Be prepared with the involvement of the local community and include the potential for local communities to be involved in the project through co-investment, a community benefit fund or similar; and
- (c) Deliver environmental co-benefits such as biodiversity improvement or other ecosystem enhancements - How is community involvement to be measured? This is a very vague

concept, a strict measurable engagement protocol should be developed to ensure this takes place in an acceptable and fair way.

Environmental co-benefits and biodiversity improvement and ecosystem enhancements can be achieved without a solar installation. It is entirely in the gift of the landowner to provide these. You do not need solar and battery storage to achieve this.

(d) Seek to maximise other environmental, community and economic benefits; and

(e) Provide an end-of-life restoration or renewal plan - Can CCC truly control what happens to this site in 40 years time given the very opaque ownership and trading models of these schemes?

Policy DS25 gives the countryside inadequate protection and represents a risk to the countryside. Solar PV developers target land without any designation where the council won't make them undertake an EIA and propose projects of less than 50 mw to avoid the scrutiny of national infrastructure planning.

### **Submitted sites review 2022 Climate Change Topic Paper**

Few of the submitted sites are rejected and then it is for being too small to generate significant energy or being a nature reserve. No consideration is given to BMV land. In the 2022 Climate Change Topic Paper the renewable energy SLAA sites are all listed. But all it says for them is "currently agricultural land". There are policy constraints around that but they are not mentioned.

When an official from CCC spoke with Hoath residents about the first draft of the Local Plan, the official commented that the topic paper only looked at the SLAA sites in the context of the technical possibility to generate renewable energy at a particular site. The potential for solar PV at any given latitude is always the same so there is always a technical possibility of PV generation.

Clearly if CCC effectively supports solar PV of this type then this will be used as a strong argument by potential developers in favour of development. In reality this kind of background support does not need to be specifically documented for any particular site as any application will be judged by the planning system. It doesn't add anything to the conversation and so should not be allowed to sit alongside the Local Plan as part of the evidence base. The analysis of the sites appears cursory at best but they are being allowed to appear on the call for sites map (alongside housing and open space sites which have been quite rigorously assessed).

### **Planning Considerations**

The Government wants to avoid using BMV land for solar farms. This is a rational and sensible decision for a country that imports half of the food it consumes.

In a statement made by the Secretary of State for Energy Security and Net Zero, on 15 May 2024 regarding 'Solar and protecting our Food Security and Best and Most Versatile (BMV) Land', Claire Coutinho recognises that food security is an essential part of our national

security and that heightened geopolitical risk makes it more important than ever that BMV land is protected and our food production prioritised by protecting the Best Agricultural Land.

The new National Policy Statement published in January 2024 makes it clear that *“applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land. Where the proposed use of any agricultural land has been shown to be necessary, poorer quality land should be preferred to higher quality land avoiding the use of “Best and Most Versatile” agricultural land where possible.* The Government in Powering Up Britain: Energy Security Plan clarified that while *“solar and farming can be complementary”* developers must also have *“consideration for ongoing food production.”*

Nevertheless, in balancing both the need for energy security and food production, as large solar developments proceed at pace, more ‘Best and Most Versatile’ (BMV) land could be used for solar PV instead of food production. The Minister set out further detail about how the policy on balancing these competing priorities is intended to be applied.

As is outlined in the National Policy Statement, the starting position for solar PV developers in taking forward Nationally Significant Infrastructure Projects is that applicants should seek to minimise impacts on the best and most versatile agricultural land (defined as land in grades 1, 2 and 3a of the Agricultural Land Classification) and preferably use land in areas of poorer quality.

The National Policy Statement can also be a material consideration in determining applications under the Town and Country Planning Act 1990 and is broadly consistent with the approach to agricultural land in the National Planning Policy Framework which states that *“Where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality. The availability of agricultural land used for food production should be considered, alongside the other policies in this Framework, when deciding appropriate for development”*.

This means that due weight needs to be given to the proposed use of Best and Most Versatile land when considering whether planning consent should be granted for solar developments. For all applicants the highest quality agricultural land is least appropriate for solar development and as the land grade increases, there is a greater onus on developers to show that the use of higher quality land is necessary.

In other words, site SLAA280 which is BMV land would be the absolute last resort for a solar farm and it would seem on the face of it to be unlikely to achieve planning permission when subjected to the full scrutiny of the planning process.

Where solar farms are located near existing grid connections “consideration should be given to the cumulative impacts of situating a solar farm in proximity to other energy generating stations and infrastructure”. What is the risk of further proposals for solar farms connecting to any new cable infrastructure which is installed as a result of granting an application for Marley Lane?

Cumulative Impact of energy schemes must be considered. How many solar parks exist or have approved planning or have land allocated within a given radius of Marley Lane. The proposed site already carries pylons which are part of the Nemo link with the European

electricity grid. The pylons are open lattice structures that detract relatively little from the landscape on their own (compared with hundreds of acres of solar panels) but are likely to have a substantial adverse effect on the landscape if they are functionally and/or spatially associated with a solar PV installation. This is because the solar installation may assimilate the otherwise isolated pylons to their industrial character and thereby increase their cumulative impact. There are also further proposals to construct an onshore converter station further east from Marley Lane on Minster Marsh to connect undersea cables from East Anglia to the Nemo Electricity Transmission Link. This will occupy 60,000 square metres further down the Stour Valley further adding to the cumulative impact in this area.

The solar PV development would introduce a novel industrial sprawl into the rural landscape of the Nethergong Valley and would damage the rural character of the site and the surrounding area. Locating the development in a rural landscape among pylons, far from minimising its impact on the character of the landscape would have a cumulative adverse effects on the landscape by associating otherwise isolated and acceptable infrastructure elements with hundreds of acres of ugly, angular, industrial solar panels, assimilating them to the industrial character for the area as a whole, in conflict with the H2 Hoath Farmlands Canterbury Landscape Character and Biodiversity Appraisal October 2020. Location will lie at the heart of public objections which are likely to be raised against this proposed land allocation. Solar PV generation if it is to be ground mounted should be on brownfield sites, otherwise on rooftops or above car parks or former industrial sites; it should not be on high quality agricultural land and the rural landscape should not be allowed to become an ugly industrial site.

### **Battery Storage**

There is a risk of uncontrolled installation of battery energy storage systems associated with solar PV installations. The operator of a solar PV electricity generating site will be able to install almost any number of batteries under the General Permitted Development Order (GPDO) if it holds an electricity distribution, generation and supply under the Electricity Act. It is not difficult to envisage circumstances in which this might occur.

If it seems not unlikely there is a commercial advantage to be gained from battery development on this site beyond that potentially foreshadowed in the EIA screening opinion request Ref. No: CA/21/00812. It is difficult to see how the planning authorities could control it on any site covered by a successful application. That seems likely to undermine the planning process and to involve a range of possible harms including environmental and fire hazard, mindful of the proposals proximity to Hoath village and Chislet Forstal.

It should also be noted that solar PV generation does not need any battery storage to produce electricity, the batteries are used to store the electricity produced which can be released to the grid when the price is advantageous. They can also be used to take energy from the grid when the price is low and release it back when the price is high, effectively operating outside of the solar PV generation.

### **Climate Emergency & Land Use**

NPPF identifies the best and most versatile land (BMV) as normally unsuitable for solar generation. The use of quality farmland, given the UK imports large quantities of food, counts against this land allocation. How many different crops and species of livestock has this land supported in the past? BMV land is ideally suited to adapt to climate change via new crops.

It is possible that an applicant for solar PV generation may consider that climate change must trump every other planning consideration when a local authority determines a planning application for development of this type. Does it mean that the developer can choose the location even if, for example it is BMV land and the local plan says it will be refused but the land has been allocated in official documents which support the local plan. This represents a clear potential ambiguity in the local plan. And as the Secretary of State for Communities and Local Government said in a Parliamentary Statement on 25 March 2015:

*Meeting our energy goals should not be used to justify the wrong development in the wrong location and this includes the unnecessary use of high quality agricultural land.*

Climate change and food supply are without doubt one of the most difficult and urgent issues of our times. It is therefore vital that the local plan is very clear about land allocation in relation to BMV farmland and does not give a green light to unnecessary solar PV on land that is better suited to adapt to climate change by growing different crops.

Under conditions of climate change, the draft local plan establishes a development plan which is designed to strike a balance between the social, environmental and economic elements of sustainability. It is tailored to the local context. Recognising the challenge of climate change and the need for renewable energy, it should aim to promote the development of 'appropriate' renewable energy production, that is to say appropriate to the local context. It must not be on BMV land; it must protect the distinctive environment of Canterbury; and it should reduce local reliance on energy from fossil fuels. In other words, the plan should be designed to be sustainable by striking the necessary balance between these various elements. Solar PV should not be encouraged on BMV land, the Climate Change Topic Paper site reference SLAA280, Marley Lane Solar Farm, appears to do the opposite.

## **Rural Economy Policy DS12**

Under Policy DS12, the council will take a positive approach to the growth and diversification of the district's rural economy, including agriculture, agri-environmental schemes, equestrian, horticulture and viticulture businesses, to support the development of the rural economy and the adaptation of these industries over the period of the plan.

It is important that the rural economy is supported, a solar PV array will not provide any support for the rural economy. Typically an industrial scale solar PV array will be owned by venture capitalists, often using a convoluted web of shell and front companies with reassuringly local names. Foreign investment is always welcome, but it is likely that ownership will be in the hands of overseas merchant bankers and treated as assets and traded at will. The local rural economy does not gain from this type of development.

## **Flood & Drainage**

Proper assessment of flood risk and how this fits with local and national policies on management of surface water in major developments must be undertaken. The agricultural land at Marley Lane on the site of the proposed land allocation will currently have a functioning drainage system both of tile or plastic land drains and formed moles to allow a functioning crop growing system to avoid water logging. The network requires maintenance and the moles need renewing to keep functioning. With solar panels in place the renewal of these moles would seem impossible. During construction, vehicles and work on site will inevitably cause compaction - the enemy of good drainage - with no mechanical correction possible because of the solar panels. Surface runoff and erosion must increase causing valuable topsoil to be lost and channels created which, over time, will compound soil erosion. The ground around each panel will become compacted during erection so the ability of the soil to absorb water is seriously compromised. This will typically be exacerbated because developers will likely build additional impermeable access routes within the site. Installation of ground mounted solar panels concentrates and accelerates the effect of rainfall, clearly not a problem if sited on impermeable roof structure with proper drainage systems.

## **Health & Safety**

Fire hazards are a very significant concern. What consideration is given to fire risks and public health around containment, leakage of contaminants into the water table, and smoke diffusion related to batteries? The proposed site is adjacent to residential properties in Hoath and Chislet Forstal.

Most battery energy storage systems make use of Lithium-ion battery technology and it would be reasonable to assume that this would be the case at Marley Lane. It is recognised that Lithium-ion batteries do pose a significant fire hazard and these are associated with high energy densities coupled with flammable organic electrolytes. This means that there is a fire risk if a Lithium-ion battery bursts or overheats. Thermal runaway is a dangerous chain reaction that can occur in lithium-ion batteries. There is also a risk of explosions and the release of toxic combustion products in the event of failure.

- Damaged cells may vent / smoke without ignition.
- Fires may occur when an electrolyte ignites.
- The battery may burn or create a fireball depending on the failure mode.
- The battery may explode.
- Venting cells can catch fire then explode or just explode. The venting can release carbon monoxide and hydrogen fluoride gases.
- Once a battery has failed the heat generated can cause other cells in close proximity (stored together in modules or packs) to fail, resulting in a chain reaction (also known as the snowball effect or runaway)

Typically a battery energy storage system facility should be designed to provide:

1. Adequate separation between containers.
2. Provide adequate thermal barriers between switchgear and batteries,

3. Install adequate ventilation or an air conditioning system to control the temperature. Ventilation is important since batteries will continue to generate flammable gas if they are hot. Also, carbon monoxide will be generated until the batteries are completely cooled through to their core.
4. Install a very early warning fire detection system, such as aspirating smoke detection/air sampling.
5. Install Carbon Monoxide (CO) detection within the BESS containers.
6. Install sprinkler protection within BESS containers. The sprinkler system should be designed to adequately contain and extinguish a fire.
7. Ensure that sufficient water is available for manual firefighting. An external fire hydrant should be in close proximity to the BESS containers. – The water supply should be able to provide a minimum of 1,900 l/min for at least 120 minutes (2 hours). Further hydrants should be strategically located across the development. These should be tested and serviced at regular intervals by the operator. If the site is remote from a pressure fed water supply, then an Emergency Water Supply (EWS) meeting the above standard should be incorporated into the design of the site for example an open water source and/or tanks.
8. The site design should include a safe access route for fire appliances to manoeuvre within the site (including turning circles). An alternative access point and approach route should be provided and maintained to enable appliances to approach from an up-wind direction.

BESS is a fairly new technology, and as such risks may or may not be captured in current guidance.

Overall this means that it would seem completely inappropriate to locate industrial equipment of this type anywhere near residential properties and would damage this landscape forever.

## **Traffic**

What is the traffic plan? Construction phase, reconstruction phase, deconstruction phase.

A project of this type will typically be completed over a 40 to 50 week period. Access to the site is on roads designated as unsuitable for HGVs. HGVs will be required to initially construct a new internal road system on the site. It is quite possible that materials inward would require 30 loads per day (60 movements) over a concentrated period when construction commences. This would be a serious problem to the residents of Hoath and Chislet Forstal and other road users and residents of the road network connecting Marley Lane to either the A28 at Upstreet or the Thanet Way at Heart in Hand.

There would also be a cumulative effect of vehicles of construction workers gaining access to the site daily.

There would also need to be consideration as to how a 60 tonne crane would access the site as this would be required to lift containers in position.

It should additionally be noted that the typical useful life of a battery is around ten years, so these would require replacement three times during the lifetime of the proposal, also the solar panels have a typical useful life of around twenty years and will need to be replaced at least once over this period. The whole project would need complete reconstruction during its whole forty year lifecycle to allow for this.

### **Biodiversity & Amenity**

There is a considerable range of legislation and planning and related guidance that is relevant to proposals of this type in respect of wildlife and biodiversity. In essence, the requirement is for developers to protect and enhance biodiversity and not to damage irreplaceable habitats or vulnerable species.

Baseline data must be carefully considered and who is consulted. Net gain calculations may not give a full picture of what could be catastrophic habitat losses during the construction and early operating years when some species could be driven out of the area forever. It is also relevant to consider how long any suggested gain will take to occur and are these gains to be protected on decommissioning.

A number of public footpaths pass through the site, these will be protected from the solar PV infrastructure with security fencing. This will cause blockage of the far reaching views described in the Hoath Farmlands LCA. The proposed hedge planting will also affect this.

It is likely that the security requirements will include security lighting all over the site to protect the valuable assets, this will detract from the dark skies which are a feature of this area.

### **Environmental Issues**

Noise ( it will be sited in a valley and close to housing)

Glint & glare.

Visual Impact of battery containers and associated infrastructure

Dark skies

Fire risk

### **Solar Energy Use**

The best use of solar energy is to produce crops and grow plants to absorb CO2

### **Summary**

The planning system is not designed to regulate the energy sector, and large solar farms surely contain the seeds of future problems. At the moment it seems to be a free-for-all with no limit placed on the amount or location of agricultural land being offered to energy developers.

Even if large solar farms are 'co-located' with agriculture, there must be a competition-distorting impact on farmers without solar panels who are unable to subsidise lower crop prices or afford the best productivity-raising equipment to reduce production costs. The paradox being that food prices go up. There are suggestions that solar farms might provide grazing for sheep but, even if this is practical, what does it mean for sheep farmers in Wales or elsewhere in Northern England where the land is unsuitable for solar generation because there isn't enough solar irradiation or flat, level sites in those latitudes? Not only would they be competing with cheap imports from New Zealand or Australia, but also with lower-cost competitors decked out with solar panels in the southern UK.

It is also proposed that the solar farms are temporary structures with the land returning to agricultural use after 40 years. Battery storage and solar panels and the significant associated infrastructure would on the face of it make it seem unlikely that the ground will ever be returned to agricultural use.

Are we simply damaging our food security and storing up problems for future generations?

**The new Local Plan must be very careful about any proposed land allocation for solar PV generation, and not just become carried away by the tide of greenwashing. Remember a single Siemens SG 14-236 offshore wind turbine can produce 14 megawatts of energy, meaning 4 turbines mounted in the North Sea can produce more energy as the whole of the 49.9 mw proposed Marley Lane solar farm. We, the Friends of Nethergong Valley, recommend that site SLAA280 Marley Lane Solar Farm be rejected as a potential site for a solar energy production and battery storage facility.**

Mark Wilkinson

On behalf of  
Friends Of Nethergong Penn