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## PLANNING, DESIGN AND ACCESS STATEMENT

Sheepwash Solar Energy Farm

**Project:** Liquodiasi ipsaper spisti sime id ute nos **Country:** Ute nos ipsaper spisti

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## 1 Executive Summary

The proposed development is the installation of a renewable energy led generating station comprising of ground-mounted solar arrays, associated electricity generation infrastructure and other ancillary equipment comprising of storage containers, access tracks, fencing, gates and CCTV together with the creation of a woodland, landscaping and biodiversity enhancements.

The proposed development site is on 74.5 hectares of arable land at Eckley Farm north of Little Cheveney Farm, Sheephurst Lane, Marden, Kent.

The proposal is supported by extensive visual and technical evidence to demonstrate its impacts and also technical reports.

Guidance in the NPPF (paragraphs 154 and 170) and policies in the Local Plan DM 24 support the principle of renewable energy development and indicate that a solar energy farm in this location is acceptable provided it does not give rise to unacceptable adverse impacts nor an irreversible loss of BMV agricultural land.

There is a clearly defined need to deliver more renewable energy projects to achieve national targets for Net-Zero.

The Landscape and Visual Impact Assessment (LVIA) assesses the impacts of the scheme, taking into account the effects of the mitigation planting proposed after 10 years of maturing. In terms of the landscape the LVIA demonstrates that at completion the development will have a slight adverse landscape impact. This will improve after 10 years to slight beneficial. In terms of visual impact most of the impacts are within 500m of the site boundary. Beyond this, impacts reduce significantly and beyond 2km the development is imperceptible. Upon completion some views close to the site will experience moderate to high impacts, but these will be temporary and after 10 years will experience negligible or beneficial impacts. This very limited level of impact is considered to comply with the requirements of the NPPF and Local Plan policy DM 24.

The development will result in no irreversible loss of agricultural land. The land will remain in part agricultural use (sheep grazing between the solar arrays) and fully return to arable at the end of the temporary period. The scheme also provides the opportunity for income diversification at Eckley Farms which will support the farm business.

Furthermore, the land to be used for the development is of lower agricultural value than other land on the farm because of its soil quality despite its grading.

The Sequential Site Assessment demonstrates that there are no sequentially preferable sites within the defined radius of the available grid connection.

Detailed reports have been provided to demonstrate both during the construction and the operational phase of the development that the development will not result in adverse impacts on the amenity of adjoining occupiers, the highway network, any heritage or archaeological assets, flooding or drainage issues or waste.

In addition, detailed reports have been submitted with respect to biodiversity and landscape. Overall the development will result in a positive biodiversity impact which, assessed against the DEFA biodiversity metric 3.0, result in a habitat improvement of 52% and for hedgerows X%. against the baseline.

The development has been designed to minimise its scale, size, height and visual impact and to maximise screening.

Full decommissioning will be secured after the end of the temporary period.

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Pre-application consultation was undertaken with the local parish councils, Member of Parliament, ward councillors and local residents. Full details of the consultation are set out in the Statement of Community Involvement submitted as part of the application.

The scheme fully complies with NPPF guidance and with the detailed planning policies in the Local Plan whilst contributing to national objectives. As such planning permission is sought.

## 2 Introduction

### 2.1 Background

This Planning, Design and Access Statement (“PDAS”) has been prepared by Statkraft UK Ltd (“Statkraft”) and supports a full planning application to Maidstone Borough Council (the Local Planning Authority, “LPA”) for: “the installation of a renewable energy led generating station comprising of ground-mounted solar arrays, associated electricity generation infrastructure and other ancillary equipment comprising of storage containers, access tracks, fencing, gates and CCTV together with the creation of a woodland, landscaping and biodiversity enhancements”.

The development known as ‘Sheepwash Solar Energy Farm’ would generate and store up to 49.9 megawatt (“MW”) of renewable energy that would be exported to the Grid. The formal Grid offer for generation and storage proposed has been accepted and secured with the Distribution Network Operator (“DNO”).

The development will involve the installation of solar panels across the site in a series of arrays. The solar panels will be mounted on frames and be no more than 3.0 metres in height. There will also be associated electrical infrastructure including battery energy storage, a 132/33kV substation and other ancillary infrastructure such as perimeter fencing, vehicle access tracks and a temporary construction compound.

Prior to 2015 solar farm planning consents were usually granted for a temporary period of 25 years. Due to technological developments, including longer equipment life, planning consents are now between 20-50 years. It is therefore proposed that the operational duration for the solar energy farm be for 37 years, after which the development will be fully decommissioned, and the site returned to agricultural use.

### 2.2 The Case for Renewable Energy

Government energy policy confirms that the delivery of renewable energy developments is in the national interest. This is in terms of both assisting the UK in achieving its carbon reduction obligations and also contributing toward ensuring that the UK has diverse, reliable and secure energy supplies.

Since 2003 a number of energy policy documents and statement relating to UK energy have been issued. These set out a commitment to cut greenhouse gas emissions and include the target of net zero by 2050. This will only be delivered by a transition to a low carbon economy which will require major investment in low carbon technologies, in particular renewable energy.

The Government’s policies also stress the critical importance of the UK continuing to have secure and reliable supplies of electricity as the transition is made to a low carbon economy. The Government also places a significant emphasis on having a safety margin of spare capacity and a diverse mix of technologies and fuels so that the country is not reliant on any one particular source. This is within the context of an expected doubling in demand for electricity by 2050 largely as a result of the electrification of domestic heating systems and the Government’s targets for electric vehicles.

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The Government's policies are therefore clear that renewable energy developments provide crucial national benefits both through reduced emissions and more diverse energy supplies and are therefore not required to demonstrate overall need. This is a material consideration when considering planning applications for renewable energy developments.

## 2.3 Content of the Planning Application

### 2.3.1 Planning Application Form

### 2.3.2 Planning Application Drawings

- Location
- Site Plan
- Layout
- Gate Elevation
- Deer Fence Elevation
- CCTV Elevation and Layout
- Edge of Park Substation
- Solar Modules and Arrays
- Solar Array -Substation
- HV Compound Layout
- HV Compound Combined DNO and Customer Sub Station
- HV Cable Route
- HV Compound Elevations
- Energy Storage Compound Layout
- Energy Storage Compound Equipment
- Access Track Section
- Mitigation and Landscape Enhancements.pdf
- Indicative H Pole at the Point of Connection TL34162 62891

### 2.3.3 Supporting Reports

- Agricultural Land Use Statement, Bidwells, March 2022;
- Soil Quality Report, Reading Agricultural Consultants, March 2022
- Sequential Site Analysis, Pegasus, February 2022;
- Landscape and Visual Impact Assessment and Proposed Mitigation, aWScape Ltd February 2022;
- Sheepwash Solar Energy Farm Photography, Verified Views and Methodology, Andy Maw Design, February 2022;
- Ecological Impact Assessment, Riverdale Ecology, February 2022;
- Biodiversity Net Gain Assessment, Riverdale Ecology, February 2022
- Landscape and Ecological Management Plan, March 2022
- Construction Traffic Management Plan, Cotswold Transport Planning, February 2022;
- Technical Note - Public Rights of Way Mitigation Strategy, Cotswold Transport Planning, February 2022;
- Flood Risk Assessment, JBA March, 2022;
- Outline Surface Water Drainage Strategy, JBA Consulting, February 2022;
- Heritage Desk Based Assessment, Cotswold Archaeology, October 2021;
- Noise Impact Assessment, dB Consultation Limited, March 2022;
- Solar Photovoltaic Glint and Glare, Pager Power January 2022;
- Grid Connection Assessment, Artios Energy Limited, February;
- Decommissioning Method Statement, Statkraft UK Limited, March 2022;
- Statement of Community Involvement, Quattro, February 2022.

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## 2.4 Structure of this Document

This PDAS provides further information of the planning application and is a combined document that serves as a Design and Access Statement as well as a Planning Statement:

- Section 2 provides the background to Statkraft UK Limited.
- Section 3 sets out the proposed development.
- Section 4 provides a summary of relevant energy policies and guidance.
- Section 5 covers relevant national and local planning policies and guidance.
- Section 6 provides an assessment of the proposed development in the context of the Local Plan.
- Section 7 provides a summary and conclusions.

## 3 Project Background

### 3.1 The Applicant

Statkraft UK Limited is Europe's largest renewable energy company with a long history of developing and operating renewable energy generation assets and is considered to be one of the leaders in this field. Statkraft has a target to develop at least 8 GW of wind and solar by 2025 internationally.

In 2021/2022 Statkraft aims to develop a number of solar energy projects across the UK including projects in Cambridgeshire, Cornwall, Mid Suffolk and Wales.

## 4 The Proposed Development

### 4.1 Planning History

There is no planning history for the site.

### 4.2 Site Description

The 74.5ha site is situated north of Sheephurst Lane approximately 0.75km east of Claygate and approximately 1km west of Marden.

The site is currently used for agricultural purposes.

The site is relatively flat and is surrounded by agricultural fields to the west and east, the railway line to the north and Sheephurst Lane to the south. To the south is the Grade II listed Little Cheveney Farm.

There are Public Rights of Way ("PROW") immediately to the north of the site with part of this northern PROW running diagonally across part of the north eastern corner of an arable field. There are other footpaths to the east and the south. Currently these footpaths do not link up.

### 4.3 Land Use Planning Designations

The site is designated as being within the countryside.

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The site is within Flood Zones 2 and 3.

## 4.4 Proposed Development

The location and layout of the proposed development are contained on the submitted drawings.

It is estimated that the solar energy farm will generate and store up to 55MW of electricity per annum.

The solar generation will consist of a series of south-facing solar arrays arranged across the site on an east/west axis. The solar array comprises of a series of short narrow aluminium posts supporting PV modules together with in field sub stations and inverters.

The distance between each row of solar arrays ranges from 3.5 – 5.5 metres with approximately 29% of the total developed site area utilised for the solar array. The panel structures will have a maximum height of 3 metres above the ground. The foundation depth of each array is approximately 0.95m.

The submitted drawing 27899/050 Rev B shows the layout and SKUKX-SHEEP-000-MCS 205 shows a typical solar array.

The energy storage compound (“ESS”) is connected to the solar arrays and to the HV compound. It comprises the following:

- 12 battery containers 3m high by 2.4m wide by 12m in length;
- 3 PCS units;
- 1 auxiliary transformer;
- Switchgear and communication room
- Ancillary equipment including underground cabling.

The ESS layout plan and elevations are contained in drawings 27899/010 Rev A and 27899/004 Rev A.

The solar energy farm – the solar array and energy storage - will connect to the local distribution network owned and operated by UKPN. This requires a high voltage compound (HV compound). The substation in the compound will connect to the UKPN overhead line by underground cable. The underground cable will be laid on site.

The high voltage compound consists of two elements of distribution network electricity infrastructure – essential UKPN infrastructure and infrastructure associated with the electricity generation of both the solar generation and energy storage.

### 4.4.1 UKPN Infrastructure

- A circuit breaker;
- 2 disconnectors;
- Underground cables connecting the switch room to the circuit breaker.

### 4.4.2 Applicant Infrastructure

- 1 132kV transformer with an acoustic screen;
- 1 disconnector;
- Underground cables to connect the solar farm and energy storage.

### 4.4.3 Joint Infrastructure

- Combined DNO and applicant sub station.

Both compounds are accessible from an access track from the main entrance to the site on Sheephurst Lane.

The HV compound layout plan and elevations are contained in drawings SKUKX-SHEEP-001-MCS 465.

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Other ancillary infrastructure associated with the solar energy farm includes:

- Storage containers;
- Perimeter fencing;
- CCTV monitoring system;
- Monitoring system;
- Underground cabling.

Security measures include the installation of perimeter fencing. The fence is designed to allow small animals to pass through the site. The submitted planning drawings SKUKX-SHEEP-000-MCS 203 and 204 contain details of the fencing and gate elevations.

The site will have no external artificial lighting during the operational phase of the development.

The CCTV monitoring system will comprise of 30 pole-mounted CCTV cameras at 5 metres integrated as part of the perimeter fencing. The submitted planning drawings SKUKX-SHEEP-000-MCS 206 and X contain details of the CCTV cameras and their positioning. These cameras are of a high specification and fewer are proposed when compared to other similar sites.

For each pole, there will be a maximum of 2 cameras (i.e. thermal camera and day/night camera) that will solely monitor areas within the site. cameras utilise infra-red technology.

A temporary construction compound will accommodate construction staff facilities (e.g. offices, staff parking bays, waste and recycling facilities) as well as store goods and equipment associated with the construction of the solar energy farm.

The construction compound will exist for the duration of the construction period. This is shown on the layout drawing.

The proposed construction compound will typically be laid with non-ground penetrating and removable Terrafirma™ 'Dura-base' mat system (or similar non-ground penetrating technology).

Once construction has ended, the construction compound will be fully decommissioned.

## 4.5 Site Access

The preferred access route to the site is from Sheephurst lane.

Access to the site during construction has been assessed and it will be suitable for long HGVs to safely enter and exit the site in forward gear.

The full CTMP provide details of the proposed construction traffic access route.

During operation access will also be from Sheephurst Lane.

Sheepwash Solar Energy Farm will not be manned during the operational phase (except for the occasional visits from operation and maintenance staff). No provisions for public transport and other non-car travel modes are therefore considered to be required for the proposed development.

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## 5 Renewable Energy Policy and Guidance

### 5.1 Introduction

This section provides a review of national policy and guidance relating to renewable energy.

This section seeks to focus on the main components of EU and Government policy that are relevant to the proposed solar farm.

The above documents are an important material consideration to be taken into account when assessing planning applications for renewable energy developments.

### 5.2 International Energy Law and Policy

#### 5.2.1 Renewable Energy Directive 2009/28/EC

European Parliament Directive 2009/28/EC obligated member states to commit to renewable energy targets. Paragraph (1) states:

“The control of European energy consumption and the increased use of energy from renewable sources, together with energy savings and increased energy efficiency, constitute important parts of the package of measures needed to reduce greenhouse gas emissions and comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and with further Community and international greenhouse gas emission reduction commitments beyond 2012. Those factors also have an important part to play in promoting the security of energy supply, promoting technological development and innovation and providing opportunities for employment and regional development, especially in rural and isolated area”.

Under the Directive, the UK is committed to sourcing 15% of its energy from renewable sources by 20201.

#### 5.2.2 Renewable Energy Directive 2018/2001/EU

The revised EU Renewable Energy Directive 2018/2001/EU established a new binding renewable energy target for the EU for 2030 of at least 32%, with a clause for a possible upwards revision by 2023.

The decision of the UK to exit the EU casts doubt over the future application of these European targets. Nonetheless, the UK has recently set its own more challenging legally binding targets which will drive a rapid and expanded deployment of low carbon and renewable energy.

### 5.3 National renewable Energy Legislation and Policy

The objectives of the UK's renewable energy policies are in accordance with international and European policy objectives. These are focused on a number of key climate change challenges, which include:

- The reduction of CO2 emissions to tackle climate change;
- The promotion of competitive energy markets in the UK;
- Affordability to customers; and
- Security of decentralised energy supplies.

There is a significant body of international and national energy policy support for renewable and low carbon development. This support is rooted in the Government's policy of growing the economy in a decarbonising way and achieving its recently set legally binding target of net-zero greenhouse gas emissions by 2050. To help achieve this the Government is rapidly

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seeking to transition from a traditionally fossil fuel dependent economy to increasing amounts of secure, resilient renewable and low carbon energy, including solar power. The fact that solar technology has advanced to the point where it no longer requires public subsidy to make it commercially viable lends it further support from Government.

### 5.3.1 Climate Change Act 2008

The Climate Change Act 2008 set into legislation the UK's approach to tackling and responding to climate change. It introduced a legally binding 2050 target to reduce greenhouse gas emissions by at least 80% relative to 1990 levels.

The two key aims of the Act are to:

- improve carbon management, helping the transition towards a low-carbon economy in the UK; and
- demonstrate UK leadership internationally, signalling commitment to taking our share of responsibility for reducing global emissions in the context of developing international negotiations.

### 5.3.2 Energy Security Strategy (2012)

The Energy Security Strategy was published by the Department of Energy and Climate Change (DECC) in November 2012. The document sets the direction for energy security policy. It provides a clear assessment of the UK's position, the risks the country faces, and the actions that are being taken.

The Energy Security Strategy sets out that the Government is primarily concerned about ensuring that consumers have access to the energy services they need (physical security) at prices that avoid excessive volatility (price security). The Strategy states that the energy security must be delivered alongside achievement of our legally binding targets on carbon emissions and renewable energy. It is noted that whilst the Government cannot control world energy market prices, they are seeking to ensure that energy services are as affordable as possible, both for consumers and businesses, and in the long term to reduce dependence on imported fossil fuels.

The Strategy outlined that there are risks to security of supply over the medium-term, with approximately 20% of the capacity available in 2011 set to close by 2021. It outlines the importance of diversity in the supply of energy and places an emphasis on ensuring that there is resilience in the market. Paragraph 1.10 of the Strategy refers to how the country's energy requirements are likely to change between now and 2050, and states as follows:

"Electricity use is likely to increase by at least 30 per cent and potentially by 100 per cent as much of our heating and transportation becomes electrified. We may see more seasonal demand (caused by electrification of heating) and different peaks in demand (from electric vehicles). These changes to demand patterns, alongside an increased use of renewables and nuclear (less flexible supply), will increase the challenges of balancing the system and also present opportunities to embed demand side response (DSR) and distributed capacity (e.g. night charging of electric vehicles)."

### 5.3.3 UK Solar PV Strategy (2014)

Further to the publication in 2012 by DECC of its UK Renewable Energy Roadmap Update, in 2014 it subsequently published its UK Solar PV Strategy Part 1: Roadmap to a Brighter Future. It identified solar PV as one of eight key renewable energy technologies that can help create a clean, balanced UK energy mix. Solar PV is recognised to have significant advantages including its versatility, its scalability, its speed of deployment and the fact that the fuel – solar radiation – is free.

The Strategy notes that deployment of solar PV across the UK has become increasingly visible to the public at all scales and is among the most popular renewable energy technologies. It received the highest public approval rating of all renewables at 85%. Government wants this level of support to be maintained – including by ensuring solar PV is appropriately sites and allow for greater community engagement – and it expects the ongoing deployment of solar PV to continue at all scales.

The Roadmap sets out the Government's four guiding principles for supporting solar PV:

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- allowing cost-effective solar PV projects to proceed and to make a cost-effective contribution to UK carbon emission objectives in the context of overall energy goals;
  - delivering genuine carbon reductions that help meet the UK's target of 15 per cent renewable energy from final consumption by 2020 and in supporting the decarbonisation of our economy in the longer term;
  - ensuring solar PV proposals are appropriately sited, give proper weight to environmental considerations such as landscape and visual impact, heritage and local amenity, and provide opportunities for local communities to influence decisions that affect them; and
  - assessing and responding to the impacts of high-volume solar PV deployment on grid systems balancing; grid connectivity; and financial incentives.

Later in 2014 DECC published the second part of its strategy - UK Solar PV Strategy Part 2: Delivering a Brighter Future which again confirmed the Government's ambitions for solar PV are high, identified the key market segments for deployment and its expectation for the market to operate without the need for Government support.

#### **5.3.4 Clean Growth Strategy (Oct 2017)**

The Government's Clean Growth Strategy (Oct 2017) sets out how it envisages the delivery of the clean, green economic growth needed to combat global warming. It identifies the policies necessary to drive a significant acceleration in the pace of the UK's decarbonisation to achieve the 2032 carbon budget targets that in turn will keep us on track to achieve the net zero target by 2050. The Strategy recognises the potential offered by solar to grow low carbon sources of energy and the Government confirms it wants to see more investment in this sector without public subsidy.

#### **5.3.5 UK 25 Year Environment Plan (2018)**

The sister document to the Clean Growth Strategy is the Government's UK 25 Year Environment Plan (Jan 2018). This sets out the goals for improving the environment within a generation and the actions Government will take over the next 25 years to achieve them. It supports the shift away from coal towards cleaner forms of energy as a way of reducing air pollution; confirms that the environmental protection already enshrined in national policy will be maintained and strengthened; and, importantly, indicates the existing requirement to provide biodiversity net gains is likely to be expanded to providing a wider environmental net gain which will be consulted upon as a mandatory requirement.

#### **5.3.6 National Infrastructure Assessment (2018)**

In relation to the need for upgraded energy infrastructure, the National Infrastructure Assessment (2018) is highly supportive of building low cost, low carbon energy sources. The Assessment (prepared by the independent National Infrastructure Commission (NIC)), was the first of its kind in the UK and recommended an increasing deployment of renewables such that by 2030 half of the UK's power should be provided by renewables.

In its Interim Response (Oct 2018) to the Assessment the Government confirmed its ongoing commitment to promoting renewables. It recognised that, within a market-based system and with significant constraints on public expenditure, the private sector has an important role to play in the delivery of renewable energy schemes. The Government's formal response to the NIC Assessment was expected in Autumn 2019 through its publication of the UK's first comprehensive National Infrastructure Strategy. This has been delayed.

#### **5.3.7 UK Climate Emergency (2019)**

In May 2019 a national climate emergency was declared by the UK Parliament. MPs called on Government to make changes that included setting a new target of reaching net zero emissions before 2050.

On a local level, KLWNBC established a Climate Change Officer Working Group September 2019 to reduce its contribution to climate change, reduce its CO2 emissions and prepare for the impacts of climate change.



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### 5.3.8 Net Zero- The UK's Contribution to Stopping Global Warming (2019)

In May 2019 the UK's Committee on Climate Change ("CCC" and advisor to the Government on progress on tackling climate change) published "Net Zero- The UK's Contribution to Stopping Global Warming".

It recommended that the UK should set and vigorously pursue an ambitious target to reduce greenhouse gas emissions to "net zero" by 2050, thereby ending the UK's contribution to global warming within 30 years. The net zero target for 2050 will deliver on the commitment that the UK made in signing the 2015 Paris Agreement. The CCC recommended that to achieve this target the supply of low-carbon power must continue to expand rapidly.

The technical report accompanying the Net Zero report suggests potential for 29-96 GW of onshore wind, 145-615 GW of solar power and 95-245 GW of offshore wind in the UK.

The report sets out a number of findings, those of relevance are provided below:

- Scenarios for 2030 and 2050 see variable renewables providing 50-75% of overall electrical energy production and are contingent on system flexibility improving.
- Improvements in system flexibility can come from increased deployment of battery storage.
- Significant new renewable generation capacity is needed to accommodate rapid uptake of electric vehicles and hybrid heat pumps. Over the period to 2035, up to 35 GW onshore wind, 45 GW offshore wind and 54 GW solar PV could be needed.
- The UK's onshore wind, offshore wind and solar PV resource are likely to be more than adequate to deliver an expanded and decarbonised electricity system to 2050.

### 5.3.9 Climate Change Act 2008 (2050 Target Amendment) Order 2019

On 27 June 2019 the UK Parliament approved the net zero target in law, thereby changing the original target of 80% reduction of greenhouse gas emissions (compared to 1990 levels) in the UK by 2050 to 100%.

The aim is to meet the target through UK domestic effort, without relying on international carbon units (or 'credits'). Meeting this net zero target will require major and urgent investment in new technologies and prioritisation of sustainable energy and cleaner power generation, including the use of solar.

### 5.3.10 Leading on Clean Growth (October 2019)

The Government Response, 'Leading on Clean Growth' (October 2019), reported on key achievements in the UK power sector including a record 33% of electricity generation from renewables in 2018, a rise of low carbon generation to some 52%, and 18 consecutive days of coal-free generation. It also recognises ongoing reform of the energy system to deliver greater system flexibility in order to integrate significant quantities of low carbon generation.

### 5.3.11 Reducing UK emissions - 2020 Progress Report to Parliament (June 2020)

This is the Committee's 2020 report to Parliament, assessing progress in reducing UK emissions over the past year. The report includes new advice to the UK Government on securing a green and resilient recovery following the COVID-19 pandemic. It recommends that Ministers seize the opportunity to turn the COVID-19 crisis into a defining moment in the fight against climate change. Although a limited number of steps have been taken over the past year to support the transition to a net-zero economy and improve the UK's resilience to the impacts of climate change, the report underlines that much remains to be done. For the first time, the Committee set out its recommendation's government department by government department.

One of the recommendations made to the Department for Business, Energy & Industrial Strategy is to deliver plans to decarbonise the power system to reach an emissions intensity of 50 gCO<sub>2</sub>/kWh by 2030, with at least 40 GW of offshore wind and a role for onshore wind and large-scale solar power, with a clear timetable of regular auctions.

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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, plus bioenergy and any fossil fuels being combined with CCS).

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.

## 5.4 Summary

The above review of various energy policies and guidance confirms that the delivery of renewable energy technologies is in the national interest both in terms of the UK achieving its carbon reduction commitments and also ensuring the Country continues to benefit from diverse, reliable and secure energy supplies.

The Government's policies are clear that renewable energy developments provide crucial national benefits that are shared by all communities both through reduced emissions and more diverse energy supplies, which helps the reliability of the Country's supplies. This is a material consideration that should be afforded significant weight when considering applications for renewable energy developments.

## 6 National and Local Planning Policy

This section provides a review of the Government's national planning policies and Maidstone Borough Council's local planning policies that are of most relevance to the proposed development.

### 6.1 National Policy

#### 6.1.1 Overarching National Policy Statement for Energy (EN-1)

EN-1 sets out the Government's policy for the delivery of major energy infrastructure. Whilst primarily of relevance to NSIPs (i.e. projects over 50MW) it is clearly a material consideration for the Proposed Development. EN-1 is the national policy on energy, and it establishes the need for energy related development, with the Government not requiring decision makers to consider need on individual applications because of this.

The Government's policy on energy infrastructure development in Part 2 of EN-1 is critical to understanding the policies on need. Paragraph 2.1.1 states that there are three key goals, namely reducing carbon emissions, energy security and affordability. Large scale infrastructure plays a "vital role" in ensuring security of supply (para. 2.1.2).

The transition to a low carbon economy is dealt with at paragraphs 2.2.5 to 2.2.11. The UK needs to move away from a high carbon energy mix in order to reduce GHG emissions, and to improve the security, availability and affordability of energy through diversification. Under some of the "illustrative" 2050 pathways electricity generation would need to become virtually emission-free.

Paragraph 2.2.23 states that "The UK must therefore reduce over time its dependence on fossil fuels, particularly unabated combustion. The Government plans to do this by improving energy efficiency and pursuing its objectives for renewables, nuclear power and carbon capture and storage".

Paragraph 3.3.10 also states that as part of the UK's need to diversify and decarbonise electricity generation, the Government is committed to dramatically increasing the amount of renewable energy capacity.

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Paragraph 3.3.12 highlights that there are a number of other technologies which can be used to compensate for the intermittency of renewable generation, such as electricity storage. The Proposed Development includes energy storage within the design.

Overall, section 3.4 identifies that large-scale deployment of renewables will help the UK to tackle climate change, reducing the UK's emissions of carbon dioxide by over 750 million tonnes by 2030. Paragraph 3.4.5 makes it clear that "The need for new renewable electricity generation projects is therefore urgent".

The Government issued a revised draft of the national overarching energy policy EN-1 and renewable energy infrastructure EN-3 in September 2021. Key policies within the draft that are relevant to this proposal are:

- The Policy will become a material consideration in decision making on applications that fall under the Town and Country Planning Act 1990 (as amended).
- "To produce enough energy required for the UK and ensure it can be transported to where it is needed, a significant amount of infrastructure is needed at both local and national scale."
- "To ensure that there is sufficient electricity to meet demand, new electricity infrastructure will have to be built to replace output from retiring plants and to ensure we can meet increased demand. "
- "Storage is needed to reduce the costs of the electricity system and increase reliability by storing surplus electricity in times of low demand to provide electricity when demand is higher. Storage can provide various services, locally and at the national level.."
- "It will not be possible to develop the necessary amounts of such infrastructure without some significant residual adverse impacts and that whilst the development of ground mounted solar arrays is not prohibited on sites of agricultural land classified 1, 2 and 3a applicants should explain their choice of site, noting the preference for development to be on brownfield and non-agricultural land".

### 6.1.2 National Planning Policy Framework (2019)

The National Planning Policy Framework (February 2019) (NPPF) sets out the Government's planning policies for England and how these should be applied. At its core is the need for the planning system to contribute to the achievement of sustainable development – meeting the needs of the present without compromising the ability of future generations to meet their own needs.

Paragraph 8 of the NPPF explains that achieving sustainable development means the planning system has three overarching and interdependent objectives:

- "an economic objective - to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- a social objective - to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being ; and
- an environmental objective - to contribute to protecting and enhancing our natural, built and historic environment; including making effective use of land, helping to improve biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."
- The environmental objective in particular is applicable to renewable energy developments.
- Paragraph 11 of the NPPF stipulates that, when determining planning applications, a presumption in favour of sustainable development should be applied and specifically:

"c) approving development proposals that accord with an up-to-date development plan without delay; or

- d) where there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:
- i. the application of policies in this Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or
  - ii. any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole.”

Paragraph 12 underlines that the presumption in favour of sustainable development does not change the statutory status of the development plan as the starting point for decision making. The policies within the Local Development Framework are considered below.

Section 6 of the NPPF refers to the economy and paragraph 83 in particular states that in supporting a prosperous rural economy planning decisions should enable the development and diversification of agricultural and other land based rural business.

Paragraph 109 directs that development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.

Paragraph 118 (a) states that planning policies and decisions should “encourage multiple benefits from both urban and rural land, including through mixed use schemes and taking opportunities to achieve net environmental gains – such as developments that would enable new habitat creation or improve public access to the countryside.”

Paragraph 148 sets out that the planning system should support the transition to a low carbon future in a changing climate and it should help minimise vulnerability and improved resilience. It states that it should shape places in ways that contribute to radical reductions in greenhouse gas emissions, minimise vulnerability and improve resilience, and support renewable and low carbon energy and associated infrastructure.

Paragraph 153 states that local planning authorities should expect new development to take account of landform, layout, building orientation, massing and landscaping.

Paragraph 154 sets out that when determining planning applications for renewable and low carbon development, local planning authorities should not require applicants to demonstrate the overall need for renewable or low carbon energy, and recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and approve the application if its impacts are (or can be made) acceptable.

Paragraph 155 sets out that Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk. Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.

Paragraph 163 directs that when determining any planning applications, local planning authorities should ensure that flood risk is not increased elsewhere and that applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding where, in the light of this assessment it can be demonstrated that;

- within the site, the most vulnerable development is located in areas of lowest flood risk, unless there are overriding reasons to prefer a different location;
- the development is appropriately flood resistant and resilient;
- it incorporates sustainable drainage systems, unless there is clear evidence that this would be inappropriate;
- any residual risk can be safely managed; and
- safe access and escape routes.

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Paragraph 170 states that planning policies and decisions should contribute to and enhance the natural and local environment by protecting and enhancing soils, minimising impacts on biodiversity and preventing new development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of air or noise pollution.

Para 170b states that that planning policies and decisions should contribute to and enhance the natural and local environment by recognising the intrinsic character and beauty of the countryside and the wider benefits from natural capital and ecosystem services - including the economic and other benefits of the Best and Most Versatile agricultural land and of trees and woodland. Footnote 53 adds that where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of higher quality.

Paragraph 175 sets out the principles that local planning authorities should apply with regard to habitats and biodiversity when determining planning applications including refusing applications where significant harm to biodiversity cannot be mitigated/compensated for; protecting SSSIs; refusing developments that result in the loss or deterioration of irreplaceable habitats unless there are wholly exceptional; and encouraging opportunities to incorporate biodiversity improvements especially where this can secure measurable gains for biodiversity.

Paragraph 180 states that planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development.

Paragraph 189 states that in determining applications, local planning authorities should require the applicant to describe the significance of any heritage assets affected, including the contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance. As a minimum the relevant historic environment record should be consulted, and the heritage assets assessed using appropriate expertise where necessary. Where a site on which a development is proposed includes or has the potential to include heritage assets with archaeological interest, local planning authorities should require developers to submit an appropriate desk-based assessment and, where necessary, a field evaluation.

The Glossary of the NPPF defines renewable and low carbon energy, including energy for heating and cooling as well as generating electricity. Renewable energy covers those energy flows that occur naturally and repeatedly in the environment including from the sun. Low carbon technologies are those that can help reduce emissions compared to conventional fossil fuels.

The NPPF is supplemented by guidance on Renewable and Low Carbon Energy, June 2015. This reiterates guidance in the NPPF and states at paragraph 001 that "Planning has an important role in the delivery of new renewable and low carbon energy infrastructure in locations where the local environmental impact is acceptable." It indicates (paragraph 005) that local planning authorities should take into account the requirements of the proposed technology as well as the potential impacts on the local environment.



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## 6.2 Local Planning Policy

The local adopted plan is the Maidstone Borough Local Plan 2017. The relevant planning policies are as follows.

### 6.2.1 Strategic Policies

#### 6.2.1.1 Policy SS1 - Spatial Strategy

This policy sets out the spatial strategy for the Borough and, amongst a range of things, confirms at sub para i that the rural character of the borough will be protected and, at sub para 9 that landscapes of local value will be conserved and enhanced.

#### 6.2.1.2 Policy SP17 - The Countryside

This states at paragraph 1 that 'Development proposals in the countryside will not be permitted unless they accord with other policies in this plan and they will not result in harm to the character and appearance of the area.'

#### 6.2.1.3 Policy SP18 - The Historic Environment

This states at paragraph ii that 'Through the development management process, securing the sensitive management and design of development which impacts on heritage assets and their settings;'

### 6.2.2 Development Management Policies

#### 6.2.2.1 Policy DM1 - Principles of Good Design

This policy sets out a list of criteria which development should meet in order to achieve high quality design. Of particular relevance to this proposal are:

iv) respect the amenities of occupiers of neighbouring properties and uses .....by ensuring the development does not result in, or is exposed to, excessive noise, vibration, odour, air pollution, activity, vehicle movements, overlooking or visual intrusion, and that the built form would not result in an unacceptable loss of privacy or light enjoyed by the occupiers of nearby properties;

v) respect the topography and respond to the location of the site and sensitively incorporate natural features such as trees, hedges and ponds worthy of retention within the site. Particular attention should be paid in rural and semi-rural areas where the retention and addition of native vegetation appropriate to local landscape character around the site boundaries should be used as a positive tool to help assimilate development in a manner which reflects and respects the local and natural character of the area;

viii) protect and enhance any on-site biodiversity and geodiversity features where appropriate, and provide sufficient mitigation measures;'

#### 6.2.2.2 Policy DM3 - Natural Environment

Paragraph 1(i) states that development should protect a range of important features in the natural landscape including important hedgerows and the existing public right of way network.

Paragraph 1(vii) states that development should positively contribute to the creation of a wider network of new links between green and blue spaces including links to the Public Rights of Way Network.

Paragraph 2 states 'Where appropriate, development proposals will be expected to appraise the value of the borough's natural environment through the following:

An ecological evaluation of development sites and any additional land put forward for mitigation purposes to take full account of the biodiversity present, including the potential for the retention and provision of native plant species;

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Arboricultural assessments to take full account of any natural assets connected with the development and any associated sites; and

A landscape and visual impact assessment to take full account of the significance of, and potential effects of change on, the landscape as an environmental resource, together with views and visual amenity.'

#### 6.2.2.3 Policy DM4 - Development Affecting Designated and Non Designated Heritage Assets

This states at paragraph 2 that where a development affects a heritage asset or its setting the impact must be assessed by means of a proportionate Heritage Assessment. At paragraph 3 it states where the site includes or had the potential to include heritage assets with archaeological interest an appropriate desk based assessment must be submitted and , where necessary, a field evaluation.

#### 6.2.2.4 Policy DM21 - Transport Impacts

This policy states at paragraph 1(i) that developments must 'demonstrate that the impacts of trips generated to and from the development are accommodated, remedied or mitigated to prevent severe residual impacts, including where necessary an exploration of delivering mitigation measures ahead of the development being occupied;'

#### 6.2.2.5 Policy DM24 - Renewable and Low Carbon Energy Schemes

This policy states:

1. Applications for larger scale renewable or low carbon energy projects will be required to demonstrate that the following have been taken into account in the design and development of the proposals:

The cumulative impact of such proposal in the local area;

The landscape and visual impact of development;

The impact on heritage assets and their setting;

The impact of proposal on the amenities of local residents e.g. noise generated;

The impact on the local transport network; and

The impact on ecology and biodiversity including the identification of measures to mitigate impact and provide ecological or biodiversity enhancement.

2. Preference will be given to existing commercial and industrial premises, previously developed land, or agricultural land that is not classified as best and most versatile.

3. Provision for the return of the land to its previous use must be made when the installations have ceased operations.

#### 6.2.2.6 Policy DM34 - Design Principles in the Countryside

This policy indicates that development in the countryside will be permitted if it satisfies the requirements of other policies in the Plan and respects the local landscape character, does not result in unacceptable traffic levels and, where new build is proposed, is unobtrusively located and well screened.

### 6.2.3 Other Policy Documents

#### 6.2.3.1 Supplementary Development Plan Maidstone Landscape Character Assessment (2013)

This SPD reviews the landscape character types and areas across the borough. It identifies the site as being within the Low Weald National Character Area, and also forming part of the Low Weald Fruit Belt and the Teise Valley Local Character Areas.

6.2.3.2 *Planning Policy Advice Note Large Scale (>50kW) Solar Arrays (January 2014).*

This is a practical guide for developers approaching Maidstone with proposals. Whilst some of its content regarding Government Guidance is inevitably dated it offers best practice advice on how to prepare a solar scheme, broadly reflective of the 2017 Local Plan policies along with practical advice on how and when to initiate discussions with the LPA, important stakeholders as well as other third parties. As such it is a very useful guide on the policy and practical issues any large-scale solar scheme needs to address in order to secure the support of the LPA.

The Note includes detailed advice regarding the considerations the LPA would have regard to where the development is on agricultural land:

Grade 1 or 2 - the Council would not normally support development on best quality agricultural land as that land should be used for agriculture purposes. Clear justification of the benefits of the development would have to be demonstrated for the land to be taken out of agriculture use. In addition, all criteria for Grade 3 land would also need to be considered.

Grade 3a - the proposal should 1) provide an explanation of why the development needs to be located on the site and not in land of lesser agricultural classification in the area; 2) provide information on the impact of the proposed development on the local area's supply of farming land within the same classification; 3) if the proposed development site makes up part of an existing farm, provide information on the viability of this farm to continue to function (as an agricultural unit) with the development in situ; and 4) consider the cumulative impact of the proposed development and other permitted large scale solar PV developments on the supply of agricultural land within the same classification across the local area.

Grade 3b, 4 or 5 - no additional info required unless the agricultural practice that the proposal would replace makes a special contribution to the environment or local economy.

6.2.3.3 *Kent County Council Position Statement on Development of Large- Scale Solar Arrays August 2014.*

This is a more overarching document than the one produced by Maidstone, looking at the potential impact of large-scale solar array schemes across Kent.

The Statement indicates general support for renewable and low carbon technology. However, KCC does not support large scale solar arrays in the Green Belt, in landscapes designated for their natural beauty and areas which contribute to their setting, on sites with ecological importance, archaeological or historic interest or on BMV agricultural land (grades 1, 2 and 3a). On greenfield sites outside protected areas it advises that proposals should demonstrate the landscapes suitability to receive such a development, landscape and visual impacts should be avoided or mitigated and cumulative impacts taken into account.

## 7 Planning Issues

### 7.1 Introduction

The proposed development is a renewable energy generation scheme. As such the key NPPF tests are those set out at paragraph 154, which states that applications for renewable energy should be approved if impacts are (or can be made) acceptable; and paragraph 170, which gives preference to the development of areas of poorer quality agricultural land over those of higher quality.

In terms of the Local Plan, the key policies are:

#### 7.1.1 Policy DM24 - Renewable and Low Carbon Energy Schemes

This policy states:

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1. Applications for larger scale renewable or low carbon energy projects will be required to demonstrate that the following have been taken into account in the design and development of the proposals:
    - i) The cumulative impact of such proposal in the local area;
    - ii) The landscape and visual impact of development;
    - iii) The impact on heritage assets and their setting;
    - iv) The impact of proposal on the amenities of local residents e.g. noise generated;
    - v) The impact on the local transport network; and
    - vi) The impact on ecology and biodiversity including the identification of measures to mitigate impact and provide ecological or biodiversity enhancement.
  3. Preference will be given to existing commercial and industrial premises, previously developed land, or agricultural land that is not classified as best and most versatile.
  4. Provision for the return of the land to its previous use must be made when the installations have ceased operations.

The detailed assessment below demonstrates that the proposed solar energy farm complies with the above key NPPF tests, the tests in Local Plan policy DM24 along with all other relevant national and local policy and guidance.

## 7.2 Principle of Development/Land Use

The NPPF does not require promoters of renewable energy developments to demonstrate the need for their project to be sited in a particular location. The Guidance on Renewable and Low Carbon Energy and Local Plan policies recognise that renewable energy projects will in some cases need to be located in rural areas and that technical considerations including proximity of grid connection infrastructure and size are key. Further, the NPPF and PPG both indicate that renewable energy developments should be approved if the impacts are, or can be made, acceptable. The policies in the Adopted Local Plan allow the development of renewable and low carbon energy projects within the open countryside provided it does not result in unacceptable adverse impacts to heritage assets, the landscape (including cumulatively), the amenity of residents or ecology and biodiversity (policy DM24 – Renewable and Low Carbon Energy Schemes).

The impact of the scheme on the open countryside is addressed in the Landscape and Visual Impact Section below. It is considered that with mitigation the proposed solar energy farm will not have unacceptable adverse landscape and visual effects and that in many instances the effects will be beneficial.

National policy objectives are to achieve net zero emissions by 2050. The current proposal would make a significant contribution towards low carbon energy generation within the District, enabling Maidstone District Council to make a meaningful contribution towards the national target.

Opportunities for solar farms in Maidstone District are very limited - the whole of the District is predominantly Grade 1, 2 and Grade 3a agricultural land, whilst parts of the District are protected by the Kent Downs AONB. If renewable energy development contributing towards the national target is to be facilitated then it would be difficult without the loss of some of this land. The Alternative Site Assessment concludes that there are no sequentially preferable sites (namely, previously developed land, non -agricultural land or greenfield land of lower quality) within a viable distance of the available grid connection.

For the reasons above, the proposal is considered to be acceptable in principle in terms of national guidance and local policy. The benefits the scheme would deliver are significant and have strong weight in planning terms. These must be weighed against any adverse impacts that the scheme may give rise to.

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### 7.3 Key Issue 1: Landscape and Visual Impact including Cumulative Impact

A Landscape and Visual Impact Assessment (LVIA) has been produced by awScape Ltd (February 2021). The LVIA identifies and assesses the magnitude of the impact of the proposal on the landscape character (landscape effect) and on people's views and visual amenity (visual effect).

The site is located within the National Character Area 121 – Low Weald and two Landscape Character Areas, Low Weald Fruit Belt and Teise Valley. The site reflects the national and local landscape character type with gentle topography, shallow valleys, arable fields divided by mature hedgerows and small blocks of woodland. Within the site there are numerous ponds and ditches whilst part of the Lesser Teise forms part of the eastern boundary of the site.

#### 7.3.1 Landscape effects

The effects of the proposed development on the landscape are determined by the sensitivity of the landscape receptor and the magnitude of effect.

Sensitivity of landscape is determined by its susceptibility to change and its value. The LVIA assesses that the overall level of susceptibility of the landscape to change is medium, with the tree and hedgerow elements being particularly susceptible to change. It also assesses the landscape value of the site and its setting as being medium. On that basis the overall sensitivity of the site to the development proposed is medium (a medium sensitivity receptor).

The magnitude of landscape effects resulting from the scheme are assessed as ranging from medium - high beneficial to high adverse. However, the high adverse effects are temporary and the overall magnitude of landscape effects is assessed as being low – medium adverse upon completion but low beneficial after 10 years, once mitigation planting has matured. The LVIA concludes that in terms of landscape effects the development at completion will be slight moderate adverse and will improve to slight beneficial after 10 years.

#### 7.3.2 Visual effects

The LVIA identifies that the greatest visual impacts will be from a small number of dwellings and PROW within 500m of the site boundary. Beyond this the impacts reduce significantly and beyond 2km the development will be imperceptible in the landscape.

A series of representative viewpoints were selected, including views from public roads and public rights of way, in order to assess visual impact. For each of these baseline existing photographs were compared to photomontages of the scheme 1 year after completion and the scheme 10 years after completion and the magnitude of visual change assessed.

A summary of the visual impacts is set out at Table 5 of the LVIA report. Upon completion some views, particularly those close to the site, will experience substantial adverse impacts. (Viewpoints 1 - 8 and views from the bungalow north of Little Cheveney Farmhouse). However, these impacts are temporary. The LVIA concludes that once mitigation planting has matured (within 10 years) the majority of viewpoints will experience moderate beneficial, negligible or substantial beneficial magnitude of impact.

At 10 years after construction only 1 viewpoint will experience slight adverse impacts - Viewpoint 10, taken from the PROW to the driveway of dwelling on Sheephurst Lane 30m east of the site, looking north. The report indicates that the impact on construction to the first floor windows at this viewpoint will be moderate substantial adverse. As vegetation matures over the 10 year period the magnitude of change will reduce to slight adverse. However, the impact to ground floor windows will be moderate adverse on construction reducing to negligible after 10 years.

This result is replicated in the assessment of dwellings affected by the development - the one dwelling adversely affected after 10 years is one of those located at Little Sheephurst Farm.

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In terms of dwellings one property, the bungalow to the north of Little Cheveney Farm experiences a substantial adverse impact on construction but this reduces to a substantial beneficial impact after 10 years. Turkey Farmhouse experiences a substantial adverse impact reducing to a moderate beneficial impact after 10 years. All other dwellings experience more moderate impacts which reduce to negligible or moderate beneficial after 10 years apart from the dwellings around Little Sheephurst Farm. These experience the same impact as described for Viewpoint 10 above.

No other properties, local SSSIs, heritage assets are adversely affected by the development. Views from Burton Road will experience a moderate adverse impact but after 10 years this will reduce to negligible. Views from the railway line running along the northern boundary of the site will experience a substantial adverse impact reducing to moderate adverse after years.

The LVIA sets out in broad terms the mitigation planting proposed. This is detailed further in the ecology section below. However, the planting scheme is developed to reflect the landscape character of the site and wider area.

### **7.3.3 Cumulative impact**

The LVIA also assesses the cumulative impact of the proposal. There are 2 solar farms in the wider vicinity of the site - the Paddock Wood Solar Farm and the Widehurst Solar Farm - whilst there is also planning permission for a switching station on a site south of Sheephurst Lane.

In Viewpoint 11 there may be the possibility of combined inter visibility with the Paddock Wood Solar Farm. However, the combined cumulative visual impact would be negligible. There would be no possibility of views of the Widehurst Solar Farm. Intervening vegetation would screen the switching station from the proposed solar farm. The cumulative effect on landscape character would be negligible.

In conclusion the LVIA demonstrates that the initial impacts arising from the development can be substantially mitigated by the extensive proposed planting which in turn would improve local landscape and character. As such the proposed solar farm is not considered to have unacceptable adverse landscape and visual effects.

Subject to the implementation of the proposed package of planting to provide screening to mitigate views, the development is considered to comply with Local Plan policies DM24- Renewable and Low Carbon Energy Schemes and policy DM34 - Design Principles in the Countryside. It is also considered that the development complies with guidance in the NPPF, which states (paragraph 154) that applications for renewable energy should be approved if the impacts are (or can be made) acceptable.

## **7.4 Key Issue 2a: Use of BMVAL Agricultural Land**

The proposed solar energy farm will be located on approximately 74.5 hectares of land currently used for arable purposes.

An Agricultural Land Use Statement has been prepared by Bidwells. This focuses on the impact of the development on agriculture and soils within the development area, at farm level and nationally.

A detailed field analysis has been carried out in line with MAFF guidance. This identified that the land comprising the site is classified as follows:

- Grade 2 - 9%
- Grade 3a - 38%
- Grade 3b - 53%

As such 45% is classified as Best and Most Versatile Agricultural Land (BMV Agricultural Land).

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The NPPF requires LPAs to take into account the economic and productive impact of development on BMV Agricultural Land. The main objective behind this is to protect national food security and to ensure the efficient use of land with a preference for development on poor quality agricultural land.

The site has good quality soils but with some workability limitations resulting from risk of water logging which in turn impacts on timeliness of operations and establishment of some crops. These problems are to some degree compensated by the warmer and sunnier climate meaning the site is well suited to arable production.

The site has historically been used to grow a rotation of conventional combinable arable crops including winter wheat, winter barley, spring barley, spring oats, winter beans, oilseed rape and linseed. This represents the most financially optimal form of conventional agricultural land use the site can viably sustain. The report considers other potential alternative sources of income to the Farm such as growing maize for use for anaerobic digestion schemes. Such a crop is viable but it would result in adverse environmental impacts whilst use of the land for a solar scheme would be substantially more efficient.

The UK has a national arable cropped area of 4.5 million hectares. Year on year this fluctuates by between 50,00 and 100,000 hectares, depending on weather and market conditions. The site is used for growing winter wheat, winter and spring barley and a number of other arable crops. These are crops grown across the country and do not require specific soil types. The site achieves below farm and national averages in terms of yields. The site does not produce specialist crops in which the UK consistently runs a trade deficit. In this context the temporary loss of this site is not considered to be economically or agriculturally significant.

The site is located in a wide area where BMV Agricultural Land is relatively prevalent. If sustainable development is acceptable in principle then it is preferable it is located on lower quality Grade 2 and 3a BMV land. In addition large areas of Maidstone Borough are designated Kent Downs AONB or local landscape value areas and a large area of Kent is designated Kent Downs AONB and High Weald AONB where landscape protection means development is unlikely to be acceptable.

The site comprises only 4.6% of the arable land of Eckley Farms. Removing relatively poorly performing field has benefits to the Estate in terms of harvesting capacity and efficiency. More importantly, for the temporary period proposed the development will provide a diversified income for the business, providing a consistent income stream not prone to the inherent volatility of crop markets and weather patterns. This will more than offset the limited lost income of crop output from the site where productivity is below average.

The loss of the agricultural land is not irreversible as solar development is temporary (37 years), after which the site will be fully decommissioned and will revert to its agricultural use. This long term break in arable production allows soil health, structure and productive capacity to recover. It can also help reduce long term, incremental soil erosion associated with heavy cultivation thanks to continuous plant cover throughout the consented period of the solar energy farm. This will allow the quality of the soil to improve and productivity to improve when the site is brought back into cultivation.

Whilst the solar energy farm is operational an agricultural use will continue in the form of sheep grazing between the solar arrays. Both the grassland that will be cultivated for sheep grazing together with the area of land set aside for biodiversity improvements will provide a long term break from the arable crop production cycle. During this period soil health, structure and productive capacity can recover and improve and long term, incremental soil erosion associated with heavy cultivation will be arrested. Therefore when the site is brought back into arable crop production it is highly likely that crop yields and productivity will have significantly improved.

The main conclusions of the Bidwells report are that:

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- The quality of the land on the development site is not important at a local level given the high proportion of BMV Agricultural Land in Kent,
- Large parts of Maidstone Borough and Kent are designated AONBs or local landscape value areas and it is preferable to avoid developments in these sensitive landscapes,
- The agricultural contribution of the site is limited to combinable commodity crops and not to the strategically significant horticulture crops in the County. The proposed location of the development therefore represents the efficient use of some of the poorer, less versatile, less resilient land in the region,
- The temporary loss of arable crop production is not considered economically significant either locally or nationally,
- The temporary loss of arable land will be on fields comprising only 4.6% of Eckley Farm's total land, but the development will provide the Farm an important diversified income stream,
- An agricultural use will continue in the form of sheep grazing and the development will not lead to an irreversible loss of BMV Agricultural Land.

On the basis of the above the proposal is therefore considered to comply with NPPF guidance, paragraph 2 of Local Plan Policy DM24 - Renewable and Low Carbon Energy Storage Schemes and the guidance set out in the Planning Policy Advice Note Large Scale (>50kW) Solar Arrays (January 2014).

## 7.5 Key Issue 2b - Grid Connection and Sequential Analysis

The UK transmission and distribution infrastructure is built around a centralised power network with historically most electricity being generated at large fossil fuel power plants connected to these networks. Since 2012 this has been changing with more renewable embedded generation being connected to as the UK's energy supply decarbonises.

This has resulted in major challenges for renewable energy projects wanting to connect to the power network as it has become increasingly challenging to find grid capacity in locations where land is available and where a connection can be made at a cost that does not affect the economic viability of a project. Grid and land are therefore key considerations at the outset of project development for any renewable energy project, whatever the technology. In addition, as standalone renewable energy projects are more likely to be curtailed when the grid is 'full', energy storage has increasingly become an important element in renewable energy project feasibility and design. In fact, ESS is now considered an essential element of the electricity mix as a whole because it is a key enabler for the development of more low carbon generation replacement for high carbon electricity generation in the UK.

The Sheepwash Solar Energy Farm incorporates infrastructure that provides energy storage. As such it requires the ability to export the solar energy generated and electricity stored to the grid as well as being able to import from the grid as and when required. For example, to assist in dealing with excess capacity from other renewable energy schemes.

UK Power Networks have confirmed that it is feasible to connect the proposed solar energy farm to the Grid and that a viable Grid offer has been secured on the 132 kV line to the western edge of the site. The Point of Connection will be the UKPN overhead line.

The Grid Connection Analysis by Artios Energy Ltd reviews the grid connection options within the area local to the proposed site - the available land. It confirms that a connection to the 132kV line running close to the western edge of the site is the most efficient option, including 100m of underground cabling. The analysis indicates that alternatives are not practical or economical as they would require significant infrastructure to be installed to facilitate a grid connection.

This is the only feasible point of connection due to technical constraints and viability as set out in the Artios Energy Ltd. Report.

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A Sequential Analysis Study by Pegasus Group has been prepared. It demonstrates that there are no alternative viable sites available. The study area assessed is a corridor of 500m from potential grid connection options. This is because sites located further away from the grid connection are not considered to be economically viable.

Within this study area the report concludes the following:

- that there are no other alternative sites on previously developed land,
- that there are no sites for large scale rooftop solar development,
- that there are no alternative sites of poorer quality agricultural land.

The report concludes that the proposed site is the only available option because:

- the use of agricultural land is necessary in the absence of alternative sites comprising previously developed land and barriers to the deployment of sites suitable for large scale rooftop solar;
- there are no alternative sites of poorer quality land and subject to any lesser environmental constraints;
- the site would remain in agricultural use and the scheme would deliver biodiversity improvements,
- and that the development therefore complies with paragraph 13 of Planning Practice Guidance: Renewable and Low Carbon Energy.

In addition to the above, consideration should also be given to the call in decision (APP/D0840/A/221638) dated 11 March 2015 where the former Secretary of State for the Department of Communities and Local Government, Eric Pickles, agreed with the Inspector's assessment, stating 'The Secretary of State weighs the loss of fully productive BMV a period of almost two generations against the scheme but, like the Inspector, he concludes that on balance, the public gain of the provision of renewable energy would outweigh the loss.'

## 7.6 Key Issue 3 – Land Diversification and Economic Development

Diversification is a key priority for Eckley Farm. The proposed development represents a diversification in the use of the agricultural estate of Eckley Farm and an additional and more secure stream of income.

The proposal will support the local economy through employment creation both during construction and the operational and maintenance phases.

At appeal considerable weight has been attached to the economic benefits of solar farms. In the planning appeal APP/K1128/A/13/2206258 the Inspector noted that the typical economic benefits that solar farms give rise to and that these should be given much weight.

"17. The development would provide some support for the construction industry and local contractors/ suppliers could be engaged during the construction and eventual decommissioning stages. Some construction workers may also use some local services. Furthermore, the scheme would generate additional income for landowners, enhancing farm incomes and possibly diversifying some farm businesses. This would accord with the Government's objective of promoting a strong rural economy. In addition, the development would assist in increasing the security and diversity of electricity supply. These economic benefits are important considerations that can be given much weight."

The proposal therefore enables the farming business to diversify in a way entirely consistent with NPPF guidance and Local Plan policies.

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## 7.7 Other Issues

### 7.7.1 Historic Environment – Archaeology

Cotswold Archaeology have produced a desk based heritage assessment. This addresses the likelihood of the presence of archaeological remains on site. The lack of archaeological surveys in the local landscape means that there is little evidence regarding the potential for buried remains. The assessment identifies slight potential for early pre-historic remains and some potential for later pre historic and Romano-British remains. Medieval / post medieval agricultural field boundaries are known to be present.

The impact of the scheme on archaeological remains arises from the proposed ground works. The construction methodology of the scheme involves minimally intrusive piles for the solar panels driven to 1.5m depth, cable runs no deeper than 0.8m depth and pads for switch stations transformers and other gear of between 0.5 and 0.8m depth. Historic field boundaries are to be retained.

Following discussion with Kent County Council's Senior Archaeological Officer, Wendy Rogers, it has been agreed that there is no archaeological objection to the scheme subject to further investigations being undertaken post consent. These would include a geophysical survey of the site to help clarify the presence of any archaeological remains and, subject to results, additional investigations or mitigation measures.

On that basis it is considered that the proposal complies with Local Plan policies DM24(iii) - Renewable and Low Carbon Energy Schemes and DM4 - Development Affecting Designated and Non Designated Heritage Assets to ensure that any archaeological remains are protected during building works.

### 7.7.2 Historic Environment – Heritage

The Cotswold Archaeology assessment also addresses the impact of the development on heritage assets. It confirms that the site is not located within a Conservation Area and does not contain any listed buildings or scheduled monuments.

There are 33 Grade II listed buildings within 1km of the site. The Marden Conservation Area is also located approx 800m to the east of the site. There is also a Grade II\* listed building, Cheveney House, located 1.6km from the site.

The Assessment reviews the impact of the development on the setting of each of the heritage assets and also considers the potential effect of the development on the significance of the assets. In a small number of instances there is a degree of inter-visibility between the development site and the nearby listed buildings, but this would not result in any harm to the significance of these designated heritage assets.

As such the proposal is considered to comply with national guidance and Local Plan policies DM24(iii) - Renewable and Low Carbon Energy Schemes and DM4 - Development Affecting Designated and Non Designated Heritage Assets.

### 7.7.3 Natural Environment - Ecology and Biodiversity

The site is not subject to any biodiversity or nature conservation designations. The site is located within the Impact Risk Zones (IRZs) of 2 Sites of Special Scientific Interest within 5km of the site - Marden Meadows SSSI (2.9km to the east) and the River Beult SSSI (3.6km to the north). In addition there is one non statutory site for nature conservation within 2km of the site - Haviker Street RNR is a roadside nature reserve in the village of Collier Street 1.3km from the site. Due to the nature of the proposed development and its distance from the above sites it is not considered that the proposal would result in any direct impacts on these sites.

The site itself comprises 7 large fields separated by hedgerows with some mature trees. The hedgerows are UK BAP Priority Habitats. There are no other UK BAP Priority Habitats within the site; although the site includes field margins these do not meet the criteria to qualify as Arable Fields Margins Priority Habitat. Woodland adjacent to the boundary of the site on the



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southern and western boundaries is listed on the Priority Habitats database as broadleaved deciduous woodland and the western woodland is also identified as ancient and semi-natural woodland. There are also a number of ponds within the site and close to it boundary.

A detailed Ecological Impact Assessment has been prepared by Riverdale Ecology (February 2022) to identify the biodiversity value of the site, any ecological constraints or impacts associated with the proposed development and recommendations regarding further survey work and mitigation measures. The Assessment includes a desk top study of the site and the surrounding area within a 2km radius as well as a Phase 1 Habitat Survey, bat activity monitoring, an environmental analysis of local ponds for great crested newts, winter bird and breeding bird surveys and a badger survey.

The Assessment indicates that the hedgerows within the site have value for nature conservation providing commuting routes and foraging for a number of different breeds of bats, the most frequent visitors being common pipistrelle and soprano pipistrelle.

The hedgerows and fields provide foraging for a wide range of birds including species of conservation concern and Schedule 1 species including barn owls. There is also evidence of a number of declining species featured on the RSPB Farmland Bird Indicator such as corn bunting yellow hammer, linnet, skylarks and yellow wagtail.

Of the ponds on the site, all of which are to be retained, only one has potential as a breeding pond for great crested newts, although there is no evidence of any population on the site itself as arable fields are not hospitable environments for great crested newts. However, there is a breeding population in ponds within 250m of the site and it is possible that newts may move between ponds.

In addition, evidence of otters, hazel dormouse, reptiles, water voles, hedgehogs, brown hares and badgers were assessed. Of these, only definite evidence of badgers, who use hedgerows as connective habitats and routes for local wildlife to move around the local area, was found. It is also considered likely that there are local populations of common reptiles such as slow worms and grass snakes in the field margins.

The proposed development will retain all the existing hedgerows and mature trees, except for a small number of new gaps which are required for access purposes, alongside grassland field margins and woodland blocks. The ponds on the site are also to be retained. The only loss of habitat would be the areas of arable field upon which the solar arrays and other necessary equipment would be located along with any disruption arising during the construction period.

The Assessment indicates the impact of the scheme on foraging bats would be negligible and that the small areas of hedging to be removed would not affect any potential roosts.

In terms of birds, apart from skylarks, the loss of the arable fields will have no discernible impact (neutral) and may even be beneficial in terms of reduced chemical spraying and relaxed management. For skylarks, however, there is a risk that without some mitigation there may be a loss of nesting populations. may nest around the solar arrays whilst others may be displaced to adjoining arable fields.

In terms of great crested newts it is not anticipated that the scheme would adversely impact on their foraging or habitat. However, a precautionary approach during construction will be required to avoid offences under the Habitat Regulations and the Wildlife and Countryside Act 1981 (as Amended).

For other animals and reptiles, the impact is negligible. The 3 badger setts on the western boundary of the site are outside the solar energy farm fence and whilst a small area of their foraging range will be lost this is not considered significant.

The Assessment set out a number of measures to mitigate impact, namely:

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- root protection zones (ROZs) during construction to protect trees and hedgerows;
  - avoid any light spillage during construction or after;
  - clearance works for the internal road system to be carried out in accordance with a Precautionary Method of Working in order to avoid any impact on Great Crested Newts;
  - woodpiles, brash piles and hedgehog homes in hedgerows;
  - 10 skylark plots in neighbouring fields at a density of 2 per hectare;
  - badger gates and tunnels in security fencing;
  - creation of woodland, an orchard and wildflower grassland in Biodiversity Enhancement Zones.

In addition, the report proposes a range of ecological measures to compensate for the impact of the development and to enhance biodiversity, namely:

- approximately 2.5km of new hedgerows will be planted between the edge of the solar farm and the Biodiversity Enhancement Zone and between the northern site boundary and the public footpath. 1km of existing hedgerows will be gapped up and enhanced.
- grassland within the solar arrays to create soil stability and habitat for wildlife including sheep grazing,
- new Biodiversity Enhancement Zones on the west and east side of the site for woodland and wildflower species rich planting to support wildlife,
- 4.67 hectares of new deciduous woodland across the northern boundary of the site, either side of the existing woodland plus additional woodland strips required as visual mitigation by the LVIA.
- 8.7 hectares of meadow grassland within the site, 4 hectares within the Biodiversity Enhancement Zone, a wide strip in the eastern edge of the site, and approximately 3.3 hectares in the southern end of Field 1.
- 2 new ponds to be created in the Biodiversity Enhancement Zones.

Provision for Protected Species is also proposed:

- Bats - 50 bat boxes plus 3 roost boxes will be placed in suitable locations in trees plus 7 larger colony boxes in the proposed new battery storage barn;
- Great crested newts - the 2 new ponds, enhanced hedgerows, woodland and wildflower meadow will enhance habitat and encourage dispersal and provision of reptile woodpiles and hibernacula will provide secure refuge;
- Birds - 80 bird boxes of different designs, 2 barn owl boxes for nesting. Wildflower meadow and grassland strips will provide improved forage.

These specific measures are shown, where appropriate, on the plan at Figure 5 Ecological Enhancement and Biodiversity Mitigation and summarised in Table 1 below.

**Table 1: Biodiversity Mitigation, Compensation and Enhancement measures**

Description of Effects	Value of receptor at the Geographical Scale (CIEEM)	Mitigation/ Compensation Measures	Habitat Creation and Enhancement Measures	Residual Impacts
<b>Woodland/Trees/ Hedgerows</b>  Minor loss for access	Local importance	Protection of root protection zones during construction	Creation of 3.54 hectares of broadleaved woodland and 0.39 hectares of orchard. 2,526 metres of new hedgerow planting and gapping up 1069 metres of existing hedgerow.	Net biodiversity gain
<b>Arable farmland</b> <b>Loss of 74.5acres</b>	Negligible importance.	Conversion of arable land to grassland of equal or greater biodiversity value.	Conversion of approximately 16 hectares to meadow grassland.	Net biodiversity gain
<b>Bats</b> <b>No loss of tree habitat</b>	Local importance.	No external lighting Retention of linear foraging features and habitat connectivity	Installation of 50 bat boxes and roost boxes. Creation of 16 hectares of meadow grassland Potential new foraging opportunities	No net loss/ Likely net gain improvement.
<b>Great crested newt</b> <b>No impact on site</b>	Site Value.	No clearance of habitat adjacent to the pond close to the Application Site Exclusion buffer of 50m around the pond	2 new ponds installed. Conversion to grassland provides higher value habitat	No Net Loss / likely net gain improvement.

<b>Nesting birds Loss of arable nesting habitat for farmland birds</b>	Local Value	No site clearance during the nesting season Creation of offsite skylark plots within nearby arable fields Conversion to rough grassland to promote suitable nesting habitat	Creation of approximately 16 hectares of meadow grassland and seeded margins. New hedgerow planting and hedgerow enhancement Installation of 80 general nest boxes and two barn owl boxes.	Loss of skylark within the site, but No Net Loss of skylark at the local scale. No Net Loss of habitat and enhanced habitat for other farmland birds.
<b>Badgers Loss of foraging habitat only within the arable field.</b>	Site Value	Some loss of foraging areas due to fencing but exclusion buffer around all setts. Enhanced foraging	Creation of new woodland and 16 hectares of meadow grassland.	Increase in the value of available foraging habitat for badgers within the Application Site.
<b>Reptiles No loss of reptile habitat.</b>	Site Value	Not Applicable	16 hectares of meadow grassland and grassland within the solar array.	Increase in extent of grassland providing net gain in foraging habitat for reptiles.
<b>NERC Act SPI/Local or National BAP Species Loss of arable farmland foraging habitat.</b>	Site Value	Not Applicable	Creation of 16 hectares of meadow grassland and protection from ground predators within the solar array.	No Net Loss.

The proposed habitat creation and enhancement measures will achieve net biodiversity gains in accordance with NPPF biodiversity policy when calculated using DEFRA's Biodiversity Metric Calculation Tool. Compared to the baseline condition the increase in habitat units is 51.04% and the increase in hedgerow units is 39.29%.

It is considered that this package of ecological enhancement measures and mitigation measures comprises a substantial response to any impact that the proposed development might have on biodiversity in the area and offers significant biodiversity enhancements that would benefit the site, Eckley Farm and the wider area. On this basis the proposal is considered to comply with local plan policy DM1 - Principles of Good Design, DM3 - Natural Environment and DM24 - Renewable and Low Carbon Energy Schemes.

#### 7.7.4 Natural Environment - Landscape and Ecology

The Landscape and Mitigation Enhancement plan AW0143-PL-002 shows the proposed mitigation planting measures to address landscape and ecology impacts. This shows that all existing trees on the site are to be retained. The scheme proposes the planting of a large new woodland belt along the northern boundary of the site comprising primarily oak, sweet

chestnut and beech to replicate the mix of species in Peacock Plantation and other areas of woodland to the south of the site (and reflecting the mitigation planting requirements set out in the Riverdale Ecology Assessment).

All existing hedgerows in the site are to be retained in order to benefit from the natural screening of the site that they provide apart from the creation of some small new gaps. Extensive new hedging is to be planted. The scheme proposes enhanced planting to the hedgerow on the northern boundary using hazel, hawthorn and elder.

Other areas of new planting and enhanced planting include along the western and southern boundaries of the site primarily to provide visual screening. A similar mix of species, reflecting the existing mix on site and nearby, will be used.

It is considered that within 10 years of mitigation planting, any landscape impacts will have been significantly reduced as set out in Table 2 below. The Landscape and Ecology Management plan further sets out implementation of the plan, management, maintenance and monitoring. This is consistent with BS 8683:2021 Process for Designing and Implementing Biodiversity Net Gain – Specification.

**Table Two: Summary of Landscape Effects**

Impact	Magnitude	Receptor Susceptibility	Embedded mitigation	Description of effects and significance upon completion	Additional mitigation	Residual effect within 10 years
Impact on the arable landscape with the introduction of solar arrays with associated fencing and access tracks	High Adverse to  Medium Adverse (within 10 years)	Low-medium	Mitigation as detailed within Drawing AW0143-PL-002	Topography minimally disturbed. Solar arrays follow existing Site topography. Temporary change to the landscape that is reversible. Limited in extent.  Moderate-Substantial Adverse	None proposed	Slight-Moderate adverse
Impact on the arable landscape with the introduction of electrical infrastructure	Medium Adverse to  Low Adverse (within 10 years)	Low-medium	Mitigation as detailed within Drawing AW0143-PL-002	Topography minimally disturbed. Solar arrays follow existing Site topography. Temporary change to the landscape that is reversible. Limited in extent.  (Slight)-Moderate Adverse	None proposed	Slight-(Moderate) adverse

Impact	Magnitude	Receptor Susceptibility	Embedded mitigation	Description of effects and significance upon completion	Additional mitigation	Residual effect within 10 years
Impact on existing woodland, trees, hedgerows and water bodies	Negligible (existing vegetation retained) to  High Beneficial (within 10 years)	High	Gapping up of existing hedgerows, planting of new mitigation and biodiversity woodland, orchard trees, retention and creation of ponds as detailed within Drawing AW0143-PL-002	Existing vegetation retained and new planting introduced  Negligible	None proposed	Substantial Beneficial
Impact on the Conservation interests of the landscape	Negligible To  High beneficial (after 10 years)	Medium-High	Mitigation as detailed within Drawing AW0143-PL-002	Landscape infrastructure, ponds and water courses are retained. Listed buildings are located at a distance from the Site with immediate setting on undeveloped field.  Negligible	None for this location	Substantial Beneficial
Impact on the scenic quality of the landscape	Low-Medium Adverse to  Low Beneficial (after 10 years) (Use of overall magnitude of effects as scenic quality encompasses all aspects of the Site)	Medium-High	Mitigation as detailed within Drawing AW0143-PL-002	Introduction of solar arrays, electrical infrastructure, barn within arable setting, with additional retention and enhancement of vegetation and introduction of woodland.  Moderate-Substantial Adverse	None for this location	Slight-Moderate Beneficial



Impact	Magnitude	Receptor Susceptibility	Embedded mitigation	Description of effects and significance upon completion	Additional mitigation	Residual effect within 10 years
Impact on the recreational value of the landscape in terms of PROW	Medium beneficial	Medium-High	Mitigation as detailed within Drawing AW0143-PL-002	Introduction of permissive paths that provide important connections to existing PROW, roads and communities.  Moderate-Substantial Beneficial	None for this location	Moderate-Substantial Beneficial
<b>Overall Significance of Effect</b>				<b>Upon completion</b>		<b>Residual within 10 years</b>
				<b>Slight-Moderate Adverse</b>		<b>Slight Beneficial</b>

The extensive planting proposed is considered to comply with local plan policy DM1 - Principles of Good Design, DM3 - Natural Environment whilst also making a significant contribution towards enhancing the landscape character of the area in compliance with policy DM24 - Renewable and Low Carbon Energy Schemes.

**7.7.5 Roads and Traffic - Highways**

The traffic movements associated with the development will be mainly confined to the construction phase. In order to address this a Construction Traffic Management Plan (CTMP) has been prepared by Cotswold Transport Planning (January 2022).

It is proposed to create a new vehicular access point to the site from Sheephurst Lane. A new T junction will be created approximately 200 metres west of the 2 cottages on the north side of the Lane known as Little Sheephurst Cottages. A new 6 metres hard surfaced track will be laid down extending for the first 25 metres into the site. After this it will be loose surfaced and after 50 metres it will reduce to 4 metres in width. Some hedge removal to the west of the new access will be necessary on Sheephurst Lane in order to accommodate the visibility splay.

Within the site a temporary access track will be laid to provide ground protection and a temporary construction compound will be provided to enable vehicles to turn. Wheel wash facilities will also be provided.

Traffic surveys and swept path analysis demonstrate that safe working for the type (normally 16.5 - 18m long articulated lorries) and quantum of construction vehicles proposed can be achieved without resulting in a detrimental impact on the local highway. There will be a small number of longer vehicles including 1x 30m long articulated vehicles which may require road closures.

In terms of traffic routing the CMTP confirms that during construction vehicles will access the site from the north A229, via the B2079 Maidstone Road, Albion Road, then Plain Road. This route was previously considered adequate for vehicles associated with the solar farm proposal at Widehurst Farm. From Plain Road vehicles would then enter Sheephurst Lane from the east.

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The CTMP estimates that construction of the solar farm shall take 24 weeks. During this period the scheme is likely to generate a total of 1470 HGV deliveries. Over the 24 week period this equates to an average of 13 deliveries per day (13 2 way movements per day).

The battery energy storage is also likely to generate 160 HGV vehicle movements, which equates to an additional 2 deliveries a day.

All HGV vehicle movements will be restricted to the hours of 8am - 6.30pm Mon - Fri, 8am - 12.30pm Sat. No deliveries would be made outside these hours.

A maximum of 80 -100 staff would be employed on the site during construction at any one time (although the typical number of staff would be lower). Parking will be provided within the construction compound and staff will be transported by mini bus from local accommodation where possible

In addition to HGV construction vehicles the site is likely to generate a number of smaller vehicle movements such as skip vehicles for waste collection and vehicles for moving construction workers and sub contractors. It is forecast that these would be relatively low on a day to day basis.

The level of traffic generated by the temporary construction phase of the development is not considered to result in a material impact on the safety or operation of the local highway network.

The CTMP concludes that the amount of construction traffic will not have a material impact on the local highway network.

In terms of the ongoing operation of the site, there will be a small number vehicles visiting the site for maintenance purposes (10 - 20 a year). These visits will usually be undertaken in 4 x 4s and would use the access point on Sheepwash Lane but also a secondary access point via Burtons Lane. It is proposed to extend the end of Burtons Lane by 10 metres to meet the site internal access track which itself will be hard surfaced for the first 25 metres.

Once operational the site will generate minimal traffic and will not have a material impact on the local highway network.

It is considered that the impact of the scheme on the local highway network both during construction and once operational will comply with local plan policy DM21 - Transport Impacts. It is considered the development complies with local plan policy DM24 - Renewable and Low Carbon Energy Schemes.

#### **7.7.6 Roads and Traffic - Public Rights of Way (PROW)**

Cotswold Transport Planning have produced a report on Public Rights of Way Mitigation Strategy (February 2022). This reviews public rights of way in the vicinity of the site.

There is a public footpath running along the northern boundary of the site and cutting across the north east corner of the site - footpath KM248/2. It is proposed to divert this footpath in order to accommodate the development.

In addition, it is proposed to create two new permissive footpaths to the west and east of the site.

Initial discussions with the PROW officer and Kent County Council have indicated that these proposals are acceptable.

In addition, it will be necessary to put in place mitigation measures on any affected PROW during construction works. These would include, in discussion with PROW officers and Kent County Council, advance signage, managed crossings, temporary closures and diversions.

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Once operational vehicles visiting the site for maintenance purposes will access the site via the primary access point from Sheephurst Lane and from Burtons Lane. Where there is an impact on a PROW priority would be given to users. Signage will be erected to warn users of potential vehicles. Given the very low number of operational visits anticipated (10-20 per year) the potential for any issues to arise is extremely low.

## 7.8 Construction Impacts

The traffic and highways construction impacts are dealt with under the Highways section above.

There will be some noise during the construction period but this will be for a limited duration. This will include noise from construction vehicles accessing the site and also the use of plant and machinery during the installation of the solar arrays. The construction methods to be used will limit the amount of heavy machinery required.

The noise associated with construction will be temporary with the construction programme scheduled to take a maximum of 20 weeks. There will be no working on site outside hours (8am - 6.30pm Mon - Fri, 8am - 12.30pm Sat).

According to British Standard Guidance Document BS 5228-1:2009- (Code for Practice for Noise and Vibration Control on Construction and Open Sites - pages 115-20), the accepted maximum ambient noise threshold level experienced by residents is usually 65dB within 1m of the facade of an occupied residential dwelling. BS advises that if the ambient level rises above 65dB then a significant effect is deemed to have occurred.

The schemes will comply with requirements to protect residential amenity as set out in Policy1 - Principles of Good Design and DM24 - Renewable and Low Carbon Energy Schemes.

There will be some air emissions associated with construction vehicles, plant and machinery involved in the installation of the solar arrays. However, these will be negligible, for a limited time and have no discernible impact on overall air quality.

During construction the temporary compound will be externally lit for security reasons. The lighting will be downward facing to minimise light spillage. It is not considered that the temporary lighting will adversely affect the amenity of the surrounding area. As such the proposal complies with Local Plan policy DM8 - external lighting.

The appointed contractor will be required to produce and implement a Site Waste Management Plan to address waste generated during the construction phase.

It is considered that the construction of the development will not give rise to any material detrimental environmental impact and complies with local plan policy DM1 - Principles of Good Design and policy DM24 - Renewable and Low Carbon Energy Schemes.

### 7.8.1 Residential Amenity

The closest residential property to the site is located approximately 30m east of the boundary of the site, along Sheephurst Lane. It, and other residential properties off Sheephurst Lane are separated from the solar arrays by dense woodland.

Potential impacts on surrounding residential properties include noise, light spill, loss of daylight and sunlight, traffic activity and glint and glare.

### 7.8.2 Noise

The site does not include any noise sensitive receptors. There are two residential properties in close proximity to the site – 8 Little Sheephurst Cottages and Willow Cottage off Sheephurst Lane.

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A Noise Report had been prepared by DB Consultation Ltd (March 2022). This examines the potential for nuisance arising during the operation of the development. The noise generating equipment associated with the scheme is 3 power conversion system (PCS), 1 auxiliary transformer and a 132/33kV transformer. This equipment would operate for a maximum of 6 hours in any 24 hour period, and only in 2 hour blocks. The field substations and the inverters associated with the solar arrays are not included in the noise assessment as they emit very low noise.

The assessment has concentrated on night-time noise and modelling used to assess worst case scenarios. The report assessed the impact of the proposed development on 2 noise sensitive receptors, 8 Little Sheephurst Cottages (NSR1) and Willow Cottage (NSR2).

The report advises that for both receptors the noise level is unlikely to be distinctly audible so sleep will not be disturbed and the impact during the day will be negligible.

Whilst the noise impact assessment does not specifically propose any mitigation measures, the applicant has included a timber acoustic fence around the battery energy storage compound.

The proposal is considered to comply with local plan policy DM 24.

### **7.8.3 Lighting**

The solar energy farm will not be externally lit. It will not therefore have an adverse effect on the amenity of the surrounding area and complies with Local Plan policy DM8 – External Lighting.

### **7.8.4 Daylight/Sunlight**

The proposal will have no material impact in day or sunlight to any adjoining occupiers.

### **7.8.5 Traffic Activity**

As set out in the Highways section once operational the development will generate in the region of 1-2 visits a month for maintenance purposes which will have a negligible impact on the local highway. It is considered the development complies with local plan policy DM21 – Transport Impacts and policy DM24.

### **7.8.6 Other Potential Impacts**

A Solar Voltaic Glint and Glare Study was undertaken by Page Power Urban & Renewables (November 2020). This assesses the risk of glint and glare upon aviation activity at Old Hay and Laddingford Airfields, railway infrastructure and operations and ground-based receptors such as surrounding roads and dwellings. The study identifies no adverse impacts apart from:

- a moderate impact from solar reflection on part of the approach path serving one of the 2 runways at Old Hay Airfield. The study indicates that when all mitigating factors are taken into account, such as visibility of the solar panels, glare duration and glare location relative to key operational areas and existing reflective surfaces, it is concluded that mitigation is not a requirement.
- impact from glare to 2 out of 45 surrounding dwellings located within 1km of the development site and with potential views of the solar panels. These 2 cottages will experience glare for more than 3 months a year but for a period of less than 1 hour per day, which is considered to be a moderate impact. These cottages are located close to the southern boundary of the development site. The impact may be reduced by existing vegetation and also by proposed screening. However, it is not possible to determine the extent of reduction and as such the study identifies that mitigation is required.

### **7.8.7 Flood Risk and Drainage**

A Flood Risk Assessment and Surface Water Drainage Strategy have been produced by JBA Consulting.

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The FRA confirms that most of the site is located within Flood Risk Zone 3, with an area in the centre of the site in Zone 1. The report recommends that a sequential approach to site layout is adopted, with the most vulnerable elements of the scheme (namely, the battery energy storage units, the HV compound and the substations) located on land with the lowest flood risk.

In terms of surface water drainage the Surface Water Drainage Strategy considers the impact of the scheme in terms of the proposed new hardstandings, the solar arrays and other structures and access arrangements.

the size of the site and the fact that the HV compound and battery energy storage area are to be located on opposite sides of the solar farm it is proposed to install two separate outfalls to two separate watercourses - referred to in the report as catchments 1 and 2.

Catchment 1 - the majority of the compound area (approx 2370 sq.m.) will be underlain by lined permeable paving with a gravel sub base. Runoff from the impermeable areas will be directed to this area. Attenuated discharge will be via a newly constructed swale to the existing watercourse 65m east of the existing compound.

Catchment 2 - runoff from the roof of the battery energy storage (approx. 328 sq.m.) and from any other surface water runoff in the catchment will be directed to gradually discharge via newly constructed swale east of the development into the existing watercourse.

There will be no increase in runoff rates due to the solar arrays. However, the arrays have the potential to concentrate rainfall under the drip line which can result in erosion and possible ground instability. This is addressed by ensuring no panels are proposed perpendicular to the ground contours so the risk of soil erosion is minimised. It is therefore not considered necessary to incorporate filter trenches/ shallow swales under the rows of panels.

The scheme includes access roads constructed from permeable materials such as MOT Type 3 with a geogrid to enable surface water to infiltrate the ground, and includes wide grassed areas which act to minimise the likelihood of soil erosion occurring. It is considered this will adequately address flood risk and drainage in compliance with guidance in the Maidstone Planning Policy Advice Note; Large Scale Solar PV Arrays.

#### **7.8.8 Design and Appearance**

The details of the proposed scheme are set out at Section 4 of this report and as shown in the submitted drawings. The solar arrays will be no more than 3 metres in height set in grassland. The equipment will be surrounded by deer fencing no more than 2.4 metres in height. Beyond the solar arrays will be enhanced hedging and woodland to provide visual screening.

The battery energy storage to the south east of the site will be contained within a timber energy barn measuring approximately 24 metres x 12 metres with a maximum height of 6.6 metres. Further equipment will be located within an adjacent compound measuring 24 metres x 12 metres with 4 metre high acoustic fencing. The ESS will be screened with hedging including native tree planting.

The overall design of the development, though infrastructure and inevitably utilitarian, will be of high quality, minimising the scale, size and height of structures whilst maximising screening, in order to ensure visual impact is minimised and that the development responds to its wider rural context, in line with Policy DM30 - Design Principle in the Countryside.

#### **7.8.9 Other Issues Raised By Local Plan Policy DM 24 - Grid Connection**

The DNO has confirmed that is feasible to connect the proposed solar energy farm to the Grid and that a viable Grid offer has been secured. The Point of Connection will be to the existing UKPN overhead line. This is the only feasible point of connection due to technical constraints.

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#### 7.8.10 Consultation

Full details of consultation with the local community are set out in the Statement of Community Involvement submitted as part of the application. This sets out the extensive efforts which have been made to ensure engagement with the local Parish Councils and local residents regarding the proposal.

#### 7.8.11 Decommissioning

The proposal is for temporary development. After the end of the 37 year temporary period the site shall revert to agricultural use and all the equipment associated with the solar energy farm shall be removed. A Decommissioning Plan has been prepared setting out the details of works proposed. This complies with part 3 of policy DM24 Renewable and Low carbon Energy Schemes.

## 8 Summary and Conclusions

The information set out in the application and supporting reports fully addresses the key guidance in the NPPF, namely paragraphs 154 and 170, and key Local Plan policy DM24 Renewable and Low Carbon Energy Schemes as well as other relevant policies and local guidance. As such the principle of a solar energy farm is considered acceptable in this location and the scheme is not considered to give rise to unacceptable adverse impacts nor an irreversible loss of BMV agricultural land.

The information provided demonstrates that there is a very clear national need to deliver more renewable energy projects which support the decarbonisation of energy and contribute to energy security supply. Government policy recognises the important contribution that solar energy can make to this.

The benign nature of the proposed development means that any impacts on the environment are low if not negligible.

The proposed site for the solar energy farm has limited impact on the environment and amenity. Mitigation measures will ensure that the development will not adversely affect the biodiversity of the site. The site is already substantially screened from the surrounding area by existing hedging and woodland and this will be extensively enhanced. The site does not adjoin any sensitive receptors.

There will be no irreversible loss of agricultural land and the Sequential Site Assessment demonstrates that there are no sequentially preferable sites within a defined radius of the available grid connection.

The transport impacts associated with the development will be almost entirely confined to the construction phase. These will be limited in duration and will not have a material impact on the local highway network. Traffic associated with the operation of the development will be negligible.

Suitable archaeological measures have been proposed to ensure that the works to the site will not be detrimental to the identified archaeological assets.

The development has been comprehensively assessed and, subject to appropriate mitigation, will not result in any unacceptable impacts on the environment in terms of biodiversity, trees and hedgerows, landscape and visual effects, the historic environment, noise, air emissions, waste, water quality or flood risk and drainage.

In conclusion, the solar energy farm contributes to national and local policy objectives and fully accords with energy and planning policy at all levels. The LPA is therefore respectfully requested to grant planning permission for the development.