



# **Joint Local Impact Report of South Derbyshire District Council & Derbyshire County Council**

## **Oaklands Farm Solar Farm NSIP**

**(Construction and operation of a solar farm plus  
energy storage with associated infrastructure and  
connection to the grid)**

**Application by Oaklands Farm Solar Ltd**

**PINS Reference: EN010122**

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## 1.0 Introduction

- 1.1 The Oaklands Farm Solar Park was accepted for examination on 5<sup>th</sup> March 2024 by the Planning Inspectorate and is now in the examination phase for this Nationally Significant Infrastructure Project (NSIP).
- 1.2 The examining authority has invited South Derbyshire District Council (SDDC) and Derbyshire County Council (DCC) to submit a Local Impact Report (LIR).
- 1.3 This report comprises the LIR of SDDC and DCC. The councils have had regard to the purpose of LIRs as set out in S60(3) of the Planning Act 2008 (as amended), DCLG's (now DLUHC) Guidance for the examination of applications for development consent and the Planning Inspectorate's Advice Note One, Local Impact Reports.
- 1.4 S60(3) of the Act describes a Local Impact Report as: *'a report in writing giving details of the likely impact of the proposed development on the authority's area (or any part of that area)'*.
- 1.5 The LIR is a means by which the impacts and their significance is presented with the Examining Authority undertaking a balancing exercise, the consideration of such impacts. The LIR provides a broad overview of the issues (positive, negative and neutral) that might arise from the proposed development.
- 1.6 The LIR is intended as a factual document and does not attempt to come to a conclusion on the acceptability of the proposals. However, it does seek to identify where there is compliance (or alternatively non-compliance) with national and local plan policy, and to distinguish between matters that are of most potential impact and those that are either temporary or less significant in the longer term.
- 1.7 SDDC and DCC retain their right to make separate written representations on their views regarding the acceptability of the scheme.

## 2.0 The Site

- 2.1 The site comprises of approximately 322ha of land to the southeast of the village of Walton-on-Trent. The site currently consists of agricultural land that is used for arable cropping and grazing.
- 2.2 The site is located in SDDC's local authority area as well as within DCC's, but it is also close to the boundaries of East Staffordshire Borough Council (ESBC) and Lichfield District Council (LDC).
- 2.3 The site lies in close proximity to a number of rural settlements including Walton on Trent (to the west); Rosliston (to the east); and Coton in the Elms (to the southeast), as well as the larger urban areas of Swadlincote (to the north east) and Burton Upon Trent (to the north).
- 2.4 The village of Rosliston lies on higher ground to the east with Walton-on-Trent to the west. The Rosliston Forestry Centre is also located to the east of the site. The centre hosts a visitor centre with picnic facilities and walks. A Public Right of Way runs through the north of the Oaklands Farm area (No. 9), which also follows the route of the long distance recreational 'Cross Britain Way'.
- 2.5 The former coal fired Drakelow Power Station is located to the north of the site. This has now been decommissioned and has permission for a new Combined Cycle Gas Turbine Power Station, Renewable Energy Centre and Solar Park. The operational Drakelow Power Solar Farm has been developed to the north, alongside residential development, between Drakelow Power Station and the River Trent.
- 2.6 The site does not contain any designated heritage assets. However, there are several potentially affected designated and non-designated heritage assets within close vicinity. These include the following:
- Park Farm – Grade II Listed building (List Entry No. 1096453).
  - Entrance to the former Drakelow Park – Gate piers and wing walls (Grade II Listed List Entry No. 1158871) and adjacent non-designated lodge building.
  - Borough Walls Iron Age Hillfort – Schedule Ancient Monument
  - Oaklands Farm – Farmhouse and attached storage range plus Oaklands Farm Cottages (non-designated).
  - Church of St Mary – Grade II\* Listed Building (List Entry No. 1159242).
  - Church of St Mary, Coton in Elms – Grade II Listed Building (List Entry No. 1096452).
- 2.7 There are no parts of the site that fall within a conservation area. However, the Walton-on-Trent Conservation Area is in the vicinity of the site.

- 2.8 The majority of the site falls within Flood Zone 1. However, a small part of the site falls within Flood Zone 3, which is associated with the watercourse that runs from the north to southeast through the site.
- 2.9 The site does not contain any international or national ecological designations. However, the River Mease SAC and SSSI are located within 4.4km to the south. The site lies within the Risk Impact Zone.

## 3.0 Proposed Development

3.1 The proposed development comprises of a solar photovoltaic (PV) electricity generating and energy storage facility at Oaklands Farm, Walton-on-Trent.

3.2 The proposed development falls within the definition of a 'Nationally Significant Infrastructure Project' (NSIP) under Section 14(1)(a) and 15(1) and (2) of the Planning Act 2008 as it entails the construction of a generating station in England with a capacity of more than 50 megawatts.

3.3 The main components of the proposed development, as set out in Paragraph 4.4 of the Environmental Statement are:

- Solar Photovoltaic (PV) modules and mounting structures;
- Solar Inverter Units;
- Transformer Units for Solar Output;
- Energy Storage Facility;
- Electrical Cabling and Connection to the Grid;
- Fencing, CCTV and other security measures;
- Access Tracks;
- Construction compounds, storage and welfare units;
- Watercourse crossings.

3.4 The proposed development is of a substantial scale and is comprised of various elements that will both individually and as a whole have an impact on the site and surrounding area. The impacts of the proposed development are considered in detail in Section 5 of this report.

## **4.0 Legislative and Policy Context**

4.1 This section of the LIR outlines the legislative and planning policy context to the proposed development.

4.2 The legislative basis for the proposed development is set out within The Planning Act 2008, which defines the process under which consent for Nationally Significant Infrastructure Projects are determined.

### **National Policy Statements**

4.3 In accordance with Section 104(2) of the Planning Act 2008, the Secretary of State is required to have regard to any relevant national policy statements, amongst other matters, when deciding whether or not to grant a Development Consent Order.

### **4.4 Energy National Policy Statements**

The relevant NPSs to this NSIP are as follows:

- EN-1 Overarching National Policy Statement for Energy;
- EN-3 Renewable Energy Infrastructures; and
- EN-5 Electricity Networks Infrastructure.

### **EN-1 – Overarching National Policy Statement for Energy**

4.5 NPS EN-1 outlines the overarching general principles, processes and impacts to be taken into in considered all types of energy NSIP development covered by the Energy NPSs. Parts 1 to 4 set out a number of introductory themes, the Government's general policy on energy demand and energy infrastructure, the need for new nationally significant infrastructure projects and assessments principles.

4.6 Paragraph 4.1.5 of NPS EN-1 states that in considering any proposed development, in particular when weighing its adverse impacts against its benefits, the Secretary of State should take into account:

- its potential benefits including its contribution to meeting the need for energy infrastructure, job creation, reduction of geographical disparities, environmental enhancements, and any long-term or wider benefits
- its potential adverse impacts, including on the environment, and including any long-term and cumulative adverse impacts, as well as any measures to avoid, reduce, mitigate or compensate for any adverse impacts, following the mitigation hierarchy.

- 4.7 Paragraph 4.2.12 of NPS EN-1 states that applicants should set out how residual impacts have been compensated for as far as possible. Applicants should also set out how any mitigations or compensation measures will be monitored, and reporting agreed to ensure success, and that action is taken.
- 4.8 Paragraph 4.3.19 of NPS EN-1 highlights that the Secretary of State should consider how the accumulation of, and interrelationship between, effects might affect the environment, economy or community as a whole, even though they may be acceptable when considered on an individual basis with mitigation measures in place.
- 4.9 Moreover, Paragraph 4.3.20 also highlights that the Government has set 13 legally binding targets for England under the Environment Act 2021, covering the areas of: biodiversity; air quality; water; resource efficiency and waste reduction; tree and woodland cover; and Marine Protected Areas. Meeting the legally binding targets will be a shared endeavour that will require a whole of government approach to delivery. The Secretary of State have regard to the ambitions, goals and targets set out in the Government's Environmental Improvement Plan 2023 for improving the natural environment and heritage. This includes having regard to the achievement of statutory targets set under the Environment Act.

### **EN-3 – National Planning Policy Statement for Renewable Energy Infrastructure**

- 4.10 Part 2.10 of the NPS EN-3 include policies specific to the development of Solar Photovoltaic Generation. This includes matters that applicants should consider in relation to site selection and design, technical considerations, impacts and mitigations.
- 4.11 The impacts highlighted in NPS EN-3 include:
- Biodiversity, ecological, geological conservation and water management;
  - Landscape, visual and residential amenity;
  - Glint and glare;
  - Cultural heritage;
  - Construction including traffic and transport noise and vibration;
- 4.12 Paragraph 2.10.145 highlights that the Secretary of State should take into account the economic and other benefits of best and most versatile agricultural land. The Secretary of State should ensure that the applicant has put forward appropriate mitigation measures to minimise impacts on soils or soil resources.
- 4.13 Paragraph 2.10.162 states that the Secretary of State is unlikely to give any more than limited weight to traffic and transport noise and vibration impacts from the operational phase of a project.



- 4.14 Paragraph 2.10.160 states that solar farms are generally consented on the basis that they will be time-limited in operation. The Secretary of State should therefore consider the length of time for which consent is sought when considering the impacts of any indirect effect on the historic environment, such as effects on the setting of designated heritage assets.

#### **EN-5 – National Planning Policy Statement for Electricity Networks Infrastructure**

- 4.15 EN-5 is also of relevance to the proposed development as the policy recognises electricity networks as ‘transmission systems and distribution systems’, which can either be carried on towers/poles or underground, and ‘associated infrastructure’, e.g. substations and converter stations.

#### **National Planning Policy Framework (NPPF)**

- 4.16 The NPPF is a material consideration for determining planning applications under the Town and Country Planning Act 1990 (TCPA 1990).
- 4.17 Paragraph 5 of the NPPF states that the Framework does not contain specific policies for nationally significant infrastructure projects and that applications for NSIP are determined in accordance with the decision-making framework in the Planning Act 2008 (as amended) and relevant national policy statements for major infrastructure, as well as any other matters that are relevant (which may include the National Planning Policy Framework).
- 4.18 The NPPF does, however, state that the planning system should support the transition to a low carbon future and support renewable energy and associated infrastructure (Paragraph 157). It goes on to state (Paragraph 163) that when determining planning applications for renewable or low carbon development, local planning authorities should approve the application if its impact are (or can be made) acceptable.

#### **National Planning Policy Guidance (NPPG)**

- 4.19 The National Planning Policy Guidance (NPPG) outlines guidance on the specific considerations that relate to large scale ground-mounted solar PV farms (013 Reference ID: 5-013-20150327). It states that one consideration amongst others should be whether land is being used effectively; recommending that large scale solar farms are focused on previously developed and non-agricultural land.
- 4.20 The NPPG advises that where a proposal involves greenfield land, decision makers should consider whether (i) the proposed use of any agricultural land has been shown to be necessary and poorer quality land has been used in preference to higher quality and (ii) the proposal allows for continued agricultural use where applicable and/or encourages biodiversity and/or encourages biodiversity improvements around arrays.

- 4.21 With regard to heritage assets, the NPPG advises that great care should be taken to ensure that heritage assets are conserved in a manner appropriate to their significance, including the impact of proposals on views important to their setting. As the significance of a heritage asset derives not only from its physical presence, but also from its setting, careful consideration should be given to the impact of large-scale solar farms on such assets. Depending on their scale, design and prominence, a large-scale solar farm within the setting of a heritage asset may cause substantial harm to the significance of the asset;

### **Written Ministerial Statements**

- 4.22 On 15<sup>th</sup> May 2024 the former Energy Security Secretary told Parliament that with growing geopolitical tension, the best agricultural land must be protected for food security. She stressed that the government aims to prioritize the best agricultural land for food production, ensuring that large solar projects avoid high-quality land and are instead developed on brownfield, contaminated, industrial, or lower-quality agricultural land. The government will expand the Renewable Energy Planning Database to track the type of land used for solar projects, ensuring that high-quality agricultural land is protected.
- 4.23 She stated that solar will continue to play a key part in government's plans for energy security and net zero, with suitable brownfield areas of lower quality land and rooftops prioritised as locations. It is also stressed planning authorities must consider cumulative impacts where several proposals for solar projects come forward in the same area
- 4.24 The potential impacts of large-scale solar farms were also addressed through a speech by the then Minister for Energy and Climate Change to the solar PV industry on 25 April 2013 and subsequent Written Ministerial Statements. The speech highlighted the importance of considering the use of low-grade agricultural land which works with farmers to allow grazing in parallel with generation, and the WMS (dated 25/3/15 - UIN HCWS488) stressed that meeting our energy goals should not be used to justify the unnecessary use of high-quality agricultural land, noting that '*any proposal for a solar farm involving the best and most versatile agricultural land would need to be justified by **the most compelling evidence***'.

### **Local Planning Policy Context**

#### **Development Plan**

- 4.25 Whilst not determinative under the Planning Act 2008, PINS as the Examining Authority can consider other important and relevant matters, including local planning policy. The Development Plan for the area is comprised of the South Derbyshire Local Plan Part 1 (adopted 2016) and the South Derbyshire Local Plan Part 2 (adopted 2017).

4.26 Notwithstanding the above, the local planning policies present a significant material consideration, particularly where they are cognisant with Energy National Policy Statement. Additionally, the policies provide a clear framework by which the council wishes to see new development come forward within the district, which should be weighed in the overall planning balance.

4.27 The key relevant policies contained within the Development Plan are listed as follows:

*South Derbyshire Local Plan Part 1 (2016)*

- Policy S1: Sustainable Growth Strategy;
- Policy S2: Presumption in Favour of Sustainable Development;
- Policy E7: Rural Development;
- Policy SD1: Amenity and Environmental Quality;
- Policy SD2: Flood Risk;
- Policy SD3: Sustainable Water Supply, Drainage and Sewerage Infrastructure;
- Policy SD6: Sustainable Energy and Power Generation;
- Policy BNE1: Design Excellence;
- Policy BNE2: Heritage Assets;
- Policy BNE3: Biodiversity;
- Policy BNE4: Landscape Character and Local Distinctiveness;
- Policy INF2: Sustainable Transport; and
- Policy INF7: Green Infrastructure.

*South Derbyshire Local Plan Part 2 (2017)*

- Policy SDT1: Settlement Boundaries and Development;
- Policy BNE5: Development in Rural Areas;
- Policy BNE7: Trees, Woodland and Hedgerows; and
- Policy BNE10: Heritage.

## 5.0 LOCAL IMPACTS

5.1 This section of the report sets out SDDC's and DCC's considerations of the local impacts that would arise from the proposed Oaklands Farm Solar Park. The local impacts include the following:

- Geology, Soils and Agricultural Land;
- Transport and Access;
- Heritage;
- Landscape and Visual Impact;
- Noise, Air Quality, Ground Contamination, and Light Pollution;
- Climate Change and Carbon Reduction;
- Biodiversity, Ecology and Trees;
- Water Resources, Flood Risk and Ground Conditions;
- Public Rights of Way;
- Glint and Glare;
- Mineral Consultation Areas;
- Community Impacts; and
- Cumulative Impacts of Development in the Area.

5.2 In assessing the local impacts of the proposals, the councils have drawn on the expertise of both relevant qualified officers of the councils e.g. environmental health, ecology, landscape, and external professional consultants e.g. glint and glare, to ensure that a suitably qualified response, based on local knowledge and expertise, is provided on each of the issues. Each local impact is considered in turn below.

### **Geology, Soils and Agricultural Land**

5.3 EN-1 highlights (paragraph 5.11.12) that applicants should seek to minimise the impacts on the best and most versatile agricultural land (defined as grades 1, 2 and 3a Agricultural Land Classification) and preferably use land in areas of poorer quality (grades 3b, 4 and 5).

5.4 Paragraph 5.11.34 of the EN-1 clearly states: *'The Secretary of State should ensure that applicants do not site their scheme on the best and most versatile agricultural land without justification. Where schemes are to be sited on best and most versatile agricultural land the Secretary of State should take into account the economic benefits and other benefits of the land. Where development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality'*

5.5 With specific reference to Solar Photovoltaic Generation, EN-3 highlights (paragraph 2.10.29) that: *"While land type should not be a predominating factor in determining the suitability of the site location applicants should, where possible, utilise suitable previously developed land, brownfield land, contaminated land and industrial land."*

- 5.6 Policy BNE4 of the Local Plan states that *'The Council will seek to protect soils that are 'Best and Most Versatile', (Grades 1, 2 and 3a in the Agricultural Land Classification) and wherever possible direct development to areas with lower quality soils'*.
- 5.7 Policy BNE5 of the Local plan states that otherwise acceptable development outside of settlement boundaries in rural areas, will not unduly impact on best and most versatile agricultural land.
- 5.8 The Framework at paragraph 180 recognises the economic and other benefits of the best and most versatile agricultural land. Footnote 62 within paragraph 181 of the NPPF requires where significant development of agricultural land is demonstrated to be necessary, areas of poorer quality land should be preferred to those of a higher quality.
- 5.9 Moreover, the Ministerial Statement in April 2013 states *"Where solar farms are not on brownfield land, you must be looking at low grade agricultural land which works with farmers to allow grazing in parallel with generation"*. The Ministerial Statement in March 2015 advises that where a proposal of a solar farm involves the best and most versatile agricultural land, it will need to be justified by *"the most compelling evidence"*.
- 5.10 There is a clear direction in national policy for solar farms to be located on brownfield and lower grades of agricultural land, which recognises the importance of balancing the need for sustainable energy whilst ensuring BMV is available for food production.
- 5.11 The Environmental Statement (Chapter 15) submitted by the applicant considers the impact of the proposed development on agricultural land and soils. The site comprises of a mix of agricultural land that is classified as being of Grade 2, 3a and 3b quality soil. The total site area comprises of 191ha, which includes 36ha of Grade 2 quality soil, 79ha of Grade 3a quality soil and 70ha of Grade B soil and 6ha of non-agricultural land. The proposed development will, therefore, result the loss of 119ha of Best and Most Versatile Land (equating to 60% of the total site area).
- 5.12 The agricultural fields subject of the proposed development are all served by land drains that will inevitably be compromised by the intrusive piling required to install the solar arrays along with the associated cabling and other infrastructure. The land drains play a critical role in controlling surface water run-off from the site and are a key factor that ensures the nutrients are retained in the soil. In absence of the land drains, the nutrients will be washed out of the soil, and therefore, the soil will no longer be BMV agricultural land quality. It is noted that surface water run-off from photovoltaic panel runs into the soil in a concentrated drip line, that focusses percolation and exacerbates leaching. Further, the effects of soil compaction on soil structure lead to reduced permeability to water and air as well as increased surface runoff and erosion. These impacts on soil are not practically reversible in respect of BMV land. The proposed development will therefore result in the permanent loss of BMV land that is a valuable source of sustainable locally produced food.

- 5.13 It is further noted that on decommissioning, it is the intention of the project to leave underground cables in situ. This will inevitably prevent suitable reinstatement of land drains, or appropriate decompaction of the soil, and may inhibit mole ploughing/subsoiling, fully ensuring that the land can never realistically be returned to BMV condition. Over time the decomposition of cabling materials will have further potential to leach contaminants into the soil and water resources.
- 5.14 The councils consider that the permanent loss of BMV land of the scale proposed is a critical impact that must be carefully considered and appropriately balanced in the determination of this application. The issue of food security is of national importance and the impacts of climate change and ongoing conflicts mean that the global food markets are volatile, and the UK must have an effective contingency plan for our food security.
- 5.15 Of particular local relevance to the councils is the agricultural land in the wider area and the site itself contains soil that is particularly good for the production of potatoes, as it is potato cyst nematode free. This makes the soil even more of a rarity and adds to the BMV value, which must be tested in the determination of this NSIP. The agricultural industry is a key part of the local economy with local farms providing potatoes for national food production businesses. The current impacts of climate change including wetter winters is resulting in lower potato harvests and subsequently leading to a shortage of potatoes.
- 5.16 **SDDC and DCC therefore conclude that the proposed development will have a negative impact on Best and Most Versatile agricultural and during construction, operation and decommissioning stages**

#### **Transport and Access**

- 5.17 Paragraph 5.14.1 of the EN-1 recognises that the transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on the surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion. Impacts may include economic, social and environmental effects.
- 5.18 In decision making, paragraph 5.14.18 of the EN-1 requires the Secretary of State to ensure that the applicant has sought to mitigate these impacts, including during the construction phase of the development and by enhancing active, public and shared transport provision and accessibility. Paragraph 5.14.19 goes on to state that where the proposed mitigation measures are insufficient to reduce the impact on the transport infrastructure to acceptable levels, the Secretary of State should consider requirements to mitigate adverse impact on transport networks arising from the development.

- 5.19 Paragraph 5.14.21 concludes that the Secretary of State should only consider refusing development on highways grounds if there would be an unacceptable impact on highway safety, residual cumulative impacts on the road network would be severe, or it does not show how consideration has been given to the provision of adequate active public or shared transport access and provision.
- 5.20 Policy INF2 of the Local Plan Part 1 states that planning permission will be granted for development where travel generated by development, including goods vehicle movement, should have no undue detrimental impact upon local amenity, the environment, highway safety, the efficiency of transport infrastructure and the efficiency and availability of public transport services.
- 5.21 The councils consider that the most significant transport and access impacts will be associated with the construction and eventual decommissioning phases of the proposed development. Once operational, it is understood that the proposed development is likely to generate a minimal number of vehicular trips, which will relate to scheduled and emergency maintenance that is required of the on-site equipment and landscaping.
- 5.22 During the construction phase of the development a significant number of HGV and LGV traffic will be generated through the delivery of solar panels, mounting equipment and associated infrastructure. Additionally, up to two Abnormal Indivisible Load (AIL) movements are expected to deliver the prefabricated transformers with each movement consisting of two trips; one laden and the second unladen.
- 5.23 It should be noted that the local highway network surrounding the site is comprised of narrow country lanes that are typical of the rural location. As such, the road network is not designed to be accessed by large HGV's and there are limited safe and convenient routes for construction traffic and maintenance vehicles to access the site. In particular, there is a pinch point at Coton-in-the-Elms with very narrow local roads where residents park on either side of the road.
- 5.24 The proposed Walton Bypass and the new Trent crossing are unlikely to be available during the construction phases of the proposed development. Similarly, Chetwynd Bridge and Walton Bridge are also unavailable due to structural weight restrictions. Access to the site by HGV from the West will, therefore, be limited to crossing in Burton upon Trent (Option 2A). Access to the site from the South and East will be via the M42 and A444, then local country roads via Coton in the Elms (Option 2B).
- 5.25 Additionally, it is indicated that the construction phase of the proposed development will be 16 months. This is significant period of time where the local rural road network will be affected by the movement of construction traffic. Given the rural context, there are a number of farm business in the area that would be significantly disrupted through the course of the construction phase. The increase of road usage by HGV's accessing the site is likely to have an impact on farm traffic, and the ability for day-to-day functions of rural business to operate.

- 5.26 Within the site itself, a network of internal haul roads will be established that range from 3.5-6m to provide construction access, which will be retained to a 3.5m width to be utilised during the operation of the development. The councils will need to establish that there are safe and satisfactory means of access to each of the individual compounds comprising the wider site.
- 5.27 There are a number of well-established local festivals held in the locality each year, these involve a period of setting out prior to the event, followed by the decommissioning of the site. This is in addition to traffic generated by those attending the festivals. These traffic movements are likely to coincide to some degree with construction traffic for the Oaklands Farm Solar Park. It will therefore be necessary to coordinate traffic management for the solar park, bypass, Trent crossing and festival traffic to ensure that disruption is minimised. It is recommended that those parties involved liaise closely to ensure that an effective traffic management system is implemented. Such a Construction Management Plan should include details of the routing and timing of construction and freight traffic to enable safe, efficient and timely delivery of plant and materials during the construction phase. Freight traffic should be restricted as far as possible to outside peak traffic flow periods with timings and routing coordinated to reduce the cumulative impacts of construction projects, the established festivals and local traffic.
- 5.28 On the basis of the above, the councils will need to be satisfied that there are no fundamental safety considerations regarding the wider highway network. It must be established in the determination of the application that suitable manoeuvring of HGV vehicles (swept-path analysis) can be readily achieved along the narrow country lanes to demonstrate that there would not be a severe road safety concern.
- 5.29 The councils consider that the creation of the main vehicular access track and temporary construction access roads will result in substantial environmental impact on the surrounding landscape due to the scale of the required tree and habitat removal. These impacts are considered to result in an everlasting long-term impact on the surrounding area, which will not be reversible once the site is decommissioning. The construction of the internal haul roads will have a significant environmental impact resulting from the loss of habitat in an area that is very high in biodiversity (these matters are considered in more detail in the Ecology and Biodiversity section below). The creation of the required road network will result in an everlasting adverse impact on the local environment.
- 5.30 **SDDC and DCC therefore conclude that the proposed development will have a neutral impact on the highway network during operation stages, and a negative impact on the highway network during construction and decommissioning stages.**



## **Heritage**

- 5.31 Paragraph 5.9.1 of the EN-1 recognises that the construction, operation and decommissioning of energy infrastructure has the potential to result in adverse impacts on the historic environment above, at and below the surface of the ground.
- 5.32 Additionally, paragraph 5.9.2 adds that the historic environment includes all aspects of the environment resulting from the interaction between people and places through time, including all surviving physical remains of past human activity, whether visible, buried or submerged, landscaped and planted or managed flora.
- 5.33 Paragraph 5.9.22 of the EN-1 highlights that in determining applications, the Secretary of State should seek to identify and assess the particular significance of any heritage asset that may be affected by the proposed development, including by development affecting the setting of a heritage asset (including assets whose setting may be affected by the proposed development).
- 5.34 Paragraph 5.9.36 states that when considering applications for development affecting the setting of a designate heritage asset, the Secretary of State should give appropriate weight to the desirability of preserving the setting of such assets and treat favourably applications that make a positive contribution to, or better reveal the significance of, the asset. When considering applications that do not do this, the Secretary of State should give great weights to any negative effects, when weighing them against the wider benefits of the application. The greater the negative impact on the significance of the designated heritage asset, the greater the benefits that will be needed to justify approval.
- 5.35 Policy BNE2 of the Local Plan Part 1 states that Development that affects South Derbyshire's heritage assets will be expected to protect, conserve and enhance the assets and their settings in accordance with national guidance and supplementary planning documents which the authority may produce from time to time.
- 5.36 Policy BNE10 of the Local Plan Part 2 states that applications for development that affect heritage assets, as defined in Policy BNE2, will be determined in accordance with national policy for conserving and enhancing the historic environment.
- 5.37 The site does not contain any listed buildings or any other designated heritage assets that would be directly impacted by the proposed development. However, there are numerous historic environment related receptors in the surrounding area. Of those identified within the Core Study Area, it is considered that the most susceptible to change are likely to be the following, during both the construction and operational phases:
- Park Farm – Grade II Listed building (List Entry No. 1096453).
  - Entrance to the former Drakelow Park – Gate piers and wing walls (Grade II Listed List Entry No. 1158871) and adjacent non-designated lodge building.

- Walton on Trent Conservation Area and associated heritage assets; those most sensitive to the proposed development include:
- Church of St Laurence (HE LEN 1159347): Grade II\* listed building, and
- Walton Hall and attached Stable Range and Garden Wall (HE LEN 1159300); Grade II\* listed building, including its undesignated parkland setting.
- Borough Walls Iron Age Hillfort – Schedule Ancient Monument
- Oaklands Farm – Farmhouse and attached storage range plus Oaklands Farm Cottages (non-designated).
- Church of St Mary – Grade II\* Listed Building (List Entry No. 1159242).
- Church of St Mary, Coton in Elms – Grade II Listed Building (List Entry No. 1096452).

5.38 The councils consider that during the construction phase, the presence of construction activities, including plant equipment, within the site may be visible from some of the listed building identified above. However, it is considered that the change experienced in the setting of these will be temporary and short, and therefore, no harm should arise.

5.39 The councils also consider that the operational phase of the development, anticipated to last 40 years, does have the potential to impact upon the setting of the heritage assets (Listed Buildings). However, these impacts are reversable upon decommissioning and this impact is likely to be less than substantial.

5.40 In particular, the settings of Church of St Laurence (HE LEN 1159347) Grade II\* listed building, Walton Hall and attached Stable Range and Garden Wall (HE LEN 1159300) Grade II\* listed building, including its undesignated parkland setting and of Borough Walls Iron Age hillfort – Scheduled Monument, are susceptible to change. However, whilst it is unlikely that this change will be irreversible 40/50 years is considered to be a generational change. While there may be little or no intervisibility between these assets and the development, it is the council's opinion that direct intervisibility does not necessarily need to be encountered within their setting for it to contribute to their significance.

5.41 Their landscape setting, of which the proposed development site arguably forms a significant proportion, plays an important role in forming an understanding of their historic rural context. When journeying between these various designations it is the councils' view that a landscape carpeted with a significant area of PV arrays will alter the perceptual qualities of their landscape setting. This is because PV arrays are alien to this rural landscape, as industrial non-organic features, but also because the current sense of sense of isolation as part of nucleated development patterns will be eroded to some degree.

5.42 It is, however, granted that this effect may only represent a small harmful change, owing to the fact that the layout seems to have been designed so as not to be overly visible from the road infrastructure around it. This largely appears to be achieved through screening provided by existing landscape features such as hedgerows and

tree plantations. In the longer term it is anticipated that this will be further reduced as new planting matures and helps to screens it from view. But nonetheless this change will result in a harmful effect. It is the councils' view that the amount of harm will be towards the lower end of less than substantial harm under the definitions provided in the NPPF.

### *Archaeology*

- 5.43 The councils consider that due to the sheer size of the site, it is inevitable that there will be significant archaeological remains within it. However, there are few known archaeological sites recorded on Derbyshire Historic Environment Record (HER) within the red line boundary. This lack of information is likely to reflect a lack of sustained investigation rather than an absence of archaeology. Within the immediately surrounding area there is a scatter of known sites on the HER, typified by cropmarks - enclosures and field systems, and artefact scatters – representing a range of periods including prehistoric flintwork, and it is to be assumed that the proposal site will contain a similar distribution of archaeological resource. Indeed, there are a few examples of known cropmark and artefact scatter sites within the red line boundary that serve to confirm this expectation.
- 5.44 A key challenge as part of the determination of this NSIP is, therefore, to identify archaeological hotspots across a very large proposal site in the expectation that most are currently unknown, to evaluate these areas sufficient to understand significance and inform determination, and to bring forward appropriate mitigation to preserve or record the archaeological resource as appropriate.
- 5.45 The approach set out in the submission is in line with advice previously provided to the applicant by the councils, that the most effective large-area screen for archaeological potential in the first instance is likely to be geophysical survey (magnetometer). The councils note that the applicant intends to carry out this survey to inform the DCO process although this has not yet taken place. The geophysical baseline may then prompt a further iteration of evaluation in carefully targeted areas to inform the councils' understanding of significance sufficient for determination, whether through trial trenching, fieldwalking, test pits or boreholes/auguring. Alternatively, it may be possible to short circuit this process through design, for example by adopting no-dig construction over the relevant area(s).
- 5.46 The submission in large part sets out this approach as previously discussed with the applicant. The councils consider that what is missing at present is the potential for mitigation by design – the text at present seems to be focused on mitigation by archaeological record. Because the below-ground impacts of solar farm developments can be tricky to estimate and difficult to mitigate in a proportionate way by traditional archaeological excavation and recording, the best approach under the policies at NPPF chapter 16 is often to design out impacts over areas of archaeological significance by adopting a no-dig approach to the solar arrays. This

obviates the need for any further archaeological excavation and can often be achieved without significant additional costs.

- 5.47 While in general, therefore, the councils support the assessment and future direction of travel in relation to the site's archaeological resource as set out in the submission, the councils recommend that preservation by design (targeted areas of no-dig construction) must be seen as the expected mitigation technique where areas of archaeological significance are identified, with other techniques (mitigation recording) as a fallback option where design adaptation is shown to be unfeasible or unviable.
- 5.48 **South Derbyshire District Council and Derbyshire County Council therefore conclude that the proposed development will have a neutral impact in terms of heritage impact on the surrounding environment during construction, operation and decommissioning stages.**

### **Landscape and Visual Impact**

- 5.49 EN-1 highlights that landscape effects arise not only from the sensitivity of the landscape but also the nature and magnitude of the change proposed by the development, whilst specific siting and design issues make the assessment a case-by-case judgement.
- 5.50 EN-1 recognises (paragraph 5.10.5) that virtually all nationally significant infrastructure projects will have adverse impacts on the landscape, but there may also be beneficial landscape character impacts arising from mitigation.
- 5.51 In decision making, paragraph 5.10.35 of EN-1 states that the ExA should judge whether any adverse impact on the landscape would be so damaging that it is not offset by the benefits of the project. Moreover, the ExA should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape by including appropriate mitigation.
- 5.52 With specific reference to Solar Photovoltaic Generation, EN-3 highlights (paragraph 2.10.94) that: *'Solar farms are likely to be in low lying areas of good exposure and as such may have a wider zone of visual influence than other types of onshore energy infrastructure'*. Paragraph 3.10.86 states that: *'whilst it may be the case that the development covers a significant surface area, in the case of ground-mounted solar panels it should be noted that with effective screening and appropriate land topography, the area of a zone of visual influence could be appropriately minimised.'*
- 5.53 Policy SD6 of the SDDC Local Plan Part 1 supports renewable energy development where they do not give rise to unacceptable impact on landscape character. The supporting text goes on to highlight that whilst there is a presumption in favour of renewable energy, this must be balanced against wider environmental and social

considerations in order to ensure the negative impacts of new development do not outweigh the benefits.

- 5.54 Policy BNE4 of the Local Plan states that *'The character, local distinctiveness, and quality of South Derbyshire's landscape and soilscape will be protected and enhanced through the careful design and sensitive implementation of new development.'* Development that will have an unacceptable impact on landscape character (including historic character), visual amenity and sensitivity and cannot be satisfactorily mitigated will not be permitted.
- 5.55 Paragraph 155(a) of the Framework while stating that renewable energy should be maximised also states that it should be ensured that *"adverse impacts are addressed satisfactorily (including cumulative landscape and visual impacts)"*. That is consistent with Local Plan policy BNE5.
- 5.56 The site is not subject of any subject of any statutory landscape designation that would result in it being afford a higher status of protection.
- 5.57 The Landscape & Visual Impact Assessment submitted by the applicant concludes that there would be long term impacts on the landscape character of the site and its setting. The councils consider that the proposal will undoubtedly represent a significant and fundamental change from an agricultural to an industrial use on a very substantial scale. Its extent and form are considered to be wholly contrary to the character of the landscape, and as such, will have a significant adverse impact.
- 5.58 The proposed development will result in the introduction of solar arrays, containers, high fencing and security cameras, as well as road infrastructure required to facilitate the operation. These factors will result in a significant change to the landscape, resulting in the decimation of large swathes of habitat and an urbanising impact on a large area of land that is entirely rural in character.
- 5.59 It should be noted that the site is located on the highest part of land between the villages of Walton on Trent and Coton in the Elms, and as such, there is no doubt that it would be visible from a number of vantage points within the vicinity. Additionally, parcels of land within the site are located on the ridge line, which would mean that the solar arrays would erode the ridgeline.
- 5.60 The proposed development would require substantial tree and hedgerow planting in order to help mitigate the visual impact of the proposed development. This would result in a substantial alteration to the landscape character of the area the effects of which would be permanent.
- 5.61 The proposed development could and should provide greater landscape benefit to add to the planning balance, for example through its ability to contribute to the wider aims and objectives of The National Forest. This is an evolving landscape as a consequence of The National Forest designation and a more robust wooded

landscape framework would certainly go a long way to containing a development of this type and scale. It may be difficult to deliver these benefits within the current red line boundary, but the councils are of the view that additional off-site planting to further reinforce the overall approach to landscape and visual mitigation and enhancements to wider landscape character should be considered.

- 5.62 **SDDC and DCC therefore conclude that the proposed development will have a negative impact in terms of Landscape and Visual Impact on the surrounding environment during construction, operation and decommissioning stages.**

#### **Noise, Air Quality, Ground Contamination, and Light Pollution**

- 5.63 EN-1 (paragraph 5.12.13) states that the Secretary of State should consider whether mitigation measures are needed both for operational and construction noise over and above any which may form part of the project application. In doing so, the Secretary of State may wish to impose mitigation measures. Any such mitigation measures should take account of the NPPF or any successor to it and the Planning Practice Guidance on noise.
- 5.64 The councils have reviewed the application concerning potential impacts on air quality, noise, odour, land contamination, environmental lighting, and wastewater disposal. Additionally, the relevant technical reports submitted in support of the application have been examined.
- 5.65 The key potential environmental impacts of the development are considered to be:
- The potential exposure of existing sensitive receptors to new sources of noise, air quality, and light associated with the development.
  - The potential exposure of existing receptors to existing sources of land contamination.
- 5.66 The councils are satisfied that the impacts of the proposed development will be acceptable in planning policy terms, provided that specific conditions are attached to the approval.

#### **Noise**

- 5.67 In Environmental Statement Chapter 11 – Noise, it is concluded that during the operational phase of the development, the significance of the effect at all noise-sensitive receptors is predicted to be negligible. Tables 11.18 and 11.19 indicate that operational phase noise exposure is modelled to range between 25-36dBA at all assessed noise receptors. After applying a rating effect in accordance with BS4142, the rated noise exposure is in the range of 28-39dBA.

- 5.68 The councils note that in some locations, the rated noise levels exceed the background noise by more than 5dBA. Furthermore, the developer is required to undertake and submit an operational noise assessment to the local planning authority prior to the commencement of works on site (DCO requirement 15). This assessment will ensure that the detailed design and selected plant do not adversely affect noise-sensitive receptors, in line with the conclusions of the assessment.
- 5.69 The councils deem the proposed development satisfactory, provided it is commissioned and operated in a manner that ensures the noise exposure predictions in Tables 11.18 and 11.19 of Chapter 11 of the ES are met and maintained for the duration of the development. Whether a specific condition should be sought to meet this objective, or reliance on the DCO is sufficient, may require further consideration.

### **Air Quality**

- 5.70 The air quality assessment in Environmental Statement Chapter 11 concludes that the operational phase of the proposed development will have an insignificant impact. However, there is potential for some disamenity effects during the construction phase. The councils are satisfied with the assessment's conclusions and believes that potential adverse impacts during the operational phase can be addressed through the Construction Environmental Management Plan (CEMP).

### **Ground Contamination**

- 5.71 Chapter 9 of the Environmental Statement, which deals with Land Quality, describes the risk as 'very low' to 'low' in the Phase 1 investigation report. The councils note that a program of intrusive site investigation is a pre-commencement requirement in the draft DCO (Requirement 6). This investigation will cover historic marl pits, a historic infilled reservoir, breaks in slope, and shallow bedrock.
- 5.72 This investigation will address the small possibility of residual contamination from the infilled land and ensure appropriate mitigation measures. The Environmental Health Officer has no concerns about land quality at the development site, provided the intrusive site investigation is agreed upon in writing and that the agreed mitigation measures are subsequently implemented.
- 5.73 A Construction Environmental Management Plan (CEMP) has been published in Chapter 4 of the Environmental Statement.

### **Climate Change and Carbon Reduction**

- 5.74 SDDC declared a Climate Emergency in June 2019, and in doing so, recognised the threat that the climate emergency placed on the district's communities, environment and economy. The council adopted a Climate and Environment Strategy in April 2021.

- 5.75 In 2021, DCC recognised that there is a climate crisis and reaffirmed the commitment to becoming net zero by 2032 or sooner and county wide net zero by 2050. In 2019 the DCC published the Derbyshire Climate Change and Carbon Reduction Manifesto, Environment and Climate Change Framework and the Low Emission Vehicle Infrastructure Strategy.
- 5.76 The construction and decommissioning phases of the development will involve the use of fossil fuels in plant and machinery. These periods will be of short duration and the emissions will be more than offset by carbon savings generated by the solar park itself over the anticipated lifetime of energy generation.
- 5.77 While the energy generated will be fed into the national grid and not used directly by local residents and businesses, the operational phase of the development will contribute to a national reduction of emissions. It will not contribute to local greenhouse gas emissions.
- 5.78 While climate change is discussed in the Construction and Environmental Management Plan, it is felt that a Carbon Management Plan, which aligns with the requirements set out in PAS 2080, should ideally be developed for a scheme of this nature and size as part of the Construction Environmental Management Plan (CEMP). Within the Carbon Management Plan, the councils would expect to see an assessment of any potential the proposed development might have to exacerbate climate change impacts, such as drought, flood risk or overheating due to a reduction in shading and cooling from vegetation loss.

### **Biodiversity, Ecology and Trees**

- 5.79 In decision-making, EN-1 highlights (paragraph 5.4.39) that the Secretary of State should take into consideration the Government's 25 Year Environment Plan and the Environment Act 2021, which mark a step change in ambition for wildlife and the natural environment. Additionally, the Secretary of State should have regard to the aims and goals of the government's Environmental Improvement Plan 2023.
- 5.80 EN-1 states (paragraph 5.4.42), as a general principle, development should aim to avoid significant harm to biodiversity and geological conservation interests, including consideration of reasonable alternatives. Where significant harm cannot be avoided, impacts should be mitigated and as a last resort, appropriate compensation measures should be sought.
- 5.81 EN-1 goes on to state (paragraph 5.4.43) that if significant harm to biodiversity resulting from a development cannot be avoided, adequately mitigated, or as a last resort, compensated for, then the Secretary of State will give significant weight to any residual harm.



- 5.82 Policy BNE3 of the Local Plan Part 1 states that support will be given to development which contributes to the protection, enhancement, management and restoration of biodiversity or geodiversity and delivers net gains in biodiversity where possible. This includes delivering long-term plans to restore the River Mease Site of Special Scientific Interest (SSSI)/Special Area of Conservation (SAC).
- 5.83 Policy INF7 of the Local Plan Part 1 states that the SDDC will seek to conserve, enhance and wherever possible extend green infrastructure in the district by working with partners to ensure the continued protection of the District's ecological, biological and geological assets, with particular regards to sites and species of international, national and local significance.
- 5.84 Given the scale of habitat removal that is required to facilitate the proposed development, there is no doubt that there will be significant ecological impacts on the site and immediate surrounding area. The proposed development will require five crossings of watercourses with three of these accommodating cabling infrastructure, construction and operational traffic, along with a further two accommodating the cable only, which will require the removal of watercourse habitat, established trees and hedgerows of high ecological value.

*Impact on River Mease SAC*

- 5.85 There are no internationally or nationally designated ecological sites within the site itself. However, the site is within the catchment of the River Mease Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI) are located in close proximity.
- 5.86 The councils consider that the exact level of impact on the River Mease SAC cannot be fully determined until a Habitats Regulations Assessment has been undertaken. In absence of a HRA there is a risk that the impact and associated mitigation on the SAC is not fully considered. It would be inappropriate to rule out significant effects because even if any effect is likely, however, limited it could act in combination with other elements of the development to make the conditions of the SAC worse.
- 5.87 Additionally, the impacts on the SAC will vary across the different phases of the development. The Environmental Statement (Appendix 6.2) Section 3.1 suggests that the operational phase of development will result in an improvement in the water quality of the River Mease SAC. However, there is potential for the solar panels to create concentrated channels where rain falls off from the lowest points, which could then convey sediment with nutrients, and/or chemicals from corroded panels via tributaries towards the River Mease SAC. Additionally, typically solar panels require regular cleaning to maintain efficiency, which introduces the potential for chemicals used in the cleaning of the panels to migrate to the SAC.

- 5.88 The River Mease SAC is already failing its conservation objectives for water quality, and as such, there is a significant prospect that the proposed development will further exacerbate this issue.

*Impact on Species & Protected Species*

- 5.89 The Preliminary Ecological Appraisal (PEA) that was undertaken by the applicant in support of the applicants recognises that the site supports a wide range of habitats including arable fields, improved grasslands, semi-improved neutral grasslands, ponds, species-rich and species-poor hedgerows, scrub woodland and bare ground.
- 5.90 The species survey undertaken as part of the PEA identified that the habitats on site were determined to have the potential to contain a number of species including bats, great crested newts, reptiles, badger, barn owl, otter, water vole and birds. It is clear, therefore, that the proposed development is likely to have any impact on a number of species and protected species.
- 5.91 The councils have particular concerns that the proposed development will have an adverse impact on otters, which has not been properly surveyed and addressed as part of the submission. There are a number of potential disturbances to otters from proposed site works, river crossings, contaminated run-off and other effects to water quality. According to the submission documents, there are no direct signs of otter recording during species surveys, but there were incidental records of otter prints and feeding remains (including freshwater mussels) and potential otter holt and slide. Whilst there are no recorded important sheltering or resting sites for otter within the study there are contradictions with other surveys nearby. The councils are, however of the opinion that the site is of value to otter.
- 5.92 Likewise, the councils also have particular concerns that the impact of the proposed development on Great Crest Newts has not been fully surveyed, which would need to be addressed in order to prepare a suitable mitigation/protection plan. The councils consider that there are a total of 15 off-site ponds within 250m of the site boundary, which have not been surveyed as no access was obtained from the landholders, therefore, presence or absence of GCN's in these ponds has not been fully determined.
- 5.93 Additionally, the site is being taken out of agricultural, largely arable production, and in the main, converted to grassland between the solar arrays. This does have the potential for an ecological improvement but will simultaneously have an adverse impact on some species, particularly ground nesting birds. It is also unclear how this change will affect some other species including barn owls. While the total area of suitable habitat may have increased, it is the fragmented form of that habitat, broken up by solar panels, that may no longer be suitable for specific species.

- 5.94 Fencing and changes to hedgerow and drainage patterns may adversely impact on the passage of larger mammals through the site. Consideration should be given, particularly to the lower sections of fencing, to ensure that the passage of mammals is not inhibited for, for example, but not limited to, fox, badger, and hedgehog, as well as deer.

#### *Ecological Emergency*

- 5.95 It should be noted that on 14<sup>th</sup> September 2023, the SDDC formally declared an ecological emergency. This declaration recognised the Council's commitment to enhancing and restoring the district's natural landscape, local wildlife, rivers/streams, water resources, habitats, trees and to resist the destruction of such habitats through a considered and sustainable local planning policy approach.
- 5.96 The declaration places ecological considerations high on the SDDC's agenda and a strategic priority alongside climate, sustainability and nature recovery. As part of this, SDDC are seeking to continue to collaborate with local communities, businesses and other organisations, existing networks, and partnerships to improve ecological literacy, encourage greater biodiversity, increase local sustainable food production in order to protect food security, tree planting and management.
- 5.97 **SDDC and DCC therefore conclude that the proposed development will have a negative ecological impact on the surrounding environment during construction, operation and decommissioning stages.**

#### **Water Resources, Flood Risks, and Ground Conditions**

- 5.98 EN-1 recognises (paragraph 5.8.2) that the effects of weather events on the natural environment, life and property can be increased in severity both as a consequence of decisions about location, design and nature of settlement and land use, and as potential consequence of future climate change. Having resilient energy infrastructure not only reduces risk of flood damages to the infrastructure, it also reduces the disruptive impacts of flooding on those homes and businesses that rely on that infrastructure.
- 5.99 Paragraph 5.8.6 of the EN-1 acknowledges that the aim of planning policy on development and flood risk are to ensure that flood risk from all sources of flooding is taken into account at all stages in the planning process to avoid inappropriate development in areas at risk of flooding, and to steer new development to areas with the lowest risk of flooding.
- 5.100 Where new energy infrastructure is, exceptionally, necessary in flood risk areas (for example where there are no reasonably available sites in areas at lower risk), policy aims to make it safe for its lifetime without increasing flood risk elsewhere and, where possible, by reducing flood risk overall. It should also be designed and constructed to remain operational in times of flood.

- 5.101 It is recognised that the majority of the proposed development falls within Flood Zone 1, and therefore, at low risk of flooding. There are, however, parts of the proposed development, which includes the access track, construction access track, emergency access tracks and underground cabling routes that run through an area of the site that falls within Flood Zone 3.
- 5.102 In light of the above, water course crossings, whether new or amended, should ensure that flow is not impeded. Changes to the flow in ordinary watercourses may create the potential for increased localised flooding and exacerbate existing issues, particularly during winter months.
- 5.103 Underground cabling within the site and forming the grid connection may impact upon existing land drainage systems associated with agriculture, this may alter localised drainage patterns through the interruption of flows. This is true of construction, operational and decommissioning phases. The existing groundwater flows may only be restored if cabling a ducting is removed on decommissioning.
- 5.104 In addition to the above, the geology of the local landscape is well known to contain aquifers. The ES provided by the applicants identifies a total of two aquifers on site. Given the identified presence of aquifers on site, there is a potential risk that the proposed development may result in groundwater pollution i.e. from the leakage that may occur from lithium battery storage on site. This could have significant impact on the surrounding water resources and in particular the River Mease SAC, which must be fully assessed, and the risk appropriately mitigated as part of the determination of this application.
- 5.105 There is also a potential fire risk associated with the lithium-ion batteries that are proposed as part of the development. The ES indicates that there is a cooling and fire suppression system installed into the units to regulate temperatures to within safe conditions to minimise the risk of fire.
- 5.106 The councils are of the view, however, that there is a significant risk that the suppression system fails, which would result in a major incident requiring a disaster response with the use of water to extinguish the battery fires and thereafter their cooling. The spent water would likely incorporate the resulting lithium ions from the electrolyte which would be contaminated and hazardous. Given the presence of the aquifers on site, any spent firewater would need to be contained so as to avoid any significant environmental impacts. It is further noted that in the light of the proximity of the site to neighbouring Staffordshire, emergency calls to the fire service locally are directed to Staffordshire. In an emergency, fire crews are required to cross the River Trent, which naturally restricts accessibility and can result in some delay in attending incidents and reducing the potential to limit a damaging environmental incident.

5.107 **SDDC and DCC therefore conclude that the proposed development will have a negative impact in terms of water resources and a neutral impact in terms of flood risk on the surrounding environment during construction, operation and decommissioning stages.**

### **Public Rights of Way**

5.108 The site is crossed by a limited Public Rights of Way network which has been accommodated within the site layout. While the user experience of the landscape will undoubtedly be impacted by the proposal, including by the noise associated with the solar park plant and battery storage facility, those sections of the PRoW are not extensive and scope exists for the screening of the more significant views, without creating a sense of enclosure.

5.109 Further, additional permissive routes are proposed with and through the solar park creating greater potential for circular routes in the locality. The change in character may be experienced more acutely by the regular users of the network than the by the occasional visitor with no prior experience of the area.

5.110 **SDDC and DCC therefore conclude that the proposed development will have a neutral impact on the public right of way network during construction, operation and decommissioning stages.**

### **Glint and Glare**

5.111 EN-3 (paragraph 2.10.102) highlights that solar panels are specifically designed to absorb, not reflect, irradiation. However, solar panels may reflect the sun's rays at certain angles, causing glint and glare. Glint is defined as a momentary flash of light that may be produced as a direct reflection of the sun in the solar panel. Glare is a continuous source of excessive brightness experienced by a stationary observer located in the path of reflected sunlight from the face of the panel. The effect occurs when the solar panel is stationed between or at an angle of the sun and the receptor.

5.112 The Local Plan does not have any specific policy relating to glint and glare. However, Policy SD6 of the Local Plan Part 1 states that proposals should not give rise to unacceptable impacts on local amenity or give rise to safety concerns.

5.113 The councils acknowledge the safety concerns that are associated with the potential glint and glare from the reflection of sunlight off the proposed photovoltaic panels. The councils consider that the key potential receptors that may be impacted by the proposed development to be aviation receptors, road users, public rights of way/bridleway users and neighbouring residential receptors.

5.114 The applicants have submitted a Glint and Glare Assessment that concludes that the proposed development will not result in a significant adverse impact from glint and glare on the identified receptors. The councils instructed an independent review of the submitted assessment to fully inform their view on the potential impacts of glint and glare associated with the proposed development. Overall, this review concluded that the assessment submitted by the applicant was robust and in line with the relevant industry guidance. However, a number of clarifications were recommended to fully understand the impacts on road receptors and residential dwelling receptors. These include the following:

- Further review of the vegetation screening at road receptors 15 and 56. Confirmation to be provided regarding the times of year when glare is predicted toward road receptors 15 and 56. Where glare is predicted outside the month of June, additional evidence / review of mitigating factors to be provided to demonstrate that impact is not significant.
- For predicted impacts at worst-case residential dwelling receptors, additional evidence (e.g. Google Street View or site photographs) would be beneficial to provide more robust evidence that vegetation will obstruct line of sight towards the residential dwellings at times of year where vegetation cover may be less dense (e.g. March and September. Nonetheless, considering the screening cover and mitigating factors through other months, it is considered that the assessment conclusions are robust.

5.115 In addition to the above, it is recognised that the Glint and Glare Assessment submitted by the applicant has modelled solar panels of smooth glass with anti-reflective coating (ARC) *“because it is the panel surface most used for modern solar panels.”* The current industry standard for solar panels is that an ARC is applied, and in absence of confirmation of the make and model of the panel, an anti-reflective coating is a reasonable assumption. The councils would recommend that if the application should be approved a condition be attached to any consent to submit details of the solar and confirmation that an ARC will be applied to the installed solar panels.

5.116 **SDDC and DCC therefore conclude that the proposed development will have a neutral impact in terms of glint and glare on the surrounding environment during operation subject to appropriate mitigation.**

### **Mineral Consultation Areas**

5.117 The councils acknowledge that the site does not impact upon identified Mineral Safeguarding Areas or identified economic mineral resources. The temporary nature of the proposal with the potential for decommissioning after 40 years, rendering the site available for mineral working, should a resource be identified, suggests that there are no adverse mineral implications arising from the proposal.

## **Community Impacts**

- 5.118 A development of this scale will have an extremely significant impact on the local area and community, as can be seen by the number and significance of the issues highlighted throughout this report. These extremely significant impacts must be properly managed so that the adverse impacts of the development are suitably mitigated to ensure the development is delivered in the way envisaged, as set out in the Environmental Statement and other supporting documents put forward by the Applicant. The controlling mechanisms lie in the full and proper assessment of any future submissions relative to the Requirements of the DCO, such as the CEMP, LEMP, and DEMP, as well as Obligations, general ecological matters, ongoing monitoring of Biodiversity Net Gain, as well as the general enforcement and monitoring.
- 5.119 It is a serious concern of the local authorities that the scale and nature of these matters will place such a burden on them so as to render the appropriate assessment of any submissions, approval of Requirements and Obligations, as well as their ongoing monitoring, unfeasible due to the resource implications. This issue puts at risk securing the appropriate mitigation that needs to be secured through this process to adequately mitigate the adverse impacts.
- 5.120 At this stage it is not possible to identify the detail and quantum of additional work the local authorities will be required to undertake. However, it is expected that the Applicant would be required to provide sufficient information to enable the local authorities to undertake full a proper assessment of the resource impacts and for the Applicant to commit to funding these.
- 5.121 Notwithstanding the above, the councils welcome and support the proposals to provide a number of financial contributions to help the development of sustainable communities within the immediate area of the development. This will include the implementation of a long-term funding source that will enable communities to plan and develop project that have been identified and developed from the ground upward. The initiatives put forward by the applicant include:
- Initial indication had been that there would be an annual figure of £40,000. This has been increased to £55,000 by the developer;
  - The scheme is targeted as having a delivery period of 40 years;
  - The applicants are currently working with local community organisations to identify needs to be used to base specific grant criteria;
  - The area of benefit is likely to be communities within the immediate area of development impact. At the time of writing this is likely to include Rosliston, Drakelow, Walton on Trent and Coton in the Elms
  - It has not yet been determined who will managed the funds and deliver the community projects but the initial proposed is for CVS South Derbyshire or Foundation Derbyshire to be the delivery agent.

- 5.122 The authorities consider that in order to ensure the most effective use of the community benefit fund, further details should be provided by the applicant regarding the scale of funding and how such a fund is likely to be administered in consultation with local community groups. Early dialogue with such groups could establish a list of potential projects that could be funded, should the scheme be granted consent.
- 5.123 Additionally, the authorities recognise that the proposed development could provide a valuable educational resource for the local area in consultation with the local community, to establish how best to provide such educational materials on site. Examples of good practice are referred to including the use of interpretation boards, explaining solar energy and the work going on onsite, which could be placed at strategic locations such as along PRow, and that visits could also be arranged for local schools / community groups.

### **Cumulative Impacts of Development in the Area**

- 5.124 The councils have concerns regarding the cumulative impacts of the number of developments that are coming forward in the surrounding area. This includes, but is not limited to, the construction of 2,200 homes on the site of the former Drakelow Power Station to the north, along with a number of current applications being considered by the District Council for a proposed Battery Energy Storage System's at land south of Walton Road, Drakelow; Fairfield's Farm, Rosliston Road, Walton-on-Trent; and at land to the north of the Royle Farm Business Park, Drakelow. DCC are also considering proposals for a waste incinerator nearby at Stanton which include a 60m chimney, and large building.



## 6.0 Summary and Conclusion

- 6.1 The Oaklands Farm Solar Park will result in a number of impacts to land within the administrative are of SDDC and DCC. This report has assessed the impacts of the scheme that has been identified within the applicants Environmental Statement, within the context of the councils' local knowledge and understanding of the area, and with reference to the relevant local and national policies.
- 6.2 The provision of renewable energy of the nature proposed is supported in principle by SDDC and DCC. Of particular relevance is Policy S6 of the South Derbyshire Local Plan Part 1, which sets out the Council's support for renewable and other energy developments.
- 6.3 Notwithstanding the above, SDDC and DCC recognise that the delivery of new renewable energy infrastructure must be weighed against the wider environmental and social impacts to ensure that the negative impacts do not outweigh any broader benefits that may arise from the proposed development.
- 6.4 This report has identified a number of negative impacts that would result from the proposed development. These impacts include loss of best and most versatile agricultural land, landscape and visual impact, access and highways, biodiversity and ecology, and glint and glare.
- 6.5 The councils consider that there is a particular tension between impact of the loss of best and most versatile agricultural land, and the provision of renewable energy. The majority of the site comprises of Grade 2 and 3a quality soil, which would impact on opportunities for food production and wider impacts on the rural agricultural economy. The impact of this loss must be given significant consideration in the determination of the proposal.
- 6.6 The councils request that the Secretary of State has regard to this Local Impact Report when making their decision.

