Agenda Item	A6
Application Number	22/00017/FUL
Proposal	Installation of a solar farm with associated access and infrastructure to include substations, inverter stations, control room, CCTV, lighting, perimeter fence and all associated works
Application site	Proposed Solar Farm, Grimeshaw Lane, Quernmore
Applicant	Opdenergy UK 6 Limited
Agent	
Case Officer	Mrs Eleanor Fawcett
Departure	Yes
Summary of Recommendation	Refusal

1.0 Application Site and Setting

1.1 The application relates to approximately 28 hectares of agricultural land located to the eastern side of the M6 motorway, just to the south of junction 34, and approximately 2 kilometres to the northeast of Lancaster City Centre. The site comprises a number of fields which are bound by a mix of hedgerows, fencing, stone walls and groups of trees. It is divided into three distinct parcels, with the larger two separated by Grimeshaw Lane which is a Public Right of Way (Restricted Bridleway) that links Moor Lane and Ridge Lane (which are also Bridleways) to Lancaster Road, close to Denny Beck Bridge. The smaller southern portion is separated from the land to the north by a farm track. The western boundary of the site is approximately 1.2 kilometres in length and is mostly shared with the M6, and its embankment, with the exception of a small section which is shared with Grimeshaw Lane where it joins a bridge across the motorway. The remainder of the site boundaries are shared with adjoining agricultural land.

1.2 The land levels rise from a point around 34 metres AOD at the north of the site, to a high point of around 75 metres AOD, just beyond the centre and lower to approximately 50 metres AOD on the south east boundary. To the east of the site the land levels lower slightly before rising up towards the boundary with the Forest of Bowland Area of Outstanding Natural Beauty (AONB), beyond which the land rises above the highest point of the application site. The closest part of the AONB is mostly wooded and the boundary is between approximately 300 metres and 600 metres from the eastern boundary of the site.

1.3 The site is located within the Open Countryside, as defined by the Local Plan, and has an agricultural land classification of 3b. It is also within a Mineral Safeguarding Area and a small part at the north of the site is identified as being at risk from surface water flooding (1 in 100 and 1 in 1000). Lancaster Moor Conservation Area is approximately 600 metres to the southwest, at its closest point, and this contains a number of listed buildings, including Lancaster Moor Hospital (Grade II) and also abuts the Williamson Park Conservation Area which includes the Aston Memorial (Grade I), although this is approximately 1.5 kilometres from the site. Parts of the site are within the consultation zone for two high pressure gas pipelines. The site is located approximately 4 kilometres from the Lune

Estuary Special Scientific Interest (SSSI) which is also covered by the Morecambe Bay Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site. It is also approximately 3.5 kilometres from Bowland Fells SSSI and SPA.

2.0 Proposal

2.1 Planning permission is sought for the installation of a solar farm consisting of around 56,000 fixed photovoltaic (PV) panels mounted on steel frames and arranged in rows running east to west across the site. The solar farm would be capable of generating up to 28MW of power, which is the equivalent of supplying 7700 homes and would save 1,150,000 tonnes of CO2 over 30 years of operation. Amended plans were submitted during the course of the application which have removed panels of some areas of the site and increased landscaping, in addition to proposing some changes to the associated infrastructure. However, the applicant has advised that the alteration to the scheme will not result in a decrease in the number of panels or total output from the solar farm, they will just be more closely spaced. The details below are based on the amended plans.

2.2 The panels would have a maximum height of 2.35 metres, with the lower edge around 0.4 metres from the ground and there would be a minimum separation of 3.4 metres between the rows. The proposal also includes some associated infrastructure and typical details of these have been provided. There are five cabinets proposed across the site to house the inverters and transformers, and these would measure approximately 12.8 metres x 2.5 metres x 3.1 metres high. A control room is proposed close to the western boundary and would measure 26 metres by 7 metres by 2.8 metres high. The substation would consist of two cabins and would be located at the north of the site. One would be approximately 5.7 metres by 5 metres and 4 metres high and the other would be 3.2 metres by 3.7 metres and 2.4 metres in height. Plans were submitted showing additional infrastructure to allow for the connection to the electricity network, with the equipment spaced across approximately 43 metres, having a maximum height of approximately 5.7 metres. However, the applicant has advised that this will not now be required, following clarification from Electricity North West, and the cabling will be underground from the substation building to the point of connection to the grid.

2.3 As set out above, the site is divided into three parcels and each would have its own road and fencing around the perimeter, in addition to pole mounted CCTV cameras. The fencing would have a total height of 2.4 metres and be constructed of galvanised steel wire mesh on timber posts. A total of 26 CCTV cameras are proposed around the perimeter of the three parcels of land, with a height of 3.5 metres. Whilst operational the land can continue to be grazed and after construction the land will be planted with species rich grasses and wildflowers. Construction is unlikely to last more than 9 months and the solar farm will be operational for 35 years after which it will be decommissioned, and the site restored.

3.0 Site History

3.1 The only relevant applications to this site relate to a screening opinion and a request for pre-application advice. The details are set out below:

Application Number	Proposal	Decision
21/00255/EIR	Screening opinion for solar farm	ES not required
21/00101/PRE3	Pre application advice for the construction of a solar farm of up to 26MW capacity	Advice given but no forum undertaken

4.0 Consultation Responses

4.1 The following responses have been received from statutory and internal consultees:

Consultee	Response
Quernmore Parish Council	**No comments received**
Environmental Health	**No advice or comments to make** – no significant health implications noted

Planning Policy	**Objection.** The site needs to be seen in the context of its setting in relation to the AONB to the South and East but also its setting within the wider landscape and the potential impacts it may have to the north and west, in particular, the strategic housing allocation located immediately to the west of the M6. The proposal will contribute to the decarbonisation of electric energy in the district and contribute to both local and national climate mitigation targets and clearly supports the Council's climate change agenda. However, it is considered that the proposal, both in terms of its extent and the associated infrastructure, will have significant visual and landscape impacts. In particular: • This is a highly visible site, emphasised by the photomontages • No assessment of visual and glint/glare impacts from the allocated housing site • Photomontage demonstrates that panels are clearly visible and still visible after 10yrs pf growth • No photomontage from the M6 itself particularly south bound • Infrastructure is higher than on other approved schemes including panels and camera poles and the fencing is shown as metal on drawings compared to a standard post and wire stockproof fence • No elevational drawings of buildings to confirm design
Arboricultural Officer	**Comments.** No significant tree works are scheduled. The AIA identifies 25 trees, 23 groups and 19 hedgerows located around the perimeter of the site, of which one tree and part of one hedgerow will require felling to allow access. A second tree is identified for felling due to its poor condition. All trees and hedgerows contribute positively to the undulating farming landscape and are visible from numerous local and wider vantage points, including Grimeshaw Lane which bisects the site. It is positive that existing hedgerows would be enhanced, and approximately 40 standard trees planted within the hedge lines. The ecological assessment and landscape strategy discuss the enhancement of the existing grassland using a wildflower seed mix and limited grazing, although details as to how this will be achieved are lacking. The landscape and visual impact assessment states that the site is not publicly accessible, however the site it is bisected by a popular public right of way, which provides a quick escape from the town into the countryside. The solar panels and extensive security fencing and CCTV cameras will have a notable impact upon the rural character of Grimshaw Lane, the public enjoyment of the local area, and the setting of the AONB which rises above Moorside Farm.
Conservation Team	**No objection.** While the development is likely to be highly prominent in landscape terms, given the distances involved, the character of the views from the site and from longer viewpoints, the topography, and the intervening features, conclude that the site does not contribute to the significance of the listed buildings by way of setting.
County Highways	**No objection** - The submitted preferred route for operational vehicles via Quernmore Avenue and Stone Row Head over the M6 via Grimeshaw Lane bridge is the most appropriate. Construction traffic would be routed east along Quernmore Road towards Caton village then west along the A683 to M6 junction 34 which avoids the city centre and is acceptable. The proposal will have a negligible impact on highway safety and capacity subject to conditions requiring: a survey condition of the adopted highway before and after construction; submission of a construction management plan or method statement; and wheel cleaning facilities during construction.
County Archaeology	**Comments.** The submitted historic environment desk based assessment is appropriate and its conclusions are accepted. A condition is requested for submission for approval and implementation of a written scheme of investigation.
Lead Local Flood Authority (LLFA)	**No objection** subject to conditions requiring: the development to be carried out in accordance with the Flood Risk Assessment; submission of a final surface water drainage strategy; submission of a construction surface water management plan; submission of a sustainable drainage system operation and maintenance manual; and submission of a verification report of constructed sustainable drainage system.
County Policy (Minerals)	**No comments received**

Public Rights of Way Officer	**No comments received**
Forest of Bowland AONB	**No comments received**
County Landscape Officer	**No comments received**
Greater Manchester Ecology Unit (GMEU)	**No objection,** subject to: protection of hedgerows and woodland during works; a comprehensive Habitat and Landscape Creation and Management Plan; No vegetation clearance or groundworks should take place during the optimum time of year for bird nesting (March to August inclusive), unless nesting birds have been shown to be absent by a suitably qualified person; and reptiles or amphibians are encountered during any groundworks, work should cease and advise sought from a suitably qualified ecologist.
National Highways	**No objection,** subject to conditions requiring: no access to the M6 Grimeshaw Lane bridge for vehicles with a weight of 7.5 tonnes or more; submission of a site access management plan for construction and operational phases; submission of a site access management plan for decommissioning; recording of the condition of the existing M6 motorway boundary fence and running surface and parapets of the M6 Grimeshaw Lane bridge, before and after construction and remedied any damage; construction management plan in relation to the M6; submission of a revised Landscape Management Strategy based upon the principles of drawing 7457/ASP3 Rev.A; no drainage to connect into the drainage system of the M6 or additional surface water runoff; and submission of the design, materials and construction methods for the closed circuit television masts, foundations and fixings.
Natural England	**No Objection** subject to implementation of a Construction Environmental Management Plan (to be submitted and approved). Agree with the conclusions of the Habitats Regulations Assessment.
Historic England	**Not offering advice**
RSPB	**No comments received**
Ramblers Association	**No comments received**
Cadent Gas	**No objection**
Fire Safety Officer	**Standard advice provided**
Shell	**No comments to make**
National Grid	**No objection**

4.2 Four letters of support have been received from members of the public which set out the following:

- Provision of green energy
- Retention of natural habitat
- Ideal location with no negative amenity or visual impact
- Generate green economy income enabling grazing to continue

5.0 Analysis

5.1 The key considerations in the assessment of this application are:

- Principal of the development
- Highway impacts
- Landscape and visual impacts
- Biodiversity
- Impacts on heritage assets
- Flood risk and drainage
- Impacts on residential amenity
- Mineral safeguarding

5.2 **Principle of the development** (NPPF paragraphs 7-12 (Achieving Sustainable Development), 152 and 158 (Renewable and low carbon development), and 174 (Best and most versatile agricultural land); Strategic Policies and Land Allocations (SPLA) DPD policies SP1 (Presumption in Favour of Sustainable Development), EN3 (The Open Countryside); Development Management (DM) DPD

policies DM44 (The Protection and Enhancement of Biodiversity), DM47 (Economic Development in Rural Areas) and DM53 (Renewable and Low Carbon Energy); Draft Climate Emergency Review of the Strategic Policies and Land Allocations DPD policy CC1 (Responding to Climate Change and Creating Environmental Sustainability)

5.2.1 The application proposes a solar farm on agricultural land. The submission sets out that it would have a generating capacity of up to 28 MW, which is the equivalent of supplying 7700 homes and would save 1,150,000 tonnes of CO2 over 30 years of operation, which is 38,000 tonnes per year. Lancaster City Council declared a Climate Emergency in January 2020. There is a raft of policy support at international, national, and local level which aims to combat climate change and to provide energy security. The Council is committed to reducing its own carbon emissions to net zero by 2030 while supporting the district in reaching net zero within the same time frame. Following the adoption of the Local Plan in July 2020, the council entered into an immediate review of the Plan to ensure that the impacts of climate change are fully considered within the planning policies for the District. This plan is now at a progressed stage, with the Examination being undertaken recently. The scope of the Review is limited to issues connected to Climate Change, and it is important to note that many of the policies within the adopted Local Plan, including landscape and land allocations, will not be affected by this and maintain their full material weight in determining planning applications.

5.2.2 As set out in the NPPF, the purpose of the planning system is to contribute to the achievement of sustainable development. Paragraph 8 sets out that the planning system has three overarching objectives which are economic, social and environmental. The proposal would meet the economic objective through supporting the provision of infrastructure and the environmental objective, in terms of mitigating and adapting to climate change and moving to a low carbon economy. In particular relation to renewable and low carbon development, paragraph 158 sets out that, when determining applications, local planning authorities should:

- Not require applicants to demonstrate the overall need for renewable or low carbon energy; and
- Approve the application is its impacts are (or can be made) acceptable.

The Planning Practice Guidance sets out the particular planning considerations relating to large scale ground mounted solar farm, which will be considered in the sections below.

5.2.3 The proposal clearly supports the Council's climate change agenda, however, it also needs to be considered alongside relevant policies within the Local Plan. The site is located in an area designated as open countryside where there are no development or solar farm allocations. Policy DM47 sets out that renewable energy schemes in rural areas will be supported in principle in appropriate locations and in accordance with other relevant Local Plan policies. Policy DM53 relates specifically to renewable and low carbon energy. It sets out that proposals will be supported where the direct, indirect, individual and cumulative impacts on the following are or will be made acceptable:

- As a result of its scale, siting or design impacts on the landscape character, visual amenity, biodiversity, geodiversity, flood risk, townscape and historic assets of the district, highway safety, aviation and defence navigation systems/communications are satisfactorily addressed;
- Impacts on the amenities of sensitive neighbouring uses and local residents are minimised;
- The wider environmental, economic, social and community benefits directly related to the scheme outweigh any significant adverse effects; and
- The proposal is consistent with other relevant policies.

It goes on to say that the Council will require that where renewable energy installations become non-operational for a period in excess of one year, the facility will be removed and the site will be fully restored to its original condition within one year.

5.2.4 The equivalent policy within the Climate Emergency Local Plan Review (CELPR) puts slightly more emphasis on the commitment to support the transition to a lower carbon future, however the criteria set out above remain the same. It also sets out that all schemes it will be expected to allow for community investment where applicable. The detailed considerations are set out in the sections below. However, in relation to that point, this does not appear to be the case with this scheme,

although it is noted that the submission states that the applicant operates community benefit funds for all their projects and such a fund will be available to support community projects near this site.

5.2.5 The project has potential negative climate impacts such as the associated emissions with production and decommissioning of the solar arrays, transport associated emissions and other material emissions which do not appear to have been quantified and subtracted from the CO2e savings provided by the application. However, from a carbon emissions perspective, the overall project should produce net positive climate benefits over the expected lifetime of the development though the generation of renewable energy and will be expected to be a net contributor to both climate adaptation and mitigation in line with emerging Policy CC1 within the draft CELPR)

5.2.6 As set out above, the site is agricultural land and an agricultural land classification report has been submitted with the application which identifies the land as Grade 3b. The NPPF places support for maintaining agricultural land under Paragraphs 174 and footnote 53 and the best and most versatile land is defined as Grades 1, 2 and 3a. Policy DM44 sets out that proposals should avoid the use of the best and most versatile agricultural land and should, as far as possible, use the lowest grade of land suitable. At least some of the land is currently used for growing crops and it is intended that the land would be used for grazing once the development is complete. It is also intended that, after 35 years, all the equipment will be removed and the land restored. Therefore, it is considered that the proposal would not result in a loss of best and most versatile agricultural land and that agriculture, in the form of grazing, can still take place on the land if the proposal is developed.

5.2.7 The proposed solar farm will contribute to the decarbonisation of electric energy in the district and to both local and national climate mitigation targets and clearly supports the Council's climate change agenda. Local plan policy accepts that renewable energy schemes can be acceptable in rural areas and it would not impact the best or most versatile agricultural land. The principle of the development is therefore considered to be acceptable. However, there are a number of specific matters that also need to be taken into consideration, as detailed above, that are considered in the sections below.

5.3 **Highway Impacts** NPPF paragraphs: 104-106 and 110-113 (Promoting Sustainable Transport); Strategic Policies and Land Allocations (SPLA) DPD policies: T2 (Cycling and Walking Network); Development Management (DM) DPD policies DM29 (Key Design Principles), DM53 (Renewable and Low Carbon Energy Generation), DM58 (Infrastructure Delivery and Funding, DM60 (Enhancing Accessibility and Transport Linkages) and DM61 (Walking and Cycling)

5.3.1 The site borders the southbound M6 motorway for approximately 1 mile. The preferred access during construction and for the maintenance and operation of the site is from the west via Moor Lane and the Grimeshaw Lane accommodation bridge over the M6. The majority of the site bordering the motorway is located above the level of the carriageways, which are in cutting, and so is not visible to motorists. Sections of the site towards the north and southern ends are at or below the level of the motorway and clearly visible to users of the M6 motorway. Given the proximity to the M6, and the use of the bridge, National Highways have been consulted on the application. They originally raised a holding objection and discussions have been undertaken between them and the applicant to resolve a number of issues. However, they have advised that they have no objection to the proposal in terms of the additional traffic it would be likely to generate upon the strategic road network itself.

5.3.2 The first of these issues relates to the access to the site and the use of the bridge across the M6. This bridge carries Grimeshaw Lane over the motorway on a deck that is single vehicle width, meaning that only one vehicle can travel across it in one direction at one time. The bridge structure is the responsibility of National Highways, with Lancashire County Council responsible for Grimeshaw Lane as the public rights of way authority. The bridge was designed to accommodate residential access, access by farm vehicles (tractors and trailers) to Moorside Farm and users of the Grimeshaw Lane restricted byway (i.e. access rights for walkers, cyclists, horse riders and carriage drivers) and was designed to the standards of the time. From 1955, the Ministry of Transport recommended designing accommodation bridges for a 7.5 Tonne vehicle and the structure was not designed for use in the same way as it would been if it were to carry a highway. National Highways have advised that their obligation is to maintain accommodation bridges for the load carrying capability they were originally provided with. Based upon Department of the Environment advice in 1974, many of these structures were signed with a 32 Tonne weight limit (as this one has been) on

the basis of a perceived occasional use by vehicles of no more than 32 Tonnes. The design definition of a 32 Tonne vehicle has changed since 1974, with the maximum axle load being greater than this.

5.3.3 National Highways have advised that the bridge has an assessed loading capacity limit of 7.5 Tonnes, and so is not suitable for use by a critical proportion of traffic in connection with this development proposal. They have set out that a full structural assessment, with a view to possibly agreeing a departure to allow for reduced axle impact load, might be a way to achieve a higher allowable single vehicle weight. However, this would be costly in terms of money and time and would not guarantee a higher assessed capacity. Consequently, a construction management plan has been requested, on the basis that site access via the bridge is not permitted for traffic movements associated with the construction, operation, maintenance and dismantling of the solar farm in excess of the 7.5 Tonne single vehicle weight restriction and design standards of the bridge.

5.3.4 National Highways have also raised some concerns regarding the use of Moor Lane to access the bridge and the site beyond. Moor Lane is a dirt track running parallel to the northbound M6 on approach to the accommodation bridge, meaning that vehicles would need to make a 90 degree turning manoeuvre onto and off the bridge on a corner where visibility is obscured by vegetation which would restrict visibility of oncoming vehicles. This is a safety-critical issue for a structure that was designed to accommodate one vehicle load on it at once, and so this runs the risk of two opposing vehicles entering the bridge at the same time. However, Ridge Lane approaches the bridge on the same alignment and has good forward visibility. This road is surfaced with concrete and, whilst single width, is likely to have been improved at the time of the motorway's construction and so is the preferred accommodation route to Moorside Farm. Whilst a swept-path analysis has been included in the Transport Assessment (TA) for the largest vehicle associated with the site (16.5 metre long articulated), it is the view of National Highways that the level of room for turning LGVs to regularly enter and leave the western end of the bridge is insufficient to avoid damage to the bridge parapets and verge abutments. National Highways have therefore advised that the proposed Construction Traffic Management Plan is therefore not agree.

5.3.5 National Highways have not objected to the proposal, and has advised that a construction management plan can be conditioned. To be able to do this, there needs to be a degree of certainty that an appropriate access can be achieved. A technical note has been submitted containing construction access option. This sets out that the site has two existing points of access, and the potential for three new temporary accesses to be created if an agreement could be made with adjacent landowners. Those accesses are to the west, across the motorway bridge, and to the north, off Lancaster Road. The submission sets out that, whilst the majority of deliveries could be broken down into smaller loads, a small element could not be broken down and therefore an alternate means of access would need to be explored. On the basis of the submission, it is considered that there are alternative access points that could be used for the construction phase and therefore this could be covered by a condition. A response is awaited from County Highways to ensure that there are no specific highway safety concerns regarding any of these options. They initially advised that the route using Moor Lane, Stone Row Head and Quernmore Avenue was likely to be the preferable option as their junctions would be able to support the levels of vehicle movements associated with the development, subject to a robust Construction Traffic Management Plan.

5.3.6 National Highways also raised concerns regarding the potential for vehicles breaching the motorway boundary and entering the site. This relates specifically to the lower area of the site at the north, which is not protected by a barrier, but also the lower area at the south as the barrier may not withstand an HGV breach. Due to the change in land use, and the hazard posed by collision with the solar farm apparatus, amendments have been made to the layout of the proposed development, removing some of the development at the north and south of the site and stepping the fenced boundary in from the boundary with the motorway verge.

5.3.7 A Road Restraints Risk Assessment (RRRAP) has also been undertaken to determine whether there is a need for additional or upgraded motorway verge safety barrier to protect road users from the effects of a collision with equipment within the site based on the amended layout drawings. This concludes that there is no requirement for additional or enhanced motorway verge safety barrier to be installed to protect road users from the development. National Highways have confirmed agreement with this. They have advised that the proposed CCTV masts are not covered by this assessment and they will need to be designed to deflect upon impact. Notwithstanding this, steps will need to be taken during the construction, maintenance and eventual dismantling of the

development to ensure that road users are protected from operations and any plant operating within the site itself. National Highways is of the view that, as a minimum, safety barrier must be installed around the site works and maintenance compound located close to the motorway boundary to the north of the Grimeshaw Lane bridge. However, this can be dealt with via a planning conditions.

5.3.8 Glint and glare from the solar panels has also been raised as a potential issue to users of the motorway. As mentioned above, the development would share a boundary with the M6 of approximately one mile. This would represent 51 seconds of a vehicle's journey time travelling at 70mph and one minute at 60mph. The solar panels would be visible to users of the M6 at the north and south of the site. The submitted Glint & Glare assessment states that: *"There is no formal guidance with regard to the maximum distance at which glint and glare should be assessed. From a technical perspective, there is no maximum distance for potential reflections. The significance of a reflection however decreases with distance because the proportion of an observer's field of vision that is taken up by the reflecting area diminishes as the separation distance increases. Terrain and shielding by vegetation are also more likely to obstruct an observer's view at longer distances."* The report identifies several receptor locations where glint and glare would be experienced by users on the M6 from both the photovoltaic panels and frames during the early mornings of the spring to autumn months. This is a safety issue as it presents the risk of driver distraction. Existing motorway verge planting is not considered to be sufficient to screen view of the panels for drivers as this is not continuous and varies in height and density, it is not there to provide for the screening of adjacent development and may be removed at any time as a result of damage and arboriculture management.

5.3.9 Close to the southern boundary, there is a clear view into the whole of the site and so panels would be visible to oncoming northbound M6 traffic. The motorway verge landscaping does not fully screen this part of the site from the reflections that the glint and glare assessment states will be visible on the motorway. National Highways have advised that, this is a particular safety issue, because whilst the panels are not in front of drivers, the potential for visual distraction should be minimised by the provision of a clear, continuous view of the solar farm which develops over the maximum possible length of approach carriageway. A clear view from distance will considerably reduce the temptation for drivers to turn their heads when passing the panels. They have advised that the problem is made worse by the fact that the panels within the site will become visible at short range and without notice but are also partially obscured. Concealing the view of the panels until the last minute should be avoided, as drivers may be distracted suddenly and take their attention away from the driving task. In this case, the partial screening is likely to increase the possibility of driver distraction. National Highways have advised that it should be noted that a northbound driver travelling at 70mph would take around 7 seconds to travel past, which is a significant period of time for the conditions for a serious collision to occur.

5.3.10 The plans have been amended to provide set-back of the panels and additional native planting within the site towards the southern end of the M6 boundary which may further help to screen the site to motorists. Whilst this is welcomed, a gap remains where the site is visible and National Highways have recommended that the Landscaping Strategy Plan is revised to extend landscape screening further north to assist in further mitigating the potential for driver distraction. This has been shown on a subsequent Landscape Strategy Plan that has been submitted. The landscaping can be covered by a condition.

5.3.11 The central section of the site, adjacent to the M6, is at a much higher level than the carriageway. However, it has been identified as a location where reflections would be experienced. National Highways have set out that, whilst it is agreed that the terrain would provide screening of the site for road users, there is reliance on the verge-side planting which provides no screening cover and has many years left to establish. They have advised that screening measures at these locations should therefore be reviewed as part of an amended landscape mitigation strategy. Some additional landscaping has been shown on the most recent plan, but again can be covered by condition. At the north of the site, the land falls to the same level as the motorway. Whilst the solar farm would be visible to southbound M6 road users and those joining southbound at Junction 34, the risk of driver distraction is minimal given that the panels face away from traffic and there is there is enough of an advance view of the site for drivers. National Highways have advised that the risk of distraction for northbound drivers would be easily removed by enhanced independent screening measures.

5.3.12 In addition to the comments from National Highways, County Highways have responded in relation to the impact on the local highway network. A response is awaited to the options for access, in the

event that utilising the bridge aver the M6 is not feasible given the weight limit confirmed by National Highways. However, they have previously advised that the level of traffic generated from the construction phase and the development once operational would not have an unacceptable impact on the surrounding highway network. They have advised that the submitted Construction Traffic Management Plan does not cover all the elements that they would expect to be included. Therefore, a revised Construction Management Plan should be submitted prior to the commencement of development, and can be covered by a condition. They have requested a survey condition of the adopted highway before and after construction and the remediation of any damage caused. However, it is considered that this is not a reasonable or enforceable condition given the extent of the adopted highway that would be used by construction traffic which is also used by other traffic. Therefore, it would be difficult to be certain that any damage caused was as a result of this development. National Highways have requested a similar condition in relation to the bridge across the M6. This is likely to be more reasonable given that access is currently restricted to the byway, although it is used by farm vehicles.

5.3.13 Overall, it is considered that the development would not have a detrimental impact on the highway network or highway safety, subject to the measures detailed above being secured by condition.

5.4 **Landscape and visual impacts** NPPF paragraphs: 92-93, 98-100 (Promoting Healthy and Safe Communities including Open Space and Recreation), 126, 130 and 34 (Achieving Well-Designed Places), 174 and 176 (Valued and protected landscapes and the countryside); Strategic Policies and Land Allocations (SPLA) DPD: SP8 (Protecting the Natural Environment), EN2 (Areas of Outstanding Natural Beauty), EN3 (The Open Countryside), T2 (Cycling and Walking Network); Development Management (DM) DPD policies: DM29 (Key Design Principles), DM46 (Development and Landscape Impact), DM53 (Renewable and Low carbon Energy Generation), DM61 (Walking and Cycling)

5.4.1 The site is located immediately to the east of the M6 motorway corridor and comprises gently undulating farmland. The land levels rise from a point around 34 metres AOD at the north of the site, to a high point of around 75 metres AOD, just beyond the centre and lower to approximately 50 metres AOD on the southeast boundary. To the east of the site the land levels lower slightly before rising up towards the boundary with the Forest of Bowland Area of Outstanding Natural Beauty (AONB), beyond which the land rises above the highest point of the application site. The closest part of the AONB is mostly wooded and the boundary is between approximately 300 metres and 600 metres from the eastern boundary of the site.

5.4.2 The landscape character type which covers the site is identified as Drumlin Field (13), sub-type Docker-Kellet-Lancaster (13c), within the Lancashire County Council Landscape Strategy for Lancashire (December 2000). This character type is characterised by a `field' of rolling drumlins. The consistent orientation of the hills gives the landscape a uniform grain, which is sometimes difficult to appreciate from within the field. Pasture predominates and fields are bounded by clipped hedges or, more often, stone walls, which rise up over the hillocks accentuating the relief of the hills. Narrow streams wind through the drumlins draining the field and small mixed woodlands contribute to the rural wooded character. Major roads often cross or skirt the edge of the drumlin fields and settlement is dispersed, with small hamlets and farmsteads in sheltered sites on the mid-slope of the drumlins. Whilst Lancaster and other towns are on the edges of the Drumlin Field, the landscape is generally rural.

5.4.3 This particular drumlin field has a distinctive north-east, south-west grain and runs from the edge of Lancaster northwards into Cumbria. The area is underlain by limestone and is distinguished by large scale undulating hills of pasture, some formed from glacial till and others which are outcrops of limestone, or reef knolls. Woodlands are often associated with designed landscapes and built development takes advantage of views from the hill tops, for example the Ashton Memorial on the edge of Lancaster which sits atop a drumlin and is a landmark for miles around. The drumlins create a setting for the city of Lancaster. The Landscape Strategy for Lancashire goes on to discuss recommendations for different landscape types. In order to conserve the distinctive rolling landform it sets out that vertical elements should be limited to retain the uncluttered character of the landscape and built development should be sheltered within the undulating landform. Whilst the first point relates to tall structures it does highlight that the rolling landform and uncluttered appearance are important characteristics of this landscape type.

5.4.4 The site and surroundings comprise rolling landform, typical of the landscape character type. Fields are mostly separated by hedgerows and trees and there are also wooded groups close to the site. This landform has been impacted by the development of the M6 motorway corridor, which cuts through the drumlin, leaving a banking along part of the boundary between the site and the M6. However, it is open and rural in character and appearance and provides a rural setting to Lancaster and the designated landscape of the Forest of Bowland AONB to the east.

5.4.5 The site extends to approximately 28 hectares and comprises a number of agricultural fields. Part of the site has recently been used to grow crops, whilst other parts appears to have been used for grazing animals. The development is separated into three distinct parcels, and a public bridleway runs between two of these in a southwest/ northeast direction. The original submission identified solar panels across most of the site. However, amended plans have been submitted which remove panels from the northern and southern extents of the site, adjacent to the M6, and propose native woodland planting. Two more groups of woodland planting are also now proposed towards the north of the site and within the central parcel, around the highest part of the site. Additional landscaping is also proposed along existing field boundaries. The same number of panels are still proposed, although they would need to be more closely spaced. The proposal also includes a number of ancillary buildings/ containers, fencing, CCTV cameras and tracks around the perimeter of each parcel.

5.4.6 A landscape and visual impact assessment has been submitted with the application. Visualisations were not provided within this, but have been subsequently provided from several viewpoints. The assessment includes a Zone of Theoretical Visibility (ZTV) which highlights where the development may be visible. This is relatively localised but includes longer views to the north and south. Immediately adjacent to the site are key views from the public bridleway, which is bordered on both sides by the site for approximately 550 metres. Views are also gained from the north looking towards the site to the south. This bridleway appears to be well used for recreation but may also be used for commuting as it provides a link from the edge of Lancaster to the A683, just to the south of Halton. Other main views are from rural roads to the north, such as around Foundry Lane and Bottomdale Road, From the M6 and from the land to the west of the M6 which is allocated as a Strategic Housing site (East Lancaster) under policy SG7.

5.4.7 Views will be gained of the development at various points of the public right of way. These will vary between short views where there are gaps in hedgerows, including access points and more continuous and expansive views at the northern end of the site. In particular there are likely to be clear views from the north of the rear of the solar panels as the land rises up to its highest point. These views are covered by viewpoints 2a and 2b within the submitted assessment which sets out that the magnitude of change is considered to be high and this would result in a significance of effect of Major Adverse at year 0. It goes on to say that once the landscape strategy and additional planting has matured, the existing field boundary hedgerow will have reached a height that would heavily filter view of the proposals, the magnitude of change would reduce to Medium and the significance of effect to Major / Moderate Adverse at year 10. The assessment includes three other viewpoints along the bridleway which have been assessed as between Major and Moderate Adverse with one reducing to Moderate/ Minor adverse at year 10.

5.4.8 The photomontages and assessment highlight that there will be impacts on views from the public bridleway, even after 10 years once landscaping has matured. Due to the nature of the solar panels and the associated infrastructure, it will significantly alter the appearance of the landscape from open rolling agricultural land, to one of an industrial nature. Whilst enjoyment of the public right of way is likely to be impacted to some degree by the presence of the motorway, it is rural in nature and part of the open countryside and provides a quick escape from the built up area of Lancaster. As such it is considered that the development would impact on the enjoyment and experience of users of the public right of way. It is positive to see that existing hedgerows would be enhanced, and standard trees planted within the hedge lines. The submission sets out that hedgerows will be allowed to reach their full potential height to screen the development. Whilst managing hedgerows on a less intensive regime should be encouraged, simply allowing hedgerows to grow in height is not in keeping with the traditional management and could impact upon their long-term retention and biodiversity value, as well as people's enjoyment of the public right of way.

5.4.9 It is acknowledged that in some views from the north/ northwest, the development will be seen in the context of the M6 motorway. However, as set out above, this landscape provides a setting for

the urban area of Lancaster and the foreground to the AONB. There are also some views where the M6 is not visible or less intrusive where the site form a clear part of the wider undulating landscape. In particular, the photomontage from view point 10 shows how the character and appearance of the site would be changed by the proposed development. Due to the undulating nature of the site and the surrounding land, the site does not provide for a well contained development. The development will also be highly visible and prominent when travelling along the M6, particularly from the north before the site and for the first section in particular. Whilst there are no issues with glint and glare, the highest point the rear and side of the panels will be clearly visible, in addition to associated buildings and infrastructure, which will give a very industrial appearance. It is accepted that users will be travelling along a major transport corridor, however, as set out above, this landscape does provide an attract rural setting for Lancaster which would be diminished by this proposal.

5.4.10 Whilst there are currently no public views on the land to the west, on the other side of the M6, this is allocated as a Strategic Housing Site. As such, it is anticipated that development would be delivered and therefore public views created. These may well be at the highest points of this land, to reduce the impact of the housing development, which would likely provide clear views of the site.

5.4.11 Paragraph 174 of the NPPF sets out that decisions should contribute to and enhance the natural and local environment by protecting and enhancing valued landscapes and recognising the intrinsic character and beauty of the countryside. Policy DM29 of the Development Management DPD sets out that new development should make a positive contribution to the surrounding landscape or townscape and policy DM46 states that the council will support development that is in scale and keeping with the landscape character and is appropriate to its surroundings in terms of siting, scale, massing, design, materials, external appearance and landscaping. This policy also goes on to say that the Council will require proposals that are within, or would impact upon the setting of, designated landscapes to be appropriate to the landscape character type and designation.

5.4.12 Amendments have been made to the scheme which have increased the landscaping within the site and also improved the appearance of the boundary fencing and reduced the height and number of the poles for the CCTV camera. However, given the large scale of the proposal, the nature of the infrastructure, which is industrial in appearance, and the open and rolling character of the landscape, it is considered that the proposal would have a detrimental impact on the character and appearance of the landscape and the rural character of the public right of way adjacent to the site and its enjoyment, in addition to the setting of the Forest of Bowland AONB which rises above Moorside Farm. The proposal therefore fails to comply with the local plan policies, in particular those detailed above, but also policy DM53 which relates to proposals for renewable energy.

5.5 **Biodiversity** (NPPF paragraphs: 174 and 179-182 (Habitats and biodiversity); Strategic Policies and Land Allocations (SPLA) DPD policies: SP8 (Protecting the Natural Environment) and EN7 (Environmentally Important Areas); Development Management (DM) DPD policies DM44 (Protection and Enhancement of Biodiversity), DM45 (Protection of Trees, Hedgerows and Woodland) and DM53 (Renewable and Low Carbon Energy Generation)

5.5.1 The site is located approximately 4 kilometres from the Lune Estuary Site of Special Scientific Interest (SSSI), which is also covered by the Morecambe Bay Special Area of Conservation (SAC), Special Protection Area (SPA) and Ramsar Site. Natural England has provided comments in relation to the designated sites. They initially raised an objection and advised that there was insufficient information to determine if likely significant effects to the designated sites could be ruled out. In particular, they advised that further details of how surface water drainage would be managed during the construction and operation phase to avoid impacts upon the designated sites, including any mitigation measures deemed necessary.

5.5.2 Following the comments from Natural England, the Council has undertaken a Habitats Regulations Assessment. This sets out that there is potential for hydrological connectivity between the site and the protected areas via site run-off into the River Lune. This has the potential for pollutants to adversely affect the protected sites. It is considered that the impacts related to polluted water run-off during, and post, construction could be avoided, but only through mitigation. Therefore, an Appropriate Assessment has been undertaken. This concludes that the proposal will not result in adverse effects on the integrity of any of the sites in question. It is considered that the Flood Risk Assessment and Drainage Strategy submitted with the application demonstrate that this potential impact could be adequately mitigated and can be covered by conditions, requiring a Construction

Environmental Management Plan and a final drainage scheme. Natural England have confirmed that they agree with the assessment conclusions.

5.5.3 Greater Manchester Ecology Unit (GMEU) have been consulted regarding other ecology impacts in relation to the proposal, including biodiversity enhancements. An ecological impact assessment has been submitted with the application. This sets out that most of the site comprises semi-improved grassland. There are a number of hedgerows along field boundaries and also some boundary walls towards the south of the site. There are a number of individual trees, mostly at the north of the site, and three veteran trees have also been identified which are within hedgerow boundaries. The submitted Arboricultural Implications Assessment (AIA) identifies 25 trees, 23 groups and 19 hedgerows located around the perimeter of the site. Areas of wet grassland have been identified adjacent to the site in addition to broad-leaved semi-natural woodland identified adjacent to the north and east site. The submission sets out that the site is considered to be of lower overall ecological value although hedgerows and veteran trees are of high value. The layout has been designed to concentrate development within the improved grassland areas and maintain and enhance hedgerows. One tree (T15) and part of one hedgerow (H19) are proposed to be felled to allow access. A second tree (T9) is identified for felling due to its poor condition. Since the ecology report was prepared, additional landscaping, including native woodland planting has been incorporated into the layout.

5.5.4 The veteran trees and shrubs present on the site are proposed to be retained and their roots protected in the development. Natural England's advice is to retain an unbuilt 15m buffer around veteran trees. The submitted AIA does not identify these as veteran trees / coppice stools, however it does show the retention of all trees in the location of the veteran trees and shrubs. However, the plan does not appear to show protection fencing around this area so a further plan would be required to show this which could be covered by a condition. Some of the solar panels in this location seem to go quite close to the boundary, so it might be appropriate to condition that an appropriate buffer zone is agreed prior to commencement and ensure that these are taken into account within an arboricultural method statement.

5.5.5 In terms of particular species, the report sets out that the site has limited potential to support protected/ rare and/ or priority invertebrates. In relation to amphibians, it sets out that, the records returned from the local record centre and those found on MAGIC Maps coupled with a paucity of suitable ponds in the local area and the barriers to movement presented by the River Lune, Denny Beck and the M6 indicate that great crested newts are unlikely to be present on or near the site. It also sets out that the number of other amphibian species in the wider local area is low and the scarcity of standing water means that the site is likely of up to lower value. The report also sets out that the proposed development is likely to provide improved foraging opportunities within the site, with the grassland underneath the solar panels providing foraging opportunities throughout the site.

5.5.6 The majority of habitats within the site, such as the pasture and silage fields, are of low value to reptiles. Features, such as hedgerows, watercourses and wooded habitats, offered suitable commuting, foraging and sheltering opportunities for this group. The report sets out that, during the installation of the solar panels, there is a potential chance for negative impacts to reptiles such as sheltering in construction materials and being killed or injured, and leaving fields to vegetate before construction which could attract species. Mitigation has been suggested to safeguard this species during construction. The report sets out that the site offers suitable foraging opportunities for badgers, brown hare and hedgehogs. However, the hedgerows and woodland provid sub-optimal cover for sett creation, due to their condition and no badger activity was recorded during the survey. The fields will continue to provide foraging habitats for terrestrial mammals post-development through the grassland and wildflower habitats. To maintain connectivity, it is recommended that holes are dug beneath security fencing to allow hedgehogs to move around within the site.

5.5.7 The site is likely to be used by common breeding bird species, both for nesting and foraging, with the wooded habitats, hedgerows, trees and scrub habitats being of greatest value in this respect. With the intensively managed grasslands it is considered that the value of the site to breeding birds is low. The report advises that vegetation removal for the construction phase should take place outside the bird breeding season of March to August inclusive, to prevent disturbance to birds, unless a nesting bird check has taken place prior to removal. Multiple trees within the field boundaries offer roosting potential for bats. The AIA does not show any of those identified as having potential to be removed. If works are proposed to trees with moderate or high bat roost potential

then further surveys would be required. However, the development can be undertaken without impacting on these. The submission sets out that the hedges and woodland are likely to be used for foraging and commuting by a low number of bats, because of proximity to the M6 and the intensive use of the grass fields indicating that there is likely to be relatively few flying insects present. The development would provide improved foraging opportunities, with gaps in hedgerows being planted up and with the grassland underneath the solar panels providing better foraging opportunities throughout the site.

5.5.8 In relation to the biodiversity enhancements, GMEU have set out that, although the report mentions that the solar panels will have gaps left between rows which would facilitate the enhancement of the grassland around and under the panels, it is difficult to ascertain inf the layout of the panels would be of such a density which would allow future grassland management that is beneficial to nature conservation. The report states that the ground beneath the solar panels will be seeded with a traditional grazing mixture which contains a more diverse seed mix than modern high-yielding swards and the land under the solar panels should be sheep grazed once established at a density to ensure that the grassland always has an average sward height of 15cm in at least half of the fields. Sheep should be rotated around the fields to ensure that a variety of sward heights persists throughout the year. GMEU support these recommendations and have advised that in principle the development could deliver a local gain in biodiversity, although this depends on the future management of the dominant habitat on the site, which is the grassland. They have therefore recommend that a comprehensive Habitat and Landscape Creation and Management Plan in order to ensure that this is secured and delivered. In addition, following these comments, the plans have been amended to significantly increase planting within the site, including the inclusion of woodland groups and further improvements to hedgerows.

5.5.9 Overall, it is considered that impact to ecology can be adequately mitigated and that the scheme can achieve a net gain in biodiversity.

5.6 **Impacts on Heritage Assets** NPPF paragraphs: 189, 194 - 197, 199 – 206 (Conserving and Enhancing the Historic Environment); Strategic Policies and Land Allocations (SPLA) DPD policies SP7 (Maintaining Lancaster District's Unique Heritage); Development Management (DM) DPD policies DM37 (Development Affecting Listed Buildings), DM38 (Development Affecting Conservation Areas), DM39 (The Setting of Designated Heritage Assets), DM41 (Development Affecting Non-Designated Heritage Assets or their Settings), DM42 (Archaeology) and DM53 (Renewable and Low Carbon Energy Generation)

5.6.1 A historic environment desk based assessment has been submitted with the application. Lancaster Moor Conservation Area is approximately 600 metres to the southwest, at its closest point, and this contains a number of listed buildings, including Lancaster Moor Hospital (Grade II) and also abuts the Williamson Park Conservation Area which includes the Aston Memorial (Grade I), although this is approximately 1.5 kilometres from the site. The proposal would not directly impact any designated heritage assets, however it does have the potential to impact on the setting of these, which contributes to their significance.

5.6.2 There is development separating the assets mentioned above from the site, including residential properties, Lancaster Farms Prison and the M6 motorway. The development would be viewed in the context of Lancaster Moor Hospital and Ashton Memorial towards the northern end of the site. In particular, the development would be on rising land that currently forms the foreground of views of these assets from the bridleway through the site. However, whilst it would alter the appearance of the landscape in this location, to one of a more industrial nature, it is considered site does not contribute to the significance of the listed buildings by way of setting due to the separation distance and intervening features.

5.6.3 In relation to archaeology, the submitted Historic Environment Desk-based assessment states that there is a significant potential for the development to damage archaeological remains of Romano-British and Medieval dates and that a scheme of investigation and mitigation will be necessary. County Archaeology have been consulted and have confirmed that they agree with this conclusion but note that whilst there is no strong evidence for either Prehistoric or Early Medieval remains on the site, their presence should be stated as 'unknown' rather than 'absent'. They have advised that they agree that there is no strong evidence for the existence of nationally important remains to exist within the site and that there is therefore no reason to require the scheme of investigation and

mitigation to be undertaken before a planning decision is taken. It is therefore considered that a programme of archaeological work, including any required mitigation following the further investigation, can be adequately controlled by condition.

5.7 **Flood Risk and Drainage** NPPF paragraphs: 159, 167 and 169 (Planning and Flood Risk); Policies and Land Allocations (SPLA) DPD policies SP8 (Protecting the Natural Environment); Development Management (DM) DPD policies DM33 (Development and Flood Risk), DM34 (Surface Water Run-off and Sustainable Drainage), DM53 (Renewable and Low Carbon Energy Generation)

5.7.1 The site is located within Flood Zone 1, which is at the lowest risk of flooding. A very small area at the north of the site is identified as being at risk of surface water flooding, which appears to follow flow paths. A Flood Risk Assessment and Drainage Strategy has been submitted with the application. The Lead Local Flood Authority has been consulted on the application. They have raised no objection to the proposal but have raised some concerns regarding the submitted drainage strategy. The submission sets out that the surface water will be managed on the site by maintaining the current site infiltration characteristics and flow paths. However, some impermeable areas will be introduced by the compounds. The LLFA also considers the proposed access roads to be impermeable, as these are designed to direct runoff off the road surface. They have advised that the drainage strategy should consider these impermeable areas, providing calculations to demonstrate that the proposed swales and filter drains have an appropriate size and capacity to manage runoff from these areas up to the 1 in 100-year + climate change event. In addition, infiltration testing will be required at the location of each infiltration component, to demonstrate that this is an appropriate way of managing surface water on the site. If infiltration is not possible, or possible for only part of the site, the development should utilise the next level of the drainage hierarchy and provide an attenuated discharge to a surface water body or utilise a hybrid approach. It is considered that this can be adequately controlled by condition.

5.7.2 The LLFA have also advised that surface water flowing from the arrays onto the areas between the rows will lead to an increased concentration of surface water and soil erosion, increasing the rates and volumes of surface water runoff. This can be further exacerbated by a lack of maintenance. The submission sets out that this will be managed by maintaining vegetation, mainly grass cover, in good condition between and underneath the panels. The LLFA expect these measures to be detailed within the SuDS operation and maintenance manual. They have also advised that, after construction, the soil should be chisel ploughed, or similar, to mitigate soil compaction during construction. This will ensure that the site can infiltrate to its potential. Furthermore, during the first few years it is important to hold frequent inspections of the planting and soil to ensure it is growing properly, and the soil is not bare or compacted, with any remedial work occurring as soon as possible.

5.7.3 In addition, the LLFA have advised that no development should occur within 8 metres of any ordinary watercourse, present towards the north of the site. This includes the construction of structures such as walls and fences. Construction within 8 metres of any ordinary watercourse is not advised as access for maintenance purposes is restricted and it has the potential to pose an undue flood risk to structures should flooding occur.

5.7.4 National Highways have also advised that there are existing problems with regards to drainage and run-off on the adjacent section of the M6 and have set out that a cut-off drainage would be welcomed if possible. They have not requested details of the drainage by condition, although they could be consulted in relation to a subsequent drainage scheme. However, they have requested a condition to ensure that there is no additional run-off to the M6. Overall it is considered that the site it not at a high risk of flooding and surface water drainage can be appropriately managed by securing an appropriate scheme and management by condition. A condition will also be required to ensure that run-off is managed during construction.

5.8 **Impacts on residential amenity** NPPF paragraphs: 130 (Achieving Well-Designed Places), 183-189 (Noise and Pollution); Development Management (DM) DPD policies DM29 (Key Design Principles), and DM53 (Renewable and Low Carbon Energy Generation), DM57 (Health and Well-Being).

5.8.1 The site is located in a rural area, around 900 metres from the nearest residential areas at the edge of the built up area of Lancaster. There are a number of dispersed farms in the vicinity of the site.

The submission sets out that, when in operation, the Inverters and Substations will occasionally produce a hum from cooling fans during peak operating conditions, however this will be at a very low level and therefore it is very unlikely that these installations will be audible above existing background noise levels. It goes on to say that a recommended 250 metre buffer between any residential houses and the inverters was set following the instructions of their specialist. This corresponds with the locations shown on the submitted layout plan. No permanent lighting is proposed, although there may be some bulkhead lights on the inverters which would be switched on if there was a need for emergency work in the dark.

5.8.2 The other potential impact to residential amenity from the solar farm relates to glint and glare. The submission sets out that the panels absorb sunlight and the glass is coated with a translucent coating to improve light transmittance into the glass. It sets out that the panels appear to have a dull sheen and do not reflect light as strong glint or glare. Studies into the likely impacts from glare on aviation have shown that glare from a photovoltaic installation is less than that from a similar sized water body, such as a lake. Glint is a more intense, but intermittent direct reflection of the sun from reflective surfaces, which can occur on rare occasions when several environmental conditions coincide. The sun has to be at the right height in the sky (seasonal) and at the right angle (time of day) and there must be no cloud obscuring the sun. Assuming that there is no cloud cover, these circumstances would only result in glint impacts on each receptor for a short period of time each day and for a few days twice a year. With the added constraint of cloudy weather, and other variables such as the slight differences in the pitch of panels and undulations in topography, the submission sets out that it is almost impossible to predict these impacts. Newly manufactured PV panels and their alloy frames may create glint initially but, with weathering and surface oxidation, this will reduce over time. In terms of impacts on nearby roads, a separate Glint and Glare report has been commissioned.

5.8.3 Taking the above into account, the distance and intervening landscape and screening from the main residential areas, and the position of the closer residential properties, it is unlikely that the proposal would have a detrimental impact as a result of glint and glare from the solar panels. There is also a Strategic housing allocation site on the eastern side of the M6 motorway. It is difficult to assess the impacts to this site as there are currently no detailed plans for the development. However, some assessment relating to the M6 is relevant to this site. As discussed above, the significance of a reflection decreases with distance because the proportion of an observer's field of vision that is taken up by the reflecting area diminishes as the separation distance increases. Terrain and shielding by vegetation are also more likely to obstruct an observer's view at longer distances. It is likely that development on the Strategic site would be set in from the M6, increasing the separation. There would also likely be additional planting that would restrict views, in addition to the location of buildings. Given this, it is considered that the proposal is unlikely to have a detrimental impact on amenity at the allocated site and would therefore be unlikely to undermine its delivery.

5.9 **Mineral safeguarding** NPPF paragraphs: 219-204 (Facilitating the Sustainable use of Minerals); Joint Lancashire Minerals and Waste Local Plan Policy: M2 (Safeguarding Minerals)

5.9.1 The site is located within a Mineral Safeguarding Area as identified by Lancashire County Council and considered within the Joint Lancashire Minerals and Waste Local Plan. Policy M2 sets out that planning permission will not be supported for any form of development that is incompatible with working the minerals, unless the applicant can demonstrate that:

- The mineral concerned is no longer of any value or has been fully extracted.
- The full extent of the mineral can be extracted satisfactorily prior to the incompatible development taking place.
- The incompatible development is of a temporary nature and can be completed and the site returned to its original condition prior to the minerals being worked.
- There is an overarching need for the incompatible development that outweighs the need to avoid the sterilisation of the mineral resource
- That prior extraction of minerals is not feasible due to the depth of the deposit.
- Extraction would lead to land stability problems.

5.9.2 No assessment has been submitted with the application. However, the proposal does relate to a development that is intended to be removed from the site and the land restored, albeit after a period of 35 years. As excavation is not proposed to construct the development, it would not be appropriate to extract the minerals prior to the development. Given that the land can be restored to its current

use, it is considered tat the development would not sterilise the mineral resource. In addition, there is no active quarry close to the site, so it would be unlikely that any mineral development would come forward on this site in the near future.

6.0 Conclusion and Planning Balance

6.1 The proposed solar farm will contribute to the decarbonisation of electric energy in the district and to both local and national climate mitigation targets and clearly supports the Council's climate change agenda. There are clearly environmental benefits from the proposal in terms of mitigating the impacts of climate change and associated economic benefits. However, as a result of the large scale of the proposal, its prominent location within an open undulating drumlin landscape and the industrial appearance of the proposed infrastructure required to deliver the solar farm, the proposal would have a detrimental impact on the character and appearance of the landscape and the rural character of the public right of way adjacent to the site and its enjoyment. It would also have an adverse impact on the setting of the Forest of Bowland AONB which rises above Moorside Farm. This clearly represents clear environmental disbenefits, and would also fail to achieve the social objective of sustainable development given the impact on users of the public right of way and visual impact.

6.2 Taking into consideration the benefits of the proposal, it is considered that the harmful landscape and visual impacts identified outweigh these and the proposal is considered to be contrary to the Local Plan as a whole, in addition to the aims and objectives of the NPPF.

Recommendation

That Planning Permission BE REFUSED for the following reason:

1. As a result of the large scale of the proposal, its prominent location within an open undulating drumlin landscape and the industrial appearance of the proposed infrastructure required to deliver the solar farm, the proposal would have a detrimental impact on the character and appearance of the landscape and the rural character of the public right of way adjacent to the site and its enjoyment. It would also have an adverse impact on the setting of the Forest of Bowland AONB. The proposal therefore fails to comply with the National Planning Policy Framework, in particular Sections 12 and 15, Policy EN2 of the Strategic Policies and Land Allocations Development Plan Document and Policies DM29, DM46 and DM53 of the Review of the Development Management Development Plan Document.

Article 35, Town and Country Planning (Development Management Procedure) (England) Order 2015

Lancaster City Council takes a positive and proactive approach to development proposals, in the interests of delivering sustainable development. As part of this approach the Council offers a pre-application service, aimed at positively influencing development proposals. Whilst the applicant has taken advantage of this service prior to submission, the resulting proposal is unacceptable for the reasons set out in the report.

Background Papers
None