County Durham Plan

Solar Energy Supplementary Planning Document (SPD) August 2024

Durham County Council

Table of Contents

1.0 Introduction 2

1.1 Purpose of this Supplementary Planning Document 2

1.2 The Climate Emergency 3

1.3 Policy Context 4

2.0 Small scale: serving residential, business and community uses 7

2.1 Introduction 7

2.2 Permitted Development Rights 7

2.3 Landscape and Townscape 9

2.4 Cultural Heritage 11

2.5 Biodiversity and Nature Conservation 13

2.6 Glint and Glare 14

3.0 Medium scale: serving business, leisure and community uses 15

3.1 Introduction 15

3.2 Permitted Development Rights 15

3.3 Landscape and Townscape 16

3.4 Biodiversity and Nature Conservation 21

3.5 Cultural Heritage 27

3.6 Glint and Glare 30

3.7 Residential Amenity 32

3.8 Recreational Amenity and Public Rights of Way 33

3.9 Flooding and Drainage 35

3.10 Site Restoration 37

4.0 Large scale: commercial solar farms 38

4.1 Introduction 38

4.2 Agricultural Land 39

4.3 Landscape and Townscape 41

4.4 Biodiversity and Nature Conservation 47

4.5 Cultural Heritage 47

4.6 Glint and Glare 47

4.7 Residential Amenity 47

4.8 Recreational Amenity and Public Rights of Way 49

4.9 Flooding and Drainage 49

4.10 Site Restoration 52

4.11 Green Belt 53
4.12 Access and Traffic 55
4.13 Contamination and Ground Stability 56
4.14 Associated Infrastructure 57
5.0 Planning process 59
5.1 Pre-Application Advice 59
5.2 Community Engagement 59
5.3 Community Benefits 60
5.4 Environmental Impact Assessment 60
5.5 Submitting a Planning Application 60

1.0 Introduction

1.1 Purpose of this Supplementary Planning Document

1.1.1 Solar energy has an important contribution to make to the UK's target to be net zero carbon by 2050 and Durham County Council's target for Durham County to be net zero carbon by 2045. Enabling local renewable energy generation will support energy security, making energy costs less susceptible to fluctuations in global gas prices.

1.1.2 This Supplementary Planning Document (SPD) provides guidance on key planning issues associated with solar including landscape character, biodiversity, heritage assets and agricultural land. It seeks to ensure panels are appropriately sited and designed and that, where possible, wider social, economic and environmental benefits are achieved.

1.1.3 Guidance is provided based on three scales of solar development:

Table 1. Definition *of three scales of solar development for the purposes of the SPD*

Small scale solar panels associated with residential, business and community uses. Panels can be free-standing ground mounted, fixed onto or integrated into a building.

Medium scale solar panels associated with business, leisure and community uses. Panels can be free-standing ground mounted, fixed onto or integrated into a building or on a solar canopy above car parking

Large scale commercial scale solar farms which connect to the national grid. Panels are free-standing ground mounted

1.1.4 There are two forms of solar technology. Solar photovoltaic (PV) panels include cells which convert sunlight into energy. These are the most common form of solar panel and used from a domestic to a commercial scale. Solar thermal panels use the suns energy to heat water for storage and are more suited to domestic properties. A solar array is a collection of multiple solar panels.

1.1.5 This SPD adds further detail to policies in the County Durham Plan, including Policy 10 (Development in the Countryside), Policy 14 (Best and Most Versatile Agricultural Land and Soil Resources), Policy 28 (Safeguarded Areas), Policy 29 (Sustainable Design), Policy 31 (Amenity and Pollution), Policy 33 (Renewable and Low Carbon Energy), Policy 35 (Water Management) and Policy 39 (Landscape).

1.1.6 It was subject to consultation in accordance with the council's Statement of Community Involvement. It is a material consideration in determining planning applications for solar development where planning permission is required.

1.1.7 Solar farm developments generating 50MW (AC) or above are currently considered Nationally Significant Infrastructure Projects (NSIP) and determined by the National Infrastructure Directorate of the Planning Inspectorate on behalf of the Secretary of State. The government is consulting on proposals to increase the threshold at which solar projects are determined as NSIP to 150MW. In determining the capacity of a site and if a proposed development should be determined as an NSIP, developers should have regard to guidance in National Policy Statement for Renewable Energy Infrastructure (EN-3). This SPD will be used to help formulate the council's response to any solar farm NSIPs proposed within the county.

1.2 The Climate Emergency

1.2.1 The council declared a climate emergency in 2019. Using electricity from the national grid accounted for about one fifth (17%) of the total carbon footprint of the county in 2022. In terms of solar PV, County Durham had 62.5MW of installed capacity as at end of 2022. The Durham Climate Emergency Response Plan (CERP) 3 (2024-27) sets a target of the county being net zero by 2045, when renewable energy generation, energy efficiency, and resilient infrastructure is in place for a carbon neutral electricity grid. The CERP is regularly reviewed, as is our progress towards achieving our target and the actions needed.

1.2.2 The CERP aligns with the national response to both the climate emergency and energy crisis. The government's Energy White Paper (2020) sets plans for a fully decarbonised, reliable, and low-cost power system, which is likely to be composed of predominantly wind and solar. This will reduce our reliance on gas, which currently sets electricity prices. The government's Net Zero Strategy: Build Back Greener (2021) seeks to accelerate deployment of low-cost renewable generation, such as wind and solar through the Contracts for Difference scheme. The strategy establishes an ambition to fully decarbonise the power system by 2035. The British Energy Security Strategy (2022) pledges to achieve net zero targets to increase solar power capacity from 14 gigawatts (GW) to 70GW by 2035. This was reaffirmed in Powering Up Britain (2023). Also more recently the Growth Plan (2022) reinforces the government's ambition to move to a system where electricity prices better reflect the UK's low carbon energy sources, to bring down consumer bills.

1.3 Policy Context

1.3.1 The National Planning Policy Framework (NPPF) encourages local planning authorities to promote renewable energy development and identify appropriate sites for it to support the transition to a low carbon future. Proposed revisions to the NPPF further emphasise significant weight should be given to a proposal's contribution to renewable energy generation and a net zero future, and that community-led projects also provide a valuable contribution to cutting greenhouse gas emissions. Planning Practice Guidance (PPG) sets out the factors local planning authorities will need to consider when determining a planning application for a large scale ground-mounted solar farm. This includes encouraging the effective use of land by focussing large scale solar farms on previously developed and non-agricultural land, if it is not of high environmental value.

1.3.2 The Overarching National Policy Statement for Energy (EN-1) and National Policy for Renewable Energy Infrastructure (EN-3), are applicable to NSIPs including those onshore projects delivering 50MW or above. EN-1 includes general policies for the submission and assessment of energy infrastructure applications. EN-3 provides guidance in relation to solar PV on site selection and design, the impacts to be assessed and potential mitigation which may be needed.

1.3.3 The County Durham Plan (CDP) is the Development Plan for Durham, alongside Neighbourhood Plans and the Minerals and Waste Plan.

1.3.4 The key CDP policies in relation to solar development are Policy 29 (Sustainable Design) and Policy 33 (Renewable and Low Carbon Energy).

Policy 29 (Sustainable Design) requires all development proposals to minimise greenhouse gas emissions, by seeking to achieve zero carbon buildings and providing renewable and low carbon energy generation. Where connection to the gas network is not viable, development should utilise renewable and low carbon technologies as the main heating source.

Policy 33 (Renewable and Low Carbon Energy) states that renewable and low carbon energy development in appropriate locations will be supported. In determining planning applications for such projects significant weight will be given to the achievement of wider social, environmental, and economic benefits. Planning applications will also need to include a satisfactory scheme to restore the site to a quality of at least its original condition once operations have ceased.

1.3.5 In applying CDP Policy 33, renewable energy generation and its contribution to the county being net zero carbon by 2045 is an environmental benefit and will be given significant weight.

1.3.6 Whilst Policy 10 (Development in the Countryside) states new development in the countryside will not be permitted unless allowed for by specific policies in the Plan, footnote 54 clarifies relevant policy includes policy on renewables. The policy sets further criteria for assessing applications in the countryside including new development must not give rise to unacceptable harm to the heritage, biodiversity, geodiversity, intrinsic character, beauty or tranquillity of the countryside either individually or cumulatively; result in the merging or coalescence of neighbouring settlements; impact adversely upon the setting, townscape qualities, including important vistas, or form of a settlement which cannot be adequately mitigated or compensated for; be prejudicial to highway, water or railway safety; impact adversely upon residential or general amenity; provide resilience to impacts arising from climate change and maximise the effective use of previously developed (brownfield) land providing it is not of high environmental value.

1.3.7 Other key CDP policies relevant to this SPD include:

- Policy 6 (Development on Unallocated Sites)
- Policy 14 (Best and Most Versatile Agricultural Land and Soil Resources)
- Policy 28 (Safeguarded Areas)
- Policy 29 (Sustainable Design)
- Policy 31 (Amenity and Pollution)
- Policy 35 (Water Management)
- Policy 39 (Landscape)
- Policy 41 (Biodiversity and Geodiversity)

- Policy 43 (Protected Species and Nationally and Locally Protected Sites)
- Policy 44 (Historic Environment)

1.3.8 There are a wide range of neighbourhood forums across the county with neighbourhood plans at varying stages. The council's neighbourhood planning webpage provides the latest position. Neighbourhood Plans are a material consideration in determining planning applications. They may include specific policies on renewable energy, or other policies of relevance including designating local views, locally valued landscapes, local green spaces or identifying heritage assets of local value. Applicants should identify if there is a neighbourhood plan covering the proposed site and the policies of relevance. Early engagement with the neighbourhood forum is also encouraged.

2.0 Small scale: serving residential, business and community uses

2.1 Introduction

2.1.1 Guidance in this section is targeted at the installation of smaller scale solar panels on or within the grounds of new or existing residential, community or commercial properties. For medium scale solar panels serving community or commercial uses (i.e., those involving larger areas of roof space and/or adjoining land), guidance is provided in section Medium scale: serving business, leisure and community.

2.1.2 Householders, businesses and community groups may wish to install solar panels on or within the grounds of their property to reduce their carbon footprint and energy bills. In addition, all new developments should minimise greenhouse gas emissions and seek to provide renewable and low carbon energy generation, in accordance with CDP Policy 29 (Sustainable Design). Furthermore, the Future Homes Standard and Future Buildings Standard is to come into effect in 2025 through a change in building regulations. This requires that buildings are energy efficient and zero carbon ready. The Energy Saving Trust provides a useful guide on things to consider before installing solar panels. Resources and latest information on funding that is available can be found on the Climate County Durham website.

2.2 Permitted Development Rights

2.2.1 The installation of small scale solar panels and associated battery storage is in many cases 'permitted development' with no need to apply for planning permission. There are, however, important limits and conditions. Permitted development rights are set by government in the Town and Country Planning (General Permitted Development) (England) Order 2015 (as amended). The Planning Portal webpage provides a helpful summary of permitted development rights for both domestic and non-domestic properties.

2.2.2 In some conservation areas within County Durham, Article 4 Directions have been served that remove permitted development rights. This means that certain works that would normally not require planning permission may do so, either in relation to a particular area or a particular type of development. Article 4 Directions are used to control works that could potentially harm the special character and appearance of the conservation area. A list of conservation areas and corresponding Article 4 Directions is available on the council's Conservation Area webpage. Alternatively, you can contact the planning department to determine if planning permission is required or not. If you want written confirmation your proposal does not require planning permission, you can apply for a 'Lawful Development Certificate'.

2.2.3 Listed building consent is required for physical alterations to a listed building in any manner which would affect its character as a building of special architectural or historic interest. The requirement applies to all types of works, and to all parts of buildings covered by the listing protection (potentially

including buildings or other structures within its curtilage). You can find out if your property is a listed building on the council's Local Plan Policies Map.

2.2.4 If the site where the solar panels are to be installed is a scheduled monument, any work will require scheduled monument consent from the Secretary of State. This process is managed by Historic England on behalf of the Secretary of State. The protected site of a monument may also include any adjoining land essential for its support and preservation. You can find out if a property is a scheduled monument on the council's Local Plan Policies Map.

Case Studies

Solar panels retrofitted to the roof of a residential property in Newton Hall under permitted development rights.

Solar panels retrofitted to the rear elevation of the roof of St John's Church at Neville's Cross under permitted development rights.

2.2.5 Building regulations are usually required for the installation of solar panels on a roof. This is separate to planning and applies to other aspects of the work such as the ability of the roof structure to carry the weight of a panel and fire safety.

2.2.6 Solar development, even when permitted development, must comply with relevant wildlife legislation and regulations, including the Conservation of

Species and Habitats Regulations 2017. Therefore, please also refer to guidance in section 2.5 Biodiversity and Nature Conservation.

2.3 Landscape and Townscape

Proposals should contribute positively to an area's character, identity, heritage significance, townscape and landscape features, helping to create and reinforce locally distinctive and sustainable communities. – County Durham Plan Policy 29 (Sustainable Design)

Any proposal should not cause unacceptable harm to the character, quality, or distinctiveness of the landscape, or to important features or views. Proposals will be expected to incorporate appropriate measures to mitigate adverse landscape and visual effects. – County Durham Plan Policy 39 (Landscape)

Great weight will be given to conserving the landscaped and scenic beauty of the North Pennines Area of Outstanding Natural Beauty (AONB). Any development in or affecting the AONB will only be permitted where it is not, individually or cumulatively, harmful to its special qualities. – County Durham Plan Policy 38 (North Pennines AONB)

2.3.1 In the first instance solar panels should be designed to accord with permitted development rights. This will avoid the need to apply for planning permission and the associated costs where panels are retrofitted to existing buildings. Where this is not possible, and where the building is not a designated or non-designated heritage asset, the following general design principles apply. These principles equally apply to new buildings where solar is incorporated into the design.

2.3.2 In the case of building-mounted solar panels:

- Locate, if possible, on outbuildings, extensions, or carports to minimise the impact on the principal building.
- Avoid designs which appear disproportionate or imbalanced. Technology is advancing and there is an increasing range of solar products which can be integrated into the building fabric, such as PV tiles and solar glass which could be considered.
- Consider how panels will look in combination. They should be symmetrical and evenly spaced. If possible and practical, roof furniture such as aerials and flues should be moved to allow for this.
- Select locations that reflect and complement existing features such as windows and roof lights.
- Where relevant, seek to standardise the style and location of panels with nearby properties, providing these are sympathetic to the character of the area.

- Choose colour treatments for mounting frames that are non-reflective and recede against the background. Frameless or black-framed panels should be used where frames would detract from the building.
- Rooftop panels require mounting systems. Low profile mounting systems will reduce visual impact and should be used wherever possible.

2.3.3 In the case of free-standing solar panels:

- Locate close to existing buildings and avoid locations remote from the associated residential property.
- Choose locations that are naturally well screened public views by existing buildings, topography, and vegetation.
- Avoid sites requiring significant ground modelling or site levelling.
- Choose panels and mounts that are low to the ground and don't project above hedges, fences and walls.
- Use panels with low potential for glint or glare.
- Use underground services where possible.
- Use low impact and reversible mountings such as pile driven or ground screw anchors.

Case Study

Solar panels incorporated into a housing development in Meadowfield.

2.3.4 Related Application Requirements:

2.3.5 These are detailed in the council's validation checklist. Generally as a minimum, elevations (scale 1:50 or 1:100) and, as applicable, roof plans (scale 1:500 or 1:200) or floor plans (scale 1:50 or 1:100) should be provided which clearly illustrate the design and location of panels. Details should also be provided of the specification of the panels proposed.

2.4 Cultural Heritage

Proposals should sustain the significance of designated and non-designated heritage assets, including any contribution made by their setting. – County Durham Plan policy 44 (Historic Environment)

2.4.1 Durham Context:

2.4.2 County Durham has a wide variety of designated heritage assets which includes Durham Castle and Cathedral World Heritage Site (WHS) of the highest significance, and at time of writing over 3,000 listed buildings, 93 Conservation Areas, 226 Scheduled Monuments, 17 Registered Parks and Gardens and 1 Registered Battlefield. These are all identified on the council's Local Plan Policies Map and also recorded on the council's Historic Environment Record. Neighbourhood plans may also identify heritage assets of local value.

2.4.3 The county has a significant number and diverse range of non-designated heritage assets. Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions but which do not meet the criteria for designated heritage assets. The council is producing further guidance on our procedure for identifying non-designated heritage assets.

2.4.4 Detailed Guidance:

2.4.5 The introduction of solar panels on or within the surroundings or broader context of a heritage asset in some circumstances will potentially cause a harmful impact. However, this can often be mitigated through sensitive design based on an understanding of the assets significance. Each heritage asset is unique and as such applicants should seek advice from the council's Design and Conservation Team at the earliest stage and well in advance of submitting a planning application. The installation of solar panels should be justified as part of a 'whole building approach' to improve the energy efficiency of a building. This uses an understanding of a building, its context, its significance, and all the factors affecting energy use as the starting point for devising an energy efficiency strategy. This is to ensure that energy saving measures are appropriate, proportionate, properly designed and integrated, cost effective and that the risks of unintended consequences are reduced. In the first instance the focus should be on low impact measures such as simple thermal upgrading. An assessment of all renewables should then be undertaken to ensure that solar panels are the right solution for the individual building or site. The council is producing detailed guidance on the use of renewables on historic buildings as part of a whole life building approach. The draft guidance is subject to consultation and can be viewed on the council's consultation webpage.

2.4.6 Historic England has provided useful guidance on Energy Efficiency and Historic Buildings which sets out the following general principles:

- The understanding of significance of the asset is critical. Fundamental to achieving high-quality design is a sound understanding of the character and importance of the historic asset involved, whether at the scale of individual buildings and sites or more extensive historic areas and landscapes.
- To minimise the risk of damage to the building, the means of fixing and the operation of the panels should be agreed in advance, whilst also ensuring that their location does not impede rainwater disposal or hinder maintenance work such as clearing gutters.
- Carefully plan how panels will be removed at the end of their life so as to avoid damage to the fabric of the building.
- Minimise visual impact to the setting through location and screening.
- In the case of solar panels on roof spaces, the roof structure will need to be checked by a competent person to ensure it can withstand the additional load.

Case Study

Solar panels integrated into the roof of the Grade II listed Belsay Hall Stable Block as part of its refurbishment.

2.4.7 In accordance with the NPPF (Section 16 Conserving and Enhancing the Historic Environment) when considering the impact of a solar development on the significance of a designated heritage asset, that includes development within its setting, great weight will be given to the asset's conservation (and the more important the asset, the greater the weight will be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance. Where a proposed

development will lead to substantial harm to a designated heritage asset, planning permission will be refused, unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm. When a development proposal leads to less than substantial harm, this harm should be weighed against the public benefits.

2.4.8 When considering applications that directly or indirectly affect non-designated heritage assets, consideration will be given to the scale of any harm or loss and the significance of the heritage asset.

2.4.9 Related Application Requirements:

2.4.10 All applications affecting heritage assets (designated and non-designated) and their setting must be accompanied by a Heritage Statement ideally prepared by a heritage consultant. The heritage statement would need to identify the heritage assets affected by the development proposal and described the significance of those heritage asset including any contribution made by their setting, with the level of detail proportionate to the heritage assets significance. It would then need to assess the anticipated impact(s) of the development proposal on that significance.

2.5 Biodiversity and Nature Conservation

Proposals will be expected to minimise impacts on biodiversity. – County Durham Plan Policy 41 (Biodiversity and Geodiversity)

In relation to protected species and their habitats, all development which, alone or in combination, has a likely adverse impact on the ability of species to survive, reproduce and maintain or expand their current distribution will not be permitted unless: a. appropriate mitigation, or as a last resort compensation, can be provided, which maintains a viable population and where possible provides opportunities for the population to expand; and b. where the species is a European protected species, the proposal also meets the licensing criteria (the 3 legal tests) of overriding public interest, no satisfactory alternative and favourable conservation status. – County Durham Plan Policy 43 (Protected Species and Nationally and Locally Protected Sites)

2.5.1 Solar development, even when permitted development, must comply with relevant wildlife legislation and regulations, including the Conservation of Species and Habitats Regulations 2017. As such, any potential negative impacts, will still have to be addressed in all cases. The homeowner or developer is responsible for ensuring that the development complies with all relevant legislation and regulations. It is advisable to engage the services of a consultant ecologist to determine if there is a risk of protected species being present.

2.5.2 In the case of the retrofitting of roof mounted panels on existing properties potential impacts include damage or disturbance to roosting bats and/or nesting birds.

2.5.3 Stand-alone solar panels within the grounds of a dwelling but not on a building are unlikely to contravene wildlife legislation, but again the onus is on the homeowner or developer to ensure that wildlife legislation is not breached.

2.5.4 The Wildlife and Countryside Act 1981 protects all nesting birds from damage or destruction of an active nest; installation work should be carefully timed not to disturb birds during their nesting seasons from about the end of February to August.

2.5.5 Related Application Requirements:

2.5.6 An Ecological Risk Assessment or Survey Work may be requested to determine the potential impacts arising from development.

2.5.7 A Bat Risk Assessment might be requested for roof installations, if the property or location meets certain criteria; for example, the property lies within 200m of woodland or roosts are recorded in the vicinity.

2.6 Glint and Glare

It will need to be demonstrated that there will be no unacceptable impact, either individually or cumulatively, on amenity. – County Durham Plan Policy 31 (Amenity and Pollution)

2.6.1 Glint is a momentary flash of bright light typically received by moving receptors or from moving reflectors. Glare is a continuous source of bright light. Solar reflection is sometimes used to refer to both. Glint and glare can be a particular issue if 'tracking' panels are proposed which follow the suns path as these may cause differential impacts depending on the season and time of day. Applications should fully consider the reflective capacity of all the materials used including panels, frames and supports. Low-reflectivity panels should be used, and panels should be located to avoid glint and glare. Where necessary, appropriate mitigation measures, such as screening, should be employed to ensure that harmful impacts are avoided.

2.6.2 Related Application Requirements:

2.6.3 A Glint and Glare Assessment may be required where there is potential for impacts on sensitive receptors. For example, where there is potential for solar reflection towards neighbouring properties or other sensitive receptors such as rail, road, and Public Rights of Way (PROW).

3.0 Medium scale: serving business, leisure and community uses

3.1 Introduction

3.1.1 Guidance in this section is targeted at the installation of solar panels to provide energy to business, leisure and community uses.

3.1.2 Businesses and community groups may wish to install solar panels to reduce their carbon footprint and energy costs. These can be roof mounted, on a solar canopy above car parking or ground mounted. In addition, all new developments should minimise greenhouse gas emissions and seek to provide renewable and low carbon energy generation, in accordance with CDP Policy 29 (Sustainable Design).

3.1.3 The council is supportive of community-led initiatives, particularly those seeking to alleviate fuel poverty. It also recognises solar development can support economic development and businesses seeking to achieve their own net zero carbon targets. In determining planning applications for such projects and in accordance with CDP Policy 33 significant weight will be given to the achievement of wider social, environmental and economic benefits.

3.2 Permitted Development Rights

3.2.1 The government has expanded permitted development rights to support renewable energy generation for non-domestic buildings, meaning in many cases there will be no need to apply for planning permission. There are permitted development rights for solar panels on or within the ground of non-domestic buildings and on solar canopies for off-street car parking, subject to certain limitations. The latest information on current permitted development rights is available on the Planning Portal website.

Case Study

Solar panels fitted to the Louisa Leisure Centre in Stanley under permitted development rights.

3.3 Landscape and Townscape

Proposals should contribute positively to an area's character, identity, heritage significance, townscape and landscape features, helping to create and reinforce locally distinctive and sustainable communities. - County Durham Plan Policy 29 (Sustainable Design)

Any proposal should not cause unacceptable harm to the character, quality, or distinctiveness of the landscape, or to important features or views. Proposals will be expected to incorporate appropriate measures to mitigate adverse landscape and visual effects. Development affecting Areas of Higher Landscape Value will only be permitted where it conserves, and where appropriate enhances, the special qualities of the landscape, unless the benefits of development in that location clearly outweigh the harm. – County Durham Plan Policy 39 (Landscape)

Great weight will be given to conserving the landscape and scenic beauty of the North Pennines Area of Outstanding Natural Beauty (AONB). Any development should be designed and managed to the highest environmental standards and have regard to the conservation priorities and desired outcomes of the North Pennines AONB Management Plan and to the guidance given in the North Pennines AONB Planning Guidelines, the North Pennines AONB Building Design Guide and the North Pennines AONB Moorland Tracks and Access Roads Planning Guidance Note as material considerations. - County Durham Plan Policy 38 (North Pennines AONB)

3.3.1 Durham Context:

3.3.2 The Durham Landscape is one of enormous contrast and diversity. It includes nationally important landscapes including the North Pennines National Landscape (Still referred to as Area of Outstanding Natural Beauty (AONB) for planning purposes) and registered Parks and Gardens of Special Historic Interest. It also includes locally important landscapes identified as Areas of Higher Landscape Value (AHLV) in the CDP and landscapes identified on the County Durham Local List of Historic Parks, Gardens and Designed Landscapes. Parts of the Durham Coast are also identified as heritage coast.

3.3.3 Neighbourhood plans may also identify locally valued landscapes, local green spaces and locally important views. The County Durham Landscape Value Assessment (2019) provides information on the valued attributes of local landscapes. All of these landscapes vary in their sensitivity to solar developments.

3.3.4 Further information on the landscape of the county can be found on the Durham Landscape website.

- The County Durham Landscape Character Assessment (2008) provides detailed information about the character of the county's landscape from the strategic to the local level.
- The County Durham Landscape Strategy (2008) is the council's adopted strategy for the landscape. It analyses the issues affecting the landscape and sets out objectives and priorities for conservation and improvement specific to each character area.
- The County Durham Landscape Guidelines cover a range of topics including trees, woodlands and forestry, hedges and grasslands and provide development and land management guidelines for individual landscape types.

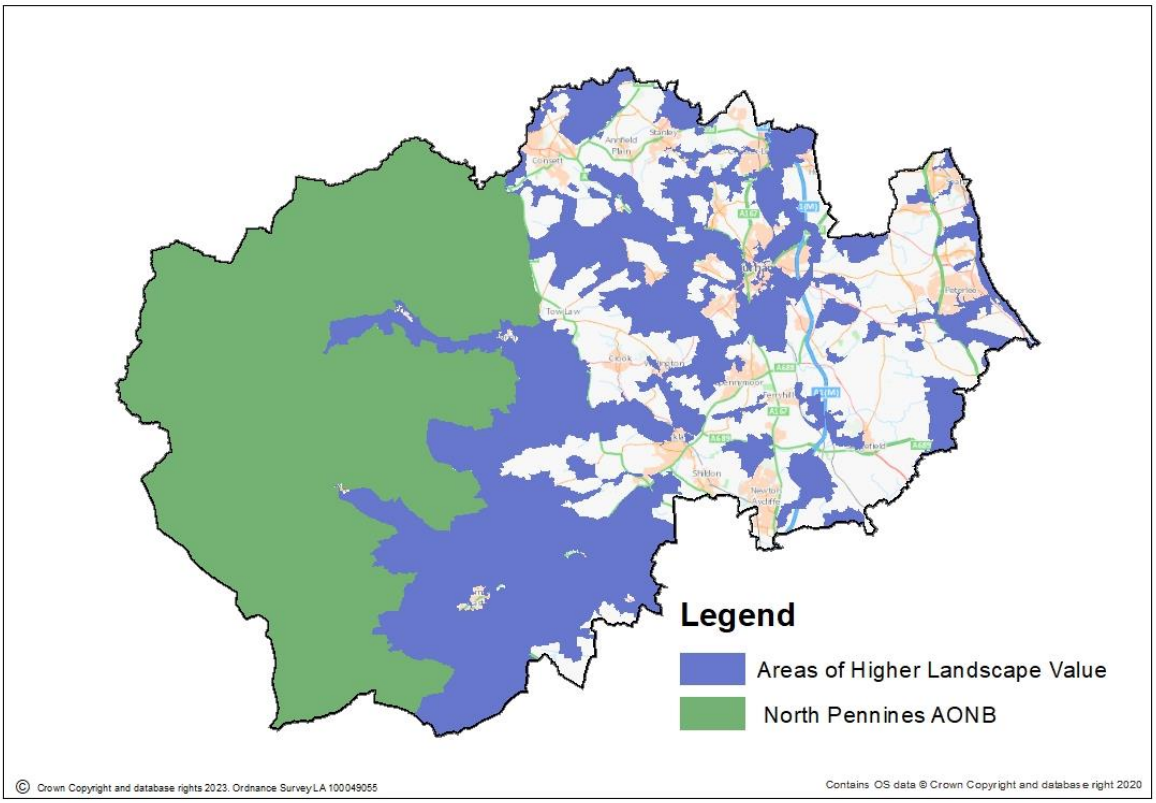

Figure 1. Areas of Higher Landscape Value and North Pennines Area of Outstanding Natural Beauty

3.3.5 Detailed Guidance:

3.3.6 Development proposals should be informed by an understanding of the character and sensitivities of the local landscape. In many cases solar arrays developed to support local business or community facilities will be in urban situations where they may not be out of keeping with the general character of the built-up area. In the countryside solar development can detract from its rural character by introducing tracts of man-made structures, particularly where they are visually prominent. The landscape of countryside on the edge of towns may share some of that susceptibility, particularly in smaller rural gaps between settlements where solar development can lead to a degree of visual coalescence. Medium scale developments can nevertheless often be accommodated without substantial harm provided that they are sensitively located and well designed.

3.3.7 Location

3.3.8 Projects of this scale are often ‘private wire’ developments linked to a specific user and may therefore have limited options in terms of location. Within those constraints, adverse effects can nevertheless often be reduced by:

- Choosing locations that are naturally well screened in public views by existing buildings, topography and vegetation.
- Locating arrays close to existing buildings, farmsteads and settlement edges to avoid a sprawling pattern of development.
- Avoiding elevated or sloping sites that are difficult to screen and sites that require significant ground modelling or levelling.
- Avoiding locations where development would erode smaller gaps between settlements.
- Avoiding sensitive locations such as historic parks and gardens and features of historical interest such as old rigg and furrow, strip lynchets and other earthworks.
- Choosing sites that fit into, or interlock with, existing field and woodland patterns.
- Ensuring that the area of development is in scale with the landscape in which it lies, reflecting the scale of other features such as field patterns and woodlands.
- Avoiding situations where the development would detract from the amenity value of public rights of way.

3.3.9 Layout and design

3.3.10 The layout of medium scale developments is usually relatively simple. Landscape and visual effects can often be reduced through design by:

- Fitting the scheme into the existing landscape framework, preserving landscape features such as hedges, walls and tree lines. A pre-development Tree Survey should be undertaken where necessary to inform design.
- Keeping the layout compact and reflecting the pattern of fields and woodlands in the area.
- Running arrays along rather than across the contours on sloping sites where this is practical having regard to aspect.
- Fitting arrays comfortably into existing fields, avoiding conspicuous long, ragged or staggered edges.
- Minimising earthworks: avoiding the use of screening mounds that can add to the development’s impact.
- Allowing sufficient space around existing hedges, trees and woodland edges to avoid shading, facilitate management and enhance their ecological value.
- Using existing access points and field tracks where possible.

3.3.11 Panels and ancillary elements

- Selecting panels and supports that are as low as is practical to keep them in scale with local field boundaries.
- Using panels with low potential for glint or glare.
- Using low impact and reversible mountings such as pile driven or ground screw anchors.
- Minimising the development of new access tracks and areas of hard surfacing: using reinforced grass or other green solutions and using agricultural or 4WD vehicles to service the facilities.
- Burying cables wherever possible (avoiding damage to trees, hedges, or archaeology) to minimise their impact.
- Housing any ancillary plant and facilities in existing buildings where possible. Where new structures are needed designing them to reflect the local vernacular and locating them close to existing buildings or other features.
- Avoiding the use of security fencing, lighting and taller pole-mounted CCTV where possible. Where fencing is required, using visually light specifications such as deer fencing and mounting CCTV on timber poles of the minimum height required: Setting perimeter fences back from hedge boundaries to reduce their visibility from outside the site in near views.
- Where lighting is necessary providing the minimum required and designing to prevent overspill and glare.

3.3.12 Planting and land management

3.3.13 Landscape and visual effects can often be mitigated to some degree by retention and management of existing field boundaries or trees and by new planting. This can include:

- Where there are trees or hedges on or close to the site commissioning an Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) to ensure that they are adequately protected through the development phase.
- Giving consideration to how the land is managed between panels – for example through grazing - to avoid it looking incongruous in the context of the land around it.
- Considering the potential for mitigation of effects in key views. Managing existing landscape features and establish new features to help screen and assimilate the development into the landscape.
- Ensuring that screening features are in keeping with the local landscape (hedges, walls, tree lines, woodlands). Use species that are native or characteristic of the locality.
- Allowing hedges to grow to a taller managed height, which can achieve screening more rapidly than new planting.
- Taking opportunities to restore existing, relict or lost landscape features or creating new features to leave a beneficial legacy in the long term.

- Having a Management Plan in place that captures landscape and visual objectives alongside other factors such as biodiversity.

3.3.14 Related Application Requirements:

3.3.15 In rural situations a Landscape and Visual Impact Assessment (LVIA) or Landscape and Visual Appraisal (LVA) may be required. The need for this or otherwise should be established with the Planning Officer at an early stage in the process. If an LVIA or LVA is required, it should:

- Follow guidance provided in the Landscape Institute and Institute of Environmental Management and Assessment's 'Guidelines for Landscape and Visual Impact Assessment'.
- Be carried out by a suitably qualified Landscape Architect.
- Have its scope and content (including study area, viewpoints and any visualisations required) agreed with the council's Landscape Officer.

3.3.16 Where there are trees or hedges on or close to the site a Tree Survey, Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) will be required. This should be:

- Carried out in accordance with BS5837.
- Undertaken by a suitably qualified arboriculturist.

3.3.17 These studies should be commissioned at an early stage to inform the location, design and management of the development.

3.4 Biodiversity and Nature Conservation

Proposals will be expected to minimise impacts on biodiversity by retaining and enhancing existing biodiversity assets and features and providing net gain for biodiversity. Where significant harm cannot be avoided, or appropriately mitigated, or as a last resort compensated for, development will not be permitted. – County Durham Plan Policy 41 (Biodiversity and Geodiversity)

Development that has the potential to have an effect on internationally designated sites, either individually or in combination with other plans or projects, will need to be screened in the first instance to determine whether significant effects on the site are likely and, if so, will be subject to an Appropriate Assessment. Development will be refused where it cannot be ascertained, following Appropriate Assessment, that there would be no adverse effects on the integrity of the site, unless the proposal is able to pass the further statutory tests of 'no alternatives' and 'imperative reasons of overriding public interest' as set out in Regulation 64 of the Conservation of Habitats and Species Regulations 2017. – County Durham Plan Policy 42 (Internationally Designated Sites)

All development proposals in, or which are likely to adversely impact upon (either individually or in combination with other developments), any of the following national designations (where not a component of an internationally designated site): Sites of Special Scientific Interest or National Nature Reserves, will only be permitted where the benefits of development in that location clearly outweigh the impacts on the interest features on the site and any wider impacts on the network of sites. All development proposals in, or which are likely to adversely impact upon, any of the following local designations: Local Sites (Geology and Wildlife) and Local Nature Reserves (LNRs) will only be permitted when it can be demonstrated that the benefits of development in that location outweigh the impacts on the local nature conservation interest or scientific interest on the site and any wider impacts on the network of sites. – County Durham Plan Policy 43 (Protected Species and Nationally and Locally Protected Sites)

3.4.1 Durham Context:

3.4.2 County Durham supports a diverse range of biodiversity, including species and habitats of international and national importance. It includes large areas of internationally important habitats such as magnesian limestone and holds populations of declining species such as water vole and red squirrels. The priority habitat and species lists produced by the Durham Biodiversity

Partnership are still valid and now held by the Environmental Records Information Centre (North East) This should be read alongside the national list of priority habitats and species of principal importance in England.

3.4.3 Habitats or features with a special value for biodiversity are often protected under international, national and local legislation. Sites protected by international or national legislation found in the county include Special Areas of Conservation (SAC), Special Protection Areas (SPA), Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR) and Local Nature Reserves (LNR). Interactive maps of their boundaries can be accessed on the Multi Agency Geographic Information for the Countryside (MAGIC) website. A further tier of sites protected through the planning system are known as Local Sites. Local Wildlife Sites are mapped on the council's Local Plan Policies Map.

3.4.4 Although not yet produced, the emerging Local Nature Recovery Strategy (LNRS) will be a key reference point for proposed development. LNRS are strategic plans that will help drive action and investment to help nature and wider nature-based environmental benefits. They will consist of:

- A Statement of Biodiversity Priorities: priorities for biodiversity outcomes, and the actions that need to be undertaken to achieve these outcomes.
- A Local Habitat Map: existing distribution of habitats and areas already important for biodiversity, overlaid by locations considered suitable for delivering the outcomes and actions. Mapping will determine strategic significance to ensure in delivering biodiversity net gains the right habitat is located in the right place.

3.4.5 All development in County Durham will need to be mindful of the LNRS (once adopted) and should aim to deliver against its priorities where appropriate. In the interim, the council has produced a habitat network map based on a number of existing national data layers, with partner and specialist input. This will be used to help determine strategic significance for the purposes of biodiversity net gain.

3.4.6 Detailed Guidance:

3.4.7 The nature of impacts on ecology will depend on the ecological characteristics and features of the site and sensitivity to proposed changes. Solar arrays could have implications for habitat loss, fragmentation and modification and for displacement of species. However, solar arrays also have the potential to deliver significant environmental gains through creating and enhancing habitats.

3.4.8 Design should be informed and influenced by ecological assessments. The use of a consultant ecologist from the earliest stages of the design process will ensure that adverse impacts are mitigated, and biodiversity enhancements are maximised.

3.4.9 Roof mounted solar panels have the potential to impact on roosting bats and breeding birds, the applicant should be aware of the legislation surrounding bats and birds and ideally select locations where impacts can be avoided.

3.4.10 There are potential impacts arising from the installation of solar arrays on a range of ecological receptors, although research on the impacts of solar arrays is in its infancy, developers should be aware of these and aim to mitigate impacts through site selection and design where appropriate.

3.4.11 Research indicates that ground nesting species such as Skylark could be displaced by solar farms[1] and Birdlife Europe[2] suggests that there could be negative impacts from solar arrays on species such as Lapwing and Skylark with reduced opportunities for foraging and breeding. The effects of solar arrays on birds are likely to be species specific and care will be needed when assessing impacts and designing mitigation or compensation.

3.4.12 There is some evidence that mayflies, stoneflies, small fly species, and tabanid flies are attracted away from water, by the horizontally polarised light produced by the panels, to lay eggs on panels, reducing their survival chances[3]. Most solar arrays in the UK use grid-formed panels with anti-reflective films, so the reflection of polarised light is substantially reduced. Using non-polarising white cell borders on the panels will further reduce attractiveness to insects.

3.4.13 Other potential impacts include severance of ecological connectivity due to positioning of road infrastructure. There may also be direct impacts on habitats through construction and security lighting which may impact foraging and commuting bats, especially on vegetated boundaries.

3.4.14 For all proposals, the mitigation hierarchy should be applied where everything is done to first avoid impacts and then minimise impacts on biodiversity, and only as a last resort compensate for losses that cannot be avoided.

3.4.15 The mitigation hierarchy begins with site selection. In terms of ground mounted solar panels intensively managed agricultural land is likely to be of least ecological value and have a greater potential to deliver biodiversity net gains, although the best and most versatile agricultural land should be avoided, as set out in section 4.1, unless it can be demonstrated the benefits of the development outweigh the harm. Ecologically important sites, including SPA (and their associated functionally linked land), SAC, SSSI, NNR and LNR, Local Wildlife Sites and Priority Habitats should generally be avoided. Sites important for protected or priority species should also be avoided where possible.

[1] Montag H, Parker G & Clarkson T. (2016). The effects of solar farms on local biodiversity. A comparative study. Clarkson and Woods & Wychwood Biodiversity.

[2] BirdLife Europe (2011) Meeting Europe's Renewable Energy Targets in Harmony with Nature – Summary Report (eds. Scrase I. and Gove B.). The RSPB, Sandy, UK

[3] Horvath et al (2010). Reducing the Maladaptive Attractiveness of Solar Panels to Polarotactic Insects. Conservation Biology, Vol. 24, No. 6.

3.4.16 Where impacts still exist after avoidance, and minimisation and restoration measures have been taken, the final option is to offset or compensate the losses elsewhere. The mitigation hierarchy applies to both species and habitats.

3.4.17 An example of applying the mitigation hierarchy would be the approach to breeding birds, for example ground nesting species such as Skylark or Curlew. If breeding birds are identified on site, then avoid installing solar panels on those areas used by breeding birds, being aware of species requirements such as sightlines. If this is not possible then designing adequate areas outside the footprint of the array that are suitable and managed for birds would be the next stage in the hierarchy. Where on-site options are not available then an off-site location would be required for compensation works; the area and management that would need to be secured would be dependent on the species and numbers of birds involved.

3.4.18 All major developments and small sites (unless exempt) are now required to achieve a minimum 10% net gain in biodiversity in accordance with the Environment Act (2021). Biodiversity Net Gain (BNG) requirements for Nationally Significant Infrastructure Projects is planned for November 2025. Various options exist to enhance the biodiversity value of a proposed development, and although interventions to enhance biodiversity will be site specific and informed by ecological survey work, the following general guidance may assist in designing ecological enhancements into ground mounted solar developments.

- Creation or enhancement of grassland habitats around the boundary of the site and/or under the solar arrays is a key mechanism for delivering biodiversity net gains on most sites. The greatest biodiversity value will be gained from providing a variety of grassland habitats within the development. The creation of species rich grasslands with a high floristic diversity could be complemented with areas of tussock grassland which would provide opportunities for nesting bumblebees and small mammals.
- Further variety can be incorporated through the inclusion of wild bird seed mixes and pollen and nectar strips.
- Provision of a diverse range of habitats should always be considered and the inclusion of woodland and wetland habitats should not be discounted within solar farms.
- Although the provision of woodland might be counter-intuitive given the shading implications; opportunities to incorporate woodland and scrub habitats especially on northern boundaries should be considered as a mechanism to introduce variety into the scheme.
- Low lying corners of fields can be utilised to create wetland features such as scrapes, ponds or wet grasslands.
- Boundary features should be created or enhanced through gap filling of existing hedgerows and the planting of new hedgerows to join up with existing features, not only to provide a range of habitats but also to

create ecological connectivity. Priority should be given to boundary features that contribute to ecological networks in the wider landscape. Field margins and hedgerows are the main type of boundary feature that should be considered, ditches can also enhance connectivity especially when associated with a margin or buffer strip.

- Security fencing may act to prohibit animal migration and a gap between the base of the fence and the ground may be required to enable movement of badgers and other wildlife across the landscape.
- The inclusion of artificial features such as nest boxes for a range of bird species or bat boxes and bug hotels can be incorporated in the scheme to encourage the greatest diversity of wildlife.

3.4.19 Biodiversity enhancements should be informed by the physical attributes of the site, existing habitats, the surrounding landscape and the results of species surveys and consultation with the local record centre. The nature of habitats delivered on site should be informed by the potential to enhance populations of local BAP or UK Priority Species.

3.4.20 Further guidance on biodiversity delivery within solar developments is available from the BRE National Solar Centre, Solar Energy UK and Renewable Energies Agency.

3.4.21 Related Application Requirements:

3.4.22 A Preliminary Ecological Assessment (PEA) and Baseline Habitat Plan will be required in all cases. The PEA will provide information on the habitats on site, present the results of data searches and using this information will recommend any further surveys required to understand the value of the site and the potential impacts arising from development.

3.4.23 Depending on the location and nature of the proposals further surveys may include breeding and / or wintering bird surveys, bat transect surveys, bat surveys of specific structures or trees. Otter and water vole surveys of riparian habitats might be required and evidence or data indicating the presence of other species e.g., badgers, could necessitate survey for those identified species. The Environmental Records Information Centre (ERIC) for the North East of England should be consulted as part of the ecological assessment. Specialist groups may also need to be contacted depending on the nature of the site and the data held by ERIC. Applicants should be aware that since species are active at different times of the year, some ecology surveys may only be suitable within specific months of the year. Sufficient lead in times need to be incorporated into the project to allow for species and habitat surveys to be completed at an appropriate time of year.

3.4.24 You will need to provide information about how you intend to achieve BNG including details of proposed significant on-site enhancements. For major developments a Defra Metric calculation will be required which provides a quantified net gain assessment. If your development qualifies as a small site, in most cases you can use the simpler small sites metric. These should

be considered alongside a qualitative assessment. For example, the metric will not capture where a development severs ecological connectivity or impacts a locally rare habitat. Priority species and important species assemblages are not accounted for within the metric and specific compensation might be required for any identified important ecological receptors.

3.4.25 A draft Habitat Management and Monitoring Plan (HMMP) is required at application stage. This document should provide sufficient information to determine that the habitat creation and long-term management (30 years) is deliverable for both significant on-site habitats and any off-site habitats created or enhanced. The plan should include appropriate monitoring regimes and review periods. The delivery of the HMMP will be secured through appropriate legal agreement or planning condition.

3.4.26 A draft Proposed Habitats Plan will be required that clearly shows habitat types or linear features being retained, enhanced, and created, and the area or length of each habitat type or linear feature; it should be colour-coded so that each habitat type is easily identifiable. Other proposed biodiversity enhancements (including for priority species) and protected species mitigation areas should also be shown on this plan e.g., bird and bat boxes. This information can be placed within the site layout plan, illustrative masterplan, green infrastructure plan or landscape plans. The information on the plan must align with the information held within the Defra metric.

3.4.27 A Biodiversity Gain Plan will be secured by condition. Development cannot commence until the Biodiversity Gain Plan and accompanying updated metric has been approved.

3.5 Cultural Heritage

Proposals should sustain the significance of designated and non-designated heritage assets, including any contribution made by their setting. - County Durham Plan Policy 44 (Historic Environment).

In determining applications which would affect a known or suspected non-designated heritage asset with an archaeological interest, particular regard will be given to the following: i. ensuring that archaeological features are generally preserved in situ; and j. in cases where the balanced judgement concludes preservation in situ should not be pursued, it will be a requirement that they are appropriately excavated and recorded with the results fully analysed and made publicly available. - County Durham Plan Policy 44 (Historic Environment).

Development which impacts upon the historic route of the Stockton and Darlington Railway (S&DR) of 1825, the Black Boy and Haggerleases branch lines and the Surtees Railway, together with their associated structures, archaeological and physical remains and setting, will be permitted where the proposal: c. does not encroach upon or result in the loss of the original historic route(s), damage the trackbed excepting archaeological or preservation works, or prejudice the significance of the asset - County Durham Plan Policy 46 (Stockton and Darlington Railway)

The Durham Castle and Cathedral World Heritage Site is a designated asset of the highest significance. Development within or affecting the World Heritage Site and its setting will be required to:
a. sustain and enhance the significance of the designated asset;
b. be based on an understanding of the Outstanding Universal Value. of the site, having regard to the adopted World Heritage Site Management Plan and Statement of Outstanding Universal Value; and c. protect and enhance the Outstanding Universal Value, the immediate and wider setting and important views across, out of, and into the site. Development that would result in harm to the Outstanding Universal Value of the World Heritage Site or its setting will not be permitted other than in wholly exceptional circumstances. - County Durham Plan Policy 45 (Durham Castle and Cathedral World Heritage Site)

3.5.1 Durham Context:

3.5.2 County Durham has a wide variety of designated heritage assets which include Durham Castle and Cathedral World Heritage Site of the highest significance, and at time of writing over 3,000 listed buildings, 93 Conservation Areas, 226 Scheduled Monuments, 17 Registered Parks and Gardens, and 1 Registered Battlefield. These are all identified on the council's

Local Plan Policies Map and also recorded on the council's Historic Environment Record. The county also has a significant number and diverse range of non-designated heritage assets. Neighbourhood plans may also identify heritage assets of local value.

3.5.3 Non-designated heritage assets are buildings, monuments, sites, places, areas or landscapes identified by plan-making bodies as having a degree of heritage significance meriting consideration in planning decisions but which do not meet the criteria for designated heritage assets. The council is producing further guidance on our procedure for identifying non-designated heritage assets.

3.5.4 Detailed Guidance:

3.5.5 Heritage assets could potentially be affected by a solar development, either by direct physical change or by a change within the heritage asset's setting and impacting upon people's perception and experience of the heritage asset. But this can be mitigated through site selection and a design process guided by a full understanding of the historic environment. A detailed Heritage Impact Assessment should be undertaken to identify the heritage assets potentially affected by the development proposal, describe their significance including any contribution made by their setting, and assess the potential impacts on that significance and setting. The Heritage Impact Assessment should identify all heritage assets located within, immediately adjacent or in the wider context of the site. The search area for the survey should be agreed with the Design and Conservation Team as part of the development management process. Where there is potential for an adverse impact it will be important to identify any potential mitigation or enhancement measures.

3.5.6 In accordance with the NPPF when considering the impact of a solar development on the significance of a designated heritage asset, great weight will be given to the asset's conservation (and the more important the asset, the greater the weight will be). This is irrespective of whether any potential harm amounts to substantial harm, total loss or less than substantial harm to its significance. Where a proposed development will lead to substantial harm to a designated heritage asset, planning permission will be refused, unless it can be demonstrated that the substantial harm is necessary to achieve substantial public benefits that outweigh that harm. Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal. When considering applications that directly or indirectly affect non-designated heritage assets, consideration will be given to the scale of any harm or loss and the significance of the heritage asset.

Case Studies

Solar panels on the roof of Freeman's Quay Leisure Centre and Clayport Library which are within the inner setting of the World Heritage Site.

3.5.7 Development must seek to conserve and protect the outstanding universal value (OUV) of the WHS through conservation of the components that contribute to its OUV, including the visual drama of the Cathedral and Castle on the peninsula. The setting of the WHS, as set out in the WHS Management Plan, is formed in part by an 'inner bowl' contained by nearby ridges and spurs incised by the meandering River Wear, and a more diffuse 'outer bowl' contained by more distant high ground including the limestone escarpment to the east and south, and higher spurs and ridges to the west. Solar development within the setting of the WHS that would harm its OUV, including important views across, out of, and into the WHS, will not be permitted other than in wholly exceptional circumstances.

3.5.8 Ground mounted solar development has potential to impact on archaeology through ground disturbance from ground levelling, trenching, foundations, and

fencing. Where proposals are likely to affect sites of known importance, sites of significant archaeological potential, or those that become apparent through the development management process, background research followed up by archaeological investigation will be required prior to their determination.

3.5.9 Archaeological desk-based assessments followed by evaluation (geophysical survey with subsequent trial-trenching) will be required. This work should demonstrate the use of appropriately qualified professional expertise. Any identified archaeology should be protected from impacts, for example by exclusion from the area to be subject to ground works. In cases where the balanced judgement concludes preservation in situ should not be pursued, it will be a requirement that archaeology is appropriately excavated and recorded with the results fully analysed and made publicly available.

3.5.10 Related Application Requirements:

3.5.11 All applications affecting heritage assets (designated and non-designated) and their setting must be accompanied by a Heritage Statement (inclusive of Impact Assessment) ideally prepared by a heritage consultant. The Statement should demonstrate an understanding of the asset's significance, identify the extent and contribution of setting, define the impacts of development and where appropriate suggest mitigation or enhancement measures.

3.5.12 Archaeological Assessment and Evaluation will be required for applications affecting any known or suspected archaeological sites. A Written Scheme of Investigation setting out the methodology for such work must be submitted for approval prior to the commencement of any investigations. Applicants are advised to discuss this requirement at an early stage of developing the scheme.

3.5.13 An assessment to evaluate the impact on a historic landscape may also be required, to define historic boundaries, ponds, hedgerows, historic and ancient woodland, and other landscape features which contribute to the significance of a historic landscape.

3.6 Glint and Glare

It will need to be demonstrated that there will be no unacceptable impact, either individually or cumulatively, on amenity. – County Durham Plan Policy 31 (Amenity and Pollution).

Within safeguarding areas, it must be demonstrated proposals would not prejudice the safety of air traffic or air traffic services and would not have an unacceptable adverse impact upon the operation of the Peterlee Drop Zone unless the benefits of the proposed development clearly outweigh the resulting harm. – County Durham Plan Policy 28 (Safeguarded Areas)

3.6.1 Durham Context:

3.6.2 Durham contains several ‘receptors’ which could be sensitive to the impact of glint and glare. These include within the county Fishburn Airfield, Shotton Airfield and Peterlee Parachute Drop Zone which are subject to Safeguarding Areas. The Durham Tees Valley and Newcastle International Airports Safeguarding Area also encompasses part of the county. Safeguarding zones are identified on the Local Plan Policies Map, in addition to Parachute Landing Areas, Overshoots and designated Drop Zones. Other sensitive receptors include the Rail Network, Strategic Road Network, those living and working here and users of the highways and PROW which intersect the county.

3.6.3 Detailed Guidance:

3.6.4 Glint is a momentary flash of bright light typically received by moving receptors or from moving reflectors. Glare is a continuous source of bright light typically received by static receptors or from large reflective surfaces. Solar reflection is sometimes used to refer to both. Glint and glare have the potential to impact on sensitive receptors including residents, users of PROW, aircraft, rail, and road. Glint and glare can be a particular issue if ‘tracking’ panels are proposed which follow the suns movements as these may cause differential impacts depending on the season and time of day.

3.6.5 Panels should be located and designed to avoid glint and glare. It will need to be determined which sensitive receptors are in the surrounding area and the potential for these to be impacted by solar reflections from the development, and the significance of any reflections. Applications should fully consider the reflective capacity of all the materials used including panels, frames and supports. Where necessary, appropriate mitigation measures, such as screening, should be employed to ensure that harmful impacts are avoided and safety is not compromised. If any mitigation measures are required regarding glint and glare impacts on the Strategic Road Network, the applicant must demonstrate that the measures can be safely constructed, and safely maintained in terms of boundary treatment. If landscaping or planting is proposed as mitigation of potential glint and glare effects, National Highways will require appropriate evidence to demonstrate the permanency of the mitigation.

3.6.6 Where relevant airports and rail operators, the Local Highway Authority and National Highways should be engaged at an early stage. The Health and Safety Executive, Durham Tees Valley Airport, Newcastle International Airport and the Secretary of State for Business Innovation and Skills, acting through the Meteorological Office, will be consulted, as appropriate, on planning applications within officially safeguarded areas and their surrounding defined consultation zones. Development proposals which would prejudice the air safety of airports and airfields will not be permitted within safeguarding zones. Where proposals are visible from the Strategic Road Network (SRN), National Highways will be consulted and it will need to be demonstrated safety on the SRN will not be compromised.

3.6.7 Related Application Requirements:

3.6.8 A Glint and Glare Assessment will be required to be prepared by a suitably qualified consultant.

3.7 Residential Amenity

Proposals which will have an unacceptable impact such as through noise and vibration, light pollution, or other sources of pollution, either individually or cumulatively, will not be permitted unless satisfactory mitigation measures can be demonstrated. – County Durham Plan Policy 31 (Amenity and Pollution)

3.7.1 Durham Context:

3.7.2 The county contains areas of tranquillity which are sensitive to light pollution, such as the North Pennines AONB and open countryside. Uses which are sensitive to amenity impacts (referred to as 'sensitive receptors') tend to be in urban areas. These include housing, schools, hospitals, and care homes.

3.7.3 Detailed Guidance:

3.7.4 In the case of solar development impacts from noise, dust and vibrations are predominantly likely to be during construction, although associated transformers, battery storage systems and inverters can emit noise when operational. Medium scale solar installations are more likely to be in proximity to sensitive receptors, as they are generally associate with an existing business or community use.

3.7.5 Proposals which have the potential to impact on the general amenity and health of people nearby will need to demonstrate that there will be no unacceptable impacts. Any noise emitting equipment should be located away from noise sensitive receptors, and mitigation measures such as acoustic enclosures may be required.

3.7.6 Dust monitoring may be needed where dust generating activities are to be carried out close to sensitive receptors. This is defined as a sensitive receptor within 100m of the dust generating activity. The assessment of the impact of dust pollution during construction will need to consider the impact on air quality from emissions of PM10 (Particulate Matter below 10 microns) and PM2.5 (Particulate Matter below 2.5 microns) and the potential for visible dust emissions to give rise to unacceptable amenity impacts or to a statutory nuisance to neighbouring sensitive receptors. Measures will need to be put in place to prevent mud and other materials migrating onto the highway.

3.7.7 Where lighting is required, it will need to be demonstrated that the lighting proposed is the minimum necessary for functional or security purposes. Particular attention will be paid to areas where tranquillity and dark skies are

valued and may also be sensitive to light pollution, such as the North Pennines AONB and open countryside.

3.7.8 Related Application Requirements:

3.7.9 A Noise Assessment may be required where proposals raise issues of potential noise disturbance and should cover the construction, operation, and decommissioning phases of the proposal to identify any potential impacts and necessary mitigation measures.

3.7.10 A Lighting Assessment will be required for developments which would involve the provision of significant external lighting (e.g., floodlights or security lighting) that may have an adverse impact on residential amenity, the character of the open countryside or a heritage asset. The assessment should assess the effects on: visual amenity, local character and distinctiveness, neighbouring amenity, heritage assets if present, nature conservation and how those effects will be mitigated.

3.8 Recreational Amenity and Public Rights of Way

Development will be expected to maintain and protect, and where appropriate improve, the county's green infrastructure network. Development proposals should incorporate appropriate Green Infrastructure that is integrated into the wider network, which maintains and improves biodiversity, landscape character, increases opportunities for healthy living and contributes to healthy ecosystems and climate change objectives.

Development proposals will not be permitted that would result in the loss of open space or harm to green infrastructure assets unless the benefits of the development clearly outweigh that loss or harm and an assessment has been undertaken which has clearly shown the open space or land to be surplus to requirements.

Development will be expected to maintain or improve the permeability of the built environment and access to the countryside for pedestrians, cyclists and horse riders. Proposals that would result in the loss of, or deterioration in the quality of, existing Public Rights of Way (PROWs) will not be permitted unless equivalent alternative provision of a suitable standard is made. Where diversions are required, new routes should be direct, convenient and attractive, and must not have a detrimental impact on environmental or heritage assets. – Durham County Plan Policy 26 (Green Infrastructure)

3.8.1 Durham Context

3.8.2 The county benefits from a Green Infrastructure network which fulfils several important functions including recreation and sport and supports both physical and mental health. As well as public open space, the network includes wildlife

sites, river corridors, coastlines, mountains, moorland, woodland and agricultural land and is integral to the health and quality of life of sustainable communities. It contains an extensive network of trails and paths which connect the county's many towns and villages. PROW can be categorised as: public footpath (walkers only), public bridleway (walker, horse riders and cyclists only), restricted byway (walker, horse riders, cyclists and non-motor vehicles) and public byway (walkers, horse riders, cyclists and all other vehicles). All recorded PROW are mapped on the Definitive Public Rights of Way Map. Details of current applications to record additional paths (mainly bridleways) on the map can be found on the PROW webpage. PROW are one element of the wider access network, which also includes railway paths, permissive paths, promoted routes and cycle routes.

3.8.3 Detailed Guidance:

3.8.4 The council has produced a Strategic Green Infrastructure Framework which sets out the principles and recommendations for Green Infrastructure in the county, and the conservation and enhancement of the existing network. This should help inform the location and design of any proposals. The council is also producing a Rights of Way Improvement Plan and proposals should consider opportunities to contribute to its objectives and associated policies.

3.8.5 The access network, including PROW, is to retain its recreational amenity and character and be integrated as part of the proposal. In the first instance applicants should identify all recorded and proposed PROW and consider evidence on the ground of established routes within and in the vicinity of the site. Where there are potential impacts on these from the development early engagement with the Access and Rights of Way Team will be needed.

3.8.6 The area to be retained will be dependent on the character of the PROW. For example, footpaths might only be 1.8m wide, whilst bridleways can be much wider. Additional planting may be needed to provide screening and protect users. In such cases, a long-term maintenance strategy and appropriate buffer will be required to ensure any planting does not encroach onto the PROW. Proposals are encouraged to consider how they can enhance the existing PROW and wider accessibility network. Measures should also be put in place to protect users during construction. It may be that temporary diversions are needed during construction for health and safety reasons. In which case an application will need to be made to the council for a temporary road closure a minimum of 8 weeks in advance of works starting.

3.8.7 In exceptional circumstances a permanent diversion proposal may be agreed with the Access and Rights of Way Team. In these cases, it must be demonstrated the new route is of at least equivalent quality, direct, convenient, and attractive and must not have a detrimental impact on environmental or heritage assets. It should also be noted, whilst the Access and Rights of Way Team might accept an application to divert a PROW, any such proposal would still have to be subject to a statutory consultation process with the potential for objections and determination at Public Inquiry, entirely separate to the planning process.

3.8.8 Proposals should look to protect the recreational value of open space, sports and recreational land including playing fields. Sport England will be consulted on any proposals impacting playing fields. They have produced playing fields policy and guidance which sets out exceptions to the presumption against development on playing fields. Of relevance to solar panels is exception 3, land incapable of forming part of a playing pitch which does not:

- reduce the size of any playing pitch;
- result in the inability to use any playing pitch (including the maintenance of adequate safety margins and run-off areas);
- reduce the sporting capacity of the playing field to accommodate playing pitches or the capability to rotate or reposition playing pitches to maintain their quality;
- result in the loss of other sporting provision or ancillary facilities on the site; or
- prejudice the use of any remaining areas of playing field on the site.

3.8.9 Related Application Requirements:

3.8.10 Any impacts on PROW should be addressed in the Design and Access Statement.

3.8.11 Where required, the Construction Management Plan will need to address how users will be protected during construction.

3.9 Flooding and Drainage

Development will not be permitted unless it can be proven through an FRA that the development, including the access, will be safe, without increasing or exacerbating flood risk elsewhere, any residual risk can be safely managed and where possible will reduce flood risk overall. There should be no net increase in surface water runoff for the lifetime of the development. Where greenfield sites are to be developed, the runoff rates must not exceed and where possible should reduce the existing greenfield runoff. – County Durham Plan Policy 35 (Water Management)

3.9.1 Durham Context:

3.9.2 In County Durham flood risk is mainly fluvial, from rivers and watercourses, although we are seeing increasing events of surface and ground water flooding due to climate change and development pressure. River flooding within the county is primarily due to the overtopping of the River Wear and its tributaries in towns and villages along its length. The county also has a coastal frontage which extends from Seaham in the north to Crimdon Park in the south. There are also several water storage reservoirs in the county. Whilst localised surface water flooding is more common in developed areas,

incidents have occurred in rural areas. The Environment Agency provides a map of flood zones.

3.9.3 Detailed Guidance:

3.9.4 It will need to be demonstrated that the solar development will be safe from all forms of flooding for its lifetime, taking climate change into account. All solar development (solar farms and infrastructure for electricity generation) is defined as essential infrastructure in the NPPF. Where ground mounted panels are proposed in flood zone 2 and 3 the sequential test will need to be passed. It will need to be demonstrated that it is not possible to locate the solar development in areas of lower flood risk. In flood zone 3 the exceptions test will also need to be passed. It will need to be demonstrated that the proposal will deliver wider sustainability benefits to the community and be safe for its lifetime, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. In addition, in flood zone 3 solar development must be constructed to remain operational and safe in times of flood, and in zone 3b also result in no net loss of floodplain storage and not impede water flows. An Environment Agency consent may be required for works adjacent a main river.

3.9.5 Ground mounted solar panels have the potential to impact on surface water flow through construction impacts and to solar arrays concentrating surface water flow from rainfall. As a result, a greater volume of surface water could potentially enter watercourses, or flow to adjacent areas at a greater rate than would otherwise occur in greenfield conditions. Whilst Sustainable Urban Drainage (SUDs) details are only required for major developments, applicants installing ground mounted solar panels are encouraged to utilise localise Sustainable Drainage Systems and consider guidance in section 4.9 Flooding and Drainage.

3.9.6 Related Application Requirements:

3.9.7 A Flood Risk Assessment (FRA) is required where ground mounted solar panels are:

- within Flood Zone 2 or 3; or
- of 1ha or more and in Flood Zone 1.

3.9.8 The FRA should review all existing flood risks and identify any necessary mitigation measures during the construction, operational and decommissioning phases. The lifetime of the development should be made explicit to ensure that mitigation measures use the appropriate climate change allowance for storage calculations for attenuation features. In addition, for developments in Flood Zone 2 or 3 a sequential test should be carried out and form part of the FRA.

3.10 Site Restoration

Developments will need to include a satisfactory scheme to restore the site to a quality of at least its original condition once operations have ceased. – County Durham Plan Policy 33 (Renewable and Low Carbon Energy)

3.10.1 Detailed Guidance:

3.10.2 Restoration means that all development, including ancillary infrastructure, footings and access tracks should be removed from the site and any soils and vegetation restored, to ensure the land is as a minimum returned to the condition it was in before the development. Where appropriate a planning condition will be attached requiring the timely restoration of land to its previous use at the end of the operational life of the solar panels.

3.10.3 Related Application Requirements:

3.10.4 Details for decommissioning and restoration should be outlined in the planning application as appropriate.

4.0 Large scale: commercial solar farms

4.1 Introduction

4.1.1 Guidance in this section is targeted at the installation of solar farms. A solar farm is a large scale PV power system which is connected to the national grid. These are generally commercial enterprises although there are some examples of community ownership models. For operational reasons solar farms need to be in proximity to a substation with capacity. Northern Power Grid generation availability heat map provides an indication of substation capacity, although this is very much a snapshot in time. Whilst appreciating this is a key constraint on where solar farms can be located, this SPD sets out key planning considerations to help direct solar farms to the most appropriate locations.

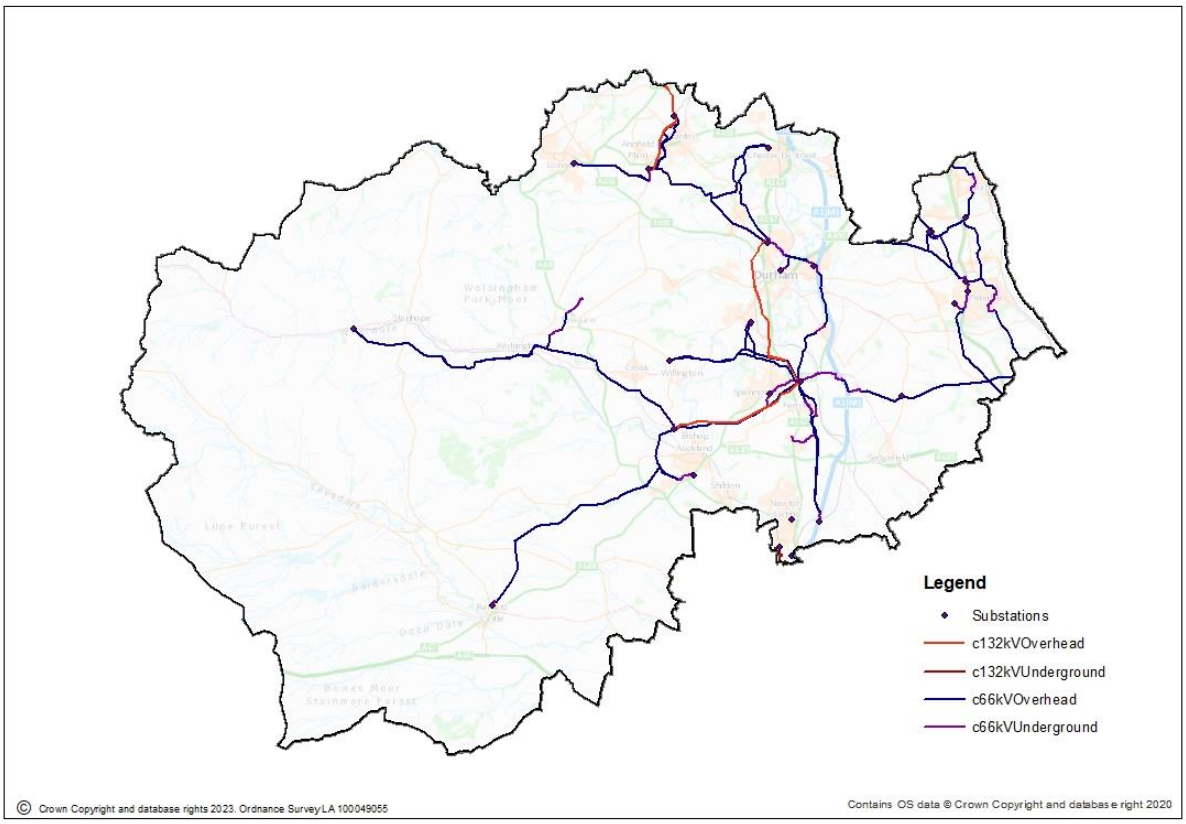

Figure 2. Northern Power Grid Infrastructure in County Durham

4.2 Agricultural Land

Development of the best and most versatile agricultural land, will be permitted where it is demonstrated that the benefits of the development outweigh the harm, taking into account economic and other benefits. - County Durham Plan Policy 14 (Best and Most Versatile Agricultural Land and Soil Resources).

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. – NPPF (Section 15 Conserving and Enhancing the Natural Environment)

4.2.1 Durham Context:

4.2.2 Agricultural Land is classified as Grade 1 to 5, with 1 to 3a being the best and most versatile (BMV) agricultural land. Apart from urban areas and the North Pennines AONB, the county is predominantly classified as Grade 3 as identified on Natural England's provisional Agricultural Land Classification map for the region.

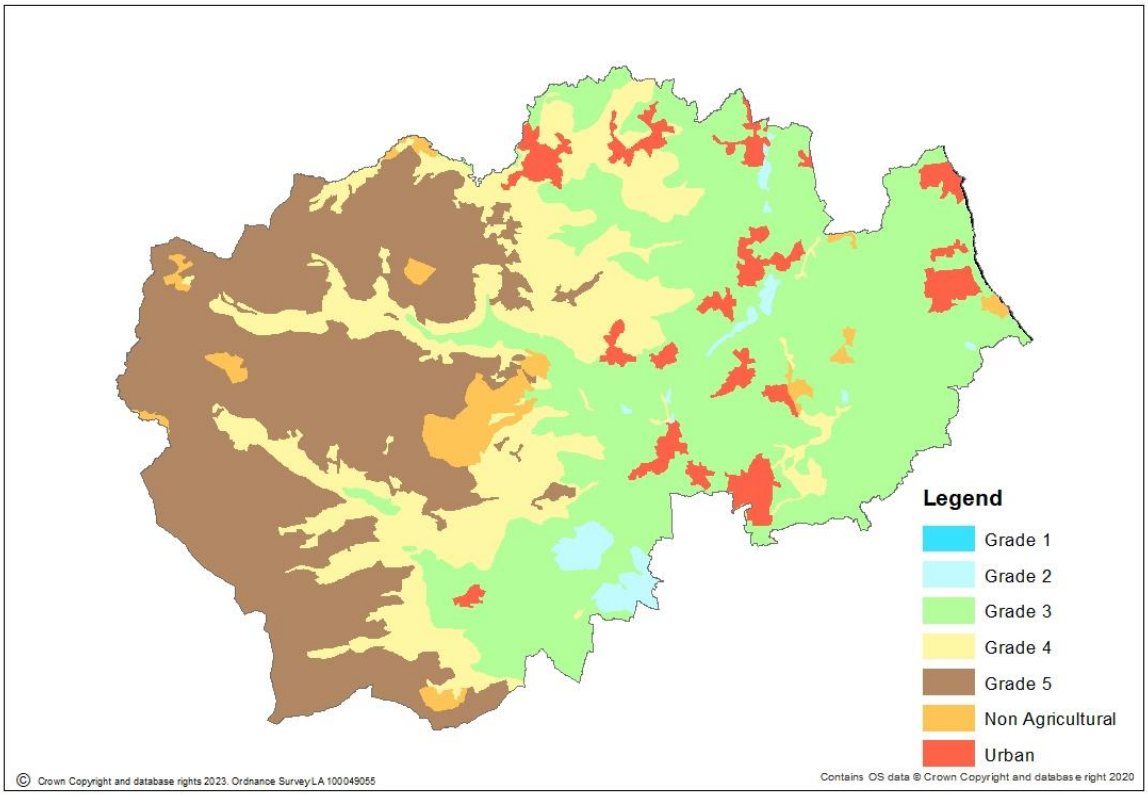

Figure 3. Provisional Agricultural Land Classification in County Durham

4.2.3 Detailed Guidance:

4.2.4 Planning Practice Guidance states where a proposal for a solar farm involves greenfield land, consideration should be given to whether 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 land. In the first instance solar development should be directed to previously developed land, which is not in agricultural use and has a low environmental value, followed by agricultural land of Grades 3b, 4 or 5.

4.2.5 Natural England's Agricultural Land Classification Map is provisional and does not subdivide Grade 3 land. An Agricultural Land Classification Statement will be needed to confirm the grade of agricultural land, where relevant. The survey will need to be carried out by suitably qualified independent practitioners in accordance with up-to-date industry best practice.

4.2.6 Solar farms can help generate an income to support the continued viability of a farm business and allow the agricultural function to continue. In accordance with Planning Practice Guidance consideration will be given to if the proposal allows for continued agricultural use, where applicable. In particular, the extent to which the design of the solar farm will allow the farm to continue to function as an agricultural unit with the development in situ. Livestock grazing can be a low cost means of managing grassland as well as increasing its conservation value. Sheep are the usual choice for solar farms, being small enough to pass beneath the rows of panels. There are examples of solar panels combined with cattle grazing, but in these cases the height of panels needs to be substantial. There is also growing research and examples of 'agrivoltaic arrays' where crops are grown between or beneath solar panels. This requires careful consideration of the crops, location and climate.

4.2.7 The council will monitor the cumulative impact of large scale solar developments on the supply of agricultural land across the county.

4.2.8 Soil is a fundamental and finite resource that fulfils many important functions and ecosystem services. Where soil stripping is required, topsoil and subsoil should be stripped, stored, and replaced separately to minimise soil damage and to provide optimal conditions for site restoration. Bringing alien soil material onto the development site should be avoided.

4.2.9 In all cases any loss of agricultural land should be on a temporary basis after which sites should be restored to agricultural use in accordance with section 4.10 Site Restoration.

4.2.10 Related Application Requirements:

4.2.11 In the case of non-agricultural land, no further information is required in this regard. For land of 1ha or more that is currently or last in use for agriculture an Agricultural Land Classification Statement will be required setting out the

agricultural land classification. Where proposals are on BMV agricultural land this should also address:

- Whether 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 land; and
- If the proposed development site makes up part of an existing farm, provide information on the ability of this farm to continue to function as an agricultural unit with the development in situ.

4.2.12 A Soil Resource Management Strategy will be required for any development on a site of 1ha or more on previously undeveloped land. To include the methodology for soil stripping, storage, and replacement.

4.3 Landscape and Townscape

Proposals should contribute positively to an area's character, identity, heritage significance, townscape and landscape features, helping to create and reinforce locally distinctive and sustainable communities. - County Durham Plan Policy 29 (Sustainable Design)

Any proposal should not cause unacceptable harm to the character, quality, or distinctiveness of the landscape, or to important features or views. Proposals will be expected to incorporate appropriate measures to mitigate adverse landscape and visual effects. Development affecting Areas of Higher Landscape Value will only be permitted where it conserves, and where appropriate enhances, the special qualities of the landscape, unless the benefits of development in that location clearly outweigh the harm. – County Durham Plan Policy 39 (Landscape)

Great weight will be given to conserving the landscape and scenic beauty of the North Pennines Area of Outstanding Natural Beauty (AONB). Any development should be designed and managed to the highest environmental standards and have regard to the conservation priorities and desired outcomes of the North Pennines AONB Management Plan and to the guidance given in the North Pennines AONB Planning Guidelines, the North Pennines AONB Building Design Guide and the North Pennines AONB Moorland Tracks and Access Roads Planning Guidance Note as material considerations. - County Durham Plan Policy 38 (North Pennines AONB)

4.3.1 Durham Context

4.3.2 The Durham Landscape is one of enormous contrast and diversity. It includes nationally important landscapes including the North Pennines National Landscape (still referred to as Area of Outstanding Natural Beauty (AONB) for planning purposes) and registered Parks and Gardens of Special Historic Interest. It includes locally important landscapes identified as Areas of Higher Landscape Value (AHLV) in the CDP and sites identified on the County

Durham Local List of Historic Parks, Gardens and Designed Landscapes. Parts of the Durham Coast are also identified as heritage coast. Neighbourhood plans may also identify locally valued landscapes, local green spaces and locally important views.

4.3.3 Further information on the landscape of the county can be found on the Durham Landscape website.

- The County Durham Landscape Character Assessment (2008) provides detailed information about the character of the county's landscape from the strategic to the local level.
- The County Durham Landscape Strategy (2008) is the council's adopted strategy for the landscape. It analyses the issues affecting the landscape and sets out objectives and priorities for conservation and improvement specific to each character area.
- The County Durham Landscape Guidelines cover a range of topics including trees, woodlands and forestry, hedges and grasslands and provide development and land management guidelines for individual landscape types.

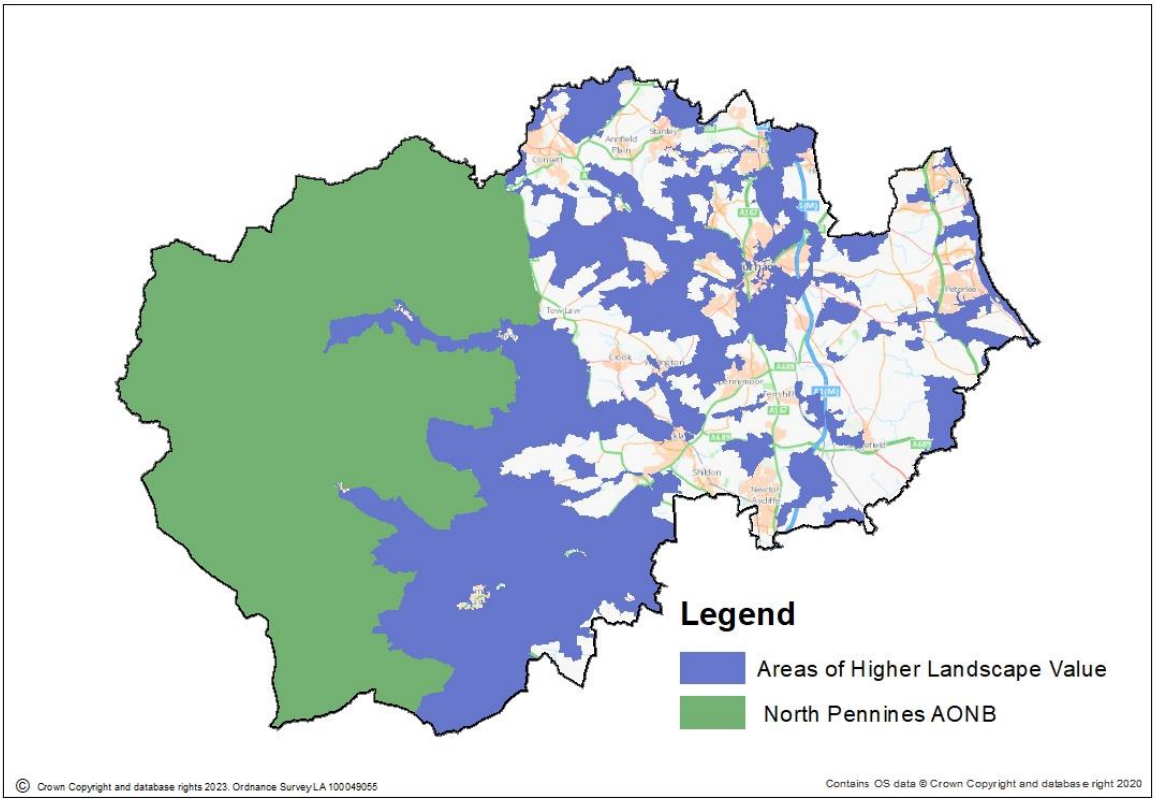

Figure 4. Areas of Higher Landscape Value and North Pennines Area of Outstanding Natural Beauty

4.3.4 Detailed Guidance:

4.3.5 Development proposals should be informed by an understanding of the character and sensitivities of the local landscape. Large scale solar farms are generally developed in the countryside where solar arrays can detract from its

rural character by introducing large tracts of man-made structures, and particularly where they are visually prominent. The countryside around towns can share that susceptibility, particularly in smaller rural gaps between settlements where solar development can lead to a degree of visual coalescence.

4.3.6 Large scale development can be difficult to accommodate in rural landscapes without locally significant effects on landscape character. While some impacts of this kind might need to be accommodated as part of the transformation of our energy supply infrastructure in the context of the climate emergency, they can nevertheless be reduced by careful site selection and design.

4.3.7 The location of larger scale development is often heavily influenced by grid connectivity and capacity which will not always coincide with landscapes of low sensitivity. The need for locations well-served by the grid may also lead to multiple developments coming forward in those areas, with potential cumulative effects on the character of the local landscape.

4.3.8 Landscape change is not always harmful and the sensitivity of landscapes to the effects of the kinds of change associated with larger scale solar development varies. Landscape sensitivity in the context of spatial planning is a term applied to landscape character and the visual environment which combines judgements about their susceptibility to a specific type of development and their value.

4.3.9 Table 2 shows landscape attributes that are broad indicators of lower and higher susceptibility to the effects of solar development on landscape character.

Indicators or lower susceptibility	**Indicators of higher susceptibility**
Flat, gently rolling or gently undulating terrain	Strongly undulating or rolling terrain. Very steep or rugged terrain
Large scale field and woodland patterns	Small scale patterns of enclosure. Open land dominated by semi-natural land cover
Complex and varied landcover without unity or rhythm; marked seasonal changes in colour and pattern.	Simple or consistent landcover; modest seasonal changes in landcover.
Landscapes heavily enclosed by hedges and tree/woodland cover	Open landscapes with little or no enclosure provided by hedges and tree/woodland cover.
Landscapes experienced in shallow and short or interrupted views. No or very limited intervisibility with other areas.	Landscapes experienced in deep open panoramic views, with prominent or distinctive skylines and/or important landmark features
Landscapes dominated by urban and industrial development	Landscapes with little built development

Landscapes with no features of historical interest and little time-depth.	Landscapes containing substantial areas / features of historical interest and /or a strong sense of time depth
Unattractive land dominated by detractive elements	Landscapes with many positive scenic attributes and few detractors
Landscapes made up of generic features. Disturbed or degraded landscapes.	Less common / rare landscapes or landscapes containing uncommon features, strongly representative of their type and/or in good condition.
Landscapes dominated by human activity.	Landscapes with a strong sense of wildness or naturalness. Very little human activity

Table 2. Landscape susceptibility

4.3.10 The County Durham Landscape Value Assessment (2019) provides information on landscape value across all of the county's landscapes. The boundaries of the AONB, Registered Parks and Gardens, and AHLV can be found on the Local Plan Policies Map. Background information on AHLV can be found in the County Durham Plan Local Landscape Designations Review. These can be found on the council's website.

4.3.11 The council will produce more detailed analysis of landscape sensitivity.

4.3.12 Location and siting

4.3.13 The location and siting of development can have a strong influence on its landscape and visual effects. These can be reduced by:

- Selecting locations in landscapes that have a lower susceptibility or sensitivity to solar development.
- Selecting locations that are naturally well screened in public views by existing topography and vegetation or are capable of being screened with new planting within a relatively short timescale.
- Avoiding elevated or sloping sites that are difficult to screen.
- Avoiding locations where development would erode small or important gaps between settlements.
- Avoiding sensitive locations such as historic parks and gardens and features of historical interest such as old field systems, rigg and furrow, strip lynchets and other earthworks.
- Avoiding sites where panels could dominate the user's experience of the public rights of way network.
- Avoiding sites that figure in important views or the settings of sensitive heritage assets.
- Considering how the scheme fits with other operational and consented schemes in the area to minimise cumulative effects.

4.3.14 Layout and design

4.3.15 Layout and design need to be informed by Landscape and Visual Impact Assessment (LVIA). Landscape and visual effects can be reduced by:

- Fitting the scheme into the existing landscape framework, preserving landscape features such as hedges, walls, woodlands and tree lines, watercourses and wetlands.
- Avoiding sensitive features such as old rigg and furrow and strip lynchets:
- Keeping the layout compact or interlocking with existing field and woodland patterns.
- Avoiding detached or scattered parcels unless doing so would meet specific design objectives such as reducing impacts.
- Running arrays along rather than across the contours on sloping sites where that is practical having regard to aspect.
- Fitting arrays comfortably into existing fields, avoiding conspicuous long, ragged or staggered edges.
- Allowing sufficient space around existing hedges, trees and woodland edges to avoid shading, facilitate management and enhance their ecological value.
- Using existing access points and field tracks where possible.
- Where the site is to be managed by grazing considering this in the layout having regard to the supervision and movement of livestock.

4.3.16 Panels and ancillary elements

- Selecting panels and supports that are as low as practical to keep them in scale with local field boundaries.
- Using panels with low potential for glint or glare.
- Using low impact and reversible mountings such as pile driven or ground screw anchors.
- Minimising the development of new surfaced access tracks and other areas of hard surfacing: using reinforced grass or other green solutions and using agricultural or 4WD vehicles to service the facilities.
- Avoiding urban detailing at the site access in rural areas: kerbs, signage etc.
- Burying cables wherever possible (avoiding damage to trees, hedges, or archaeology) to minimise their impact.
- Housing ancillary plant and facilities in existing buildings where possible. Where new structures are needed, designing them to reflect the local vernacular and locating them close to existing buildings or other features.
- For larger battery storage arrays and inverters choosing well screened locations and using visually recessive colours for battery modules.
- Where security fencing is required, using visually light features such as deer fencing: Setting perimeter fences back from hedged boundaries to reduce their visibility from outside the site where there are close views.
- Where any operational lighting is necessary, providing the minimum required and designing to prevent overspill and glare.
- Avoiding the use of tall CCTV poles and masts: mounting CCTV on timber poles of the minimum height required.

4.3.17 Planting and land management

4.3.18 Landscape and visual effects can often be mitigated to some degree by retention and management of existing features and new planting – either to control visibility or to enhance the landscape infrastructure in the long term to offset effects during the operations period. This can include:

- Where there are trees or hedges within or around the site commissioning an Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) to ensure that they are adequately protected through the development phase.
- Considering the potential for mitigation of effects in key views. Managing existing landscape features and establishing new features to help screen and assimilate it into the landscape.
- Ensuring that screening features are in keeping with the local landscape (hedges, walls, tree lines, woodlands).
- Using species that are native to, or characteristic of, the locality.
- Allowing hedges to grow to a taller managed height to achieve screening objectives more rapidly than new planting and to avoid them being obscured by panel arrays in wider views.
- Taking opportunities to restore existing, relict or lost landscape features and create new features to leave a beneficial legacy in the long term.
- Looking outside of the development boundary, and particularly within the wider land-holding, for opportunities to mitigate impacts and introduce compensatory enhancement.
- Having a management plan in place for the lifetime of the development that captures landscape and visual objectives alongside other factors such as biodiversity.

4.3.19 Related Application Requirements:

4.3.20 For large scale development a Landscape and Visual Impact Assessment (LVIA) will typically be required. This should be carried out in accordance with the Guidelines for Landscape and Visual Impact Assessment produced by the Landscape Institute and the Institute of Environmental Management and Assessment (3rd Edition 2013) and undertaken by a suitably qualified person.

4.3.21 The LVIA should have regard to the following documents, electronic copies of which can be obtained from the Landscape and Arboriculture section:

- County Durham Landscape Character Assessment (2008)
- County Durham Landscape Strategy (2008)
- County Durham Landscape Guidelines
- County Durham Landscape Value Assessment (2019)

4.3.22 And where appropriate:

- County Durham Plan Local Landscape Designations Review (2019)

- The North Pennines AONB Planning Guidelines and Building Design Guidelines
- Neighbourhood Plans

4.3.23 The study area for the LVIA and the location of representative and/or important viewpoints used in the study should be agreed with the council's Landscape Officer.

4.3.24 Photographs and visualisations included as part of the analysis of views should conform to the standards set out in Visual Representation of Development Proposals (Landscape Institute Technical Guidance note 06/19).

4.3.25 Where there are trees or hedges on or close to the site a Tree Survey, Arboricultural Impact Assessment (AIA) and Arboricultural Method Statement (AMS) will be required. These should be carried out in accordance with BS5837: 2012 and undertaken by a suitably qualified arboriculturist.

4.3.26 The LVIA and Arboricultural studies should be commissioned at an early stage to inform the location, design and management of the development.

4.4 Biodiversity and Nature Conservation

Please refer to guidance in section 3.4.

4.5 Cultural Heritage

Please refer to guidance in section 3.5.

4.6 Glint and Glare

Please refer to guidance in section 3.6.

4.7 Residential Amenity

Proposals which will have an unacceptable impact such as through noise and vibration, light pollution, or other sources of pollution, either individually or cumulatively, will not be permitted unless satisfactory mitigation measures can be demonstrated. – County Durham Plan Policy 31 (Amenity and Pollution)

4.7.1 Durham Context:

4.7.2 The county contains areas of tranquillity which are sensitive to light pollution, such as the North Pennines AONB and open countryside. Uses which are sensitive to amenity impacts (referred to as 'sensitive receptors') tend to be in urban areas. These include housing, schools, hospitals, and care homes.

4.7.3 Detailed Guidance:

4.7.4 In the case of solar development impacts from noise, dust and vibrations are predominantly likely to be during construction, although associated transformers, battery storage systems and inverters can emit noise when operational.

4.7.5 Proposals which have the potential to impact on the general amenity and health of people nearby will need to demonstrate that there will be no unacceptable impacts. Any noise emitting equipment should be located away from noise sensitive receptors, and mitigation measures such as acoustic enclosures may be required.

4.7.6 Dust monitoring may be needed where dust generating activities are to be carried out close to sensitive receptors. This is defined as a sensitive receptor within 100m of the dust generating activity. The assessment of the impact of dust pollution during construction will need to consider the impact on air quality from emissions of PM10 (Particulate Matter below 10 microns) and PM2.5 (Particulate Matter below 2.5 microns) and the potential for visible dust emissions to give rise to unacceptable amenity impacts or to a statutory nuisance to neighbouring sensitive receptors. Measures will need to be put in place to prevent mud and other materials migrating onto the highway.

4.7.7 Where lighting is required, it will need to be demonstrated that the lighting proposed is the minimum necessary for functional or security purposes. Particular attention will be paid to areas where tranquillity and dark skies are valued and may also be sensitive to light pollution, such as the North Pennines AONB and open countryside.

4.7.8 Related Application Requirements:

4.7.9 A Construction Management Plan will be required for all major developments with existing sensitive receptors within 100m of the site boundary. It should include measures to control and monitor emission of dust and dirt, noise, and vibration.

4.7.10 A Noise Assessment may be required where proposals raise issues of potential noise disturbance and should cover the construction, operation, and decommissioning phases of the proposal to identify any potential impacts and necessary mitigation measures.

4.7.11 A Lighting Assessment will be required for developments which would involve the provision of significant external lighting (e.g., floodlights or security lighting) that may have an adverse impact on residential amenity, the character of the open countryside or a heritage asset. The assessment should assess the effects on: visual amenity, local character and distinctiveness, neighbouring amenity, heritage assets if present, nature conservation and how those effects will be mitigated.

4.8 Recreational Amenity and Public Rights of Way

Please refer to guidance in section 3.8.

4.9 Flooding and Drainage

Development will not be permitted unless it can be proven through an FRA that the development, including the access, will be safe, without increasing or exacerbating flood risk elsewhere, any residual risk can be safely managed and where possible will reduce flood risk overall. There should be no net increase in surface water runoff for the lifetime of the development. Where greenfield sites are to be developed, the runoff rates must not exceed and where possible should reduce the existing greenfield runoff. – County Durham Plan Policy 35 (Water Management)

4.9.1 Durham Context:

4.9.2 In County Durham flood risk is mainly fluvial, from rivers and watercourses, although we are seeing increasing events of surface and ground water flooding due to climate change and development pressure. River flooding within the county is primarily due to the overtopping of the River Wear and its tributaries in towns and villages along its length. The county also has a coastal frontage which extends from Seaham in the north to Crimdon Park in the south. There are also several water storage reservoirs in the county. Whilst localised surface water flooding is more common in developed areas, incidents have occurred in rural areas. The Environment Agency provides a map of flood zones.

4.9.3 Detailed Guidance:

4.9.4 It will need to be demonstrated that the solar development will be safe from all forms of flooding for its lifetime, taking climate change into account. All solar development (solar farms and infrastructure for electricity generation) is defined as essential infrastructure in the NPPF. Where proposed in flood zone 2 and 3 the sequential test will need to be passed. It will need to be demonstrated that it is not possible to locate the solar development in areas of lower flood risk. In flood zone 3 the exceptions test will also need to be passed. It will need to be demonstrated that the proposal will deliver wider sustainability benefits to the community and be safe for its lifetime, without increasing flood risk elsewhere, and, where possible, will reduce flood risk overall. In addition, in flood zone 3 solar development must be constructed to remain operational and safe in times of flood, and in zone 3b also result in no net loss of floodplain storage and not impede water flows. An Environment Agency consent may be required for works adjacent to a main river.

4.9.5 Solar farms have the potential to impact on surface water flow through construction impacts and solar arrays concentrating surface water flow from rainfall. As a result, a greater volume of surface water could potentially enter

watercourses, or flow to adjacent areas at a greater rate than would otherwise occur in greenfield conditions.

4.9.6 The site's soils and their permeability will be a major consideration, as siting on impermeable clay soils will lead to runoff channel forming, erosion and potential silting of watercourses. In contrast soils and subsoils are often thin and highly permeable when overlying Magnesian Limestone which supports the protected/designated Magnesian Limestone grasslands.

4.9.7 The permeability of material used for the access tracks should be taken into consideration. A greater volume of surface water could potentially enter watercourses, or flow to adjacent areas at a greater rate than would otherwise occur in greenfield conditions due to earthworks carried out during construction. This concentration of water flow can create rills, or channelised flows, which can compact and erode the soil, and lead to the potential silting of watercourses and possible flooding.

4.9.8 Changing baseline drainage patterns can alter subsurface flow paths such that water is preferentially moved from one receptor dependent on ground water to another (especially in a fractured aquifer like the Magnesian Limestone). Cumulative impacts should be considered and the potential to lower water levels, quantity in private water supplies, or raise groundwater levels and increase flood extents and duration.

4.9.9 Solar panels are often installed in agricultural land with potential pre-existing contaminants in the ground and groundwater. Altering the pre-development drainage could mobilise these (nitrates, herbicides, pesticides, landfill contaminants) potentially resulting in a pollution and deterioration in water quality at a receptor such as a watercourse, wetland, pond, private or public water supply borehole.

4.9.10 When considering the impact on flood risk and the future drainage of such developments, due consideration should be undertaken in respect of the construction phase. During this period the ground around the arrays can become compacted, and if not rectified later, may result in the run-off from the arrays draining onto semi-impermeable ground resulting in possible drainage issues.

4.9.11 The length of lifetime of the development should be made explicit to ensure that mitigation measures for the site are effective for the lifetime of the development. This would affect any climate change allowances to be made for storage calculations for attenuation features.

4.9.12 To counter these risks the following measures should be taken where appropriate:

- Undertake an assessment of the baseline run-off rates of the existing site. Compare this to the calculated greenfield allowance for a development.

- Undertake an assessment of the baseline infiltration rates and site specific baseflows to rivers. There are many areas which do not match the generic catchment hydraulic modelling criteria due to the inherent difficulties in assessing recharge or rainfall infiltration. Equally there will be sites where a greenfield runoff rate may still cause flooding. In these cases, schemes should provide additional mitigation.
- Research the former use of the land listing possible contamination. Provide a semi-quantitative or quantitative assessment of the risk and impact on all receptors with measures to mitigate, where necessary against the risk of mobilising contaminants through the change of use and drainage of the land. Where a drainage system design maintains baseline run-off and infiltration rates this assessment may become less important.
- Research which nearby watercourses are impacted by lower than normal flows i.e. close to their (EFI) environmental flow indicator which is the minimum flow required to support good ecological status as required by the Water Framework Directive 2000. These may benefit from having more water to improve their quality and WFD status.
- To counter ground compaction from construction machinery, sub soiling by chisel plough should be carried out to break up any natural hard sub soils or construction compacted ground beneath the surface, which may otherwise cause poor drainage.
- Access roads should take account of the infiltration capacity of the soil. Where feasible, permeable materials should be used, or the road should be positively drained.
- Drainage from access roads may require attenuation control to the outflow before discharging to an identified location (e.g., a watercourse) or soakaway (where ground conditions allow). Please refer to CIRIA's SuDS Manual to inform your design of such elements.
- Structures should be sited along the contour (wherever possible) so that the water flow between rows is dispersed evenly beneath them.
- Incorporate bunds, filter drains or other measures to interrupt flows of water between structures to disperse water flows over the surface and promote infiltration into the soils.
- Incorporate wide grassed filter strips at the downstream side of the structures and maintain the grass at a long length to interrupt water flows and to promote infiltration.
- Incorporate gravel filled filter drains or swales to help infiltrate run-off (where ground conditions allow).
- There should be a soil management plan in place to ensure that the soil is kept in good condition both during and after construction, as well as for decommissioning.

4.9.13 Related Application Requirements:

4.9.14 A Flood Risk Assessment (FRA) and Surface Water Drainage Strategy is required where sites are:

- within Flood Zone 2 or 3; or
- of 1ha or more and in Flood Zone 1.

4.9.15 The FRA should review all existing flood risks and identify any necessary mitigation measures during the construction, operational and decommissioning phases. The lifetime of the development should be made explicit to ensure that mitigation measures use the appropriate climate change allowance for storage calculations for attenuation features. In addition, for developments in Flood Zone 2 or 3 a sequential test should be carried out and form part of the FRA.

4.9.16 The following information shall be included within the surface water management proposal:

- Assessment of the existing soil and sub soils and their permeability.
- A review of the existing surface water drainage mechanisms.
- Assessment of the impact from the run-off and how this will be controlled.
- Details, plans, sections and calculations where necessary to demonstrate that there will be no increase in flood risk, and total discharge from the site will be equivalent to QBAR Rate for all events up to and including the 1 in 100 + 40% climate change factor for the lifetime of the development.
- Details of the future site management plan including an inspection and maintenance plan for the areas around and beneath the structures.
- Details and sections of any new access roads identifying how these will be drained.
- A construction management plan providing details of how the site and any temporary and permanent access roads will be drained during the installation and decommissioning. This assessment should review how the site drainage characteristics will be temporarily changed following removal of any crops, stubble or grasslands.
- Identify any existing watercourses which may require crossing to form temporary or permanent access tracks and include details of any localised culverting and assessments to demonstrate that the culverts will be able to accept the flow from the 1 in 100+ 40% Climate Change storm event with an agreed freeboard. Note that where any works affecting a watercourse even of a temporary nature are involved, then an Ordinary Watercourse Consent approval will be required from Durham County Council Drainage and Coastal Protection Section.

4.10 Site Restoration

Developments will need to include a satisfactory scheme to restore the site to a quality of at least its original condition once operations have ceased. – County Durham Plan Policy 33 (Renewable and Low Carbon Energy)

4.10.1 Detailed Guidance:

4.10.2 Applications need to include outline proposals for the timely restoration of the land to its previous use at the end of the operational life of the solar farm, which is generally between 25 and 40 years. Full details for decommissioning and restoration will be required prior to decommissioning and this will be secured by condition. Restoration means that all development, including ancillary infrastructure, footings and access tracks should be removed from the site and any soils and vegetation restored, to ensure the land is as a minimum returned to the condition it was in before the development. Any landscape or biodiversity enhancements delivered through the development should be retained where appropriate. Restoration should be completed as soon as practicably possible. This will be secured by bond, legal agreement, or condition.

4.10.3 Related Application Requirements:

4.10.4 An outline decommissioning and restoration scheme.

4.11 Green Belt

Green Belt has an important function in preventing urban sprawl by keeping land permanently open. The NPPF states substantial weight should be given to any harm to the Green Belt. Elements of many renewable energy projects will comprise inappropriate development in the Green Belt and very special circumstances will need to be demonstrated. Very special circumstances will not exist unless it is evidenced the potential harm to the Green Belt is clearly outweighed by other considerations. – NPPF (Section 13 Protecting Green Belt land), County Durham Plan Policy 20 (Green Belt)

4.11.1 Durham Context:

4.11.2 Land designated as Green Belt in the county covers an area of 8,726 hectares. This equates to just under 4% of land in the county. The extent of the Green Belt is shown on the Local Plan Policies Map. It can be broken down into three areas. The Durham City Green Belt which surrounds the City of Durham, which broadly aligns with an Area of Higher Landscape Value. The original purpose of this Green Belt was to preserve the setting of Durham as a historic town, prevent unplanned outward expansion of the city and coalescence (or merging) with surrounding villages. The North Durham extension to the Tyne and Wear Green Belt which comprises two parts, the North East Durham Green Belt located to the north of Seaham and the North Durham Green Belt located to the north of Chester-le-Street. The original purpose of the North Durham extension was to check the unrestricted sprawl of large built-up areas within Tyne and Wear, to prevent settlements merging and to encourage urban regeneration.

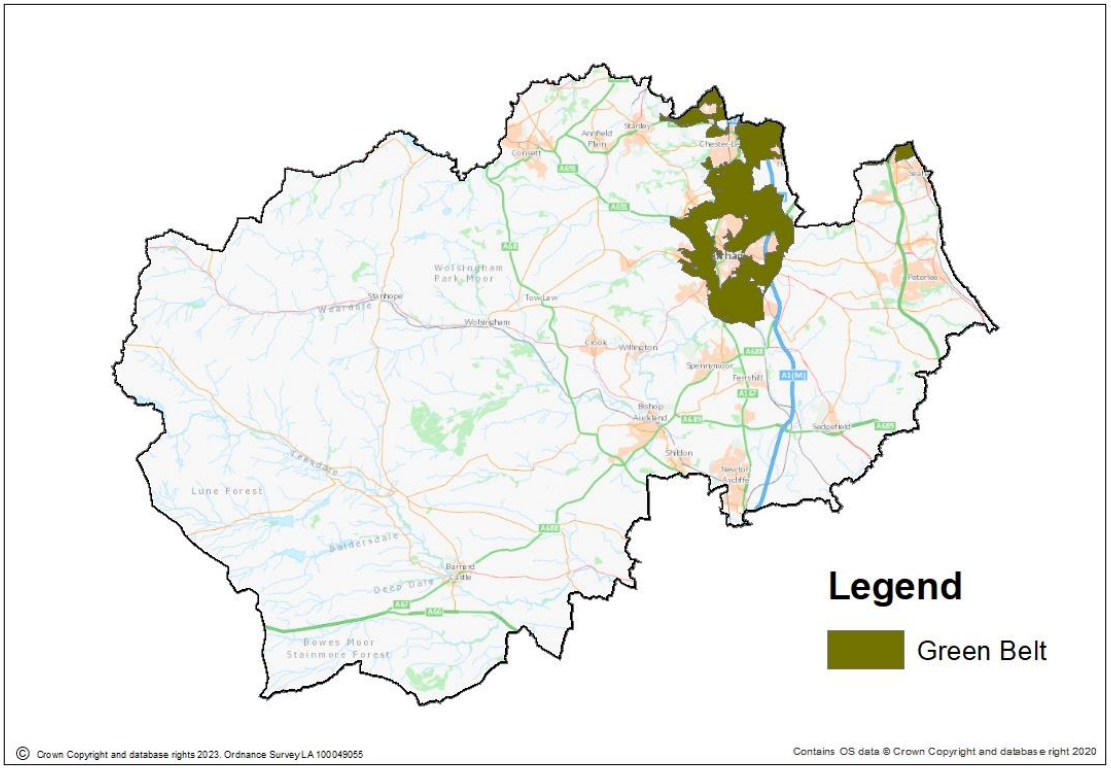

Figure 5. Green Belt in County Durham

4.11.3 Detailed Guidance:

4.11.4 The fundamental aim of Green Belt policy is to prevent urban sprawl by keeping land permanently open. The essential characteristics of Green Belts are their openness and their permanence. Solar farms can impact on the openness of the Green Belt. National policy prescribes that very special circumstances will not exist unless the harm to the Green Belt and any other harm are clearly outweighed by other considerations. In assessing if very special circumstances exist consideration will be given to the wider environmental benefits associated with increased production of energy from renewable sources. Consideration will also be given to the extent it has been demonstrated the solar farm could not be located elsewhere in the county due to locational requirements.

4.11.5 Related Application Requirements:

4.11.6 Evidence of very special circumstances, which would outweigh the harm to the Green Belt and any other harm.

4.12 Access and Traffic

Proposals should ensure that any vehicular traffic generated, following the implementation of sustainable transport measures, can be safely accommodated on the local and strategic highway network and does not cause an unacceptable increase in congestion or air pollution, or detriment to road safety. – County Durham Plan Policy 21 (Delivering Sustainable Transport)

4.12.1 Detailed Guidance:

4.12.2 In the case of solar farms most transport impacts will be during construction, with limited maintenance vehicle visits during operation. It may be necessary to improve access routes into the site. In this scenario the Local Highway Authority should be engaged at an early stage.

4.12.3 Where development could potentially affect the operation of the Strategic Road Network (SRN), applicants are encouraged to consult with National Highways before submitting a planning application. In such cases the Transport Assessment or Statement should outline the anticipated trip generation of the construction and operational phase of the development with sufficient detail to allow National Highways to assess the impact on the SRN. The Construction Management Plan would also need to be approved by National Highways prior to the development commencing. Subject to a review of the peak trip generation during the construction and operational stages of the proposed development, further assessments may be required to understand any potential impact on the SRN.

4.12.4 Related Application Requirements:

4.12.5 Where appropriate a Transport Assessment or Transport Statement will be required.

4.12.6 The Construction Management Plan will need to address impacts of construction traffic. This will need to include at least the following: length of construction period, hours of operation, peak trip generation (including type of vehicles); construction traffic routes and details of any necessary Temporary Traffic Management and access arrangements; staffing numbers; contractor parking; details of delivery arrangements (including for any abnormal loads) and loading and unloading arrangements; and mitigation measures and details of enforcement (e.g. limited delivery times, noise reduction, wheel washing, penalty clauses for contractor).

4.13 Contamination and Ground Stability

Development will not be permitted unless the developer can demonstrate that: a. any existing despoiled, degraded, derelict, contaminated or unstable land issues can be satisfactorily addressed by appropriate mitigation measures prior to the construction or occupation of the proposed development; b. the site is suitable for the proposed use, and does not result in unacceptable risks which would adversely impact on the environment, human health and the amenity of local communities; and c. all investigations and risk assessments have been undertaken by an appropriately qualified person. – CDP Policy 32 (Despoiled, Degraded, Derelict, Contaminated and Unstable Land)

4.13.1 Durham Context:

4.13.2 Large parts of County Durham have been identified by the Coal Authority as 'Development High Risk Areas' and 'Development Low Risk Areas' due to the known occurrence of coal mining legacy issues and related hazards. Contaminated land in the county can arise from several sources typically associated with some types of industrial and manufacturing uses such as gas, coke, chemical and steel works. While contamination is more likely to arise in former industrial areas, it can also occur in other locations, including in the countryside. There is also despoiled land, which is primarily where mineral resources have been removed.

4.13.3 Detailed Guidance:

4.13.4 The Coal Authority does not as standard require a Coal Mining Risk Assessment for solar arrays as ground disturbance is generally minimal. However, where works require the installation of cabling or other infrastructure a risk assessment may be required. In such cases the Coal Authority will be consulted.

4.13.5 Guidance on groundwater and contamination is provided in section 4.9 Flooding and Drainage.

4.13.6 Related Application Requirements:

4.13.7 A Coal Mining Risk Assessment will be required within Coal Mining High Risk Areas where works will involve significant ground works (i.e., beyond surface scraping and installation of loose materials.)

4.14 Associated Infrastructure

Renewable and low carbon energy development in appropriate locations will be supported. Proposals should include details of associated developments including access roads, transmission lines, pylons and other ancillary buildings. – County Durham Plan Policy 33 (Renewable and Low Carbon Energy)

4.14.1 In addition to solar panels, solar farms include supporting infrastructure including inverters, which convert energy from the panel from direct current (DC) into useable alternating current (AC), batteries to store the electricity and cabling. Commercial solar farms need to be in proximity to a substation with capacity on the National Grid. A solar farm proposal could include a new substation and associated cabling.

4.14.2 Batteries can help to maximise the efficiency of an installation by allowing energy to be stored. Battery storage should be considered as part of all solar developments. Batteries and inverters should be co-located in existing buildings where possible, particularly where these are in the local vernacular and located near the site. New battery and inverter buildings should match the local vernacular, be carefully sited, and should generally avoid high or exposed locations. Existing and locally occurring vegetation should be used to screen new buildings. Batteries and inverters should be located away from noise sensitive development.

4.14.3 Where planning permission is being sought for development of battery energy storage systems of 1MW or over, in open air environments using lithium-ion batteries Planning Practice Guidance encourages applicants to engage with the relevant local fire and rescue service before submitting a planning application. Where relevant the local fire and rescue service will also be consulted on planning applications. Further guidance on battery storage and fire safety has been produced by the National Fire Chiefs. If a BESS is located near to the SRN, further evidence is also required by National Highways regarding fire risks.

4.14.4 Cabling should be buried underground to minimise their impact on landscape character and visual amenity. They should avoid areas of ecological or archaeological sensitivity, damage to trees or hedges. Connection to the grid may cause an accumulation of overhead wiring, if this occurs in sensitive areas, the cumulative impact will need to be assessed.

4.14.5 Related Application Requirements:

4.14.6 The application should clearly set out where invertors and batteries will be located and how they will be designed. The nature and extent of cabling should be shown on the site plan.

4.14.7 A Noise Impact Assessment may be required where batteries or inverters would be in proximity to noise sensitive uses.

5.0 Planning process

5.1 Pre-Application Advice

5.1.1 Pre-Application advice is strongly encouraged for medium and large scale solar developments. This will avoid abortive work by helping to identify if a proposal is likely to be acceptable. Advice will be provided on the supporting studies required and the level of detail they should contain based on the sensitivity of the site, the nature of the proposal and its potential effects.

5.1.2 Pre-Application enquiries can be submitted online via the council's planning advice and enquiries webpage.

5.2 Community Engagement

5.2.1 The council will expect developers to engage with the community prior to submission of a solar farm application. Through this process an applicant will be able to explore areas of concern, options for mitigation and potential benefits that their proposal could provide to the local area. The applicant should demonstrate how they have taken account of the community's responses within their application.

5.2.2 BRE Solar Centre has produced Community Engagement Good Practice Guidance for Solar Farms. The government has also produced Good Practice Guidance on Community Engagement and Benefits for Onshore Wind Developments. Whilst this is specific to onshore wind, the council endorses the approach to community engagement encouraged in the guidance. It considers the approach also reflects existing best practice for commercial solar development. Key principles in both guidance documents include:

- developing a community engagement plan from the outset;
- starting community engagement as early as possible in the process;
- recognising all communities are different and therefore the local community will need to be determined on a case-by-case basis;
- using a range of different engagement methods to reach the whole community and understand the differing needs and priorities;
- feeding back and following up with the community; and
- on-going engagement through a projects operational lifetime and in decommissioning.

5.2.3 The council's Statement of Community Involvement provides further guidance on appropriate consultation methods and how the results of community consultation should be used.

5.2.4 In the case of the installation of small and medium scale solar developments, it is advisable to engage with neighbouring occupiers before submitting a planning application.

5.3 Community Benefits

5.3.1 Community benefits associated with renewable energy schemes can help to give a community a sense of ownership and address their concerns over development. Proposals for renewable energy development should be developed through local community engagement and, where appropriate, deliver local community benefits. Applicants are encouraged to outline the benefits of their proposal within their planning application. In determining planning applications for such projects and in accordance with CDP Policy 33 significant weight will be given to the achievement of wider social, environmental and economic benefits. Benefits could include employment and skills, educational opportunities and local energy generation.

5.3.2 For community benefits to be secured through planning obligations (s106) via a legal agreement they must be directly related to the development; necessary to make the development acceptable in planning terms; and fairly and reasonably related in scale and kind to the proposal. It should be noted community funds or investments (e.g., Community Benefits Trust, local share issue, community ownership) do not meet the criteria set out for planning obligations, and as such cannot be considered as part of the decision making process on planning applications. They are encouraged but a matter for discussion between the developer and the community.

5.3.3 The council's Low Carbon Team provide advice to community groups, including those seeking to take forward their own renewable energy projects. Further information is available on the Climate County Durham website and the team can be contacted at: ClimateCountyDurham@durham.gov.uk.

5.4 Environmental Impact Assessment

5.4.1 Certain solar developments require Environmental Impact Assessment (EIA) under Regulations which implement the EU's Environmental Impact Assessment Directive. Solar farm developments are not specifically listed in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. However, Schedule 2 of the Regulations specify that any industrial energy installation producing electricity, steam, and hot water, which exceeds 0.5ha could potentially be EIA development.

5.4.2 Requests for EIA Screening and Scoping can be made via planning@durham.gov.uk.

5.5 Submitting a Planning Application

5.5.1 A Planning Performance Agreement (PPA) is an agreement between a developer and the local planning authority setting out who will do what and by when, to effectively project manage key events and timescales associated with a development proposal. In the case of solar farms a PPA is encouraged.

5.5.2 The council's validation checklist sets out validation requirements for planning applications. In the case of solar farm developments, engagement is encouraged prior to submission and will avoid delays in the application being validated.