

Byers Gill Solar
Local Impact Report - Landscape and Visual Amenity
Darlington Borough Council

July 2024



Glenkemp Landscape Architects



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Illustrations

Cover: View east from Great Stainton towards Panel Area D from public footpath.

All photography in this report has been undertaken by Glenkemp Landscape Architects except for images extracted from the ES and supporting documents.

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Overarching National Policy Statement for Energy (EN-1) Department for Energy Security & Net Zero November 2023

To consider the potential effects, including benefits, of a proposal for a project, the applicant must set out information on the likely significant environmental, social and economic effects of the development, and show how any likely significant negative effects would be avoided, reduced, mitigated or compensated for, following the mitigation hierarchy.(para. 4.3.4)

Where some details are still to be finalised, the ES should, to the best of the applicant's knowledge, assess the likely worst-case environmental, social and economic effects of the proposed development to ensure that the impacts of the project as it may be constructed have been properly assessed.(para.4.3.12)

Whilst the applicant may not have any or very limited choice in the physical appearance of some energy infrastructure, there may be opportunities for the applicant to demonstrate good design in terms of siting relative to existing landscape character, land form and vegetation. (para 4.7.6)

Applicants must demonstrate in their application documents how the design process was conducted and how the proposed design evolved. (para 4.7.7)

Landscape effects arise not only from the sensitivity of the landscape but also the nature and magnitude of change proposed by the development, whose specific siting and design make the assessment a case-by-case judgement. (para.5.10.4)

The applicant should consider landscape and visual matters in the early stages of siting and design, where site choices and design principles are being established. This will allow the applicant to demonstrate in the ES how negative effects have been minimised and opportunities for creating positive benefits or enhancement have been recognised and incorporated into the design, delivery and operation of the scheme. (para.5.10.19)

Applicants should consider how landscapes can be enhanced using landscape management plans, as this will help to enhance environmental assets where they contribute to landscape and townscape quality. (para 5.10.24)

The Secretary of State should be satisfied that local authorities will have sufficient design content secured to ensure future consenting will meet landscape, visual and good design objectives.

(para 5.10.30)

The Secretary of State should consider whether the project has been designed carefully, taking account of environmental effects on the landscape and siting, operational and other relevant constraints, to minimise harm to the landscape, including by appropriate mitigation (para 5.10.37)

National Policy Statement for Renewable Energy Infrastructure (EN-3) Department of Energy Security and Net Zero March 2023

*Proposals for renewable energy infrastructure **should demonstrate good design, particularly in respect of landscape and visual amenity**, opportunities for co-existence/co-location with other marine uses, and in the design of the project to mitigate impacts such as noise and effects on ecology and heritage. (para.3.5.2)*

National Design Guide Ministry of Housing, Communities and Local Government January 2021

The underlying purpose for design quality and the quality of new development at all scales is to create well-designed and well-built places that benefit people and communities. This includes people who use a place for various purposes such as:

- to live, work, shop, for leisure and recreation, and to move around between these activities; and*
- those who visit or pass through.*

*Good design considers how a development proposal can make a contribution towards all of them. This applies to proposals of all sizes, including small scale incremental changes (such as highway works), new buildings, infill developments, major developments and larger scale developments such as urban extensions, new neighbourhoods, new settlements **and infrastructure**.*

.....permission should be refused for development of poor design that fails to take the opportunities available for improving the character and quality of an area and the way it functions.

Well-designed places are;

- Based on a sound understanding of the features of the site and the surrounding context, using baseline studies as a starting point for design;*
- Integrated into the surroundings so they relate well to them;*

Well-designed new development is integrated into its wider surroundings, physically, socially and visually. It is carefully sited and designed, and is demonstrably based on an understanding of the existing situation, including:

- the landscape character and how places or developments sit within the landscape, to influence the siting of new development and how natural features are retained or incorporated into it;*

Design Principles for National Infrastructure National Infrastructure Commission Design Group

Well-designed infrastructure supports the natural and built environment. It gives places a strong sense of identity, and through that forms part of our national cultural heritage. It makes a positive contribution to local landscapes within and beyond the project boundary.

General photography of PV modules in this report shows Worset Solar Farm, Hartlepool under construction in 2024. Photography illustrates appearance of a solar farm under different light conditions on undulating land.

All photographs taken from public viewpoints prior to mitigation planting.





1.0 INTRODUCTION

1.1 Glenkemp Landscape Architects has been appointed by Darlington Borough Council (DBC) to prepare this Local Impact Report on landscape and visual amenity matters in relation to the Byers Gill Solar development. Glenkemp was initially appointed in July 2023 following publication of the Preliminary Environmental Information Report (PEIR) in May 2023. Glenkemp undertook a review of the proposals and methodology set out in the PEIR and advised Darlington Borough Council through subsequent (topic specific) consultations with the Developer. This document sets out the Council's response to the proposals and predicted landscape/visual amenity effects described in the Developer's Environmental Statement (ES). It forms part of the overarching Local Impact Report prepared by DBC as required under the application process for a Nationally Significant Infrastructure Project (NSIP). Primarily it deals with potential impacts which occur within the Darlington administrative boundary but also describes impacts affecting adjacent local authorities where relevant.

1.2 This document is not an ES or Landscape and Visual Impact Assessment. It provides a review of the Proposed Development in relation to landscape and visual amenity and evaluates the baseline information and assessment of effects set out in the Developer's ES and supporting documents. Where possible, the descriptions of baseline information in this report have been summarised to avoid repetition of text contained in the ES. Some descriptions have been expanded where additional explanation is considered helpful and of relevance. This report presents the Council's response in relation to landscape and visual amenity impacts generated by the Proposed Development.

2.0 DEVELOPMENT DESCRIPTION

2.1 The proposed solar farm development covers approximately 490 hectares (ha) and is capable of generating 180MW of electricity. It comprises solar photovoltaic (PV) panels, on-site Battery Energy Storage Systems (BESS), associated infrastructure, substation, underground cable connections and landscape mitigation. Construction would take approximately 12-18 months under a single phase or 18-24 months if the works were undertaken in multiple phases. The Proposed Development would be operational for approximately 40 years.



2.2 The following components have the potential to generate landscape and visual effects through change/loss of existing landscape features, changes in landscape character and changes in visual amenity. Collectively and/or individually, these components have the potential to generate significant landscape and visual effects.

- 3.5m high solar PV modules aligned in rows set 4m -12m apart on metal frames
- Inverters and transformers in 97 containers 3m high x 2.5m width x 12m length
- Substation/compound and associated electrical equipment (substation 8m high, communications mast 15m high)
- 10km of underground cabling in trenches 1600mm depth x 2000mm wide
- 2m high deer fence around the perimeter of solar panel enclosures
- 3m high pole mounted CCTV
- Planting mitigation measures
- Diversion of existing public rights of way

2.3 While it is acknowledged that construction and decommissioning works have the potential to generate significant localised effects, such works are temporary in and

not uncommon in countryside areas. Similarly, cabling works are unlikely to generate significant long-term landscape/visual effects where the route generally avoids areas of woodland/topographical features or designated sites and where planting proposals would mitigate for the loss of hedging and trees. Therefore, this report will focus on potential effects of the Proposed Development during the operational stage, taking account of mitigation and any significant changes which may have previously occurred during site clearance and preparation.

3.0 MITIGATION

3.1 The ES states that changes have been made to the design of the Proposed Development to avoid or reduce adverse environmental effects and to make the Proposed Development fit better into the wider landscape. These measures and changes are considered 'essential' to the Development and termed 'embedded mitigation'. The ES states that additional mitigation has been identified to further mitigate significant adverse effects. The ES states that opportunities for enhancement have also been identified. A Mitigation Route Map (Document Reference 7.8) includes a list of generic and topic specific mitigation measures secured as part of the Proposed Development.



3.2 The General Arrangement Plans in the ES (ES Figures 2.3 - 2.8) illustrate areas of 'mitigation, planting and enhancement,' however, these do not always correspond with more detailed proposals shown on the Environmental Masterplan (Document 2.5). For this reason, where applicable, reference will be made to proposals shown on the Environmental Masterplan in this report.

3.3 Table 2-1 in supporting ES document 7.8 Mitigation Route Map includes a list of environmental actions/commitments, surveys and operational commitments relevant to landscape and visual amenity. The Environmental Masterplans presented in ES Document 2.5 show proposed development features and site works intended to mitigate landscape and visual effects. These comprise the following main components with areas/measurements extracted from data provided in Design Approach Document - ES document 7.2 and Appendix 2.15 Public Rights of Way Management Plan.

- Tree planting (3ha)
- Hedgerow/hedgerow tree planting (7km)
- Shrub mosaic planting (29ha)
- Infill hedge planting and relaxation of hedge flailing ^{*1}
- Wildflower and grass rich sward (59ha)
- Re-routing of Public Rights of Way (7 no) and provision of new permissive paths (5 routes totaling 3.6km)
- Proposed community land around Bishopton comprising school car park/sensory garden /community recreation land/orchard (3ha) ^{*2}

^{*1} Assumed relaxation of hedge flailing would increase managed hedges to 3.5m high to screen solar panels.

^{*2} ES document 7.2 Design Approach Document (paragraph 3.1.4) refers to 24ha. Glenkemp measure this area to be no more than 3ha. Glenkemp have not remeasured other mitigation quantities stated in the Design Approach Document.



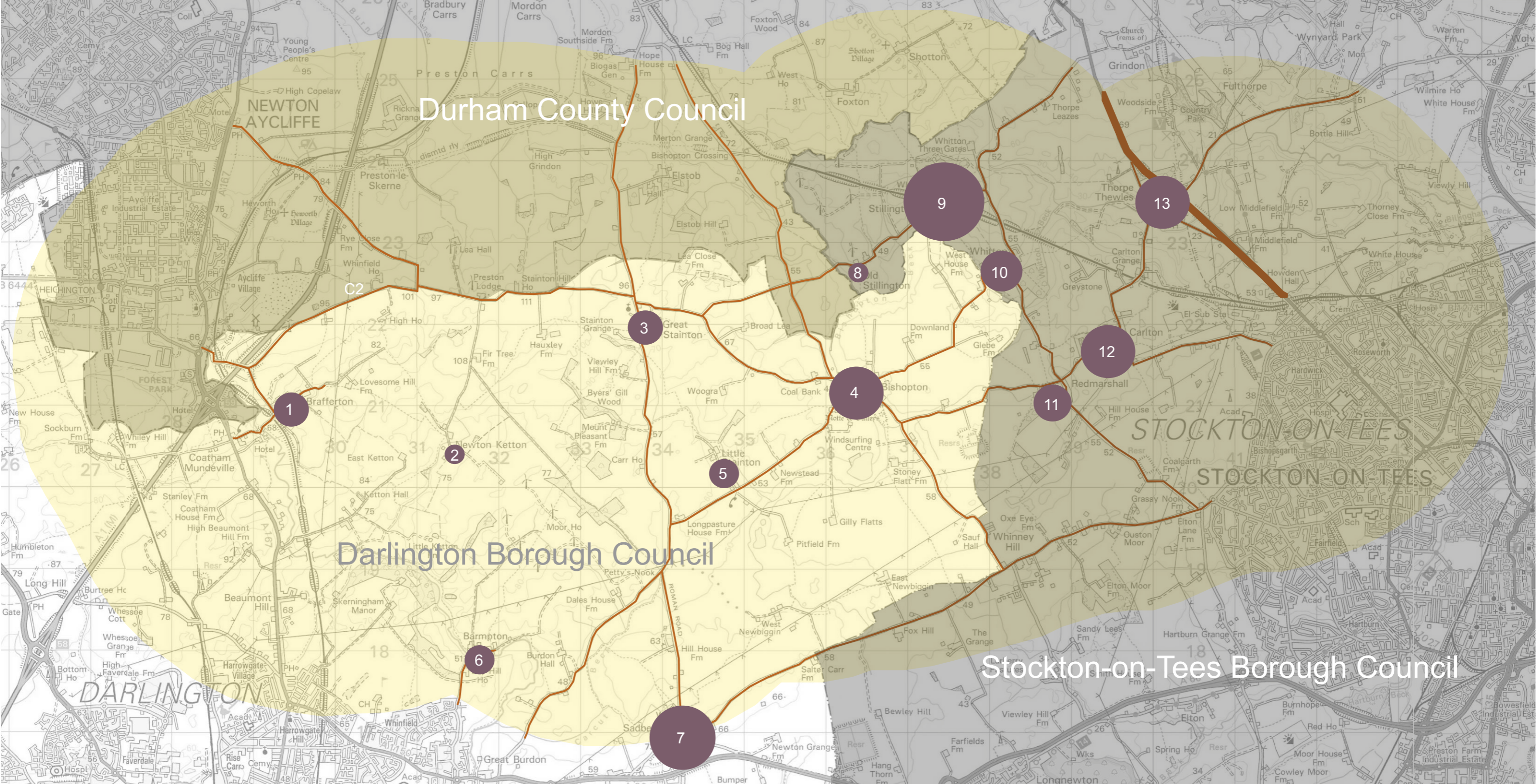


Figure 1. Study area - settlement/highway connections

-  3km study area
 -  Public highway
 -  Village/settlement
- | | |
|--------------------|--------------------|
| 1. Brafferton | 8. Old Stillington |
| 2. Newton Ketton | 9. Stillington |
| 3. Great Stainton | 10. Whitton |
| 4. Bishopton | 11. Redmarshall |
| 5. Little Stainton | 12. Carlton |
| 6. Barmpton | 13. Thorpe Thewles |
| 7. Sadberge | |

4.0 THE STUDY AREA

4.1 The 3km study area defined in the ES covers predominantly open farmland between the eastern edge of Darlington and the western edge of Stockton-on-Tees. The majority of the Proposed Development lies within Darlington Borough Council, including the solar panel areas, substation and BESS. The underground cable connection to Norton Substation, in the eastern part, lies within Stockton-on-Tees Borough Council. Land located in the northern part of the study area falls within Durham County Council (see Figure 1).

4.2 The 3km study area is open farmland with scattered settlement comprising several rural villages and hamlets (see Figure 1). There are also numerous farmsteads and country properties located throughout. The villages are linked by a network of country roads which connect to the main urban areas. The villages contain relatively few local facilities except for village halls and churches. There are Primary Schools in Stillington and Bishopton.

Planning context

4.3 The ES describes the principal policy documents for NSIPs which inform decision making for renewable energy infrastructure. These include National Policy Statements and the National Planning Policy Framework.

4.4 Local Planning Policy is set out in the local plans for Darlington Borough Council, Stockton Borough Council and Durham County Council and supporting documents. The following policies in Darlington Local Plan 2016-2036 (adopted 2022) are relevant to the Proposed Development and the scope of this report.

SH1 – Settlement Hierarchy
DC1 -Sustainable Design Principles & Climate Change (Strategic Policy)
DC4 – Safeguarding Amenity
ENV3 - Local Landscape Character (Strategic Policy)
ENV4 -Green & Blue Infrastructure (Strategic Policy)
IN9 – Renewable Energy

4.5 *Policy SH1 cites;*

'distribution of development will be shaped by the role and function of places (settlement)..... The character of the Rural Villages, including their relationship to and setting within the surrounding countryside, will be protected and where possible enhanced'.

4.6 Policy DC1 is concerned with good design and ensuring proposals respond positively to the local context. Proposals should take account of important views and vistas. Policy DC4 is concerned about safeguarding amenity. Among other things it states that development will be supported where it is suitably located and is acceptable in terms of visual dominance and overbearing effects. Policy ENV3 is concerned with the protection and enhancement of character and local distinctiveness of the urban and rural area and villages. Policy ENV4 is concerned with the protection and improvement of green and blue infrastructure. Policy IN9 states renewable energy development will be supported where proposals are in accordance with relevant criteria which includes the mitigation of visual impact in relation to solar development, taking account of, among other things, **the colour and appearance of the modules.**

Settlement

4.7 There are 13 villages/settlements located in the 3km study area as illustrated on Figure 1 in this report. Six of these settlements lie within 500m of the solar panel areas of which 4 are located within the DBC administrative area. The main villages located in Darlington are Brafferton, Great Stainton and Bishopton. (Newton Ketton is a small hamlet comprising several scattered farmsteads and country properties).

4.8 ES Chapter 7 provides a reasonable description of the baseline for each of the three villages. Figure 7.6 in the ES provides plans showing the extent of the setting for the villages assessed by the Developer. This information was requested by DBC after the Council had concerns about the potential significant effect on the setting of the villages. DBC is of the view that the area of land identified as the village setting in Figure 7.6 has been understated and therefore the magnitude of change on the villages is also likely to be understated. This is considered in further detail below and also in Section 8 of this Report.

4.9 The rural setting of the three villages is a key feature of the distinctiveness and identity of the settlements, contributing to local landscape character and the amenity of local residents. Setting is the physical environment of the villages, typically defined by the intervisibility between the settlement edge and surrounding land. Setting has greater value when positive attributes contribute to positive features of local identity and distinctiveness. Setting may also have

greater value where it is uniquely associated with a particular settlement. The amenity value of setting is likely to increase when land within the setting is physically and visually accessible by the local community. Identifying the extent of setting is not an exact science and requires an element of judgment when determining the extent of visibility from the settlement edge. It is usually based on fieldwork and photography. Some villages may contain local landmarks or occupy visually prominent locations i.e. Great Stainton, which may extend the area of setting over a wide area. Where this occurs, a judgment is made on the extent of the immediate setting, identifying land more closely associated with the settlement in local views.

Access and connectivity

- 4.10 The road network is used by residents living in the study area to access workplace and services in the surrounding towns. Additional commuter traffic is generated by vehicles using the country lanes as alternative routes between the main urban centers. There are public footpaths/bridleways located throughout the study area. These are generally well waymarked but circular routes around the villages are limited except around Brafferton. Footpath connections between the settlements are often poor. There are no National Cycle Network routes through the Study Area.
- 4.11 As in many rural areas, the country lanes around the villages fulfill an important amenity function in providing connections to Public Rights of Way, which otherwise would be inaccessible. Some of the lanes, such as Mill Lane in Bishopton, are regularly used by the local community for countryside access. Generally, however, the roads create a high degree of severance across the footpath network which limits their use.
- 4.12 ES Chapter 7 identifies 33 Public Rights of Way within DBC/Stockton-on-Tees and Durham County which will be physically or visually affected by the solar panels, associated infrastructure or mitigation planting. This figure excludes some footpaths connected to Stillington and Old Stillington located in Stockton-on-Tees. It also excludes footpaths which may be temporarily affected by the proposed underground cable. These 33 footpaths cover a total footpath length of approximately 46 kilometres. Of these footpaths, a total of 25 No (covering a total length of approximately 33 kilometres) are predicted to experience large or medium adverse effects at completion. Some of these effects are predicted to reduce to small or negligible over time, as planting mitigation matures. The proportion of footpath affected

by the Development Proposals will vary across the Study Area.

- 4.13 Within the 3km Study Area there are approximately 65km of rural roads (public highway) as shown on Figure 1. These roads connect villages to Darlington and Stockton-on-Tees and the main highway network. There are three principal east-west routes. The central route runs through the villages of Redmarshall, Bishopton, Great Stainton and north of Brafferton. The southern route, Darlington Back Lane, connects Sadberge to Stockton-on Tees, at Elton. The northern route runs through Stillington, between Great Stainton and the A177. The main north-south route connects Sadberge to Sedgefield (located outside the Study Area), via Great Stainton. There are also north-south routes from Elton to Stillington and between Bishopton and Whinney Hill, on Darlington Back Lane. Great Stainton lies at the intersection of two key routes which cross the Study Area.

Landscape character

- 4.14 The 3km Study Area falls within National Character Area (NCA) 23 Tees Lowlands, published by Natural England. This NCA covers the Tees urban/industrial conurbation extending west to Darlington and including rural farmland separating the main urban areas. Land to the east of Bishopton is defined in the Stockton-on-Tees Landscape Character Assessment (2011). Land in the north and west of the Study Area covering Newton Aycliffe, Elstob and Preston Carrs, is defined in the County Durham Landscape Character Assessment (2019). The proposed solar panels areas are located on land defined in the Darlington Landscape Character Assessment (2015). Panel Areas A-D are located in Landscape Character Area 6: Great Stainton Farmland. Panel Areas E-F are located in Landscape Character Area 7: Bishopton Vale.

4.15 The following summary descriptions of key sensitivities have been extracted from the Darlington Landscape Character Assessment (2015) below.

Landscape Character Area 6: Great Stainton Farmland

Key sensitivities

- *Strongly rural character without modern development and few roads;*
- *Prominent hilltop site and intact layout of Great Stainton;*
- *Visually important woodlands on the skyline, particularly when seen from the vale to the south;*
- *Long views from open elevated locations, including from roads around Great Stainton; and*
- *Many field boundary trees contribute to landscape character.*

Key sensitivities at settlement edges

- *Brafferton is a linear village, with two rows of houses facing a linear village green. The main street is a no-through route running uphill, terminated by a farmstead. The adjacent wooded valley slopes will be sensitive to all but the smallest built developments, but there is little or no scope to expand this village without fundamentally altering its form and character.*
- *Great Stainton is similarly traditional in form, though arranged as a compact cluster around the green and hotel. The immediate surroundings comprise small pastoral fields with trees, preserving historic field boundaries, and would be of high sensitivity to even small built developments.*

Landscape Character Area 7: Bishopton Vale

Key sensitivities

- *Open nature, with long views and overlooked from higher ground;*
- *Areas of more rural character particularly in pastoral areas with smaller fields;*
- *Rural context and setting of villages, particularly Bishopton conservation area and its motte;*
- *Connected series of water bodies along the Newbiggin Beck; and*
- *Distant views to Roseberry Topping.*

Key sensitivities at settlement edges

- *Bishopton is grouped around its parish church and is triangular in form, being arranged along three converging roads and hemmed in by the Bishopton Beck. The village has many mature trees and generally robust settlement boundaries. The surrounding landscape comprises small pastoral fields. The 12th-century motte is located to the south, and there are horse paddocks and agricultural buildings on other sides. The motte and the landscape to the west of the village are within the conservation area. The surrounding landscape is low lying and of generally lower sensitivity overall. However, development to the south would straddle the Beck, and potentially impact on the setting of the motte. Extensions to the village could unbalance the traditional form if not very carefully considered.*

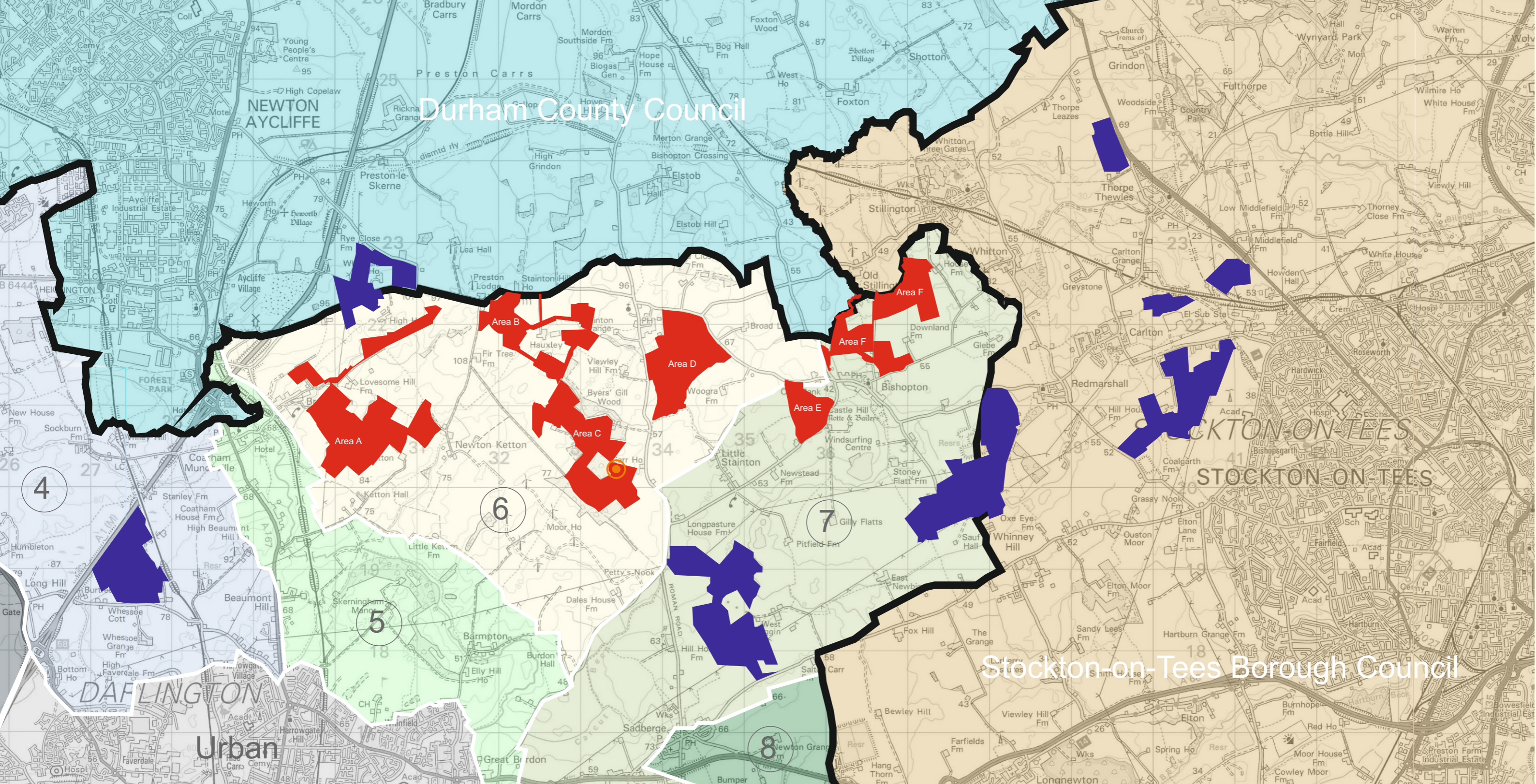


Figure 2. Darlington landscape character areas

- | | | |
|--|---|---|
|  | Panels Areas
(connecting cable routes not illustrated) | Darlington Landscape Character Areas |
|  | Solar farm cumulative development | ④ Whessoe and Dene Beck |
|  | Proposed substation | ⑤ Upper Skerne Valley |
| | | ⑥ Great Stainton Farmland |
| | | ⑦ Bishopton Vale |
| | | ⑧ Middleton Farm |

5.0 CUMULATIVE SOLAR FARM DEVELOPMENT

5.1 There are eight solar farms with consent and/or under construction located in the 3km study area as illustrated in Figure 4. Details are listed below in Table LLIR1.

6.0 CONSULTATION

6.1 A topic specific meeting was held between DBC and the Developer on 11 September 2023 to discuss landscape and visual matters following a review of the PIER by Glenkemp for DBC. At the meeting, the Developer confirmed that changes would be undertaken to the layout of several Solar Panel Areas due to changes in agreements with landowners. The changes were briefly described. It was understood that revised layout drawings would be provided to DBC prior to completion of the ES. The meeting focused on the following areas of concern:

a) The absence of site analysis plans which would demonstrate an understanding of the landscape context in terms of intervisibility, key views, local panoramic views, settlement/settlement gap/settlement edge, key footpath routes and patterns of green infrastructure.

b) The absence of a comprehensive appraisal of effects on villages and settlement including the setting of settlement, settlement gap, local views and countryside access.

c) Concern was expressed by DBC that proposed screening was considered a positive measure in the PEIR without consideration of the adverse effects on views and landscape (visual) character. Further information was requested on proposed hedge heights due to these concerns. The Developer confirmed that the management of existing hedging in the control of landowners would not be changed to provide additional screening.

d) DBC was concerned that the viewpoints selected by the Developer did not adequately represent views from all receptors and did not always represent locations from where receptors would experience the highest magnitude of change i.e. the worst case. Some photographs had significant obstructive foreground elements, or the field of view was severely limited due to topography. Where this occurred, it was pointed out that alternative locations were available in close proximity offering viewpoints which were more representative of local views. A small number of examples were provided by DBC. It was recommended that additional photography was undertaken throughout the study area to address these weaknesses. DBC expressed the view that photography presented in the PEIR did not adequately reflect potential visual effects on local receptors or demonstrate adequate evidence to support the predicted effects.

Table LLIR1 – Cumulative solar farm projects in the 3km Study Area

Description	ES ID	Application Reference	Authority	MW	Area
Gatley Moor Solar Farm	16	22/00727/FUL 22/1499/FUL	cross boundary DBC /SBC	49MW	123ha
California Farm Solar Farm	18	22/1511/FUL	Stockton BC	49MW	87ha
Whinfield Solar Farm	21	DM21/02816/FPA 21/00958/FUL	cross boundary DCC /DBC	31MW	42ha
High Meadow 2 Solar Farm	26	21/2290/FUL	Stockton BC	10MW	15ha
Middlefield Farm Solar Farm	28	20/2692/FUL	Stockton BC	15MW	28ha
Burtree Solar Farm	36	22/00213/FUL	Darlington BC	49MW	62ha
Thorpe Bank Solar Farm	40	20/2131/FUL	Stockton BC	32MW	38ha
Long Pastrure Solar Farm	41	22/01329/FUL	Darlington BC	49MW	104ha
Total				284MW	499ha

e) Concerns were raised by DBC that the PEIR did not contain a comprehensive list of potential receptors as these were primarily based on the selected viewpoints which did not represent all potential receptors. In particular, concern was raised about potential impacts on the setting of villages.

f) Further information was requested on CCTV as concerns were raised by DBC that even minor views of this infrastructure had the potential to alter the perception of the rural landscape, even when the solar panels were substantially screened.

g) DBC confirmed the opinion that there are significant weaknesses in the information provided in the PEIR which tended to understate potential visual and landscape effects.

h) DBC confirmed the view that the scope of the RVAA assessment provided in Appendix 7.6 was considered too limited. In the opinion of DBC the 100m study area was not sufficiently large to identify all properties which may experience significant visual effects leading to a loss of residential visual amenity. This was flagged by DBC because of the understanding that undulating landscapes can more frequently result in significant visual effects and these effects are more difficult to fully mitigate due to topography. DBC are concerned that the adoption of a 100m study area disregards effects on some properties overlooking the solar panels located in Great Stainton and Bishopton.

7.0 DESIGN REVIEW

Overview

7.1 The Developer for Byers Gill Solar describes the layout for the PV modules under six separate Panels Areas A-F. The Panels Areas are located across a geographic area in excess of 25 km² (9.74 square miles) See Figure 3 in this report. The geographic area is predominantly open farmland with scattered villages connected by rural roads and public footpaths. The farmland is located between Darlington/Newton Aycliffe and Stockton-on-Tees. The gap between the edge of these major urban areas is approximately 12km. The Solar Panel Areas extend across 8km of this gap. The gap contains an additional seven solar farms which have consent and/or under construction (One cumulative project lies outside

the described settlement gap). The Panel Areas cover approximately 20% of all land within the 25km² geographic area. The Panel Areas cover 57 separate field enclosures.

7.2 The landscape across the 3km Study Areas is undulating farmland with relatively low levels of tree cover except in the southwestern part, south of Great Stainton and around some villages and beck valleys. There are constantly changing views across the Study Area and long distance views towards the Cleveland Hills and Pennines from elevated viewpoints. Farmsteads are often prominent on ridgelines. Prominent landmarks include All Saints Church at Great Stainton.

Scale and appearance

7.3 Byers Gill Solar covers approximately 490 hectares (ha) and is capable of generating 180MW of electricity. The area is approximately equivalent to the total area of land covered by the eight solar farms with consent and/or under construction in the 3km Study Area i.e. the cumulative solar projects. The Byers Gill solar panels and mitigation land covers an area of 418ha (area excludes cable connections). The Development includes 32km of underground cable route. The Proposed Development in combination with other consented solar farms in the 3km study area would cover a total area of 989ha.

7.4 The solar farms listed in Table LLIR2 are identified on the Renewable Energy Planning Database (Department of Business, Energy and Industrial Strategy) as the largest solar photovoltaics projects in the UK with consent/under construction or in the planning system. There are other solar projects at pre-application stage such as White Elm Solar Farm (200MW on a site of 303ha) and Botley West Solar Farm (860MW) covering 1300ha of land in Oxfordshire, described as the largest photovoltaic project in Europe.

Table LLIR2 – Largest UK consented/prosposed solar farms

Description	MW	Area
Sunnica Energy Farm	500MW	1000ha
Little Crow Solar Farm	150MW	226ha
Longfield Solar Farm	500MW	380ha
Cleve Hill Solar Farm	350MW	492ha

- 7.5 Byers Gill Solar, both individually and in combination with other consented solar farms in the 3km Study Area represents one of the largest concentrations of photovoltaic development in the country, equivalent to some of the largest solar energy farms currently proposed in the UK.
- 7.6 The dispersed nature of the Byers Gill solar panels across a wide geographic area, with separation distances ranging from 100-700m, would give the appearance of up to 10 individual solar farms separated by one or several fields, roads and settlement. Half of these individual solar farms would be visible from the central east-west highway route through the study area, viewed in combination with up to three culminative solar farms.
- 7.7 The open, undulating topography of the Study Area presents a challenging landscape in which to locate solar farm development due to potential high visibility from elevated land, visibility on local ridges and the large variation in reflective light caused by undulating solar panels. These factors can make geometric rows of PV panels appear more incongruous in the landscape than would otherwise be the case on relatively low lying land with natural screening. Photographs shown on pages 1 to 6 of this report illustrate the visual effects of PV panels under different light conditions on undulating land. The photographs show Worset Solar Farm under construction in Hartlepool. The photographs were taken on the same day over several hours. No colour adjustment has been made to the photographs.
- 7.8 High visibility from elevated viewpoints means that PV modules and associated infrastructure can remain visible above planting mitigation in residual views and cannot be totally or adequately screened to a level which would avoid potential significant effects. The loss of open views across undulating farmland is also a significant impact caused by extensive screen planting. A balance needs to be struck between the positive ecological/landscape benefit of such planting and the potential adverse effects on views and visual character in open farmland. This balance can only be achieved through a clear understanding of the local landscape and the nature of views. DBC is not convinced that the Developer has undertaken analysis to demonstrate an understanding of these issues.

Design Approach Document

- 7.9 There is no site-specific analysis of land in the Study Area set out in the Design Approach Document which would demonstrate a clear understanding of the key sensitivities and features of the local landscape/settlement and illustrate how this has informed the initial design process - as required under paragraphs 4.7.7 and 5.10.19 in NPS EN-1. This indicates either an over reliance on published desk top information or that detailed site analysis was not a key driver in the design process. DBC would normally expect a high level of site evaluation to be provided for any major development of this strategic scale. Example A and D in this report illustrates the type of settlement analysis which would be expected in a Design Approach Document.
- 7.10 During consultations with the Developer assurance was given that site analysis had been undertaken but not presented in the PEIR documents. There was an expectation by DBC that such work would be included in the Design Approach Document. It is acknowledged that some analysis of settlement sensitivity is presented in the ES after concerns raised by DBC, however, this does not demonstrate how this has informed the design process.
- 7.11 Paragraph 6.1.2 of the Design Approach Document sets out the overriding design principles which were established as part of the site selection process and against which the design evolution was tested. These include: a) protection/enhancement of existing features of the local landscape character, b) developing a strong green infrastructure network, c) protecting/enhancing biodiversity and protected species and d) enhance public amenity provision and Public Right of Way Network.

- 7.12 However, it is not apparent from the Design Approach Document, the ES or any other supporting document, the rationale behind the following design proposals which characterise the scheme layout for Byers Gill Solar.
- a) The clustering of solar panel areas around rural settlements and their landscape setting.
 - b) The clustering of solar panel areas along the most commonly used country road in the Study Area connecting local villages.
 - c) The dispersed nature of the solar panels covering a wide geographic area (25km²).
 - d) The limited opportunity for expansion of Panel Areas B and C on land which DBC regards as less sensitive (outside the village settings) with relatively few environmental constraints.
 - e) The introduction of solar panels in open countryside at Bishopton with high visual amenity value due to proximity (and visual connectivity) to important walking routes, the settlement edge and community facilities.
- 7.13 Reference is made several times in the Design Approach Document (and also the ES and Mitigation Route Map) to the reduction in height of the solar panels from 4.35m to 3.5m. Paragraph 7.2.4 in the Design Approach Document states the height reduction was in response to feedback received following statutory consultation and further assessment work. It is the experience of DBC that 3.5m high solar panels are commonly specified for new solar farms and, moreover, many solar farms specify a height below 3.5m. Of the eight consented solar farm developments in the Study Area (the cumulative solar farms) only one has solar panels of 3.5m high. The most common height is 2.8m-3.0m with some as low as 2.5m high. Therefore, DBC is of the view that the proposal for 3.5m high solar panels should not be regarded as mitigation where this specification is commonly used on new solar development and taller panels are, in fact, atypical.
- 7.14 The Design Approach Document (paragraphs 3.1.4 and 7.3.3) makes reference to the creation of new permissive routes totaling 3.6km, to improve the quality and connectivity of the PRoW network. These routes are welcome where there is poor or disrupted connectivity across the existing network (and relatively low usage) due to the condition of the paths and/or severance by

roads. However, this must be balanced against the loss of amenity due to views of the solar panels and extensive screening by new hedging which will adversely affect visual amenity. Extensive screening together with views of solar panels will alter the nature of views from local paths and adversely affect visual connectivity across the open farmland. Locally, high hedging along footpath routes is not uncommon but double hedging is rare, focused mainly on a small number of the traditional lanes which cross the Study Area. DBC considers that the permanent realignment of paths and designation of new Public Rights of Way would have secured additional long term community benefit above that offered by the Developer through the creation of permissive routes.

7.15 Paragraph 7.3.4 in the Design Approach Document Refers to the protection of long-range or panoramic views from PRoW but there is no evidence presented in the Document to support this statement or any illustrative material/analysis which identifies such views and their protection.

7.16 The Design Approach Document (paragraph 7.3.7) refers to new amenity areas, community land and interpretation at Bishopton, south of Coal Bank. There are no proposals for such mitigation/enhancement in other villages located in the Study Area. It is reasonable to assume, therefore, that the benefit of these proposals is limited to residents in Bishopton. That said and accepting there is a site of local historic value on the western edge of Bishopton, it is unclear from the Design Approach Document why this specific area would be the focus for community amenity recreation when it has limited connectivity with other footpath routes, is at significant distance from other community facilities and has low levels of natural surveillance and supervision.

7.17 Paragraph 7.3.10 of the Design Approach Document states that the hedgerow planting and hedgerow tree planting is intended to strengthen green corridors and create links between existing woodland belts and copses. There is no illustrative material provided in the Design Approach Document to demonstrate how the proposed mitigation planting relates to Corridor Buffers described in the Darlington GI Strategy or achieves any overarching cohesive green network other than to reinforce field boundaries. Conversely, almost all descriptions of mitigation tree and hedge planting and relaxation of hedge flailing refer to screening, even in

- areas where planting is intended to provide some community benefit. The absence of a clearly defined landscape strategy in the Design Approach Document is a key weakness in the presentation of the design principles and without such information it is difficult for DBC to assess the positive benefit of embedded mitigation and enhancement in terms of strategic green infrastructure and wildlife corridors.
- 7.18 Under the heading '*Outcomes of the design process*', paragraph 7.4.2 in the Design Approach Document, identifies six embedded mitigation measures which reduce or prevent impacts. Most of these measures have been previously reviewed and commented upon elsewhere in this Report. Table 7-1 lists residual significant landscape and visual effects - concluded from the ES. It identifies 5 receptor groups including several villages and public rights of way. There is a single reference to the '*topographic setting*' of the villages in relation to Great Stainton. It is noted that the effects on the character of Great Stainton and Bishopton and the effect on views from these villages are grouped together under the same '*location/stage of effect*', whereas, normally, the approach taken in Landscape and Visual Impact Assessment would be to separate out these effects under different receptors. In other words, the number of landscape and visual receptors predicted to experience significant residual effects is greater than would be apparent from a cursory review of Table 7-1 provided in the ES.
- 7.19 It is the view of DBC that the list of receptor groups which may experience significant residual landscape and visual effects set out in Table 7-1 does not accurately reflect the magnitude of impacts which would be experienced by all receptors across the Study Area. This will be expanded upon later in this report. It is accepted that solar farm development will inevitably result in landscape and visual impacts and some of these impacts are unlikely to be avoided or reduced by embedded mitigation. However, **it is not inevitable that solar development will result in significant residual impacts**. Where this occurs and the significant impacts affect multiple receptors, it is likely to indicate the following:
- a) The landscape has a low capacity for solar farm development and/or
 - b) The mitigation measures are inadequate and/or
 - c) The Development layout/design requires adjustment to reduce the extent of significant residual impacts and avoid widespread unacceptable harm.
- 7.20 Paragraph 7.5.1 in the Design Approach Document places emphasis on the provision of interpretation panels and provision of community spaces (at Bishopton) as examples of how the design approach enhances the experience of the landscape and its heritage, confirming this has been a central part of the design's iteration. However, it is clear from the landscape and visual assessment that such mitigation measures have limited effect and they do not markedly reduce the significant residual landscape visual effects at Bishopton or on any other receptor in the Study Area. Moreover, these measures would have little benefit beyond the immediate setting of Bishopton.
- 7.21 Paragraph 7.5.2 in the Design Approach Document refers to the '*temporary phase in the places' story*'. The Council is mindful that any effects due to the Development will last 40 years (multi-generational) and that some of the adverse effects of the mitigation measures - where these affect views from public footpaths and alter landscape/visual character - are widespread and most likely permanent.
- 7.22 The biodiversity net gain across the site is welcome and perhaps the most significant benefit of the development. It is, rightly, one of the most commonly stated benefits of solar farm development and usually one of the key mitigation measures. However, the test is whether all the planting mitigation measures would be implemented in the absence of the Development if this resulted in significant landscape and visual effects. For instance, increased hedge heights may have habitat benefit but introducing this measure extensively along road corridors/public footpaths across a wide geographic area (where low hedging is typical) has the potential to significantly alter landscape/visual character. This is especially so in undulating countryside where long views contribute to visual character and the visual amenity of the landscape. Therefore, in weighing the ecological benefit of the mitigation measures the Council is mindful of potentially significant landscape/visual adverse effects arising from such measures. This has influenced DBC's response to some of the key mitigation measures highlighted by the Developer. It is unfortunate that the Developer has not provided a landscape analysis of the study area as this would have assisted the Council in making judgments as to the benefit or disbenefit of the ecological mitigation measures in relation to key views etc.

Figure 3. Byers Gill Solar. Geographic area



Geographic area (north/south-east/west) covered by solar panels and mitigation land 25.24 square kilometres (9.74 square miles)

3.5km to Norton Substation

3.14km

Countryside gap between major settlement approximately 13km

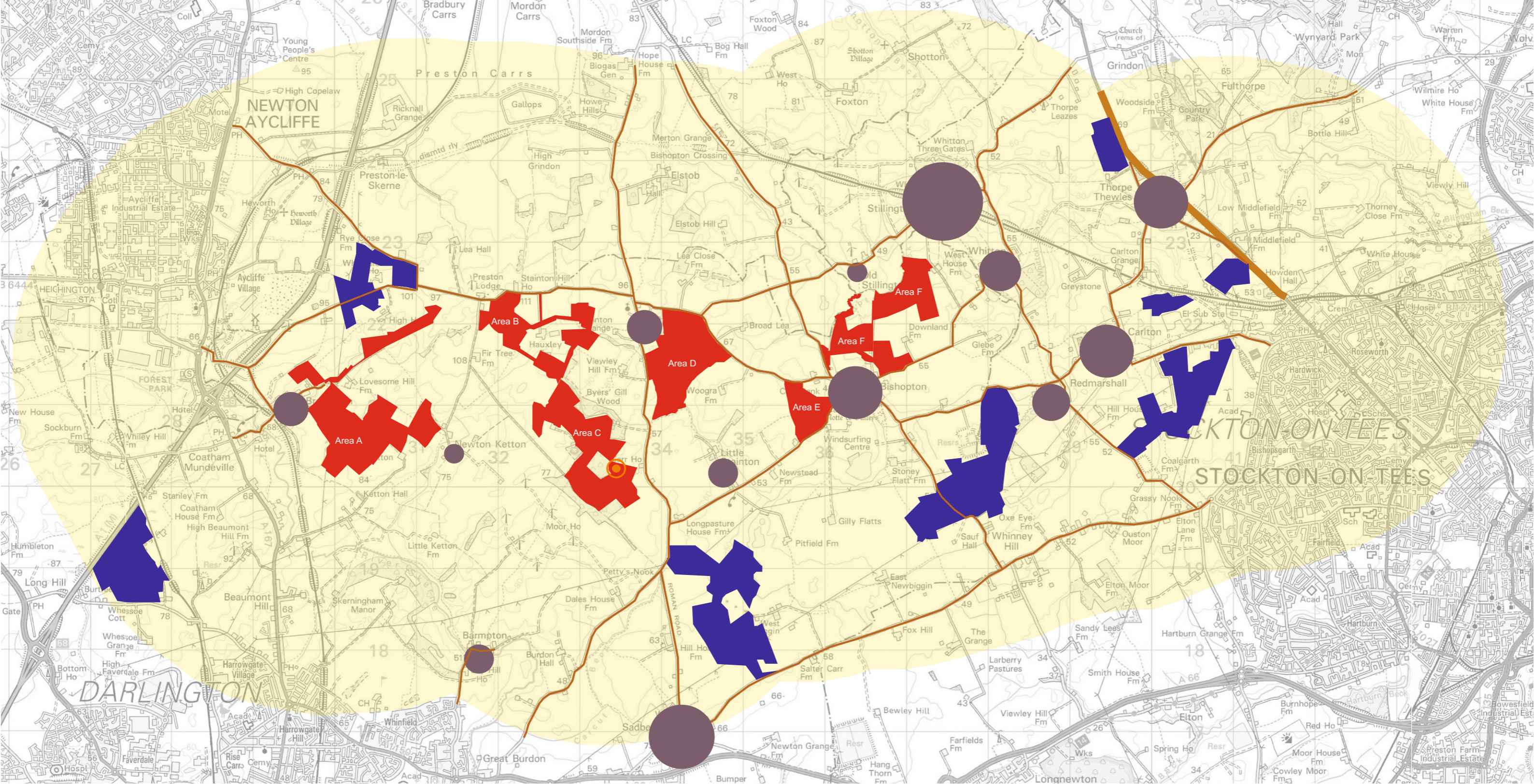





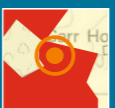


Figure 4. Byers Gill solar panels and cumulative solar development in 3km study area

-  3km study area
-  Public highway
-  Village/settlement
-  Panels Areas (connecting cable routes not illustrated)
-  Solar farm cumulative development
-  Proposed substation

8.0 REVIEW OF THE ES AND SUPPORTING DOCUMENTS

8.1 DBC is of the view that the methodology and criteria used to undertake the landscape and visual assessment in ES Chapter 7 generally accords with Guidelines for Landscape and Visual Impact Assessment (Third Edition) published by the Landscape Institute and the Institute of Environmental Management and Assessment. The baseline material is adequate and comprehensive except for the absence of plans illustrating site analysis and evaluation of setting. Significant concerns remain on a number of other matters previously raised in this report. These are considered in further detail throughout this section.

Consultation

8.2 Table 7-1 in ES Chapter 7 provides a summary of engagement with stakeholders including the response from the Developer. The table presents the Developer response to the topic specific meeting held on 11 September 2023 under the Section, Post-PEIR consultation with Darlington BC following a review of the Developer's PIER undertaken by Glenkemp on behalf of DBC. It should be noted that DBC do not accept all of the responses provided in the Developer. Key areas of concern are described below.

a) DBC are of the view that the photographic viewpoints in ES Chapter 7 do not represent the reasonable worst-case scenario which may be experienced by all receptors. DBC has particular concerns about views provided around Great Stainton and views from the east-west highway route connecting the villages. Furthermore, many of the photographs are taken in low light conditions, either overcast or with significant cloud cover. In some views, key landscape elements are silhouetted against sunlit backgrounds. In other photographs, views are substantially obscured by **avoidable** foreground features. It is accepted that weather conditions during winter are not always favorable for photography, but it would be expected that a reasonable range of light conditions would be presented in the ES to show the varied appearance of PV panels in the visualisations and also the nature of views, as demonstrated in this report. It is DBC's opinion there was ample opportunity for multiple site visits throughout the design and ES process to ensure viewpoints could be photographed in appropriate light conditions.

b) The Developer wrongly suggested that the effects on the setting of settlement could not be assessed independently in the ES Chapter 7 but offered to assess the sensitivity of settlement character and the effects of the Proposed Development on settlement character. DBC has concerns about this approach as it limits the weight given to setting. The effect on setting is clearly of significant concern to residents, especially as it impacts local amenity. Furthermore, the sensitivity of settlement setting is specifically highlighted in the DBC landscape character study and also the contribution of settlement setting to the wider landscape character. Policy SH1 seeks to protect and enhance the character of rural villages including their setting.

c) DBC is of the view that the visibility of CCTV in the open countryside can significantly alter the perception of a place. The undulating landscape of the study area allows views across the Solar Panels or parts of the Solar Panels from elevated viewpoints. Views of the PV modules and associated infrastructure cannot be entirely screened in such views, regardless of proposed mitigation. Therefore, it is not unreasonable for DBC to request further details of CCTV in the knowledge that some solar farm development can include a high number of pole mounted CCTV and the large scale of Byers Gill Solar will affect a wide geographic area.

8.3 Notwithstanding the above comments, DBC is now satisfied that most (but not all) adverse effects of mitigation planting on the selected viewpoints have been adequately assessed in ES Chapter 7. There is clear reference to the loss of view in the ES and there are some notable changes in predicted effects between the PEIR and ES following this assessment review. For example, the predicted residual visual effects on the bridleway near Brafferton with mature mitigation planting has changed from Large, Neutral effect in the PEIR to Large Adverse in the ES.

Viewpoint analysis

- 8.4 Paragraph 7.4.2 in ES Chapter 7 confirms that viewpoints are used as 'sample' locations to inform the assessment of effects on receptors. ES Appendix 7.4 states viewpoint assessment has been carried out to inform the assessment of the likely magnitude and significance of landscape and visual effects arising for the Proposed Development. Paragraph 7.4.18 in ES Chapter 7 states the method of visualisation has been informed by Landscape Institute Technical Note (LITN) 06/19 Visual Representation. Annotated photographs and matched wirelines are used for the majority of viewpoints and photomontages used for viewpoints close to settlements and transport routes. LITN 06/19 confirms that the aim of Type 3 and 4 photomontages/photowires is to represent the appearance, context and extent of the development.
- 8.5 DBC is of the view that the visualisations presented in the ES do not accurately represent the typical variation and natural appearance of solar panels in a landscape context. See photographs of Worset Solar Farm under construction in Hartlepool on pages 1 to 6 of this report. The Worset Solar Farm photographs do not illustrate the screening effect of mitigation planting.
- 8.6 Reference has been made several times in this report to DBC concerns about the representativeness and quality of the selected viewpoints in the ES. To demonstrate this point, Example B of this report illustrates a range of public views taken around and towards Stainton Village, comparing this to photography presented in the ES. It is clear from even a cursory comparison that the existing panoramic views towards/from Great Stainton are not adequately represented in the ES.
- 8.7 DBC also has concerns about the limited selection of photographs taken from the main east-west route in the Study Area connecting the villages. Figure 6 shows the location of the five ES viewpoints on the 10.6km long road corridor. Example C in this report illustrates alternative views from the section of highway between Bishopton and Great Stainton. Photograph 4 in Example C shows the view towards Great Stainton from the eastern approach. This view is not presented in the ES but it clearly shows a significant part of the setting of Great Stainton, visible from the highway, which will be affected by the Development. It is clear from photographs presented in Example C that viewpoint 21 in the ES is not representative of views available from this section of road.

Settlement character, sensitivity and setting

- 8.8 In response to concerns raised by DBC on the impacts on village setting, the Developer has undertaken a settlement study based on a review of local factors such as settlement pattern and views. The adopted methodology does not specifically address the value, sensitivity or impact on setting as requested by DBC, but ES Figure 7.6 Key Settlements indicates the extent of land which the Developer considers to fall within the setting the three main villages. (Brafferton, Bishopton and Great Stainton). The plans also show the extent of solar panels which fall within the setting.
- 8.9 DBC is concerned that ES Figure 7.6 significantly understates the extent of the village settings and in doing so disregards areas of solar panel which fall within the settings. This discrepancy would clearly lead to a conclusion which understates the impact of the Development on the setting of the three main villages. Example D in this report illustrates a preliminary assessment of the setting around Bishopton. This level of settlement assessment would be expected for any major planning application. The extent of the setting around Bishopton shown in Example D is based on a reasonable assessment of intervisibility between the settlement edge and surrounding countryside. The assessment clearly shows that Panel Area E substantially falls within the village setting and would affect the magnitude of change within the setting.
- 8.10 DBC has also undertaken an assessment of the extent of land forming the setting of Brafferton and Great Stainton. See Figure 6 and Example A in this report. It is notable that ES Figures 7.6.1 – 7.6.3 show a more limited area than presented in this report. The DBC assessment is based on fieldwork, analysis of the ES photography and other photography presented in this report. Special note was taken of viewpoints 1 and 2 in the ES to define the setting area of Brafferton. There is no explanation in the ES as to why the ES photography was not used to identify the additional area of land within the setting of Brafferton to the north and south of the village, when it is clearly illustrated in the viewpoints. It is clear to DBC that the extent of the setting of the main villages is more extensive than shown in ES Figures 7.6.1 – 7.6.3 and, as a result, the effects of the Development on the setting (character) of the villages will be of a greater magnitude than assessed in the ES.

Figure 5. Distribution of solar panels in 500m zone

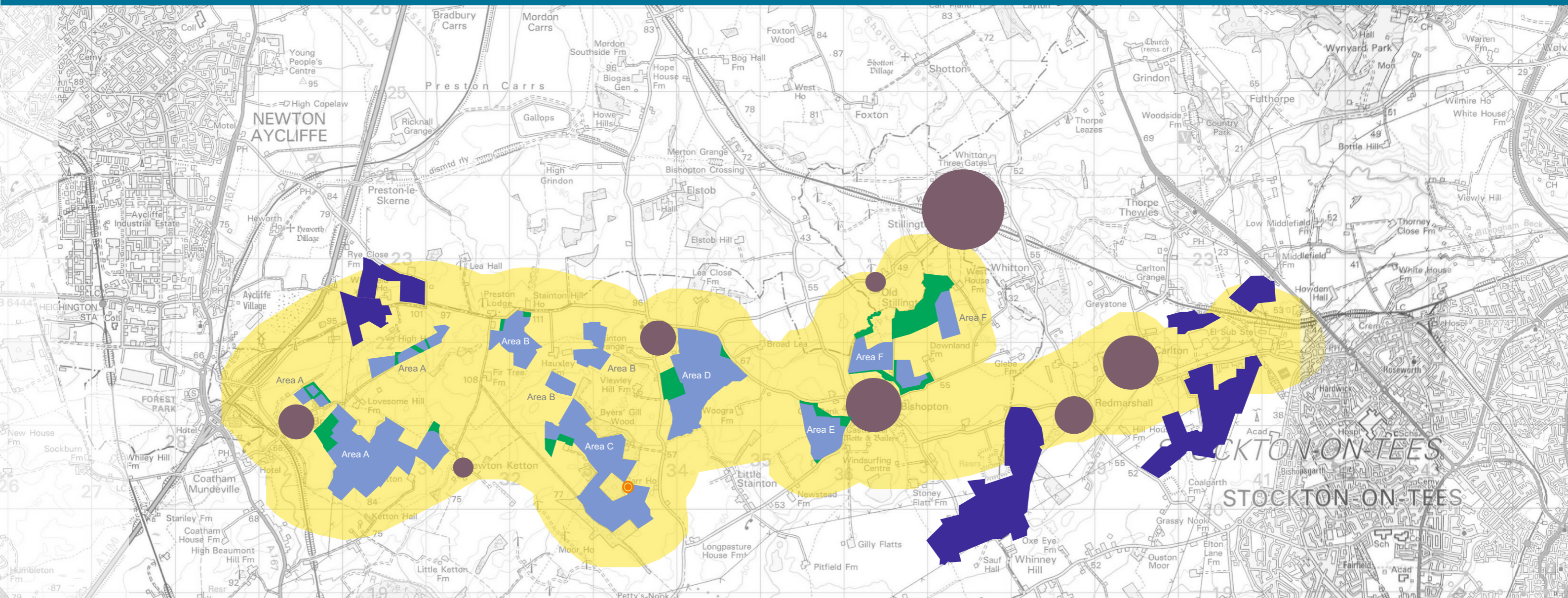
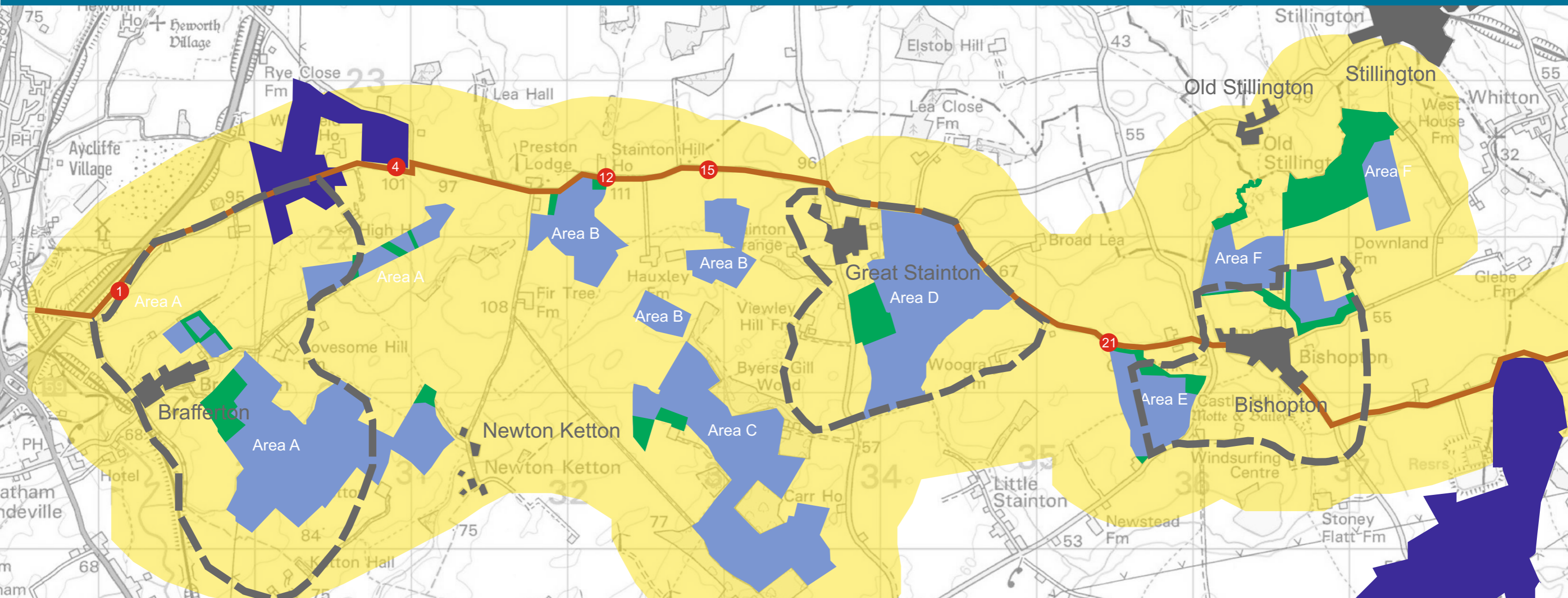
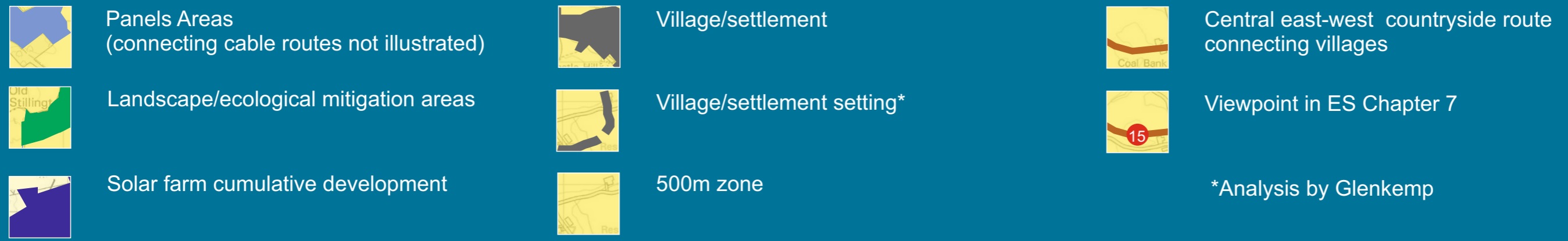


Figure 6. Village settings and connecting highway in 500m zone



9.0 LANDSCAPE AND VISUAL ASSESSMENT

9.1 Table 7-12 in the ES summarises the predicted landscape and visual impacts. Significant impacts during operation are predicted for the following receptors/receptor groups:

1. Darlington Landscape Character Area 6 Great Stainton Farmland
2. Character of Great Stainton
3. Character of Bishopton
4. Changes in views at Great Stainton
5. Changes in views at Bishopton (Years 1-10)
6. Views from PRow between A167, Salters Lane, Lea Hall and Little Ketton Farm
7. Views from PRow east of Salters Lane between Lea Hall, Newton Ketton, Elstob Lane and Hill House Lane
8. Views from PRow east of Elstob Lane and Hill House Lane, between Bleach House Bank, Stoney Flatt Farm and Gillyflatts
9. Views from PRow east of Bleach House Bank between Stillington, Redmarshall and Stoney Flatt Farm (Years 1-10)

9.2 Table 7-13 in the ES summarises the predicted landscape and visual impacts for receptors/receptor groups considered to receive non-significant effects. The table covers 19 individual receptors/receptor groups of which 6 are predicted to experience moderate adverse effects during operation. Moderate adverse effects can be potentially significant.

9.3 Notwithstanding differences of opinion between the Developer and DBC regarding the method of assessing changes in settlement character and setting, it is clear that the ES predicts significant adverse residual impacts on Bishopton and Great Stainton and on views from these villages. These adverse impacts will clearly affect the amenity of local communities.

9.4 DBC is of the opinion that the impacts on Brafferton and views from Brafferton are also major/moderate adverse and therefore significant, noting that the magnitude of change on the village setting is far greater than illustrated in the ES. There are also significant changes in views of the Development from the settlement edge and views of the solar panels from all local footpath connections into the village. Existing public views will be altered by proposed screening, views of the solar panels, changes in the nature of village setting and loss/changes in open countryside views. DBC is of the view that the magnitude of change on the

character/setting of Brafferton and views from Brafferton is higher than predicted in the ES and, even if this is disputed by the Developer, the predicted moderate effects should be considered significant for the reasons highlighted above.

9.5 DBC considers the landscape effects on Darlington Landscape Character Area 7 Bishopton Vale are also greater than predicted in the ES. This arises due to the adverse effects generated by the Development and cumulative effects generated by other consented solar farms in combination. The ES acknowledges significant effects on the character of Bishopton and views from Bishopton (Year 1-10). The rural context and setting of villages are key sensitivities of the character area and protected by policy. Furthermore, the Development in combination with cumulative solar farm development, will impact on all roads and public footpaths throughout this character area except for Bishopton Lane and a small number of paths to the south of this highway. The impacts include a change in landscape and visual character and a change in views due to visibility of the Development and/or the screening of existing views. DBC is of the opinion that the magnitude of change on this character area is higher than predicted in the ES and even if this is disputed by the Developer, the predicted moderate effects should be considered significant for the reasons highlighted above.

9.6 ES Table 7-13 assesses the impacts on views from local rural roads within 1.0km of the Proposed Development to be moderate during the operational phase sometimes reducing to moderate/minor at Year 10-40. DBC is of the opinion that such effects such be considered significant and adverse for the reasons set out in paragraph 9.7 below.

9.7 Figures 1 and 4 in this report show the road network in relation to villages in the 3km Study Area. The map illustrates cumulative solar development and the Proposed Development. It clearly demonstrates that all almost rural roads within the 3km Study Area will interact with either the Development or a consented solar farm. Figure 6 shows the relationship of the central east-west highway route through the Study Area (connecting the main villages) with the Proposed Development, consented solar farms and the setting of villages. The map shows that along this central route (approximately 10.5 km in length) the road would interact with 7 distinct parcels of land containing solar panels (the Proposed Development in combination with cumulative solar farms). These are likely to be perceived as 7 separate

solar farms. The distance between the solar panel areas ranges from approximately 0.7km to 2.52 km. Therefore, travellers using this route would potentially experience a solar farm approximately every 3 minutes or less, assuming an average speed of 40miles/hour (64km/hour). This analysis indicates that travelers on the principal east-west rural route between Darlington and Stockton-on-Tees (connecting the main villages) would experience regular views of solar panels along the entire 10.6km route at intervals not exceeding every 2 or 3 minutes. Such views would be available until mitigation planting had matured. Even then, glimpsed views are likely to persist across the undulating landscape and in winter views. In any event, many of the existing open views from the road corridor would be lost. ES Chapter 7 assesses the magnitude of change in views from rural roads within 1km of the proposed solar panel areas to be moderate or, at best, moderate/minor after Years 10-40. It would be expected that the effects on the central route (as a whole) would be at the higher scale due to the close proximity of the solar panels.

Summary of landscape and visual impacts

- 9.8 The ES predicts significant (major/moderate) landscape and visual adverse effects during operation on the Great Stainton landscape character area, the villages of Great Stainton and Bishopton (village character and views) and all public footpaths within 1.0km of the Proposed Development. Views from several receptors are predicted to reduce to moderate adverse by Years 10-40. Moderate effects can be considered potentially significant. DBC is of the opinion that the effects on the character of Brafferton and views from Brafferton should also be considered significant. Furthermore, DBC is of the view that significant impacts will occur on the setting of the villages. The sensitivity of the rural village settings is highlighted in Darlington Landscape Character Assessment and any significant changes will clearly impact on landscape character and the amenity of local residents. Additionally, DBC is of the opinion that the combination of the Proposed Development and cumulative solar farms generates significant impacts on the rural highway network in the 3.0km Study Area. Every road would interact with a solar farm and travellers would potentially experience a solar farm every 2-3 minutes along the entire 10.5km central route connecting the villages.
- 9.9 The predicted significant landscape and visual effects described above will occur even after mitigation. This would indicate the landscape has a low capacity to accommodate additional solar farm development above that already consented and/or the proposed mitigation is ineffective or insufficient to limit significant effects. This is

despite the positive impacts of ecological and recreational measures (permissive footpaths) which have local benefit and also the enhancement measures around Bishopton. In other words, the combined benefit of the mitigation and enhancement measures is insufficient to reduce the extent of overwhelming and significant adverse effects.

- 9.10 Overall, the predicted significant impacts in the ES are not that dissimilar to the views expressed by DBC although there may be some disagreement on the significance of moderate impacts and the magnitude of effect on Brafferton and local roads. Indeed, there is a high degree of consensus that many local receptor groups in close proximity to the solar panels will experience significant effects including rural settlement and public footpath users. There is also agreement about significant adverse effects on landscape character although, for reasons given, DBC is of the view these effects cover multiple character areas.
- 9.11 DBC accepts that some effects are inevitable for any solar development but significant adverse residual effects on multiple receptors (after mitigation) are not inevitable. It suggests that the undulating landscape has limited capacity for a solar farm of this scale in combination of other consented solar development and/or the dispersed nature of the Development across a large geographic area, causes widespread unacceptable harm to many receptors which cannot be mitigated. The predicted landscape/visual impacts will be transformative and the effects on local amenity and local communities will be multi-generational.

10.0 SUMMARY AND CONCLUSION

- 10.1 Byers Gill Solar, taken individually and in combination with other consented solar farms in the 3km Study Area represents one of the largest concentrations of photovoltaic development in the country, equivalent to some of the largest solar energy farms currently proposed in the UK.
- 10.2 The dispersed nature of the Byers Gill solar panels across a wide geographic area, with separation distances ranging from 100-700m, would give the appearance of up to 10 individual solar farms (in close proximity) separated by one or several fields, roads and settlement.
- 10.3 The Development proposes six separate Panels Areas A-F located across a geographic area in excess of 25 km² (9.74 square miles). The geographic area is predominantly open farmland with scattered villages connected by rural roads and public footpaths. The farmland is located between Darlington/Newton Aycliffe and Stockton-on-Tees. The gap between the edge of the major urban areas is approximately 12km. The Solar Panel Areas extend across 8km of this gap. The gap contains an additional seven solar farms which have consent and/or under construction (One cumulative project lies outside the described settlement gap). The Panel Areas cover approximately 20% of all land within the 25 km² geographic area. The Panel Areas cover 57 separate field enclosures.
- 10.4 The open, undulating topography of the Study Area presents a challenging landscape in which to locate solar farm development due to high visibility from elevated land, visibility on local ridges and the large variation in reflective light (appearance) caused by undulating solar panels. These effects are illustrated in this report with photography of a solar farm in a similar landscape.
- 10.5 It is unclear from the Design Approach Document, the ES or any other supporting document, the rationale behind the following design proposals which characterise the scheme layout for Byers Gill Solar.
- a) The clustering of solar panel areas around rural settlements and their landscape setting.
- b) The clustering of solar panel areas along the most commonly used country road in the Study Area connecting local villages.
- c) The dispersed nature of the solar panels covering a wide geographic area (25km²).
- d) The limited opportunity for expansion of Panel Areas B and C on land which DBC regards as less sensitive (outside the village settings) with relatively few environmental constraints.
- e) The introduction of solar panels in open countryside on the edge of Bishopton with high visual amenity value due to proximity (and visual connectivity) to important walking routes, residential and community properties and recreation facilities.
- 10.6 The absence of a clearly defined landscape strategy in the Design Approach Document is a key weakness in the presentation of the design principles and without such information it is challenging for DBC to assess the positive benefit of embedded mitigation and enhancement in terms of strategic green infrastructure and wildlife corridors.
- 10.7 DBC is of the view that the proposal for 3.5m high solar panels should not be regarded as mitigation where this specification is commonly used on new solar development and taller panels are, in fact, atypical.
- 10.8 The Design Approach Document makes reference to the creation of new permissive routes to improve the quality and connectivity of the PRoW network. These routes are welcome where there is poor or disrupted connectivity across the existing network. However, the recreation value of improved footpath connectivity must be balanced against the loss of amenity due to the widespread use of double hedging. The designation of Permissive Routes as Public Rights of Way would have secured greater long term benefit for local communities.
- 10.9 The Design Approach Document refers to new amenity areas, community land and interpretation at Bishopton. There are no proposals for such mitigation/enhancement in other villages located in the Study Area. It is reasonable to assume, therefore, that the benefit of these proposals is limited to residents in Bishopton.
- 10.10 The biodiversity net gain across the development is welcome and perhaps the most significant benefit of the development. However, in weighing the ecological benefit of the mitigation measures the Council is mindful of potentially significant landscape/visual adverse effects arising from such measures. It is the Council's opinion that the widespread introduction of hedging on PRoW

and new permissive routes significantly reduces the amenity value of these footpaths. The substantial length of footpath affected by these proposals and the extensive geographic area covered by the Development (in close proximity to three villages) increases the adverse effect on local amenity. It is accepted that high hedging (on both sides of a footpath corridor) may be a preferable solution to views of solar panels, but it does not mean that this solution is acceptable in landscapes where such features are uncommon.

experience a solar farm every 2-3 minutes along the entire 10.6km central route connecting the villages. DBC is of the view, therefore, that such effects should be considered significant.

10.11 DBC is of the opinion that the baseline methodology and criteria used to undertake the landscape and visual assessment in ES Chapter 7 generally accords with guidelines. The baseline material is generally adequate and comprehensive, but the absence of plans (in the ES or supporting documents) illustrating site analysis and evaluation, normally expected for strategic development at this scale, is a significant weakness. The Council also has major concerns about the selection/quality of photographic viewpoints presented in the ES and the representativeness of appearance in the visualisations. The Council is of the opinion (demonstrated by photographic evidence presented in this report) that the photography provided in the ES does not represent a reasonable 'worst case' for some receptors such as Great Stainton (and the roads into this village) and in some cases, does not even represent a typical view. The misinterpretation of the village settings and the absence of an assessment on the settings (as a distinct receptor) compounds the above weaknesses.

10.13 Overall, the predicted significant adverse impacts identified in the ES are not that dissimilar to the views expressed by DBC but there is disagreement on the significance of moderate impacts and the magnitude of adverse effect on Brafferton and local roads. There is a high degree of consensus that many local receptor groups in close proximity to the solar panels will experience significant adverse effects including rural settlement and public footpath users. There is also agreement about significant adverse effects on landscape character although, for reasons given, DBC is of the view these effects cover multiple character areas.

10.12 The ES predicts significant landscape and visual effects during operation on the Great Stainton landscape character area, the villages of Great Stainton and Bishopton and all public footpaths within 1.0km of the Proposed Development. Views from several receptors are predicted to reduce to moderate by Years 10-40. Moderate adverse effects can be considered potentially significant. DBC is of the opinion that the effects on the character of Brafferton and views from Brafferton should also be considered significant. Furthermore, DBC is of the view that significant impacts will occur on the setting of the villages. The sensitivity of the rural village settings is highlighted in Darlington Landscape Character Assessment and any significant changes will clearly impact on landscape character and the amenity of local residents. Additionally, DBC is of the opinion that the combination of the Development and cumulative solar farms generates significant impacts on the rural highway network in the 3.0km Study Area, noting that the ES predicts visual effects on every individual section of road, ranging from moderate/minor to moderate (potentially significant). It is clear that every road would interact with a solar farm and travellers would potentially

10.14 Summary of landscape and visual effects after mitigation considered by DBC to be significant (during operation). ES denotes those affects which are assessed as significant in the Environmental Statement.

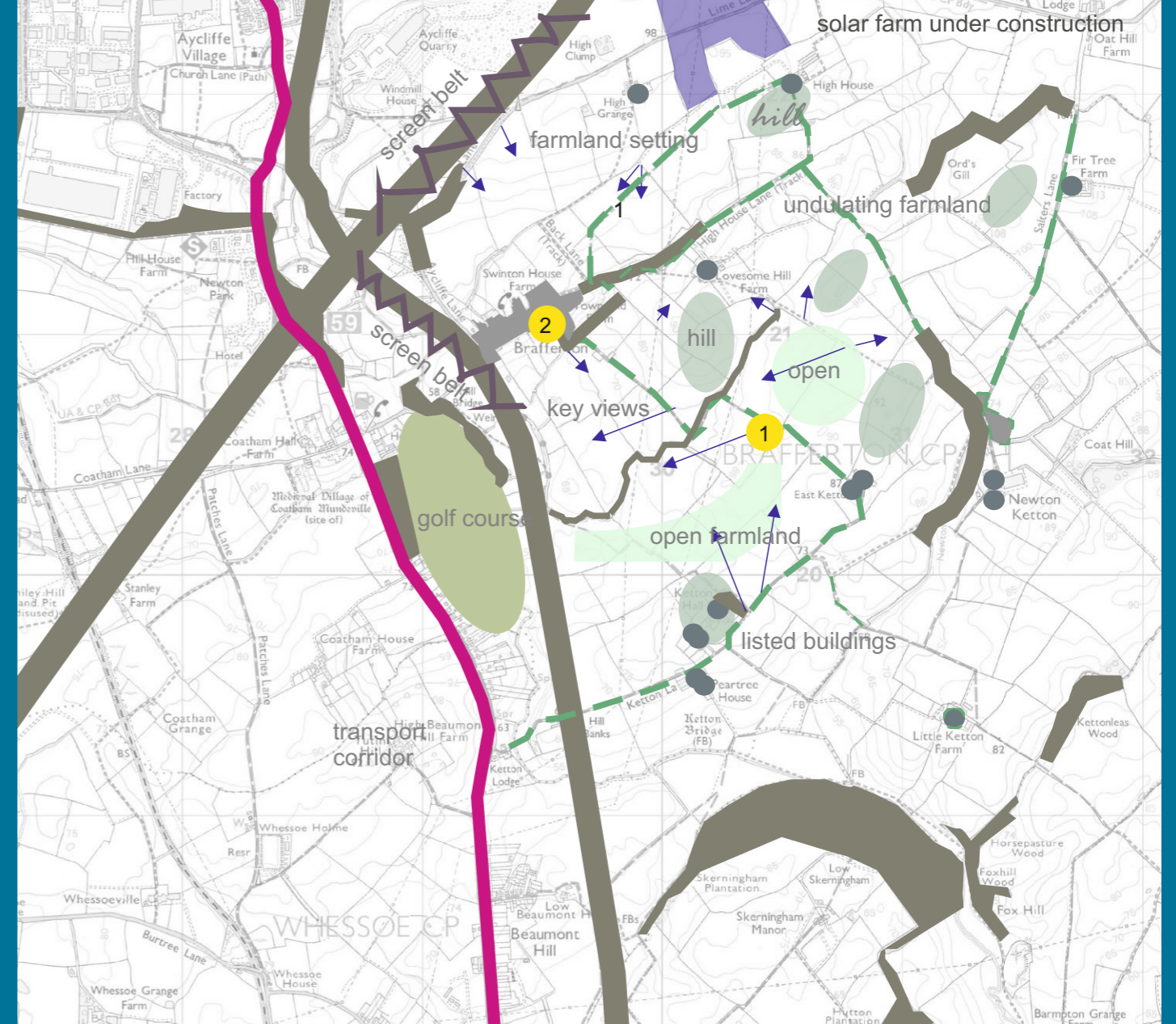
- 1) Landscape effects on landscape character area Darlington 6: Great Stainton Farmland (ES)
- 2) Landscape effects on landscape character area Darlington 7: Bishopton Vale*¹
- 3) Landscape effects on the setting of Bishopton*²
- 4) Landscape effects on the setting of Great Stainton*²
- 5) Landscape effects on the setting of Brafferton*²
- 6) Landscape effects on the character of Bishopton (ES)
- 7) Landscape effects on the character of Great Stainton (ES)
- 8) Landscape effects on the character of Brafferton*³
- 9) Visual effects on **all** Public Rights of Way within 1km of the Development (ES)*⁴
- 10) Visual effects on the central east-route through the Study Area connecting villages*⁵
- 11) Visual effects on views from Bishopton (ES)
- 12) Visual effects on views from Great Stainton (ES)
- 13) Visual effects on views from Brafferton*⁶

Notes*

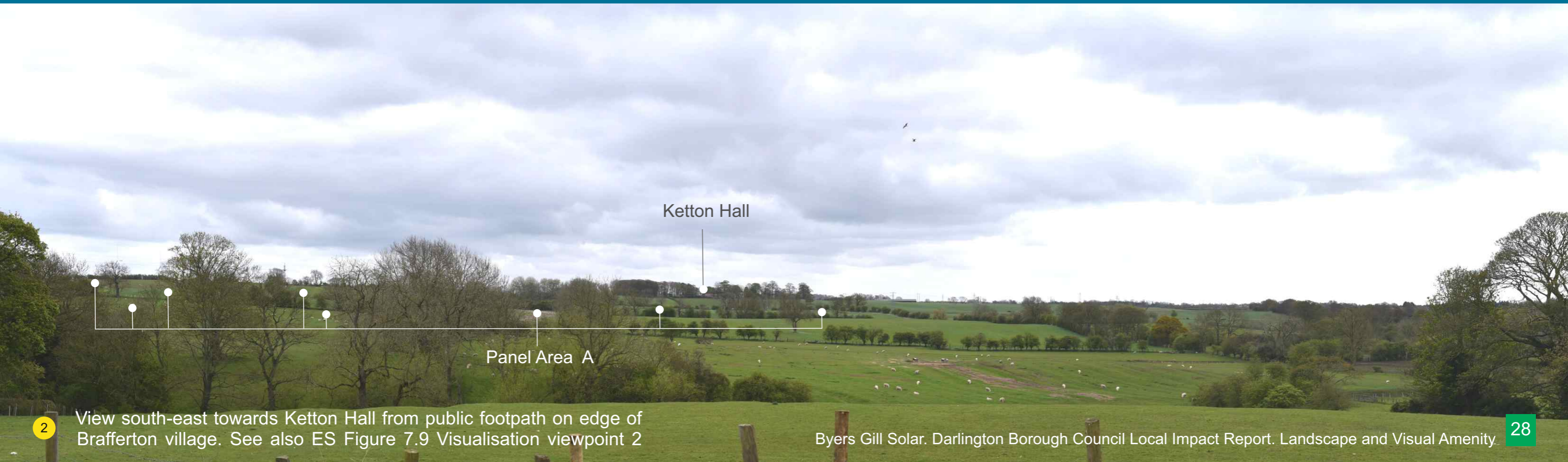
1. Assessed as moderate in the ES (potentially significant)
2. Not assessed as a receptor in the ES
3. Assessed as moderate/minor in the ES
4. Effects on PRoW are grouped in geographic areas in the ES. All visual effects for all PRoW groups are assessed as significant
5. Effects on individual sections of roads within 1km of the Proposed Development are assessed as moderate/minor or moderate in the ES (moderate effects are potentially significant).
6. Assessed as moderate in the ES (potentially significant)

- 10.15 DBC accepts that some effects are inevitable for any solar development but significant adverse residual effects on multiple receptors (after mitigation) are not inevitable. The conclusion of significant landscape and visual effects in the ES and by DBC suggests that the landscape in question has limited capacity for a solar farm at this scale in combination of other consented solar development. It also indicates that the dispersed nature of the Development, across a large geographic area, causes widespread unacceptable harm to many receptors which cannot be mitigated. The predicted landscape/visual impacts will be transformative and the effects on local amenity and local communities will be multi-generational.
- 10.16 The absence of site analysis and evaluation in the ES and Design Approach Document (except for key settlements, after a request from DBC) would suggest the layout of the Development has not been driven by landscape and visual amenity considerations from the outset. Indeed, it is difficult not to conclude that the solar farm layout, as currently proposed, has been dictated by factors such as land ownership/landowner consent rather than landscape and visual sensitivities, since no rationale is presented to justify the concentration of solar panels around the villages. Landscape and visual matters have been mainly addressed through the landscape mitigation strategy. The strategy has limited success due to the inherent weakness in the design layout, and this has resulted in a range of significant adverse impacts which most likely could have been avoided had the Developer adopted a different design approach.
- 10.17 The significant landscape and visual effects generated by the Proposed Development after mitigation are in conflict with Local Policy SH1, DC1, DC4, ENV3 AND IN9. Darlington Borough Council are of the view that these effects and the process undertaken by the Developer to identify such effects are in conflict with national policy and guidance set out in NPS EN1 and NPS EN3.

Example A. Landscape analysis - Brafferton



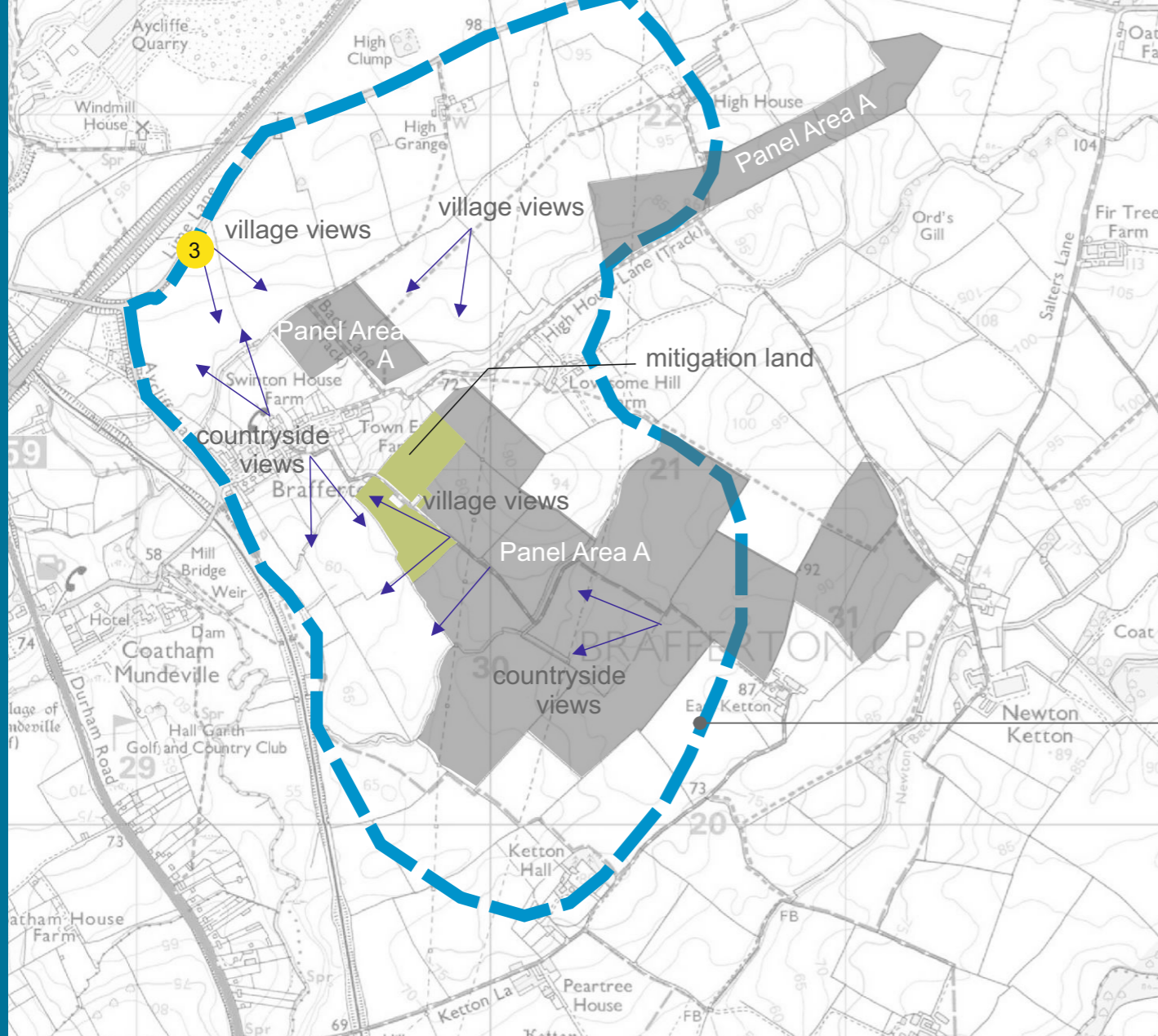
1 View east from public footpath across open farmland



Ketton Hall

Panel Area A

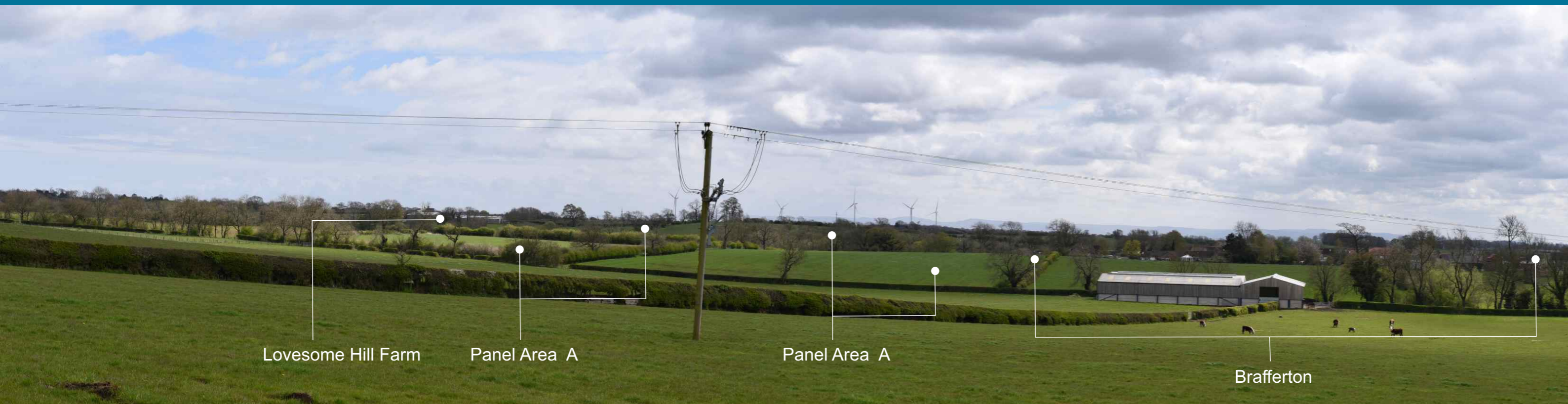
2 View south-east towards Ketton Hall from public footpath on edge of Brafferton village. See also ES Figure 7.9 Visualisation viewpoint 2



Extent of village setting illustrated in ES Figure 7.6.1

Extent of village setting observed through site photography and fieldwork and further confirmed by viewpoints 1 and 2 - ES Figure 7.9

Example A. Landscape analysis - Brafferton



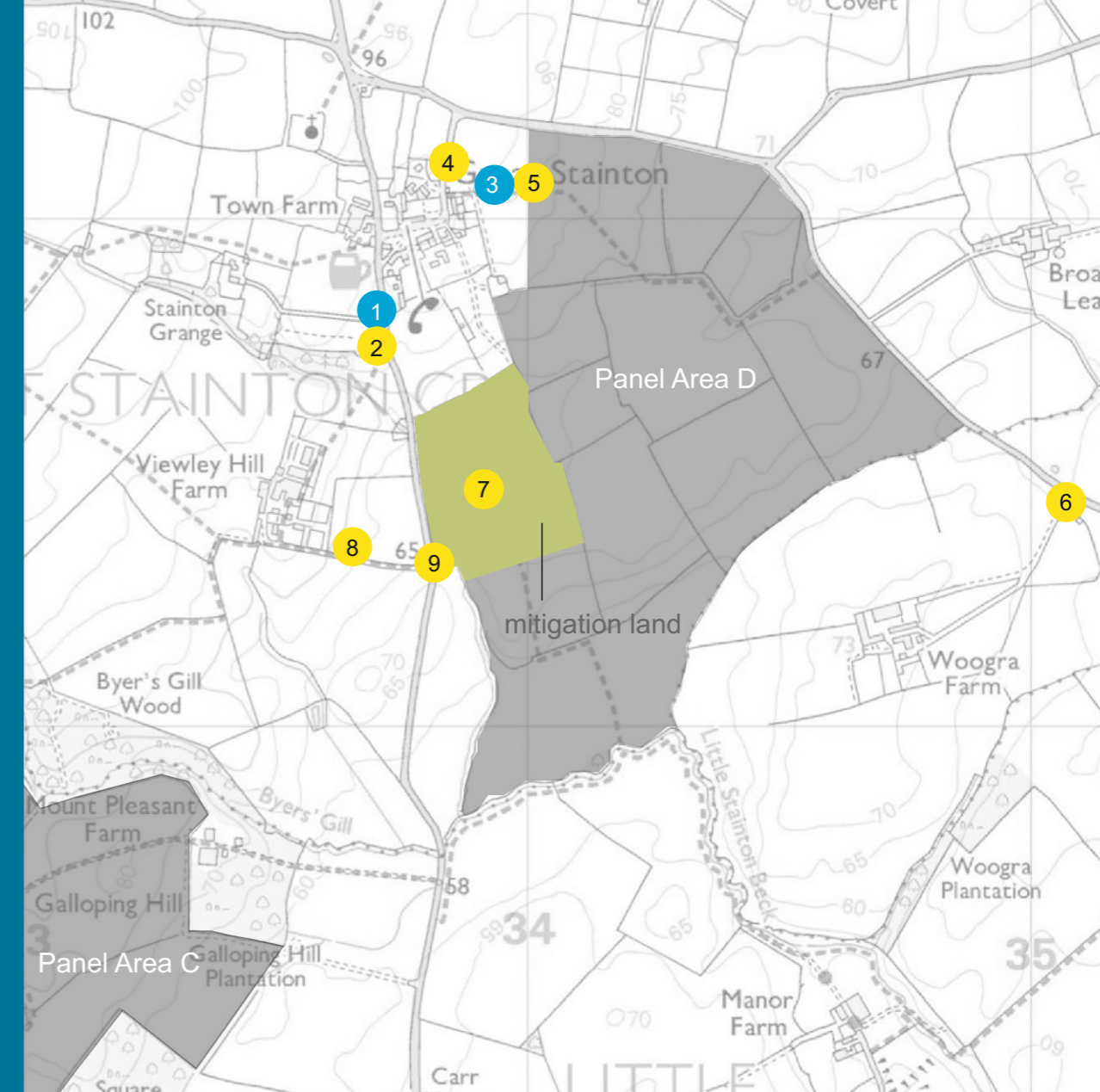
3 View south-east towards Brafferton from Lime Lane. See also ES Figure 7.9 visualisation viewpoint 1

Example B. Great Stainton - viewpoint analysis

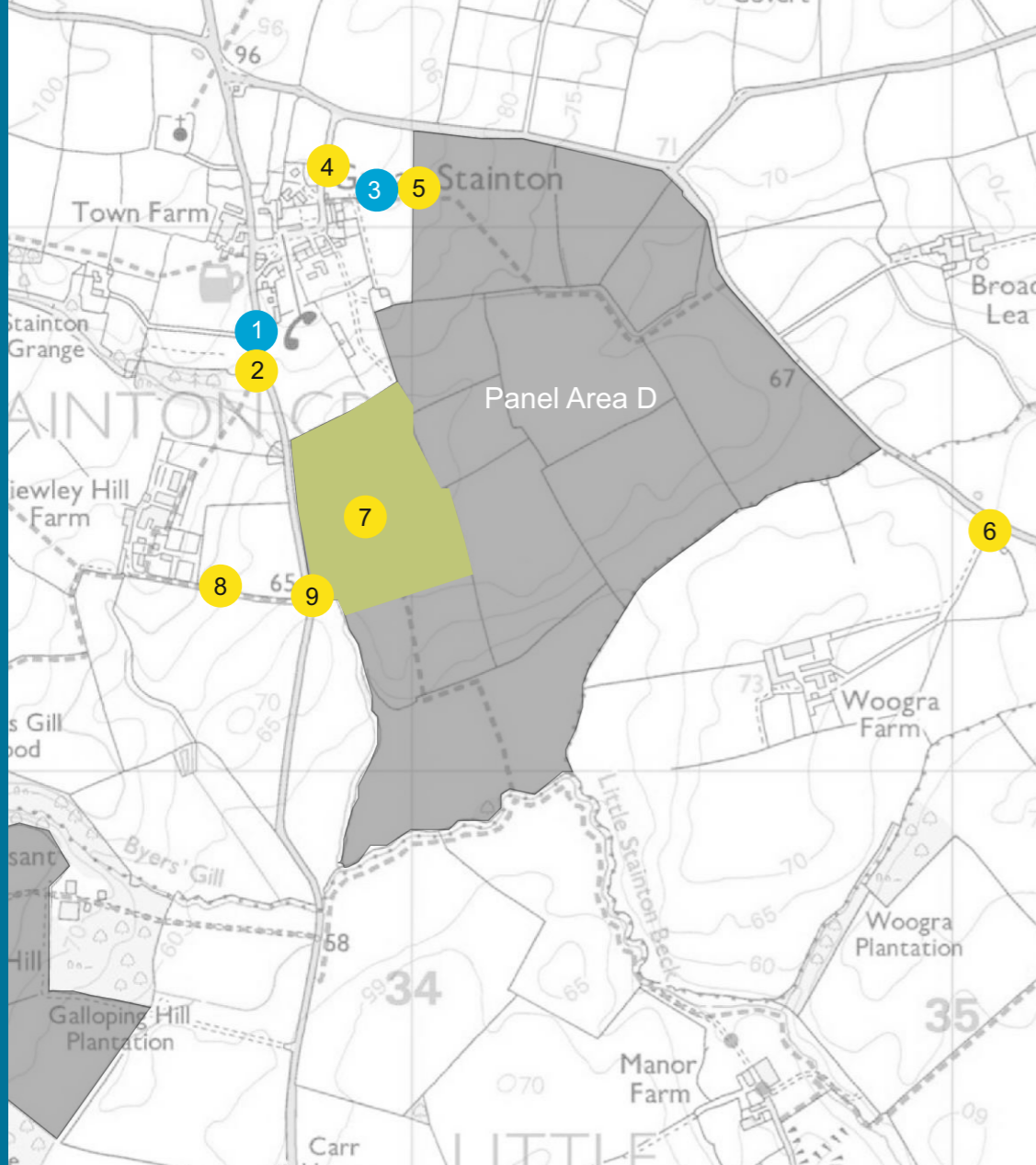
- Viewpoint assessed in ES Chapter 7
- Additional photography undertaken for Landscape Local Impact Report



1 ES photograph at viewpoint 18



2 Photograph 20m south of viewpoint 18 showing panoramic view from highway



Example B. Great Stainton - viewpoint analysis

- Viewpoint assessed in ES Chapter 7
- Additional photography undertaken for Landscape Local Impact Report



● ES photograph at viewpoint 17 - view east



● ES photograph at viewpoint 17- view south





7 View north towards Great Stainton from public footpath*

* This public viewpoint will not be available following the footpath diversion undertaken as mitigation for the Proposed Development.



Example C. Views from country road between Bishopton - Great Stainton

- Viewpoint assessed in ES Chapter 7
- Additional photography undertaken for Landscape Local Impact Report



1 ES photograph at viewpoint 21



2 View west from Hilltop House, Coal Bank

Example C. Views from country road between Bishopton - Great Stainton

● Additional photography undertaken for Landscape Local Impact Report



3 View east towards Hilltop House, Coal Bank



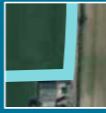







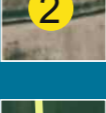
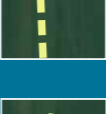

4 View west towards Great Stainton, west of access to Woogra Farm

Example D. Bishopton landscape setting

* Approximate area of land which forms the immediate setting of Bishopton with intervisibility with the settlement edge. Based on analysis of winter views.

● Additional photography undertaken for Landscape Local Impact Report



- Village setting* 
- Bishopton Conservation Area 
- Listed buildings 
- Scheduled monument 
- Local landmark 
- Tree belt/woodland 
- Community facilities 
- Key views from/towards the settlement edge 
- Photographic viewpoint 
- Public footpath/bridleway 
- Important pedestrian route 





2 View north from Mill Lane across field gate

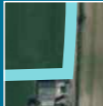


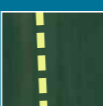




3 View south west on Mill Lane towards Bishopton

Example D. Bishopston landscape setting

Extent of village setting illustrated in ES Figure 7.6.3



- Village setting 
- Bishopston Conservation Area 
- Scheduled monument 
- Public footpath/bridleway* 
- Solar panels 
- Mitigation tree/shrub planting* 




* Development includes additional landscape/ecological mitigation measures under and around the margins of panel areas not illustrated on this diagram. Proposed footpath diversions illustrated where applicable.

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Local Impact Report - Landscape and Visual Amenity
Darlington Borough Council

July 2024

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