Proposed Solar PV Development

Byers Gill Solar
EN010139

5.2 Consultation Report Appendices Part 2 of 4

37(3)(c) of the Planning Act 2008

APFP Regulation 5(2)(q)

Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009

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Byers Gill Solar

Consultation booklet

FRIDAY 5 MAY – FRIDAY 16 JUNE 2023

Images are typical and indicative only

The need for Solar

The UK has made a legally binding commitment to achieve net zero carbon emissions by 2050. This can only be achieved with the roll-out of reliable, affordable, clean energy sources such as solar. Solar farms, such as Byers Gill Solar, would make a meaningful contribution to local and national climate commitments, reducing our impact on the environment and contributing to energy security.

In 2022, the UK Government published their Energy Security Strategy, announcing that they intend to accelerate and increase solar power capacity by up to fivefold from 14GW to 70GW by 2035. If achieved, this will mean the UK will have a 100% renewable energy grid by 2035. Byers Gill Solar would play an important part in the helping the UK to reach our renewable energy targets, by powering over 70,000 homes.

Byers Gill Solar is located across Darlington and Stockton-on-Tees, and borders County Durham. The local authorities in these areas have also recognised the need for action on climate change. Darlington Borough Council and Durham County Council declared a climate emergency in 2019, while Stockton-on-Tees Borough Council adopted an Environmental Sustainability and Carbon Reduction Strategy in 2022. Byers Gill Solar will be a crucial part of any efforts to reduce carbon consumption.

JBM SOLAR

About JBM Solar

JBM Solar is at the heart of the UK's renewable energy revolution, helping to realise our collective goal of net zero emissions through the deployment of solar energy. Since 2012, JBM Solar has secured planning permission for more than 1GW of solar projects, the equivalent of providing energy to over 265,000 homes. JBM Solar is committed to delivering large-scale solar farms with co-located battery storage, and a minimum of 50% biodiversity net gain on every project.

JBM Solar has recently been acquired by RWE, the UK's largest power generator and one of the largest renewables developers, who are committed to the design, build and operation of the Byers Gill Solar. RWE's involvement provides certainty that the scheme would be high-quality and well maintained throughout its operation.

This booklet provides information on Byers Gill Solar to inform stakeholders and local communities, enabling them to fully respond to the public consultation.

As part of this consultation, we are seeking your feedback on the proposals for Byers Gill Solar. The feedback you provide to us at this stage will help to shape and inform our proposals before we submit our Development Consent Order application later this year.

Byers Gill Solar

Byers Gill Solar consists of a solar farm capable of generating 180MW of electricity, enough to power over 70,000 homes. Located across neighbouring sites between Darlington, Stockton-on-Tees and Durham, the proposals include:

- Six Panel Areas,
- Battery Energy Storage Systems (BESS);
- An on-site substation;
- Up to 31km of underground cabling, to connect the Panel Areas to Norton Substation; and
- A range of supporting infrastructure, including inverters, storage containers and security measures.

Other key features of the scheme are mitigation and enhancement measures for the natural environment. These measures would ensure any negative impact on existing habitats and biodiversity is limited, with improvements provided to help nature thrive on the site. New habitats and landscaping would be created, leading to an overall increase in biodiversity and ecological networks across the site. As well as contributing to the UK's net zero targets, Byers Gill Solar would also contribute to creating a better natural environment in the local area.

Public rights of way would also be improved, with new connections creating more off-road routes for local people to enjoy. Views to the Castle Hill motte and bailey castle would be enhanced through sensitive landscaping, with existing and new hedgerows managed so that the solar farm is screened from walkers enjoying the local area. Two new recreational areas would also be created with picnic benches and planting for community use.

There are some elements of our proposals, such as the height of the solar panels, and the exact layout of the required cable routes, that we are still yet to determine. As part of this consultation, we have presented and assessed the 'worst case' scenario – for example, the height of our solar panels at 4.35 metres. Your feedback to this consultation, combined with further assessments engagement with other stakeholders will allow us make decisions on these elements as part of our future application. Any changes we make to these elements of the Proposed Development will be clearly identified in the future application.

The size of the scheme means that Byers Gill Solar is a Nationally Significant Infrastructure Project (NSIP). This means that permission to construct and operate the scheme is sought through a Development Consent Order (DCO) application made to the Planning Inspectorate and decided by the Secretary of State.

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Community benefits

In addition to helping the UK meet its net zero targets and support in the provision of new renewable energy regeneration, Byers Gill Solar will also bring a range of localised benefits, detailed below.

JBM Solar is committed to continue to work with local authorities, businesses and community groups to recognise further community benefits as part of Byers Gill Solar, and we encourage you to provide your feedback on our proposals as part of this consultation.

The displacement of over 4,220,000 tonnes of CO_2 from equivalent fossil fuel energy, which equates to taking **c. 101,000 cars off the road for a year**

New green infrastructure such as redirected rights of way, new permissive paths, outdoor picnic area, a community orchard and information boards

Genuine benefits for local residents including a **£600,000 community benefit fund**

Large proportion of the site for **continued agricultural use** such as chicken or sheep grazing. After decommissioning, the soil will be in better condition than it is now

Biodiversity net gain will be delivered across the project. We will provide ecological benefits through **new habitats**, such as wildflower meadows, grassland areas, and a dedicated area for ground nesting birds

7km of **new and enhanced hedgerows**, 59 Hectares of **planting and seeding** between panel areas, 24 Hectares of **community picnic areas and orchards**, 3 Hectares of **new trees** and 29 Hectares of **biodiversity enhancement areas**

Battery Energy Storage System (BESS) on site, ensuring the solar farm can be as flexible as possible in delivering energy to the grid

£27 million generated in business rates over the lifetime of the project, alongside approximately 200 jobs during construction. We will also endeavour to provide jobs to local people where possible

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Our proposals

Legend

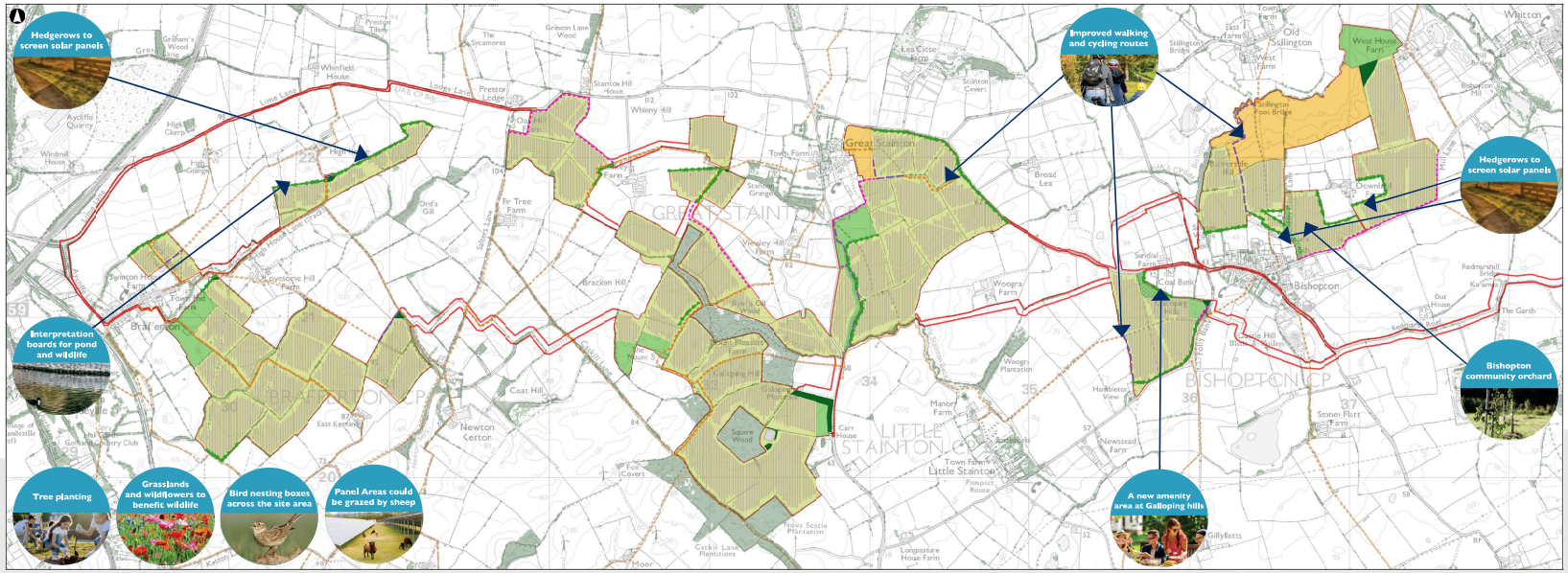
- Site Area
- Existing Public Right of Way
- Existing Vegetation and Woodland

Concept Masterplan Proposals

- PV Areas
- Onsite Substation
- Biodiversity Enhancement / Wildflower Meadow
- Tree Planting
- Amenity Recreation Areas
- Hedgerow
- Planting and Seeding Areas
- Retained Agricultural Land

Proposed Access Amendments

- Proposed Permissive Route
- Proposed Re-route



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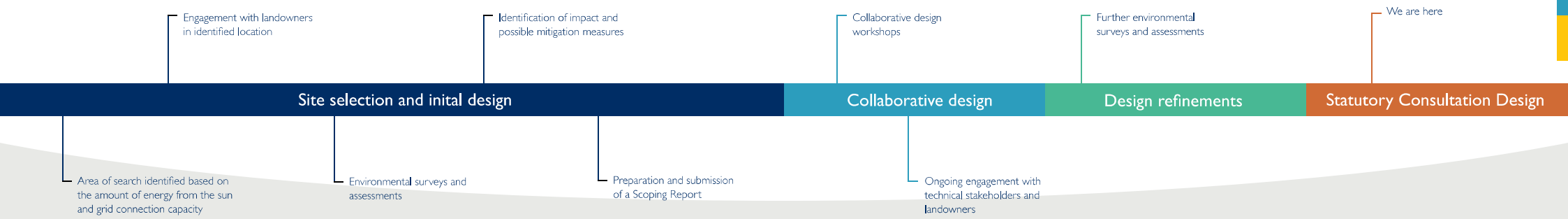
Design evolution

The location, design and layout of Byers Gill Solar has been developed taking into account a range of technical and environmental factors, as well as feedback from engagement undertaken to date with stakeholders, landowners and representatives of the local communities. Chapter 3 'Alternatives and Design Iteration' of the PEIR provides a detailed account of the design process to date, which has been summarised below:



Next Steps: feedback from this statutory consultation will be taken into consideration as the design of Byers Gill Solar is developed further. We will report on how this feedback influences the design in the DCO application.

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Environmental Assessment – Our work so far

Due to the scale and type of consent we are seeking permission for, we are required to carry out an Environmental Impact Assessment (EIA) to inform our proposals. The process aims to identify any potential effects – positive and negative - that our proposals will have on the local communities and environment during construction, operation and decommissioning of the solar farm.

As outlined in the Design evolution section of this booklet, the process includes on-site surveys, specialist assessments and consultation with a wide variety of stakeholders, and this statutory consultation is just one part of that process. The PEIR that we have provided as part of this consultation details the extensive surveys and assessments carried out to date on specific topics and provides an outline of how we plan to mitigate and reduce any perceived impacts.

The information in this booklet is a summary of that information and has been provided to help inform your response to our proposals. The table below summarises all the individual topics considered in the development of Byers Gill Solar to date. We have also carried out a cumulative impact assessment, which considers other proposals in the local area:

Topic	What we're assessing	Further information
Climate Change	The potential impacts on greenhouse gas emissions and the resilience of the scheme against any major climate events	PEIR Chapter 5
Biodiversity	The potential impacts on national and local ecological networks, including on habitats for species such as wintering waterfowl, bats and barn owls	PEIR Chapter 6
Landscape and Visual	The potential impacts on the character and views of the local landscape and people's enjoyment of it	PEIR Chapter 7
Cultural Heritage and Archaeology	The potential impacts on historical assets such as scheduled monuments, listed buildings and conservation areas	PEIR Chapter 8
Land use and socioeconomics	The potential impacts on agricultural land, the local economy, public rights of way and any land allocated for future development	PEIR Chapter 9
Hydrology and flood risk	The potential impacts on surface water, groundwater, flood risk and drainage	PEIR Chapter 10
Noise and Vibration	The potential noise impacts during construction, operation and decommissioning at noise-sensitive locations near Byers Gill Solar	PEIR Chapter 11
Traffic and Transport	The potential impacts on local traffic and transport during the construction and decommissioning of Byers Gill Solar	PEIR Chapter 12

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Operation

During the operational phase of Byers Gill Solar – anticipated to be 40 years – activities taking place on the site would be minimal. We anticipate that they will be limited to ongoing maintenance activities and safety and security checks, including replacement of any damaged components. There will also be a need to access the Panel Areas to carry out environmental checks, such as monitoring the success of new planting and maintaining the local vegetation.

To keep the site as safe and secure as possible during operation, the Panel Areas will be surrounded by security fending and CCTV cameras along the perimeter.

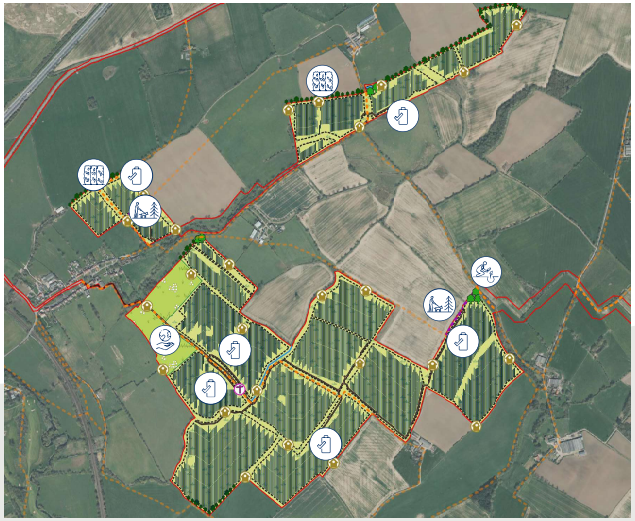
Decommissioning

Byers Gill Solar has a design life of at least 40 years. Following operation, the solar farm will require decommissioning – this is expected to take between six and twelve months. Decommissioning entails the removal of all solar infrastructure; up to 99% of materials in solar PV modules are recyclable, and the remaining materials would be disposed of in accordance with good practice and processes at that time.

Any requirements to leave certain infrastructure, for example access tracks, would be discussed and agreed with landowners as part of the decommissioning process. The site would be returned to its original use as far as possible and practical, with the established biodiversity and habitat measures left in place.

Preliminary Design, Panel Area A - Brafferton

Panel Area A – located in Brafferton parish, east of Brafferton village.



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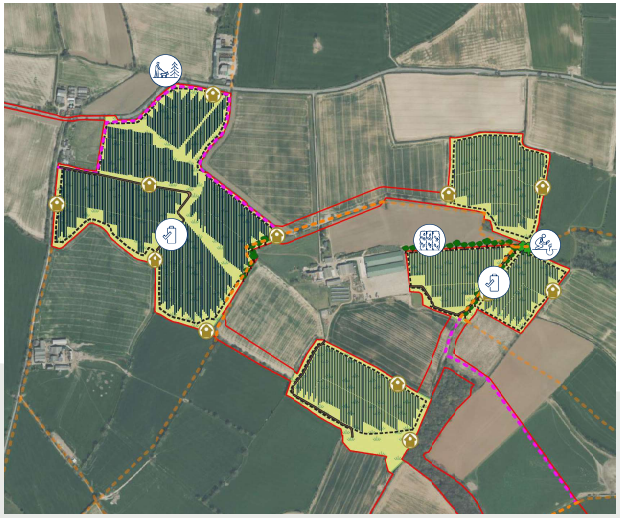
Preliminary Design, Panel Area B - Hauxley Farm

Panel Area B – located in Great Stainton Parish, East of Brafferton village

Legend
- Site Area
- Existing Public Right of Way
- Access Tracks

Concept Masterplan Proposals
- PV Areas
- Fence
- Proposed Planting and Seeding Mitigation
- Proposed Tree Planting
- Proposed Hedgerow Enhancements
- Bird Nesting Box

Proposed Access Amendments
- Proposed Permissive Route
- Proposed Re-route
- Hedgerow enhancements
- Battery Energy Storage Systems
- New permissive path creating circular routes
- New tree planting for landscape and ecological mitigation



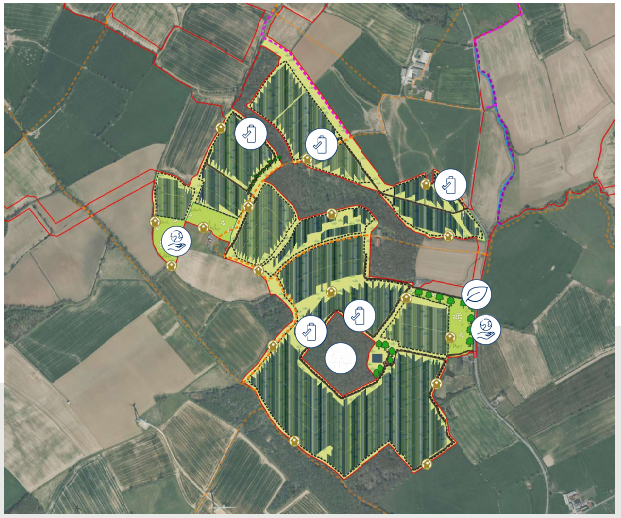
Preliminary Design, Panel Area C - Byers Gill Wood

Panel Area C – located either side of Little Stainton and Great Stainton

Legend
- Site Area
- Access Tracks

Concept Masterplan Proposals
- PV Areas
- Fence
- Proposed Planting and Seeding Mitigation
- Proposed Tree Planting
- Proposed Biodiversity Enhancement/ Wildflower Meadow
- Proposed Hedgerow Enhancements
- Bird Nesting Box

Proposed Access Amendments
- Proposed Permissive Route
- Proposed Re-route
- Biodiversity enhancement area
- Battery Energy Storage Systems
- New permissive path creating circular routes
- New tree planting for landscape and ecological mitigation
- Screening planting to minimise visual impact
- Retention and protection of Square Wood



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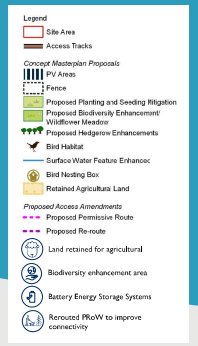
Preliminary Design, Panel Area D - Great Stainton

Panel Area D – located either side of Little Stainton and Great Stainton



Preliminary Design, Panel Area E - West of Bishopton

Panel Area E – located to the south-west of Bishopton, within Bishopton Parish

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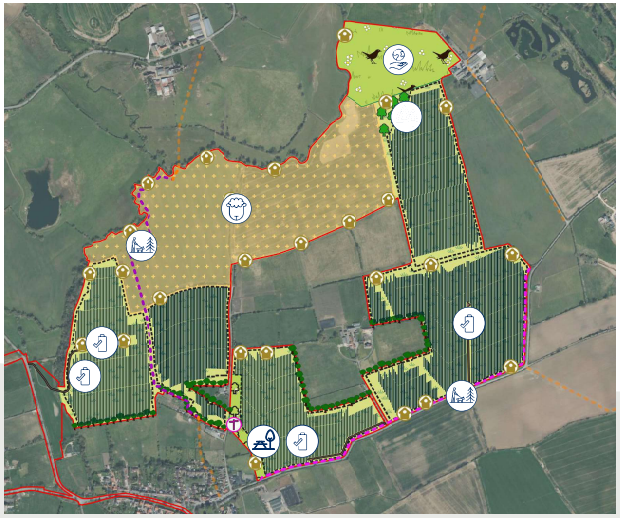
Preliminary Design, Panel Area F - North of Bishopton

Panel Area F – located to the north-east of Bishopton, within Bishopton Parish



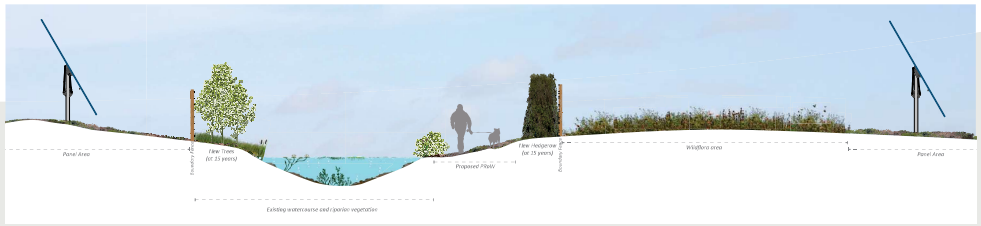
Landscape and environmental design

Byers Gill Solar would include considerate landscaping across the whole site, to protect and enhance the natural environment as well as the cultural heritage of Darlington and Stockton-on-Tees. We are undertaking assessments and surveys to understand how we can contribute to the local area, making sure we look at the environment as a whole, so our plans create rich and diverse habitats for the natural world to thrive in and for the public to enjoy.

We will make sure that Byers Gill Solar would leave the site in the same or better condition than it is now, so we make a positive contribution towards both the UK's energy generation and to nature recovery.

The key design principles for the scheme are to ensure that:

- the scheme minimises effects on local landscape character;
- a minimum of 50% biodiversity net gain is achieved;
- the local history and heritage is protected and celebrated;
- solar panels are sited to minimise visibility from public rights of way (PRoW), roads and homes;
- the layout respects the existing field, ditch and hedgerow patterns;
- access to the countryside is maintained and improved, and;
- existing natural features are retained and protected and where possible enhanced.



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Biodiversity

Byers Gill Solar is located in an ecologically rich area, surrounded by internationally and nationally important sites and many protected and declining species. There are expected to be no direct impacts from Byers Gill Solar on these sites, woodlands and hedgerows from the operation of Byers Gill Solar. To make sure that no direct impacts are felt, we have designed the Panel Areas to:

- avoid impact on the identified protected and declining species;
- retain the majority of hedgerows and woodland;
- fell no trees;
- create buffers between the Panel Areas and watercourse, hedgerows and trees to allow wildlife to continue to thrive;
- improve the existing hedgerows using native species;
- allow planting at the edges of fields to provide winter wild bird food, rough grass or wildflowers;
- allow planting under and between the Panel Areas to be planted with wildflowers, legume rich plants and grasses; and
- land to be reserved solely for the creation of new habitats for bird species, and roosting boxes for bats and barn owls.

The proposed new habitat creation and enhancement we would provide is expected to have long-term, beneficial impacts on the area, with a significant net gain in biodiversity. Habitat corridors and ecological networks would be improved, with particular improvements for invertebrates, bats and badgers.

More information can be found in the Chapter 6 Biodiversity of our PEIR, available to view on the consultation website.

Heritage

Darlington and Stockton-on-Tees have a rich archaeological history; the earliest evidence of human activity in this area is from the Neolithic period. The area was occupied during the Saxon and Medieval periods, and local villages particularly grew during the 17th to 19th centuries. There are two heritage assets which could be affected through a change to their setting by the Proposed Development; summarised below.

12th century motte and bailey

The panels will be screened from the scheduled monument by vegetation and surrounding buildings. To celebrate the monument, and its historical significance, two new recreation areas (located in Panel Areas E and F) will have views of the motte and bailey and will include interpretation boards with further information about this local asset.

Village of Bishopton

Bishopton has a number of listed buildings and is a designated Conservation Area. To protect this important local asset, it is proposed that improvements to existing hedgerows and planting of new ones is put in place, which also has the added benefit of improving ecological connectivity and wildlife habitats.

To make sure the archaeological record remains undisturbed, we would carefully consider the placement of supporting structures, and take further measures to protect any remains which may be underground. Any new remains discovered during the construction of Byers Gill Solar would be investigated and recorded in collaboration with Historic England and the county archaeologist.

More information can be found in the Chapter 8 Cultural Heritage and Archaeology of our PEIR, available to view on the consultation website.

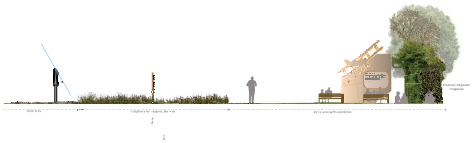
Public Rights of Way (PRoW)

There are a number of existing public rights of way that intersect with Byers Gill Solar, and we want to minimise the impact on these local connections and their users as much as possible, and where impacts cannot be avoided, mitigate them at the earliest opportunity. The main objective when designing the public rights of way elements of our proposals is to ensure access and connectivity are not severed at any stage of the proposals, and that safe, reliable and attractive diversions or re-routes are to be provided. Our proposals are presented on the map overleaf, which shows the current PRoW and those that we are proposing to divert or extend.

To enable a more cohesive public right of way network, we are continuing to engage with landowners to discuss the use of permissive routes to be available for use from construction, and to keep in place following the decommissioning of the solar farm.

A plan showing all PRoWs across the panel areas is available in Chapter 9 of the PEIR, at Figure 9.2.

E - Ecological enhancement to watercourse



F - Picnic area with sculpture

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Construction Impacts

It is recognised that there will be short-term impacts on the way that residents and visitors will access and enjoy the area, as well as to the local environment. If consented, the construction period is estimated to be around 12 months. As part of the planning application, a Construction Environmental Management Plan (CEMP) will be produced, which will outline our proposed mitigation for impacts felt during the construction period.

In addition to the impacts on the local environment, we anticipate impacts on the local road network and localised traffic during the construction period. To try and minimise the impact on local traffic, it is envisaged that a minibus will be provided to transport construction workers from a central location.

Each Panel Area will have a different access point and construction compounds. The compounds would have security measures and would contain storage, parking, vehicle turning and welfare facilities for the construction workers and would be designed to minimise the impact on the ground below. Further information will be made available as part of our planning application, at which time a Construction Traffic Management Plan (CTMP) will be provided.

Safety for local communities, our construction workers and local wildlife is a key priority for the construction period. To ensure the safety of users, some of the public rights of way may also be closed or diverted during the construction period, and additional but limited lighting will be provided in isolated locations to enable safe construction methods.

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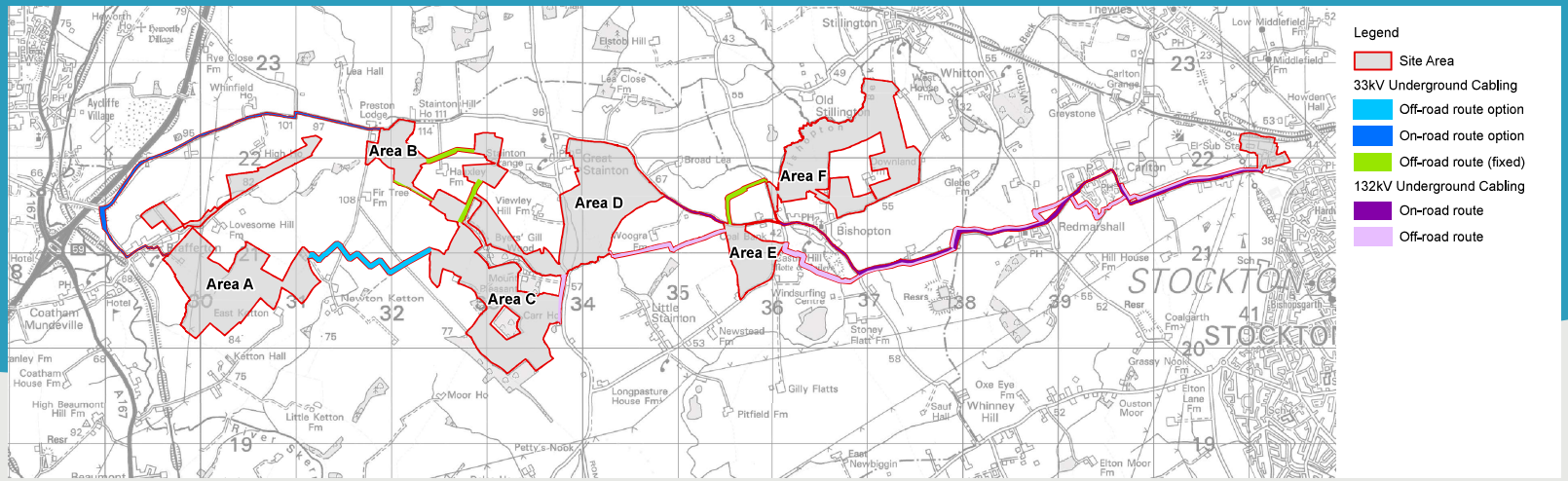
Cable Routes

The electricity generated by Byers Gill Solar will be transferred to the national grid via underground cables to the on-site substation and the existing National Grid substation at Norton. There are two types of cable required; 33kV cables which will connect the proposed Panel Areas to the on-site substation, and 132kV cables which would connect from the on-site substation at Norton.

The cables will need to be installed either along existing road routes (on-road) or installed on greenfield land (off-road). We want to minimise the impact on access to local routes during the construction period, and so it is likely that a hybrid approach will be adopted, using a mix of on-road and off-road routes. This will also be informed by agreements with landowners. The exact routes are still being determined, but we have presented a worst-case scenario as part of this consultation to inform your feedback. Following this consultation, a single option will be taken forward and submitted as part of the application.



Have your say

The consultation period for Byers Gill Solar is between Friday 5 May – Friday 16 June 2023. The deadline for responses is 23:59 on Friday 16 June 2023.

As part of this consultation, we are seeking your feedback on Byers Gill Solar. The feedback you provide to us at this stage will help to shape and inform our proposals before we submit our Development Consent Order application later this year.

This booklet has been provided as a summary of our proposals, in order to help inform your response to our consultation. We are also hosting a series of public information events both in the local community and online to provide you with an opportunity to speak directly with a member of our project team and discuss any questions or concerns you may have.

To provide us with your feedback, you can:

- Complete a feedback questionnaire online, available at: **www.byersgillsolarfarm.co.uk**
- Download, print and complete a feedback questionnaire, and return it to: **FREEPOST Byers Gill Solar** (no stamp is required)
- Write to the project team at: **FREEPOST Byers Gill Solar** (no stamp is required)
- Email us at: **enquiries@byersgillsolar.com**

One of the best ways to get more information about our proposals and speak to the project team is to attend one of our public information events, the details of which are provided to the right:

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Topic	What we're assessing	Further information
Friday 12 May 2023	Online webinar – please sign up via the project website, **www.byersgillsolarfarm.co.uk**	6pm – 7pm
Friday 19 May 2023	Stillington Village Hall, Lowson Street, Stillington, TS21 1JE	1pm – 7pm
Tuesday 23 May 2023	Brafferton Village Hall, The Green, Brafferton, Darlington, DL1 3LA	1pm – 7pm
Wednesday 24 May 2023	Bishopton Village Hall, Church View, Bishopton, Stockton-on-Tees, TS21 1HB	1pm – 7pm
Wednesday 31 May 2023	Online webinar – please sign up via the project website, **www.byersgillsolarfarm.co.uk**	12pm – 1pm
Wednesday 7 June 2023	Online webinar – please sign up via the project website, **www.byersgillsolarfarm.co.uk**	6pm – 7pm

Next Steps: Please provide your response to our consultation by 23:59 on Friday 16 June 2023. Once the consultation has closed, we will review all the feedback provided and use this, alongside further environmental assessments, and engagement with landowners, to refine our proposals.

We intend to submit our application for Development Consent later this year, and as part of that we will set out a summary of the responses, describe how these influenced our design, in a Consultation Report.

Following the submission of our application, the Planning Inspectorate (on behalf of the Secretary of State for the Department for Energy Security and Net Zero) may examine the application and make a recommendation to the Secretary of State who will make the decision on whether or not to grant development consent.

JBM SOLAR

Contact us

www.byersgillsolarfarm.co.uk

enquiries@byersgillsolar.co.uk

[redacted]

FREEPOST Byers Gill Solar (no stamp required)

Appendix 5.9 Consultation launch newsletter

How to get involved

One of the best ways to get more information about our proposals and speak to the project team is to attend one of our public information events, the details of which are provided below. You can register for online events on the project website or by emailing **enquiries@byersgill.com**.

Event	Date	Time	Location
Drop-in event (Stillington)	May 19th	1pm-7pm	Stillington Youth Centre, 2 Forest Park, Stillington, Stockton-on-Tees TS21 1NW
Drop-in event (Brafferton)	May 23rd	1pm-7pm	Brafferton Village Hall, The Green, Brafferton, DL1 3LA
Drop-in event (Bishopton)	May 24th	1pm-7pm	Bishopton Village Hall, Church View, Bishopton, Hall, Stockton-on-Tees TS21 1HB
Webinar	12th May	6pm-7pm	Online
Webinar	31st May	1pm-2pm	Online
Webinar	7th June	6pm-7pm	Online

Where to find out more

Our team will ensure the full suite of consultation materials, including the PIER and SoCC, are available at our deposit point, Norton Library.

Deposit point (Norton Library)	Monday, Tuesday, Thursday	9.30pm-5pm	Norton Library, 87 High St, Norton, Stockton-on-Tees TS20 1AE
	Wednesday, Friday	9.30pm-7pm	
	Saturday	9.30pm-1pm	

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Byers Gill Solar

Our proposals

JBM Solar has been progressing plans for Byers Gill Solar. The solar farm, located between Darlington and Stockton-on-Tees, would generate **180MW of electricity**, and provide cheap, clean energy to the equivalent of over **70,000 homes.**

This newsletter contains information about our public consultation, running from 5 May to 16 June, and lets you know how you can get involved and have your say on our proposals.

We want to hear your views on our proposals. Your feedback is valuable to us and can shape the final results of the project.

Throughout the consultation, we are hosting a series of drop-in events and webinars for people to have their say on the proposals before we submit our application to the Planning Inspectorate later this year. We have further published our more detailed site plans, and the Preliminary Environmental Information Report (PEIR), which identifies the potential effects that a proposed development may have on the environment, people and local communities.

What we do

JBM Solar was founded in 2012 and is leading provider of clean energy, delivering more than 1GW of solar to the country.

JBM is now an RWE company, meaning that we expect to construct, own and operate Byers Gill.

Materials available include

All materials are available to view on our website, www.byersgillsolar. co.uk/, or can be provided in hard copy through our contact centre.

- Consultation booklet
- Consultation booklet Statement of Community Consultation (SOCC)
- Preliminary Environmental Information Report (PEIR)
- Feedback questionnaire

Have your say

It is important that you have your say to unlock the full potential of the project. There is an online feedback form on our project website. To receive a hard copy, please get in touch or collect a copy from our consultation events or an information points.

Call us on: [redacted]

Email us at: Enquiries@byersgillsolar.com

By post: Freepost Byers Gill Solar
(you do not require a stamp)

Visit our website: www.byersgillsolar.co.uk/

Byers Gill Solar Farm

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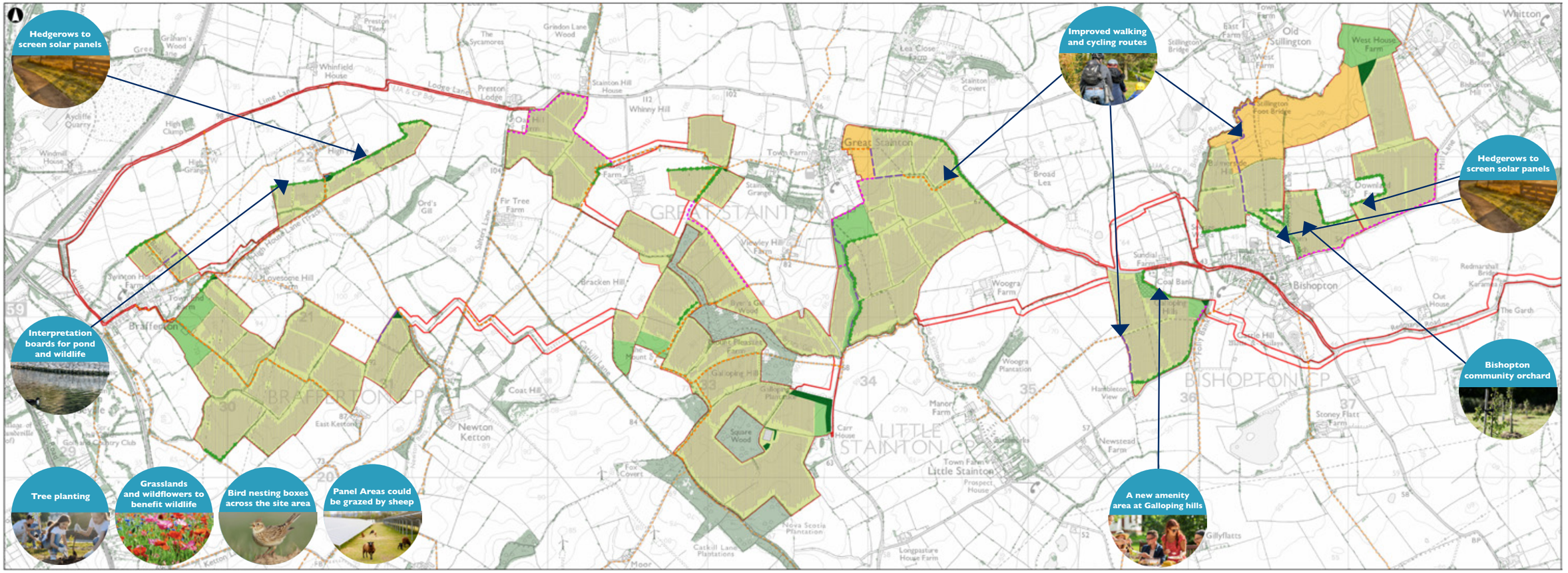

Legend

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- Existing Public Right of Way
- Existing Vegetation and Woodland

Concept Masterplan Proposals

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- Hedgerow
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- Retained Agricultural Land

Proposed Access Amendments

- Proposed Permissive Route
- Proposed Re-route

Appendix 5.10 Feedback questionnaire

Byers Gill Solar

Consulation Feedback Questionnaire

5 May – 16 June 2023

Our proposals

In 2022, the UK Government published their Energy Security Strategy, announcing that they intend to accelerate and increase solar power capacity by up to fivefold from 14GW to 70GW by 2035. If achieved, this will mean the UK will have a 100% renewable energy grid by 2035.

Byers Gill Solar consists of a solar farm capable of generating enough energy to power over 70,000 homes, representing a significant step towards local and national goals of reaching net zero, establishing energy security and reducing our impact on the climate.

The solar farm would be spread across neighbouring sites between Darlington, Stockton-on-Tees and Durham in north-east England and would include solar panels and the supporting infrastructure needed for power generation, as well as safety and security measures.

Other key features of the scheme are mitigation and enhancement measures for the natural environment. These measures would ensure any negative impact on existing habitats and biodiversity is limited, with improvements provided to help nature thrive on the site. New habitats and landscaping would also be created, leading to an overall increase in biodiversity and ecological networks across the site. As well as contributing to the UK's net zero goals, Byers Gill Solar would also contribute to creating a better natural environment in the local area.

Providing your feedback

You can respond to this consultation by:

- **Completing a feedback questionnaire online, available at:** www.byersgillsolarfarm.co.uk
- **Downloading, printing and completing a feedback questionnaire, and return it to:** Freepost Byers Gill Solar (no stamp is required).
- **Writing to the project team at:** Freepost Byers Gill Solar (no stamp is required)
- **Emailing us at:** enquiries@byersgillsolar.com

A consultation booklet has also been produced which provides a summary of our proposals and has been written to help you provide your feedback to this consultation. The booklet, and further information such as detailed maps and plans and our Preliminary Environmental Information Report (PEIR) can be found on our consultation website, here:

www.byersgillsolarfarm.co.uk

The consultation runs between 5 May and 16 June 2023. Please submit your response to us by 23:59 16 June 2023.

The project in principle:

1. Do you support the use of solar farms as part of the mix of renewable electricity generation required to meet the UK Government's commitment to achieving net zero carbon emissions by 2050?

Strongly support	Support	Neutral	Oppose	Strongly oppose	Don't know
❑	❑	❑	❑	❑	❑

Please provide any comments explaining your response to question 1:

2. Do you support the Byers Gill Solar Farm project?

Yes, wholly support	Yes, but I have some concerns	Neutral	No, but I support the development of solar farms generally	No, not at all	Don't know
❑	❑	❑	❑	❑	❑

Please provide any comments explaining your response to question 2:

Site layout and design

Byers Gill Solar would be made up of six panel areas (A – F), located between Darlington and Stockton-on-Tees. It would generate 180MW alternating current of electricity and would be connected to the national grid via an on-site substation and an existing substation in Norton.

For more information on each Panel Area, please see pages 13-18 of our consultation booklet.

3. Do you have any comments on the overall site layout?

4. Do you have any specific comments about Panel Areas A-F? Please specify which panel area(s) you are commenting on.

Underground cables would be used to connect the Panel Areas up to the on-site infrastructure and to the national grid. The exact location of some of the cable routes is still to be determined, and potential cable routes can be seen on pages 24-25 of the consultation booklet.

5. Do you have any comments on the potential cable routes shown for Byers Gill Solar? Please describe any specific areas of the site if relevant.

Byers Gill Solar would include the supporting infrastructure necessary for the operation of a solar farm. This includes an on-site substation, battery storage, access roads, and security measures such as fencing and CCTV.

6. Do you have any comments on the supporting infrastructure required for Byers Gill Solar Farm?

Landscape and environmental design

Our proposals for Byers Gill Solar include our suggested approach to minimise our impact on the environment and the local community, and to help enhance the rich biodiversity within the local environment. On pages 6-23 of the consultation booklet, we have explained our approach to mitigating impacts of the Byers Gill Solar farm on the environment and the local community.

7. Do you have any comments on our landscape and environmental design? Please make your comments in relation to each of the topics below where applicable.

a. Landscape and visual (please refer to pages 6-7 of the consultation booklet for more information)

b. Biodiversity (please refer to page 20 of the consultation booklet for more information)

c. Public rights of way (please refer to page 22 of the consultation booklet for more information)

d. Heritage assets (please refer to page 21 of the consultation booklet for more information)

e. Construction impacts (please refer to page 23 of the consultation booklet for more information)

f. Other

Community benefits

Alongside the solar technology, Byers Gill Solar would also provide local community assets, such as an improved public right of way network, an orchard and a new picnic area. Please see page 5 of the consultation booklet for further information on our proposed community benefits.

8. Do you have any suggestions on how we can provide community benefits through Byers Gill Solar?

Operation and decommissioning

9. Do you have any comments on the operation or decommissioning of Byers Gill Solar?

Preliminary environmental information report (PEIR)

The PEIR includes information about our plans for Byers Gill Solar and identifies its potential environmental effects, based on a preliminary assessment. More information about this can be found on pages 10-11 of the consultation booklet.

10. Do you have any comments on the methodology and/or preliminary assessments in the PEIR? Where possible, please specify the environmental topic area(s) you are commenting on.

Any other comments

11. Do you have any other comments you wish to make about Byers Gill Solar?

About you

We want to make sure we are reaching a wide range of voices so we can make our proposals for Byers Gill Solar the best they can be, so the next section allows us to capture information about who is responding to this consultation. The postcode section is mandatory as it enables us to make sure we are getting responses from people local to the proposed site.

12. In what capacity are you responding to this consultation on Byers Gill Solar?

❑ Local resident	❑ Landowner who has been notified of their land interest being affected by the scheme	❑ Local business owner / work locally	❑ Visitor to the area
❑ Elected representative (e.g. Parish Council, Local Authority or MP) (please specify in the text box below)	❑ Statutory organisation (please specify in the text box below)	❑ Local interest group (please specify in the text box below)	❑ Other (please specify in the text box below)

Name

Organisation (if applicable)

Address

Postcode*

Email address

Phone number

* Mandatory

Data privacy notice

Your details are being collected by BECG, on behalf of JBM Solar solely in regard to the above proposals. Your feedback will be used anonymously and used to develop a Consultation Report (or similar document) about this public consultation that will be submitted to the planning authority or similar body; this will be a publicly available document. To opt out from receiving updates, either do not supply your contact information, or email us at enquiries@byersgillsolar.com. To find out more about how we will handle your information please read our Privacy Notice: **https://byersgillsolarfarm.co.uk/.**

A hard copy is available upon request.

Appendix 5.11 Non-Technical Summary

JBM SOLAR

Byers Gill Solar
Preliminary Environmental Information Report: Non-Technical Summary (NTS)

May 2023

Contents

Introduction

JBM Solar is proposing Byers Gill Solar, a solar farm with battery energy storage systems (BESS) located between Stockton-on-Tees and Darlington. This is 'the Proposed Development'.

The Proposed Development would be able to generate over 50 megawatts (MW) of electricity which means it is a Nationally Significant Infrastructure Project (NSIP) requiring planning permission through a Development Consent Order (DCO). This is an application made to the Planning Inspectorate (PINS) and decided by the Secretary of State (SoS) in accordance with the Planning Act 2008.

As part of this process, public consultation must be carried out regarding the Proposed Development before a DCO application is made. To enable an informed response to the consultation, a Preliminary Environmental Information Report (PEIR) has been prepared to provide information about the Proposed Development and the likely significant environmental effects. This document is a Non-Technical Summary (NTS) of the PEIR which aims to summarise the contents of the PEIR and its key conclusions.

The information in the PEIR is preliminary. Along with the feedback received in response to the public consultation, the preliminary assessment will be further developed as part of an Environmental Impact Assessment (EIA). This will be reported in an Environmental Statement (ES) that is submitted as part of the DCO application.

More information regarding the DCO process is available on the PINS website, click here or visit https://infrastructure.planninginspectorate.gov.uk/application-process/the-process/.

Byers Gill Solar

The need for Solar

The UK has made a legally binding commitment to achieve net zero carbon emissions by 2050. This can only be achieved with the roll-out of reliable, affordable, clean energy sources such as solar. Solar farms, such as Byers Gill Solar, would make a meaningful contribution to local and national climate commitments, reducing our impact on the environment and contributing to energy security.

In 2022, the UK Government published their Energy Security Strategy, announcing that they intend to accelerate and increase solar power capacity by up to fivefold from 14 Gigawatt (GW) to 70GW by 2035. If achieved, alongside other renewable generation, the UK will have 100% renewable energy grid by 2035.

About JBM Solar

JBM Solar is at the heart of the UK's renewable energy revolution, helping to realise our collective goal of net zero emissions through the deployment of solar energy. Since 2012, JBM has secured planning permission for more than 1GW of solar projects, the equivalent of providing energy to over 265,000 homes. JBM is committed to delivering large-scale solar farms with co-located battery storage, and a minimum of 50% biodiversity net gains on every project.

JBM has recently been acquired by RWE, the UK's largest power generator and one of the largest renewables developers, who are committed to the design, build and operation of the Byers Gill Solar scheme. RWE's involvement provides certainty that the scheme would be high-quality and well maintained throughout its operation.

Chapter 1: Introduction

Purpose of the Preliminary Environmental Information Report (PEIR)

The PEIR presents the findings of the environmental assessments undertaken to date for the Proposed Development. It has been prepared to enable the local community and stakeholders to understand the potential environmental effects of Byers Gill Solar so that they can make an informed response to the statutory consultation.

The information contained within this PEIR is a preliminary account of the main environmental issues identified so far in relation to Byers Gill Solar. The PEIR sets out where uncertainties and assumptions apply. The PEIR has been prepared by 'competent experts'.

Site Location

The Proposed Development is located in the north-east of England, within the boundaries of Stockton-on-Tees Borough Council, Darlington Borough Council and Durham County Council.

The majority of the Proposed Development is located within the administrative boundary of Darlington Borough Council. The eastern part of the cable routes crosses into the administrative area of Stockton-on-Tees Council. The northern extent of the planning boundary (the 'Site Area') borders Durham County Council's administrative area.

The Site Area is within proximity to the villages of Brafferton, Newton Ketton, Great Stainton, Bishopton and Old Stillington. These areas and their surroundings are agricultural fields, and have trees, hedgerows, access tracks, woodlands, and farmholdings scattered within them.

National and local planning policy and legislation

Solar farms must follow national and local policies and legislation which govern this type of development. The DCO process is set out in the Planning Act 2008. This also states that the application will be examined by PINS and determined by the SoS. Requirements for undertaking an EIA are set out in Infrastructure Planning (Environmental Impact Assessment) Regulations 2017.

The Government has produced National Policy Statements (NPS) for energy NSIP developments which are the primary basis for decision-making on energy DCO applications, although there is not a specific NPS for solar energy. The relevant NPS for Byers Gill Solar are:

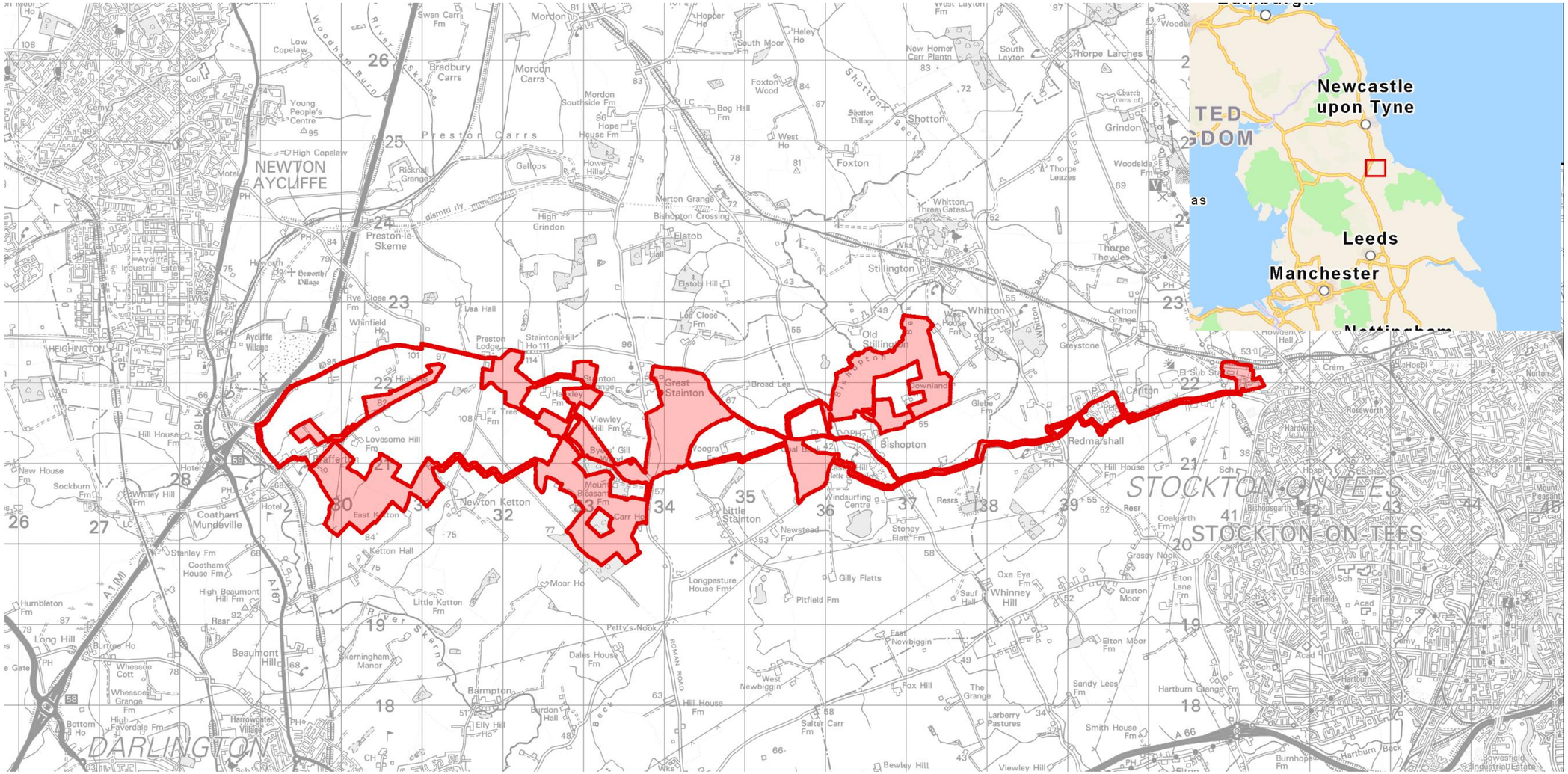
- EN-1 NPS for Overarching Energy (2011)
- EN-3 NPS for Renewable Energy (2011)
- EN-5 NPS for Electricity Networks (2011)

The Government has recently launched consultation on updated versions of the NPS, including Draft NPS EN-3 which has specific policies for solar developments. Byers Gill Solar will be developed in accordance with both the current and draft NPS. The PEIR also takes into account the National Planning Policy Framework (NPPF), and the local policies of Darlington Borough Council, Stockton-on-Tees Borough Council, and Durham County Council.

More information can be found in PEIR Appendix 1.1 Planning Policy Framework.

Site Location Plan

JBM SOLAR



See PEIR Figure 1.2 Site Location Plan

Chapter 2: The Proposed Development

Summary of the Proposed Development

The Proposed Development consists of a solar farm capable of generating over 50MW Alternating Current (AC) of electricity with co-located Battery Energy Storage Systems (BESS), located between Darlington and Stockton-on-Tees in north-east England. The Site Area is approximately 563ha and ha been split into eight distinct components: six Panel Areas (groups of solar photovoltaic (PV) modules) (Panel Areas A-F), Norton Substation and underground cables.

The solar PV panels would be mounted on a metal frame in groups. The solar PV panels will either be fixed in position or will track the sun throughout the day; this aspect of the Proposed Development remains under consideration by the Applicant and may be confirmed prior to submission of a DCO application.

An on-site substation would be located within Panel Area C. The Proposed Development includes environmental mitigation and enhancement measures to avoid or reduce adverse impacts on the surrounding environment and nearby communities.

It is expected to take 12 months to construct Byers Gill Solar. It would then be operational for 40 years, after which time it would be decommissioned.

Design Parameters

The technology for solar power is constantly changing and improving. To ensure that Byers Gill Solar would use the most up-to-date technology some elements of the design will not be fixed ahead of the DCO application submission. As a result, worst-case variations have been used to assess all foreseeable significant environmental effects. Including this flexibility in the DCO application is sometimes referred to as the 'Rochdale Envelope'.

Environmental Management

As part of the DCO application, we will set out in management plans how we would manage the impact on the environment during construction, operation and decommissioning of the Proposed Development. The measures included in these management plans would be secured through the DCO to ensure that they are carried out by JBM Solar across the lifetime of the Proposed Development. The management plans include:

- Outline Construction Environmental Management Plan
- Landscape and Ecology Management Plan
- Outline Construction Traffic Management Plan
- Outline Health and Safety Plan
- Outline Public Right of Way Management Plan
- Outline Materials Management Plan
- Outline Pollution Response Plan
- Outline Site Waste Management Plan
- Outline Soil Resources Management Plan
- Outline Spillage Emergency Response Plan
- Outline Battery Safety Management Plan
- Arboricultural Impact Assessment
- Decommissioning Environmental Management Plan

More information can be found in the Planning Inspectorate's Advice Note Nine: Rochdale Envelope

Landscape Masterplan

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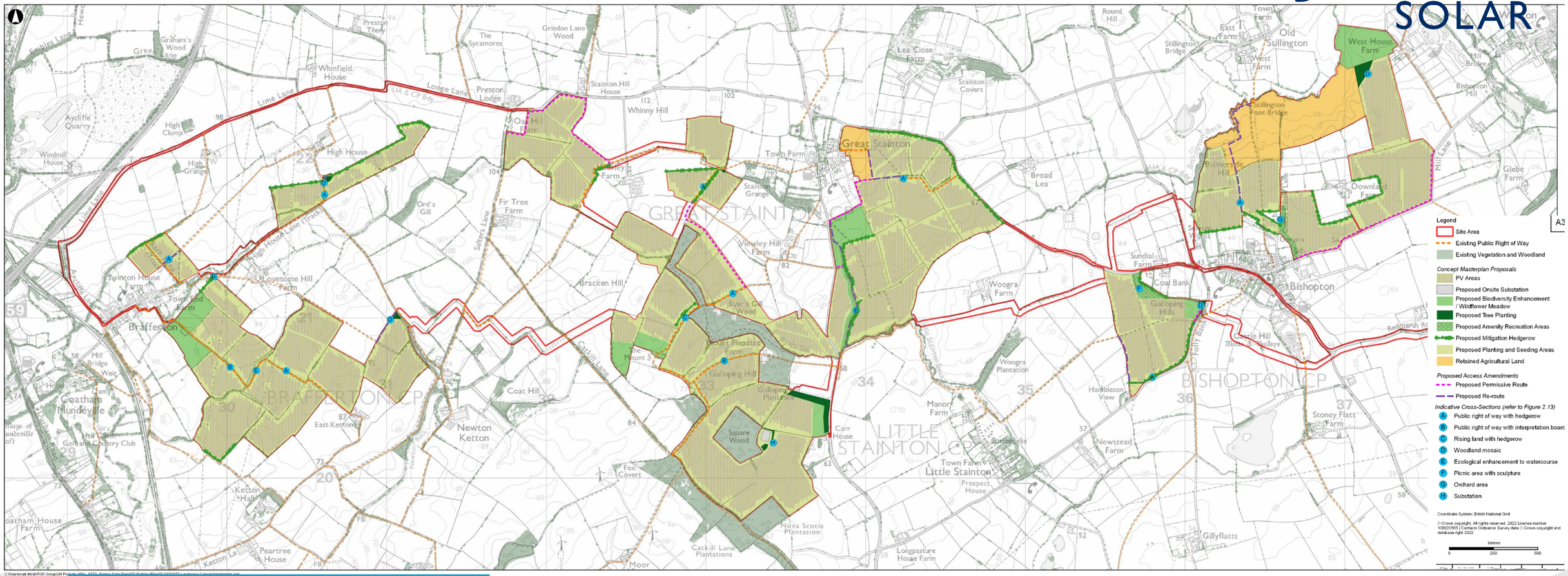
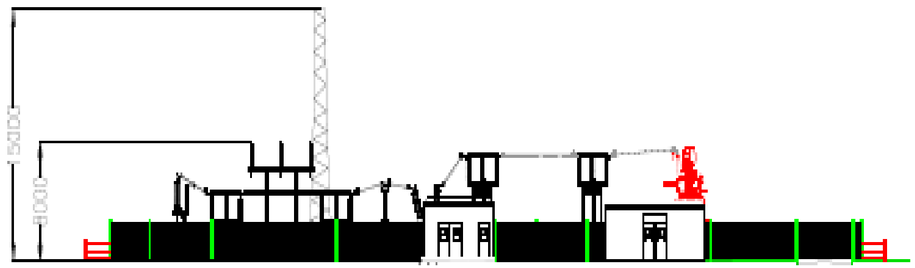


See PEIR Figure 2.12 Landscape Concept Masterplan

Solar farm infrastructure

The images below feature typical examples of the key infrastructure. As the design of Proposed Development is yet to be finalised, the key infrastructure proposed may be different.



Typical on-site substation

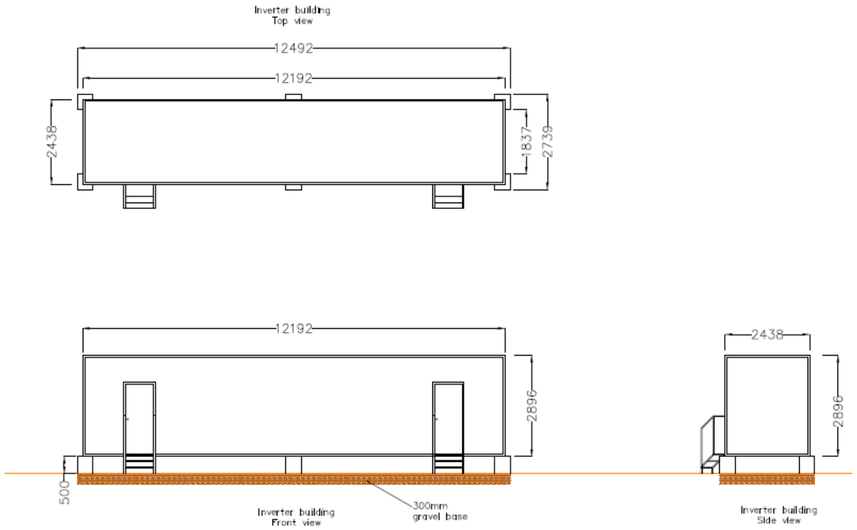
An on-site substation is necessary to connect the Panel Areas and transmit the energy generated, converting it to the necessary voltage. Underground cabling would connect the solar panels to the on-site substation and connect the on-site substation to the grid connection at the existing Norton substation (north-west of Stockton-on-Tees). The preferred route for all underground cabling is to be confirmed ahead of the DCO application submission, with both on-road and off-road options under consideration at this stage.

Battery Energy Storage System (BESS)

BESS is likely to consist of lithium-ion batteries and will allow energy to be stored on-site. BESS would be stored inside containers alongside heating, ventilation and cooling systems.

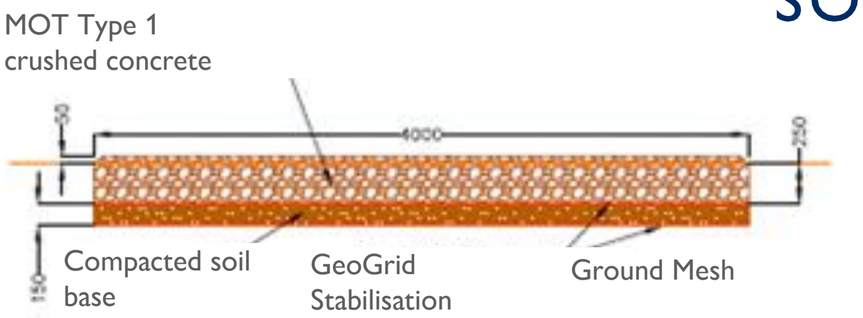
Solar farm infrastructure

The images below feature typical examples of the key infrastructure. As the design of Proposed Development is yet to be finalised, the key infrastructure proposed may be different.



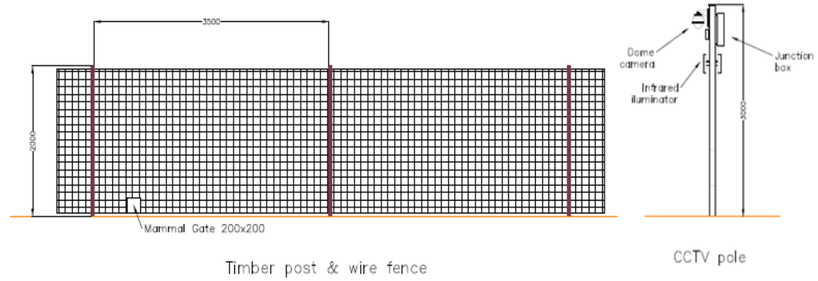
Typical Shipping Container Style Unit

The inverters, transformers and BESS would be arranged together across the Site Area. It is anticipated that there would be up to 53 hybrid containers (which include an inverter and BESS) and up to 44 inverter containers located across the Site Area. Transformers and inverters convert, monitor and control the electricity produced.



Cross-section of typical access track

Access into each of the Panel Areas would be required to facilitate construction, as well as allowing ongoing maintenance access from the local highway network.



Typical security measures

Security measures such as fencing, CCTV and lighting would be installed.
The fencing would be designed to allow small animals to pass through. Lighting would only be required around key electrical infrastructure and would not be continuous, but sensor triggered.

Chapter 3: Alternatives and Design Iteration

Chapter 3 of the PEIR describes the alternative options considered by JBM Solar in deciding the location, design and layout of the Proposed Development. It identifies the range of technical and environmental factors that have been taken into account, as well as feedback from engagement undertaken to date with stakeholders, landowners and representatives of the local communities.

JBM Solar is seeking to deliver the Proposed Development through voluntary agreement with landowners, rather than seeking compulsory purchase of land. This means that JBM Solar has only considered alternative options where they do not require compulsory purchase of land.

Site selection

In choosing where to locate a new solar farm, JBM Solar identified an 'area of search' based on two key factors:

- solar irradiance/yield (the amount of energy from the sun reaching the earth in any location); and
- grid connection capacity (agreeing a connection point into the national grid).

These two factors created an area of search around the existing Norton substation. Based on this area of search, JBM Solar assessed the local environment and discussed land agreements with local landowners to identify appropriate parcels of land for inclusion in the project.

Collaborative design workshops and design review

The first layout of the Proposed Development included measures to reduce impacts on communities, such as setting back panels to reduce visual impacts and careful siting of the on-site substation.

JBM Solar sought feedback on the design from a variety of stakeholders through collaborative design workshops. The information provided at these workshops, as well as findings from initial assessments, helped to identify possible design changes that could be incorporated to further reduce or avoid effects on the environment and the community. They also provided the opportunity for local communities to provide wider community benefit ideas.

As a result of this process, a number of changes were made which are now reflected in the current design:

- Distance buffers were applied to ensure a distance from environmental features such as badger setts, trees where bats may roost, ancient/veteran trees and water zones;
- Solar PV modules were removed from Panel Areas A, C, E and F to reduce or avoid visual impacts; and
- Public Rights of Way routes were amended within the Site Area to provide improvement or avoid harmful impacts for users.

The design will be reviewed further before DCO application, taking into account reasonable alternatives, including those arising through consultation feedback.

Chapter 4: Approach to Environmental Impact Assessment

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The EIA assesses the likely impacts – both positive and negative – of the Proposed Development on local communities and the environment during construction, operation and decommissioning. The final findings of the EIA will be reported in the ES which is submitted with the DCO application.

A Scoping Report was prepared in consultation with PINS to decide what needed to be included or 'scoped in' to the EIA. These topics are reflected within the PEIR chapters and will be reported in the ES. Topics that have been scoped out may be represented through submission of specific documentation as part of the DCO application.

Some preliminary technical assessments have been carried out already, to support the PEIR. These include:

- A Water Framework Directive Assessment, which relates to the protection and enhancement of surface fresh water, estuaries, coastal waters and groundwater; and
- A Flood Risk Assessment, considering flood risk both to and from the Proposed Development.

The evaluation of significance is a product of the likelihood and consequence of each impact as set out in the table to the right. Significant effects are generally defined as those that are of Moderate or Major significance. The conclusions of the significance of each impact will incorporate embedded design and mitigation measures.

Indicative significance criteria for use within the EIA

Significance	Criteria
Major	These effects are likely to be key factors or important considerations at a regional or district scale but, if adverse, are potential concerns to the project, depending upon the relative importance attached to the issue during the decision-making process. They are generally, but not exclusively associated with the sites and features of national importance and resources/features which are unique and which, if lost, cannot be replaced or relocated.
Moderate	These effects, if adverse, while important at a local scale, are not likely to be key decision-making issues. Nevertheless, the cumulative effect of such issues may lead to an increase in the overall effects on a particular area or on a particular resource.
Minor	These effects may be raised as local issues but are unlikely to be of importance in the decision-making process. Nevertheless, they are of relevance in the detailed design of the project.
Negligible	Effects which are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Potential environmental effects

This document provides an overview of the preliminary findings of the environmental assessments carried out to date. The results of further assessments will be presented through the ES.

The following sections detail the likely significant effects of the Proposed Development on local communities and the environment, alongside how these effects would be mitigated and any additional enhancements that are proposed. If the planning application is successful, the DCO would include requirements and secure control measures to ensure that any mitigation and enhancement is delivered.

Further information on each section can be found in the corresponding PEIR Chapter, available on the project website (www.byersgillsolarfarm.co.uk).

Glossary of terms

Term	Definition
Site Area	The entire Byers Gill Solar site.
Panel Area	A defined group of solar panels within Site Area. There are six in total (Panel Areas A – F) within the Proposed Development.
Study Area	The area in which environmental studies and surveys are carried out, typically bigger than the Site Area but varies depending on the work being undertaken.
Designated site	A site that has been given special legal protection due to its environmental importance, examples include Sites of Special Scientific Interest (SSSI), Ramsar Sites (wetlands of international importance).

Chapter 5: Climate Change

Baseline

The assessment of climate includes the effects of greenhouse gas (GHG) emissions associated with the Proposed Development and resilience of the Proposed Development to cope with extreme weather events. The site is currently used for arable farming, with managed hedgerows and trees. As a result, the site likely has a high capacity for carbon sequestration and storage. The baseline GHG emissions also include the fuel use of agricultural vehicles and machinery.

The baseline for the assessment of climate resilience is made up of the current climate observations and future projected climate conditions and extreme weather events in the local area. UK climate projections predict an increase in annual temperatures and rainfall, with wetter winters and drier summers and increases in the frequency of heatwaves, prolonged periods with no rainfall and days with heavy rainfall (when precipitation is greater than 25mm).

Preliminary summary of likely significant effects

Greenhouse Gas

The greatest GHG impacts would occur during construction of Byers Gill Solar, stemming from the construction of the materials and components needed for the solar farm. Transportation of these, waste, fuel use and workers commuting represent the other sources of GHG emissions.

During operation, the maintenance of the solar farm over its 40-year lifespan is likely to result in the largest portion of these operational GHG emissions. The operational emissions are also expected to decrease over time with the electrification of machinery and vehicles. However, the solar farm's generation of renewable electricity is expected to outweigh any direct emissions from its operation. Therefore, it is concluded that the operation of the Proposed Development would have a major beneficial effect on the climate, which is significant. In addition, the change in land use of the site, from arable to grassland, scrubland, woodland and hedgerows would lead to a slight increase in the ability of the land to capture carbon – a positive effect.

Decommissioning emissions are harder to predict, as the conditions 40 years in the future are not yet known. It has been assumed that land which would be changed from arable to grassland or scrubland would revert to arable land following decommissioning (with any carbon captured being released), but that any new woodlands and hedgerows planted or enhanced would remain. This is considered to result in a minor adverse effect on the climate.

Climate Change Resilience

The Proposed Development would be designed to be resilient to impacts arising from projected future extreme weather events and climatic conditions, and designed in accordance with current planning, design and engineering practices and codes.

No likely significant effects are predicted with regard to the vulnerability of the Proposed Development to climate change during construction, operation or decommissioning.

Chapter 6: Biodiversity

Baseline

There are numerous sites designated for ecological interest within the vicinity of the Proposed Development. These include Teesmouth and Cleveland Coast Special Protection Area (SPA), Ramsar, Thrislington Special Area of Conservation (SAC) and several Sites of Special Scientific Interest (SSSI) including Newton Ketton Meadow SSSI. There are also two Local Nature Reserves (LNRs) and two Local Wildlife Sites (LWS) including Carr House Pond Darlington LWS which is located immediately adjacent to the Site Area.

There are protected and priority species within the Site Area, including breeding and winter birds, invertebrates, amphibians, reptiles, bats, water vole and otter, badgers and other species such as brown hare and hedgehog. The majority of habitats across the Site Area were species poor, however most of the hedgerows, ponds, areas of woodland and watercourses qualify as priority habitat.

Preliminary summary of likely significant effects

Throughout construction and decommissioning, there would be potential impacts on wildlife, habitats, plants and watercourses, and all but one (breeding birds) are assessed to be negligible or not significant. This is partly due to the short-term nature of the construction and decommissioning periods, as well as taking into account mitigating measures that would be applied regarding light, noise and pollution, and the timing of the works. Many habitats in the Site Area would not be disturbed, as they are not located nearby to proposed works.

Small sections of hedgerows may need to be removed to allow for construction, however only poor-quality hedgerows will be affected and would be replanted with native species. This is considered to be a short-term impact and is not significant. The retention of hedgerows and other boundary features means the impact on bats is expected to be negligible. No trees are expected to be felled.

The operation of solar farms requires minimal work, and so there would not be a significant impact on biodiversity. Little lighting would be required, so nocturnal animals such as bats would not be affected.

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Mitigation and enhancement measures

During construction, works would be timed to minimise the impact on wildlife, and fences would be used to protect habitats and existing landscaping, including tree roots. These will be set out in a Construction Environmental Management Plan.

New habitats would be created and existing ones enhanced, through the planting of hedgerows, wildflower meadows and legume rich grasses, both under the panels and around the edges of fields, which would significantly increase biodiversity and the number and diversity of animal species.

The layout of the Panel Areas has been designed to avoid areas where wintering and nesting birds have been previously recorded, and some areas of the site will not have any panels so habitats remain available for these species. The layout also means many habitat areas will remain, such as field margins, woodland, most hedgerows, and all trees.

Chapter 7: Landscape and Visual

Baseline

The Landscape and Visual assessment considers the likely effects of the landscape character, designated landscapes and visual receptors, such as people in the public domain, of the Proposed Development.

Byers Gill Solar is not located in any national or local landscape designations. The Site Area is in an agricultural area, with woodland, hedgerows and hedgerow trees across the landscape, leading to constrained views, although there are some higher and open locations nearby with wider views. There are villages and local roads throughout the Site Area.

Preliminary summary of likely significant effects

The on-site substation and solar panels would be the most visible elements of the solar farm. Because of hedgerows, trees and the undulating landscape, the Panel Areas are mostly only visible up to 1 – 1.5km away, apart from a few areas where the panels are on slopes, or where occasional higher land in the distance would look across the Proposed Development. From Great Stainton, there would be frequent, close views of Byers Gill Solar, and it is likely the solar farm would become a key characteristic of the area. There are other nearby local areas that would be in close proximity to the Site Area, which could experience significant effects. Walkers and road users would also be able to see the Panel Areas from different parts of the road and Public Right of Way (PRoW) network.

The new planting would change the landscape character as it matured, which is considered to be a positive effect.

Mitigation and enhancement measures

The layout of Byers Gill Solar has been designed so as to minimise the impact of the solar farm on local views of the landscape. Existing hedgerows would be enhanced and new ones created. The land would also be maintained so that, once the solar farm has been decommissioned, the landscape is similar to its present state and can be used for future farming.

Existing PRoWs that would go through the middle of fields with solar panels would be rerouted around the edges of fields to create a more pleasant walking experience. The potential for new permissive footpaths to be created to connect existing routes and avoid roads is being explored as part of the Proposed Development.

Interpretation boards would be provided at points of interest along PRoWs, with information about the landscape, biodiversity and local heritage, as well as about the solar farm.

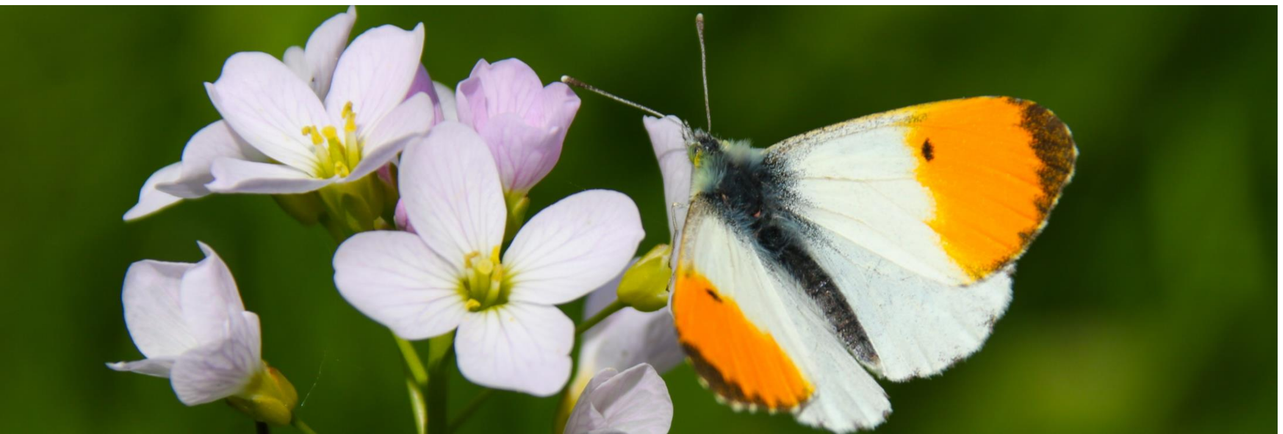
Chapter 8: Cultural Heritage and Archaeology

JBM SOLAR

Baseline

To understand the archaeological history of the Site Area, geophysical surveys have been undertaken of the surrounding area. The earliest evidence of human activity in this area is from the Neolithic period, but there are few traces of human life in this area until the Iron Age. The area was occupied during the Saxon and Medieval periods, and local villages particularly grew during the 17th to 19th centuries, with the landscape being used for both agriculture and industrial production. There are two heritage assets which could be affected through a change to their setting by the Proposed Development; the remains of a 12th century motte and bailey castle to the south of Bishopton, the listed buildings and the conservation area village of Bishopton.

Between 1916 and 1919, there was a First World War airfield located west of Bishopton, used for night landings. This was likely sparse, with a few timber structures, and would not have been paved. It is unlikely there are any physical remains of the airfield.



Preliminary summary of likely significant effects

During construction, any known archaeological remains within the Site Area will be removed in consultation with the County Archaeologist. This effect has not been assessed as significant as it would mostly affect small sections of these archaeological sites, and mitigation measures would be put in place.

Operation of the Proposed Development would have a significant effect on the Scheduled Monument motte and bailey castle through a change in setting and the experience and appreciation of that significance. This effect has been reported as a moderate adverse effect following the implementation of the embedded design measures summarised below.

Mitigation and enhancement measures

The design of Byers Gill Solar would be flexible, with the ability for foundations for panels moved to avoid certain archaeological features as necessary. Any archaeological remains found will be investigated and recorded. Enhancing and planting new hedgerows would mitigate views of the site, and so limit its impact on the heritage assets.

There is an opportunity to use the Proposed Development to increase local knowledge about the history of the former First World War airfield. What shape this would take would be formulated through engagement with the local community and relevant stakeholders at the appropriate time.

Chapter 9: Land use and socioeconomics

Baseline

The number of economically active people within Stockton-on-Tees, Darlington and County Durham is broadly in line with the average for the North East Region.

The proposed Site Area is comprised of agricultural, arable land. The topsoil is predominantly clay, medium clay loam or heavy clay loam, with slowly permeable clay subsoil beneath. There a number of Public Rights of Way (PRoW) in the area, although none of these are part of recognised regional or national trails. There are no National Cycle Network routes in the area, although it is known to be used for recreational cycling.

There is a safeguarded limestone mineral resource which parts of two Panel Areas cover; this only represents a small element of the overall limestone resource in the county and the limestone could be extracted following decommissioning of the solar farm.

Preliminary summary of likely significant effects

Byers Gill Solar is likely to offer a number of direct and indirect economic benefits during construction and decommissioning, including some direct employment of construction staff as well as local supply chain opportunities. Non-local construction staff would be staying and spending locally during the construction period, bringing wider indirect benefits to local accommodation, businesses and service providers. This is assessed to have a minor beneficial effect. There is unlikely to be any effect during operation.

There may be some impact on the PRoWs during construction and decommissioning, but this would be short term and they would be unaffected during operation.

With regards to Agricultural Land, there is reported to be a moderate adverse effect during the construction stage, however it is anticipated that the quality of agricultural land would have improved by the time of decommissioning due to the undisturbed nature of the grassland leading to benefits to soil health and structure.

Any further impacts to soil resources would be avoided where possible, and otherwise managed through a Soil Management Strategy.

Mitigation and enhancement measures

New permissive PRoWs would be proposed, to enhance the existing network of footpaths.

Wider community benefits are also being explored as part of the statutory consultation process.

Chapter 10: Hydrology and Flood Risk

Baseline

Groundwater in the Site Area is drained towards the east, south and west, via the Whitton Beck, Newton Beck and River Skerne respectively. Due to this drainage, the site can be considered to be hydrologically linked to some nearby designated sites, such as Newton Ketton Meadow (a Site of Special Scientific Interest (SSSI)) and the Teesmouth and Cleveland Coast (SSSI and Ramsar Site). The nearby watercourses do not achieve a good ecological status, due to poor soil management and sewage discharge.

The Site Area is within Source Protection Zones, which safeguard drinking water quality. Most of the Site Area is within Flood Zone 1, and so is not considered to be at a significant risk of flooding. Two parts of the site are within Flood Zone 3, and so have a higher risk of flooding. The majority of the site is a low risk of surface water flooding and groundwater flooding.

Preliminary summary of likely significant effects

There is a potential risk of increased pollution to watercourses during the construction and decommissioning phases, with the highest increase anticipated during excavation works. No large-scale excavations would be required for installation of the solar panels, but some may be required for the construction of the substation. The impact of this has not been assessed to be significant.

The nearby designated sites could also be at risk of increased pollution, however this has not been assessed as significant due to the mitigation measures that would be in place, and the likelihood of any pollution being already diluted before it reached these sites. Similarly, there would similarly be no significant effects on groundwater and public water supply during construction or decommissioning. There is a potential of increased flood risk from the compaction of soils by heavy machinery, but this would be mitigated such that the effect is assessed as negligible.

During operation, fuel spills from maintenance vehicles or contaminated runoff from maintenance activities could enter the watercourses, but there is a low likelihood of this happening. They could also increase flood risk through soil compaction. The change in use of the land from agriculture to solar panels would result in fewer spray chemicals and fertilisers being used, which could reduce the amount of phosphates and nitrates entering the watercourses; an overall beneficial effect.

Mitigation and enhancement measures

A Flood Risk Assessment and Drainage Strategy have been prepared and propose a drainage scheme and maintenance plan that would ensure that surface water run-off is managed as per existing site conditions. Measures would be put in place to manage runoff and sediment, and pollution.

An 8m buffer zone has been designed around the perimeter of the watercourses, with increased vegetation helping to manage erosion and sedimentation and increase the biodiversity of the area. Building in areas of fluvial (river) flood risk has been avoided. Any land used during the construction, such as the site compound, would be replanted.

The site would be covered with vegetation at all times, helping to reduce any potential pollution from reaching the watercourses.

Chapter 11: Noise and Vibration

Baseline

The local area is rural and sparsely populated, with several individual villages. There are also some isolated properties and farms, and some designated sites, such as Sites of Special Scientific Interest (SSSI).

Preliminary summary of likely significant effects

During construction and decommissioning, there may be effects from construction traffic such as HGVs, but these would be temporary in nature, largely due to large-scale removal or delivery not being necessary. There is predicted to be a negligible effect on traffic levels, so any increase in noise is unlikely to be significant. Similarly, there is unlikely to be perceptible vibration from construction traffic.

Minimal traffic trips would be required during the operation of Byers Gill Solar and contained largely to those required for maintenance, and so it is unlikely there will be a significant effect on noise or vibration. However, there could be some noise created by the supporting infrastructure for the Proposed Development.

Mitigation and enhancement measures

A Construction Environmental Management Plan and Construction Traffic Management Plan will be prepared and will propose the mitigation to manage the construction phase.

The inverters, which form part of the battery system for the solar farm, would be located as far as reasonably possible from sensitive locations to minimise any potential noise effects.

Chapter 12: Traffic and Transport

Baseline

The Site Area is in a rural area, with a number of nearby local villages. The nearest Strategic Roads are the A1, A66 and A19. On assessing collision data, there does not appear to be a common causation factor or significant trend for these incidents. There are weight limits on some local roads.

There are limited pavements or footways nearby the Proposed Development and no National Cycle Networks. There are numerous Public Rights of Way (PRoW) and some advisory cycle routes and bridleways that go through the Panel Areas.

There is little existing public transport provision.

Preliminary summary of likely significant effects

Additional traffic caused by the construction of Byers Gill Solar is predicted to be negligible and temporary. The average number of trips added to the local and strategic road networks is forecast to be low, with increases of 1.12% on the rural road daily traffic flow and 28.42% the rural road daily HGV traffic flow. These increases are below the allowable change set out by the Institute of Environmental Assessment, and so it is considered that this will have a negligible effect on traffic. There is not expected to be an increase in driver delays.

The route of the cables has not yet been decided, however road-based routes could cause driver delay.

The negligible increase in traffic is not expected to have an impact on pedestrian and cyclist journeys.

The minimal amount of operational work required by solar farms would also mean there would be a negligible amount of traffic caused by the operation of Byers Gill Solar.

Decommissioning is likely to have similar impacts as construction, although it is difficult to predict the transport situation in forty years' time, and so no further assessment of traffic and transport has been conducted.

Mitigation and enhancement measures

A Construction Traffic Management Plan would be produced to minimise any negative environmental impacts. This would include access arrangements, transportation of materials and waste, and the management of vehicles on-site. Works would be scheduled outside of peak hours to reduce their impact.

Chapter 13: Cumulative effects

JBM SOLAR

For the Environmental Impact Assessment (EIA), consideration will be given to the combined effects of the Proposed Development on one receptor, and the cumulative effects of different nearby projects combined with effects of Byers Gill Solar. These will be fully assessed reported in the Environmental Statement (ES).

In-combination effects assessment

Assessments of in-combination effects undertaken as part of environmental topic chapters that already inherently consider impacts from other aspect chapters, have been included with the aspect chapters of the PEIR and will be subject to further assessment within the ES. The receptor types identified so far include:

- Residential properties
- Human health
- Sensitive community facilities
- Commercial business facilities (including farms)
- Ecological receptors
- Built heritage
- Archaeology
- Waterbodies
- All travellers (vehicle users, pedestrians, cyclists, public transport users)

Cumulative effects assessment

The assessment has established the Zone of Influence for environmental aspects (based on the extent of likely effects), and long and short lists of other developments which could give rise to cumulative effects in combination with the Proposed Development. The long list and short list of other developments have not yet been finalised and consultation with local authorities will continue to help identify further relevant other developments. The assessment of the cumulative impacts of these developments will be assessed within the ES, along with identification of any mitigation measures.

Chapter 14: Summary

Following our Preliminary Environmental Impact Assessment, we have provided a summary of the potential effects resulting in the construction, operation and decommissioning of Byers Gill Solar. Those which are considered to be major or significant have been provided in the table below.

Topic / receptor	Effect	Significance
Climate change	Production of low carbon energy.	Significant beneficial
Breeding bird assemblage	Loss of breeding habitat for nesting birds through disturbance and the placement of Solar PV modules. Breeding and foraging habitat will be created and managed.	Significant adverse
Habitats - arable and grassland habitats, semi-improved grassland, woodland, dense scrub, hedgerows, treelines, swamp & ponds	No pathways which could affect habitats, and enhancement of arable and grassland habitats through planting under and between panels will increase biodiversity.	Significant beneficial
Invertebrates, including Nathusius' pipistrelle and all other bat species recorded in the study area	Likely potential increase in invertebrate abundance and diversity due to habitat enhancement. Additionally, all boundary features of value to potential bat roost features in trees will be retained with suitable buffers.	Significant beneficial
Great crested newts and other amphibians	No pathways which could affect habitat suitable for these species. Habitat creation of hedgerows and enhancement of field margins and under panel areas to benefit GCN and amphibians.	Significant beneficial
Reptiles	Habitat creation of hedgerows and enhancement of field margins and under panel areas to benefit reptiles.	Significant beneficial
Some landscape character areas across Great Stainton, Darlington, Stillington, Redmarshall and Elstob.	Changes to views for residents and users of local roads and footpaths. Changes to host landscape character area.	Significant
Agricultural land and soil resources	Disturbance of the land from the construction of the Proposed Development.	Significant adverse
Residential properties	Noise and vibration from construction and decommissioning activities.	Significant adverse

See PEIR Chapter 14 for the full Summary

Next steps

The next stage in the Environmental Impact Assessment (EIA) process is to refine the design of Byers Gill Solar, taking into account further assessment that will be undertaken to understand the potential environmental effects and identify any necessary mitigation measures to reduce adverse effects. These will be assessed and reported in the Environmental Statement (ES).

Feedback from the statutory consultation will be analysed to identify issues that require further investigation and will inform the design of the Proposed Development. A Consultation Report summarising the consultation and how JBM Solar had regard to the feedback will be part of the Development Consent Order (DCO) application.

The ES will set out the issues raised during the consultation and how these have been considered and addressed. Details of the design iteration will be included in the DCO application.

Have your say

The consultation period for Byers Gill Solar is between Friday 5 May – Friday 16 June 2023. The deadline for responses is 23:59 on Friday 16 June 2023.

As part of this consultation, we are seeking your feedback on Byers Gill Solar. The feedback you provide to us at this stage will help to shape and inform our proposals before we submit our Development Consent Order application later this year.

We are also hosting a series of public information events both in the local community and online to provide you with an opportunity to speak directly with a member of our project team and discuss any questions or concerns you may have.

To provide us with your feedback, you can:

Complete a feedback questionnaire online, available at:
www.byersgillsolarfarm.co.uk

Download, print and complete a feedback questionnaire, and return it to:
Byers Gill Solar (no stamp is required)

Write to the project team at: **Byers Gill Solar** (no stamp is required)

Email us at: **enquiries@byersgillsolar.com**

Appendix 5.12 Consultation poster

Byers Gill Solar

JBM SOLAR

We want to hear your views on our proposals for a new solar farm in the area. Your feedback can shape the final results of the project.

From 5 May to 16 June we are running our consultation on Byers Gill Solar. We need you to have your say to unlock the projects potential. An online feedback form can be found on our website, https://byersgillsolarfarm.co.uk/, or collected from an event.

Consultation Drop-in Events

May 19th (1PM-7PM) - Stillington Youth Centre, 2 Forest Park, Stillington, Stockton-on-Tees TS21 1NW

May 23rd (1PM-7PM) - Brafferton Village Hall, The Green, Brafferton, DL1 3LA

May 24th (1PM-7PM) - Bishopton Village Hall, Church View, Bishopton, Hall, Stockton-on-Tees TS21 1HB

Webinars

Please register on our webiste

Friday 12th May 18:00 – 19:00
Wednesday 31st May 13:00 14:00
Wednesday 7th June 13:00 – 14:00

Get in touch

https://byersgillsolarfarm.co.uk/

Email us: enquiries@byersgillsolar.com

Call us: [redacted]

Write to us: Freepost Byers Gill Solar

Appendix 5.13 List of recipients of the consultation poster

Place name	Address
Bishopton Road Post Office	26 Bishopton Rd, Stockton-on-Tees TS19 0AW
The Talbot	47-49 The Grn, Bishopton, Stockton-on-Tees TS21 1HE
Blue Bell Inn	31 High St, Bishopton, Stockton-on-Tees TS21 1EZ
Bishopton Equestrian Centre	Bishopton, Stockton-on-Tees TS21 1EZ
Stillington Post Office & Premier Store	Park Cres, Stillington, Stockton-on-Tees TS21 1JF
Park Lane Surgery	Redmarshall St, Stillington, Stockton-on-Tees TS21 1JS
Stillington Youth & Community Centre	2 Forest Park, Stillington, Stockton-on-Tees TS21 1NW
EPF Graphics	Unit 2B, Stillington Industrial Estate, Stillington, Stockton-on-Tees TS21 1AF
Stockton Country Parish, St John's Church, Stillington	St John's Church, Morrison St, Stillington, Stockton-on-Tees TS21 1JD
Teesside Cleaners Ltd	27 St Johns Park, Stillington, Stockton-on-Tees TS21 1NT
The Ship	14 Church Ln, Redmarshall, Stockton-on-Tees TS21 1EP
Hamilton Russell Arms	Thorpe Thewles, Stockton-on-Tees TS21 3JW
The Smiths Arms	Thorpe Rd, Carlton, Stockton-on-Tees TS21 1EA
The Vane Arms	The Village Green, Thorpe Thewles, Stockton-on-Tees TS21 3JU
Lea Close Farm	Great Stainton, Stockton-on-Tees TS21 1LZ
Oat Hill Farm Boarding Kennels	Great Stainton, Stockton-on-Tees TS21 1NF
The County	13 The Green, Aycliffe Village, Newton Aycliffe DL5 6LX
Royal Telegraph	6 North Terrace, Aycliffe Village, Newton Aycliffe DL5 6LG
Darlington Beekeeping Supplies	4 The Green South View, Brafferton, Darlington DL1 3LB
The Old Forge	The Grn, Brafferton, Darlington DL1 3LA
Foresters Arms	Coatham Mundeville, Darlington DL1 3LU
Kemp W & R & Sons	1 The Grn, Brafferton, Darlington DL1 3LA
Whessoe Parish Hall	Whessoe Parish Hall, Harrowgate Hill, Darlington DL1 3AA
Grindon Parish Hall, Thorpe Thewles	14 Durham Rd, Thorpe Thewles, Stockton-on-Tees TS21 3JN
Stockton Country Parish, St Cuthbert's, Redmarshall	St Cuthbert's Church, Church Ln, Redmarshall, Stockton-on-Tees TS21 1ES
Carlton Post Office	1 Westgarth, Carlton, Stockton-on-Tees TS21 1DZ