# Frequently Asked Questions

## Proposed solar farm and battery storage facility

**High Nunton Farm,** near Borgue, Dumfries and Galloway

**The following frequently asked question (FAQ) list has been developed in response to questions asked about the proposed project at High Nunton Farm during the webinar and to general questions asked at the drop-in-session.**

---

**Q: Is there an ecologist to advise on eco-friendly screening to avoid conifers and leylandii, or will it be up to individual properties affected?**

The planting within the proposed landscaping area of the scheme will be guided by our landscape architecture team, led by an experienced arboriculturist with input as required by our ecology team.

The planting scheme will use native species. However, if specific concerns are raised on individual viewpoints, the team will consider faster growing evergreen species where they could help to address specific screening concerns raised in the short to medium-term, whilst the surrounding native species become established.

If people do have concerns on specific views, please get in contact with us.

---

**Q: Will the new tree and hedge planting be native species?**

The planting scheme will use native species, including evergreen species such as holly and Scots pine to provide year-round screening.

---

**Q: Are there any plans to increase pollinators at the site i.e. installing bee hives etc.?**

The biodiversity, planting and management plan will (when produced) seek to increase habitat and species diversity, which will support pollinators, insects generally - and as a result - bird life within the area.

As a result of the pre-application community consultation, we are pleased to have been approached by a local beekeeper who is interested in housing beehives on the farm, which would offer a positive addition to the farm and in due course the project.

---

**Q: I have solar panels which are ground mounted. They are set into concrete slabs for stability. Will your scheme be the same? In which case what happens to the concrete when the scheme ends? Including related questions on the use of concrete.**

The solar panels at High Nunton would be mounted on steel frames, which are fixed to the ground using steel piles allowing grass to continue to grow below and around the panels. At the end of the operating life of the solar farm the fixed steel piles, the frames, the panels, and the associated cabling can be removed from the site and the land returned to agriculture.

Some concrete will be required in the foundations, though it is unusual that the electrical equipment (such as the inverters) need to be placed on concrete slabs. It is generally preferred to achieve the structural support required at key loading points in limited structural locations under the equipment.

---

**Q: Can it be guaranteed there will be no strimming or use of herbicides to contain any ungrazed grass or weeds?**

It is anticipated that the majority of the site will be grazed and managed as it currently is. Should the grass within the solar array need to be managed, the grass strips will be sufficiently wide to enable the grass to be cut using a tractor, if needs be.

Like with any area of planting, there may be a requirement to cut grass and weeds back in the areas of planting until such time that the planting is established, though this would be kept to the minimum required.

---

**Q: Access to and from the A755 is on a blind bend with potential 60 mph traffic, what consideration has been given to this issue?**

The safe exit and entry of vehicles onto the site from the A755 will need to be addressed in the planning application. A traffic speed survey has been completed and the traffic management plan will need to include visibility splays for traffic departing the site. A range of options exist for managing the safe entry and exit of vehicles to site during the construction period. These will need to be agreed to in advance by the Highways Department at Dumfries and Galloway Council, though could include safety signage, temporary speed limits, or banksmen to escort construction vehicles on to or off the site, as required.

It is usual for projects of this nature to have a pre-commencement planning condition in place preventing construction works from starting until the local Highway Authority has approved the specific safety measures proposed by the contractor who will be managing the construction of the site.

Whilst it is anticipated that the project will take in the region of nine months to construct, the busiest period for deliveries to the site is expected to coincide with the delivery of the solar panels to the site over a period of approximately six to eight weeks, during which time we would expect an average of three to four deliveries to site per day.

---

**Q: The access route to the A75 has a dangerous bend at Barharrow farm for vehicles turning to Borgue what measures will be taken to mitigate the danger.**

This would appear to be an existing safety concern that would be best addressed to the local Highway Authority in the short-term.

---

**Q: Will you be able to see the panels from Kirkcudbright?**

Considerable effort has gone into creating a design and layout which seeks to minimise both close and distant views of the panels. An assessment of the scheme by our landscape architect has indicated that there will only be very limited views of the site from Kirkcudbright. In general, these will be fleeting, distant views of parts of the solar site, though these would be very low profile and hard to distinguish from that distance.

The site is generally well screened from Kirkcudbright. Where it is less well screened, the design includes for specific planting to further mitigate views from the east.

---

**Q: Will you be able to see the panels from Borgue?**

Again (see previous question), considerable effort has gone into creating a design and layout which seeks to minimise both close and distant views of the panels. The analysis undertaken by the landscape architect, indicates that views from Borgue itself are unlikely, given the local contours and natural screening.

As illustrated from the viewpoints in the webinar and shared at the drop-in session, the site will be visible from a short section of the B727 from just east of Borgue, though the team are looking to mitigate these views with screen planting on the site.

---

**Q: How will the electricity get to the substation at Tongland? (And related questions).**

The electricity will be transported to the substation at Tongland via a grid connection that will be designed, installed, owned, and operated by Scottish Power, in its role as a statutory electricity undertaker. At this point we have not been informed of the proposed route or design by Scottish Power, though we would anticipate that Scottish Power will where possible follow the line of existing cables in the area, and that any cables mounted above ground will be mounted on wooden poles, and not metal pylons.

---

**Q: Please can you clarify parking arrangements for access to the footpath? (And related questions).**

As highlighted on the webinar and at the drop-in-session, discussions are on-going with the Community Council at Borgue as to potential alternative routes for the footpath and parking arrangements. The proposed route, access and parking for the footpath will be revised following these discussions.

---

## Q: How will the picnic area kept clean of waste and free from fly tipping?

The picnic area will be some distance from the nearest public road and so it is unlikely to be at risk of fly tipping.

We would hope that people using the footpath and the picnic area will respect the countryside and take their litter away with them, however, in the event rubbish is left on site then Robert Maitland shall arrange for it to be collected and removed.

---

## Q: What noise will the project generate? (And related questions)

***In terms of the construction of the site:***
The construction programme for the project is anticipated to last approximately nine months, during this time there will be vehicles and plant moving around the site to form the access tracks, transport equipment, dig the cable ditches, and mount the equipment, etc. The work will also require the construction of the metal frames, fitting of the solar panels, and cabling work. The frames will comprise pre-cut and drilled metal structures that need to be assembled and bolted, typically by hand using handheld tools.

The installation of the steel piles is expected to take a period of six to eight weeks for a project of this scale. The process for installing the piles has not yet been defined but will need to comply with the British Standard for noise on construction sites and will be limited to prescribed times during the working day.

***In terms of the operation of the site:***
The solar panels themselves are silent. Some of the electrical equipment around the site, such as the batteries and the inverters (which convert the electricity from the direct current generated by the modules to the alternating current that is required by the national grid), will produce some noise, though these will be located well away from housing, and if necessary, will be acoustically screened.

A noise assessment will be completed on the final design of the scheme to ensure that the projected noise levels of the project are within the required standards.

---

## Q: Can acoustic screening or other screening be built if requested once panels are in place?

As set out above, the panels themselves do not produce noise, though some of the electrical infrastructure does produce some noise, which will be assessed by the noise assessment.

We would anticipate that if granted, the planning application will include for maximum noise levels at surrounding noise sensitive receptors. Should these be exceeded, then the planning condition would require mitigation, which could include acoustic screening to address the issue, however we do not at this stage believe that there will be a requirement for this.

If the proposed screen planting does not achieve its intended aims once established, then all options will be considered as to how best to address this shortfall.

---

**Q: Are the solar panels recyclable when they are removed?**

Yes, not only can solar panels be recycled, but they are also covered by the Waste Electrical and Electronic Equipment directive (WEEE directive) that obliges developers to recycle them.

Approximately 85% of the solar panel is glass or metal, the majority of which can be recycled. 85% of the solar cells themselves can also be recycled.

The steel for the frames that support the PV panels can be recycled, and the metal from the electrical cables can also be recycled.

The download section of the High Nunton Solar website has an infographic with more information on the recycling of panels.

---

**Q: What security will the site have?**

The individual arrays will be fenced off by standard 'deer fencing' with access gates. The arrays will be covered by CCTV, though the CCTV will use infra-red for low light periods. The CCTV cameras will only cover the area within the development.

It is not anticipated that the site will require any external lighting, including security lighting.

---

**Q: Please can you include wetland habitat creation, there are several small burns which are an important part of the landscape? Please don't just plant trees.**

The work to date has included both a ground water dependent terrestrial ecosystem and hydrology surveys. The design not only avoids the sensitive areas identified in these surveys, but the bespoke planting and management plan for the site will also seek to protect and enhance these wetland areas.

---

**Q: Will we be able to walk our dogs along the new footpath and at the picnic area?**

We understand that this will be permitted, though as parts of the site maybe grazed by livestock, dogs would need to be kept under close control as is normal near livestock.

---

**Q: What will the storage / substation equipment look like, the scale of it etc? Your visuals show only the panels. (And related questions.)**

The images only show what the modules will look like because it is not anticipated that the battery storage compound will be visible from the locations shown in these viewpoints.

The battery containers and associated plant will comprise modular units of a similar shape, size and nature to shipping containers. They will be of a similar or lower height to the solar panels and are located in a well screened corner of the site, with very limited external visibility, in an area of approximately 1acre.

When viewed from a distance, the roof of the containers may be visible, but these would be behind the solar panels and at a similar height to the panels and so will be significantly screened by the solar panels.

---

**Q: Will there be opportunities for local companies to bid for work during the construction process?**

The construction and operation of the project will bring with it many opportunities for local businesses and contractors to benefit both directly and indirectly. For example, the first phase of the project will be to plant and manage the proposed screen planting, which in itself will be a significant piece of work.

In due course the construction of the fencing, roads, general infrastructure, and the scheme itself will offer a wide range of opportunities for local contractors to bid for.

There will also be indirect benefits to local businesses resulting from the local services that are likely to be required, such as the provision of food and accommodation.

---

**Q: What is the timing of the preplanning phase? Can we wait until trees are bare to assess impact and need for screening? (And related questions)**

We are asking for comments back on the pre-application consultation phase by the 1st of September. The final planting plan will be developed as part of the landscape and visual impact assessment (LVIA) for the project, which will include an assessment of winter views in terms of informing the design of the proposed screen planting for the scheme and assessing the impacts.

---

**Q: Not everyone has the technology to look up plans, take part in webinars or attend the limited meeting on Friday as it is holiday time. Can we also ask for a public meeting with maps, possible photomontage, and where we can hear other people's questions and answers?**

If anyone who was unable to attend the drop-in-session would like to see the information that was available at the drop-in-session, please contact us at: **info@highnuntonsolar.co.uk**. This FAQ document sets out the questions and answers from the webinar and other frequently asked questions from the drop-in session.

---

**Q: How many panels in total make up the PV farm?**

Significant progress is being made by the PV industry to increase the power and efficiency of solar PV modules, meaning that projects being developed now need fewer modules than projects that were developed even a few years ago.

The initial concept for this project developed by the Wood Group in their scoping report referred to approximately 92,000 panels. The current design is based on approximately 50,000 modules, though when we revise the design following the pre-application community consultation process we anticipate that we can further reduce the number of modules and the footprint of the site.

---

**Q: Is there any direct benefit to Borgue Village apart from a footpath and picnic area as is usually the case with wind farms?**

Robert Maitland has initiated discussions with the Borgue Community Council with regards to establishing local projects that could viably be supported by the solar farm.

---

**Q: Will it be possible to do a site visit to appreciate local topography and scale?**

Yes, trips to the site can be arranged. If you would like to visit the site, please email **info@highnuntonsolar.co.uk** to allow us to make the necessary arrangements.

---

**Q: There are a wealth of archaeological sites in the area - what measures will be taken to ensure that any unknown sites will not be damaged by the access or works?**

The initial constraints mapping for the site was informed by a desktop and non-intrusive archaeological assessment of the site by a qualified archaeologist, which has identified areas of known archaeological interest.

The design avoids the areas identified by the archaeological assessment that should be preserved.

The Environmental Statement includes a chapter on heritage and archaeology, which will consider archaeology and mitigation measures in further detail.

---

## Q: What glare will be visible to houses in view of the solar panels and also of roads to Brighouse and Ross Bay and Carnie Hill?

A glint and glare assessment will be conducted on the final design to account for the impact on sensitive receptors.

The assessment will use a computer model that tracks the passage of the sun every day of the year to establish the number of minutes per year that any of the panels could cause glare at a sensitive receptor.

Should the assessment identify a level of glare that needs to be addressed, the design will be modified, or the screen planting adapted to address these concerns.

Following our initial assessment, we do not anticipate that glare will be an issue at any sensitive receptors.

---

## Q: What is the risk of rainwater running off the panels and causing flooding on lower ground?

The solar panels are mounted on frames above the ground and so do not reduce the permeability of the ground beneath the panels. The Hydrology chapter of the Environmental Statement will consider the extent to which the run-off pattern of rainwater on site may change, and the requirement to mitigate this change. For example, the hydrology assessment may recommend using shallow swales, or areas of woodland and hedge planting to help slow down the passage of surface water from the site into the local river networks at key locations.

The Hydrology chapter will also consider the risk relating to flooding and advise of any further mitigation measures required to ensure that the project does not increase the risks relating to flooding. Our initial assessment is that the measures we are taking to increase the level of woodland planting and to protect and enhance some of the wetland habitats will actually reduce run-off from the site and reduce the risk of flooding.

---

## Q: Will the project pay business rates to the local council?

All commercial solar farms pay business rates at the prevailing rate. The actual amount payable will be determined by the local authority in the same way they assess all other business rates, based on the rateable value of the scheme, the size of the scheme, and any rates relief available from the Scottish Government at the time for renewable energy.

As agricultural buildings and land are exempt from business rates, the development of the project would result in an increase in the level of business rates payable to the local authority from the farm.

---

## Q: Is it really sunny enough for this to make sense in Borgue?

The southern and western cost of Dumfries and Galloway is the sunniest corner of Scotland when looking at the annual level of solar energy received per $m^2$. On the site itself, the solar energy forecast for the site is that each KW of solar panel will generate just under 992kWh of electricity per year.

As a general rule of thumb, large scale solar projects need to be over 950kWh/kWp/year to be commercially viable.

---

## Q: Do we need more energy generation locally given all the wind farms that are being built?

Achieving the net zero target for 2045 will be very challenging, as will the interim target to double the energy generated from renewable sources by 2030.

As the wind doesn't always blow, there are advantages in balancing energy generation across a range of renewable energy sources with differing generation profiles to achieve a better fit between generation and demand. Also, an energy system that is entirely dependent on wind for its energy needs will need more energy storage for the periods of calm weather as Scotland further increase the amount of renewable energy that it generates.

---