ARRAN COMMUNITY RENEWABLES SOLAR FARM PROPOSAL

The proposed development

Arran Community Renewables (ACR) are planning to submit a planning application for a 4MW AC solar farm on farmland at Glenkiln, approximately 1km west of Lamlash. The proposed development will:

- Generate 5,600MWh of clean renewable electricity from solar irradiation every year.
- Comprise approximately 10,000 solar panels mounted on racks and arranged in rows with gaps to ensure limited shading. The top of the panels would be a maximum height of 3.0m off the ground and would face south.
- Include a small substation located to the south west of the site, with access from the south, to minimise visual impact.
- Be secured by an approximately 2m high 'deer fence'.
- Have ambitions to integrate sheep grazing under the solar panels.
- Include biodiversity and ecological enhancements within the design, which will have beneficial effects for various local plant and wildlife species.

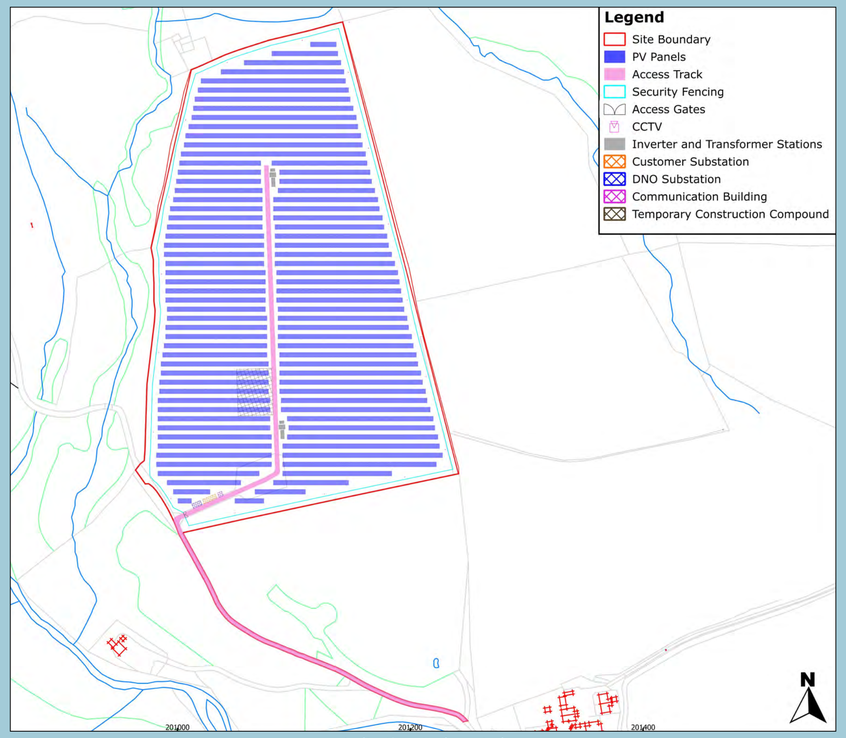
Planning permission will be sought for a 40-year period. On reaching the end of its operational life, the proposed solar development will be fully decommissioned, and the site restored to its original state as agricultural land.

Site selection

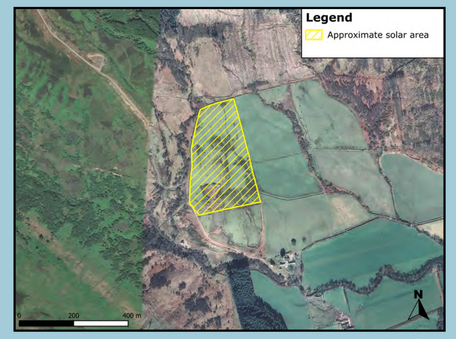
ACR has investigated a range of renewable energy options for this site, including wind and solar and after thorough evaluation, ARC have chosen to move forward with a solar project. This solution was selected for its minimal impact on the surrounding environment.

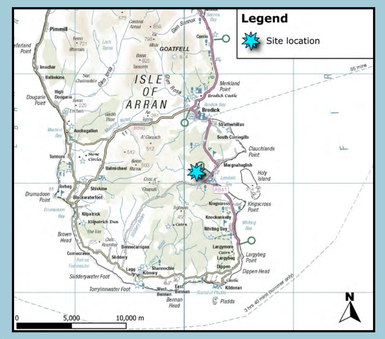
This site is considered especially suitable for solar for multiple reasons:

- The area is located on a south-facing slope, with minimal shading, which is suitable for solar development.
- The topography of the area minimises potential visual impact within the surrounding landscape.
- The site is suitably distant from Lamlash, while not encroaching on 'untouched' wilder areas on Arran.
- This site is only 1.1km from a 33kV connection opportunity. This minimises requirement for new infrastructure, which could be disruptive and have visual impact. Grid connection is currently proposed via a new overhead line, mounted on wooden poles, from the existing line near Ĺetter Rd.



Indicative site layout plan





Site location

About Arran Community Renewables

Arran Community Renewables is a community-led initiative focused on creating sustainable energy solutions for the Isle of Arran. In 2018, the team at Arran Eco Savvy started our search for potential renewables projects. We considered a host of sites and technologies, speaking to the community, landowners and the local electricity operator alike. In 2020 we kick-started Arran Community Renewables, and since 2021 we have been working closely with Local Energy Scotland and local farmer and environmentalist Kenneth Bone to plan for the development of the Solar PV Array at Glenkiln.

We have secured significant funding for work so far from the Scottish Government's Community and Renewable Energy Scheme (CARES). The team managing the fund at Local Energy Scotland have been very supportive of the project. The funding to-date has been used efficiently, ensuring the project will be feasible; obtaining pre-app advice from the council; securing an electricity grid connection, and more recently conducting environmental studies to support the project.

To learn more about Arran Community Renewables, please visit our website at:

https://www.arranrenewables.com/our-story

To learn more about Arran Eco Savvy, please visit our website at:

https://arranecosavvy.org.uk/about-arran-eco-savvy/

Who will the project benefit?

COMMUNITY BENEFITS

This project's primary interest is to benefit the local community, and as such the income from the solar farm will be held in a community benefit fund. It is likely that the community benefit fund will support some of the projects already supported by Arran Eco Savvy (AES), but also a significant number of new/unrelated projects. Ideally these will be low carbon, but any projects with a strong community benefit will be considered.

ACR would therefore welcome your feedback on potential local priorities and projects where you would like to see investment. Some ideas for ways this could be used are:

- Community energy cost subsidy towards renewable energy and insulation measures or fuel poverty.
- Contribution towards community or local events, and environmental or heritage projects in the local area.
- Promoting care and support of vulnerable people, improving community safety.
- EV charging points installed within the local area.
- Contributions towards community facilities.

LOCAL BENEFITS

The development will provide a wider socio-economic benefit to the local and national economy in the following respects:

- ACR will look to employ local resource in construction and for any maintenance work wherever possible. This could be in terms of groundwork, landscaping, civil engineering, and construction contracts.
- Where it is not possible to resource locally, there will be direct inward investment to local retail and accommodation during the construction and operational phases of the project.
- There are likely to be further employment benefits resulting from the projects created by the community benefit fund.
- There will also be additional business rates to the local council over the project lifespan.

ENVIRONMENTAL BENEFITS

Once operational, the solar farm element of the scheme is expected to generate up to 5,600MWh of renewable electricity per year. This is equivalent to the annual electrical demand of c. 2,100 average UK homes, which is equivalent to approximately 23% of Arran's annual domestic electrical consumption. This would offset approximately 1,200 tonnes of carbon emissions from fossil fuel sources in year 1, and as such make a significant contribution to meeting Scotland's ambitious 'net zero by 2045' target.

Additionally, there are anticipated to be biodiversity enhancements, improving the quality of existing habitats and supporting wildlife, alongside continued sheep grazing under panels to continue farming practices.

Sheep grazing alongside solar

Your feedback is appreciated

This public exhibition is being held for you to:

- Learn more about various aspects of our proposal.
- See visualisations of the solar project from key viewpoints.
- Talk to our representatives here today about the scheme and to give your feedback on our proposals.
- Find out more about the potential community benefits that could be realised as a result of this project.

We are also interested in exploring the possibility of community ownership of the project and would welcome any expressions of interest in investing. Although this isn't directly related to the planning process, we believe community ownership will be an important part of the project's future.

Additionally, we are keen to gather feedback on potential local contractors or suppliers, particularly for tasks such as deer fencing or grass cutting. Any recommendations you may have will help us make informed decisions and ensure that local businesses have the opportunity to get involved.

Once a planning application has been submitted, all information relating to the application will be publicly available on North Ayrshire Council planning department website. We will share the planning application reference number on our project website once this is available.

ACR invites members of the public to provide feedback by the following channels:

- www.arranrenewables.com
- info@arranrenewables.com
- Donald McNicol: 01770700296

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Development works

ACR have been working with Locogen and Local Energy Scotland to secure a cost-effective grid connection for the project. We have also received detailed pre-application advice from the Council regarding the proposed development and the surveys required to support a planning application. The surveys required to support a formal application and determine the magnitude of any potential impacts include the following:

- Ecology and biodiversity;
- Landscape and Visual Appraisal (LVA);
- Historic environment;
- Glint and Glare assessment;
- Noise assessment;
- Hydrology and Flood risk;
- Construction and Traffic Management.

The planning application will include a series of detailed assessments of the potential impacts on the local environment.

Examples of solar farms in agricultural setting

ENVIRONMENTAL ENHANCEMENTS

In addition to surveys, the outputs of which will be in planning application, there is potential to introduce measures to improve the environmental and ecological status of the site. ACR are currently investigating the potential to plant native species hedgerows, which would not only improve screening but could also host biodiverse species such as invertebrates, or breeding birds.

Additionally, following construction, there is potential to re-seed the land with a species rich grassland mix. This will further enhance biodiversity at the site.

Examples of Arran bird species

Photo credits: Top left—Jake Walker (Locogen); Bottom left— Carl Reavey via ArranBirding.co.uk; Right—Dennis Morrison via ArranBirding.co.uk

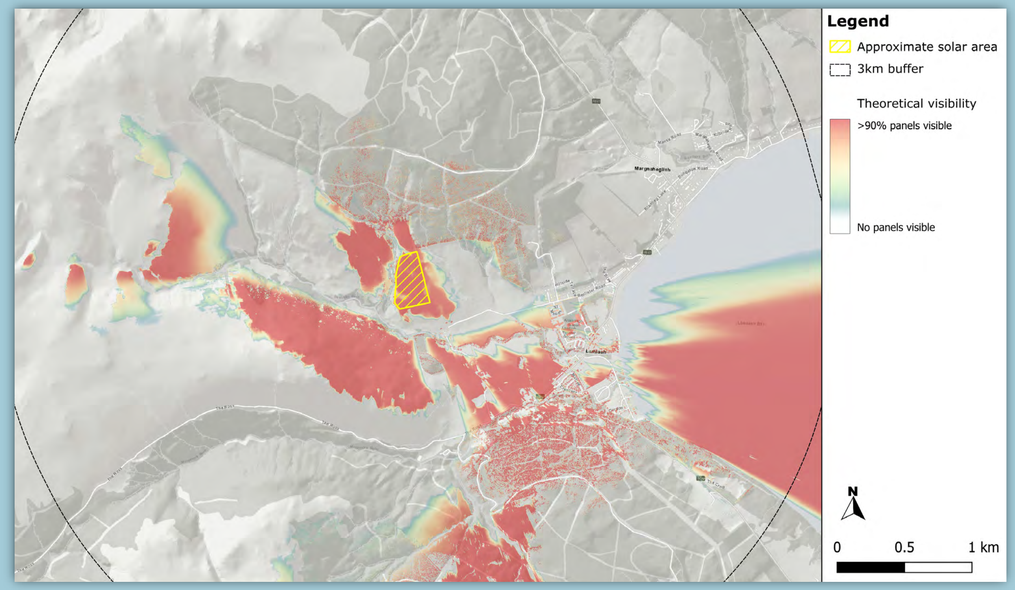
LANDSCAPE AND VISUAL APPRAISAL (LVA)

Assessing the landscape and visual impacts of the proposed development has been a key area of assessment to date. The potential theoretical visibility of the proposed development has been assessed, with several key viewpoints selected for assessment.

Zone of Theoretical Visibility (ZTV) mapping

Zone of Theoretical Visibility (ZTV) maps have been produced for the project across a range of scales, one of which is shown opposite. Areas that are shaded have a theoretical visibility of the solar farm, with the different colours indicating the proportion of the solar farm which is visible. This map assumes an observer height of 2m (considered conservative), and a panel height of 3m.

The ZTV opposite utilises a digital surface model (DSM). This is sourced from publicly available LIDAR data, which for this location was available from 2021 at a 1m resolution. This map therefore includes for screening objects such as trees or buildings. To-date, visual models (photomontages) have been completed from three locations where the ZTV map suggested that there was potential visibility, presented on Board 3.



Next stages

As ACR move forward with the project proposal, several key steps are needed to ensure responsible development. Currently the focus is on understanding the level of local community concerns and support for the development.

We hope to submit a planning application to the Council this week, with any supplementary information provided to them before the end of 2024. As such, if you have any concerns or feedback that we have not been able to discuss today, please get in touch before 16 Dec for consideration in the initial application. If all prerequisites are successfully met, and suitable finance secured to build the project, construction could begin in 2027. A more detailed overview of the long-term project plan is outlined below, and the community will be kept informed of any updates as the project progresses.

PROJECT PHASE	TIMELINE	TASKS
SCOPING WORKS AND INITIAL COMMUNITY ENGAGEMENT	Q3 2024 – Q4 2024	· PRE-APPLICATION; · PLANNING APPLICATION PREPARATION; · INITIAL COMMUNITY ENGAGEMENT; AND · DECISION ON RISKS & LEVEL OF SUPPORT TO PROCEED.
PLANNING	Q4 2024 – Q2 2025	· PLANNING SUBMISSION; · CONSULTATION; AND · DETERMINATION.
GRID	Q1 2027 – Q1 2028	· PROGRESS GRID CONNECTION WORKS WITH SSEN.
TECHNICAL WORKS	Q1 2025 – Q4 2026	· GROUND INVESTIGATIONS; AND · PRELIMINARY DESIGN
PROPERTY WORKS	Q2 2024 – Q3 2028	· CABLE ROUTE PLANNING; AND · SITE LEASE WORKS AND AGREEMENTS.
PROCUREMENT AND CONSTRUCTION	Q2 2025 – Q1 2028	· SECURE FINANCE; · CONSTRUCTION AND INSTALLATION; · GRID CONNECTION WORKS; AND · SITE OPERATIONAL.

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Visualisations

The following visualisations have been prepared to allow the level of landscape and visual impact of the solar project to be assessed. The final versions of these visualisations will be submitted as part of the planning application for the project.

Viewpoint 1

Viewpoint 2

Viewpoint 3