



Company Profile

Who are we?

**With over 20 years experience in UK PV,
your assets are in safe hands**

SGU are proud of our high-quality EPC provision for successful solar PV installation projects cemented by decades of industry knowledge and experience.

We pride ourselves on our commitment to delivering high performing and reliable renewable energy projects.

We provide bespoke solutions for clients tailored to their specific project requirements.

Superior project management plus a skilled workforce work closely throughout every phase of the installation, resulting in a seamless build.

Performance monitoring and management is pre-agreed, with a precise schedule. Delivered safely and within budget, regardless of complexity.

Best practice compliance ensures safety and optimisation throughout, vital to predict and mitigate risk as well as maximise performance.

Beyond EPC, our unique One O&M Resource™ solution combined with a revolutionary workflow and an agile engineering workforce allows us to provide clients with a quality and cost-effective O&M solution.

O&M

We provide experience, expertise, a total dedication to the highest service levels and an industry leading approach to transparent, real-time reporting.

We are able to cost efficiently provide the optimal level of O&M resources to manage and mitigate the risks and maximise the returns from your assets.

We saw an opportunity for more accurate and transparent reporting, and audit trails that would leverage technology and connectivity to provide accountability across a nationally distributed team of engineers and maintenance workers.

We recognised from doing the initial analysis of a site, we could more accurately analyse and understand the risks to output and deliver a superior O&M solution that was accurately provisioned and better optimised.

This ultimately meant we could mitigate the risks at a lower cost to the client.

Our proven One O&M Resource™ solution has been supporting the industry for over 20 years.

This combined with a revolutionary workflow and an agile UK-wide team of O&M engineers, allows us to provide Clients with a quality and cost-effective approach to O&M.



The SGU team

Co-Founders



Darren Lewis
Operations Director



Stuart Spiers
Technical Director

Core members



Richard Harrison
HR



Daniel Fettes
Commercial



Vicky Garbett
Finance



Hannah Allen
Digital



Kristine Pyne
Operations



Derek Purchase
H&S

Team



SGU brings an honest open and hardworking approach to PV O&M.

We provide a best in industry workflow and reporting structure that is backed up by robust work scheduling, expedited replacement part delivery and an intelligent and proactive approach to maintenance.

We protect our customers with a rigorous initial assessment, comprehensive onboarding programme and ongoing training to ensure we meet our continuous improvement goals.

We have created an environment where talent can thrive and where we can support individual growth.

EPC

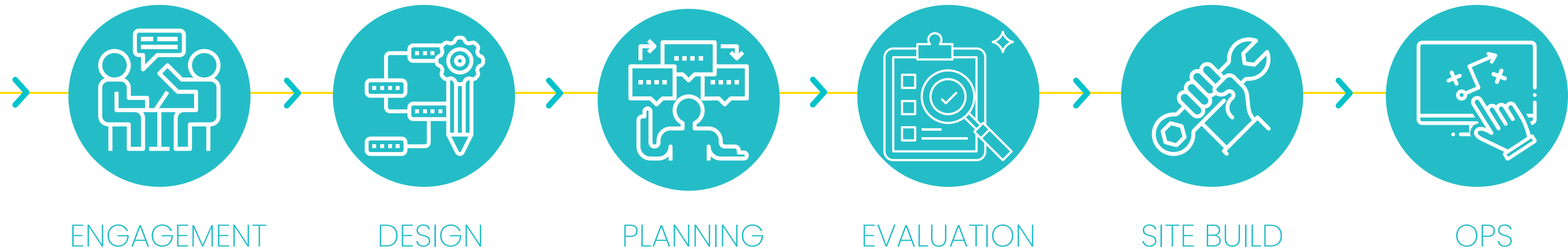
Solar PV is a rapidly maturing industry. The exponential double-digit annual growth rate for the last three decades is due to an equally impressive reduction in costs of the energy produced by technology.

Sustaining this cost reduction is critical to maintaining the growth, our compliance with EPC best practices contributes to further cost reductions.

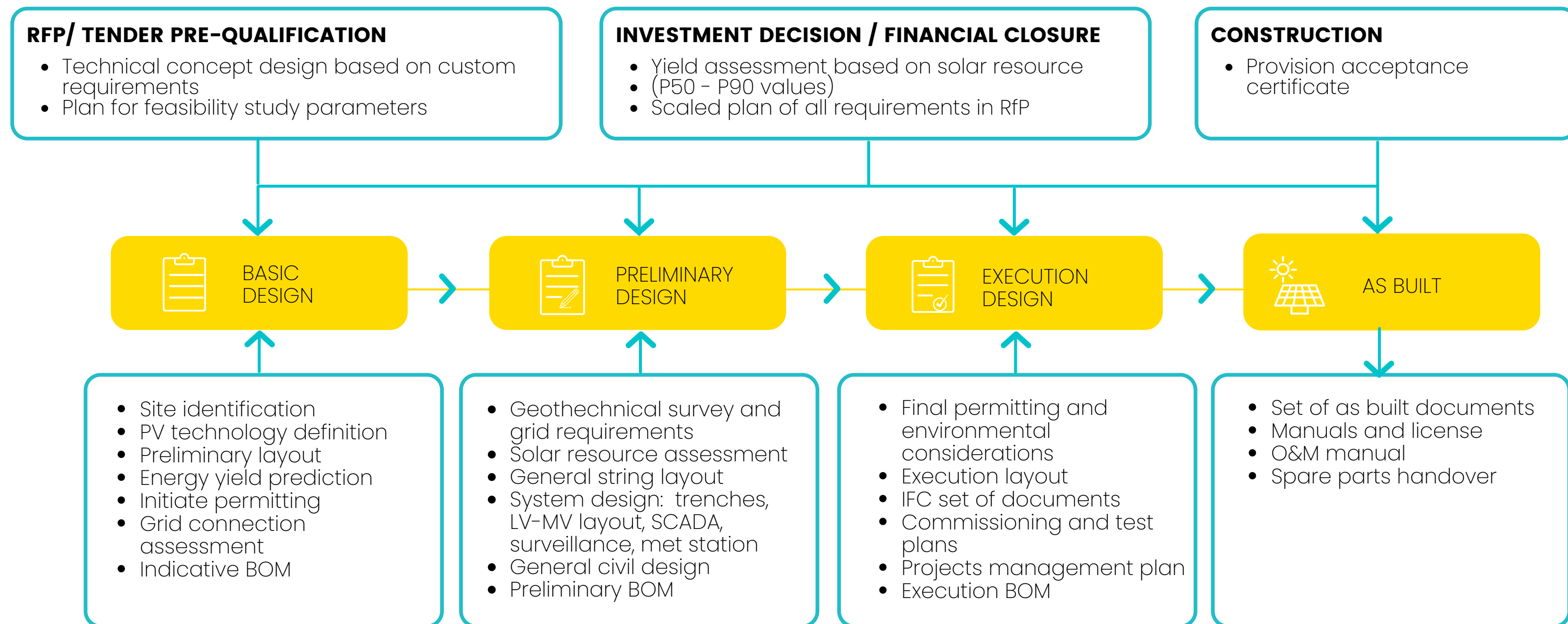
Quality forms the foundation of our entire EPC process as the earlier it is introduced, the lower the overall system build and O&M costs. The entire methodology from Development and EPC to O&M, mitigates handover problems, which increase costs at later stages, and provides suitable risk management tools to drive optimum efficiency.



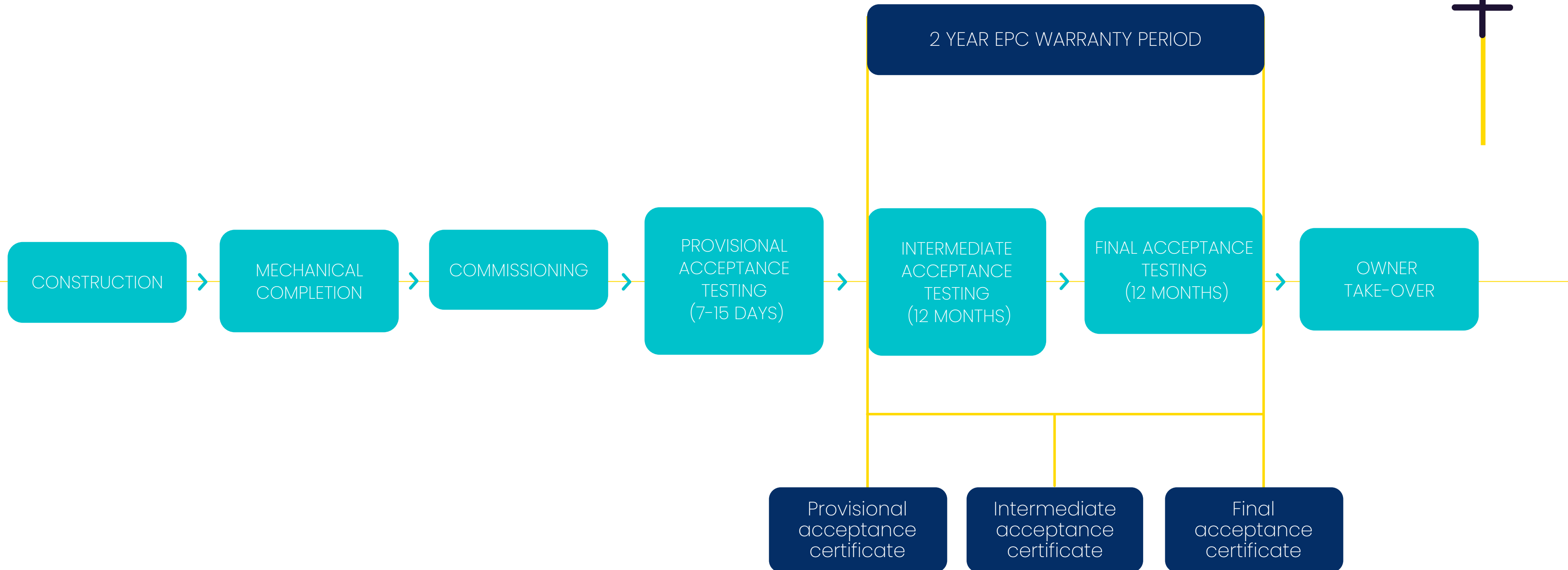
EPC Lifecycle



EPC best practices



EPC best practices



Battery storage



Energy storage has achieved global recognition as an essential technology to support the movement to a low carbon energy system.

Sustaining grid stability is paramount as intermittent renewables remain a challenge. Capturing clean energy to ensure the balance of energy generation vs. demand is crucial.

National Grid highlights energy storage as a key development area and predict up to 30GW installed capacity could be expected by 2050.

The UK is the battery storage market lead for Europe with over 900MW now operational.

In February 2021, Solar Media Market Research analysts identified the UK's battery storage pipeline of 14GW of projects and 2.7GW in Ireland for this year.

Co-location of storage and renewables drives the long-term build cost coefficient. There has been increased interest in battery storage co-located with wind and solar. In the last year, the UK saw 60 new planning applications for large-scale battery storage projects, representing some 1.2GW of capacity.

At SGU we pride ourselves on utilising the highest quality materials from trusted manufacturers to ensure optimum performance from our battery storage systems. We offer availability guarantees alongside suitable maintenance contracts for every battery energy storage system we install and maintain.

Support

Here at SGU we understand the importance of family and safeguarding security for their future. We have decades of experience in solar, but we realise when it comes to your land, the expert is you.

We work collaboratively with you to achieve the best output from the solar farm, engaging the community, re-wilding, encouraging biodiversity and restoring the land to its original condition at the end of the project. We welcome your involvement from planning stages, throughout the build and during maintenance of the site in its lifetime.

There are many variables in encouraging biodiversity with solar farms, we will outline some of the more common factors throughout this document.

Good land management practice creates significant increases in wildlife populations on agricultural land. Solar farms have the potential to support wildlife and contribute to national biodiversity targets. They are secure sites with little disturbance from humans and machinery once construction is complete further contributing to an ideal environment for biodiversity gains.

Solar farms present an excellent opportunity for biodiversity. Most solar farms panels are set on piles resulting in minimal disturbance to the ground. The panels and infrastructure typically disturb less than 5% of the ground. As panels are raised above the ground on posts, over 95% of a field utilised for solar farm development is still accessible for plant growth and potential wildlife enhancement. Post-build, there is little human activity apart from occasional maintenance visits.

Most sites have a lifespan of at least 25 years which is sufficient time for appropriate land management to yield real wildlife benefits. Where a solar farm is developed on agricultural land there is often a condition that it should be reverted to its original land use at the end of the project.

Construction of a solar farm usually takes 6-15 weeks and will consider sensitive times for protected species. Activities likely to result in disturbance or removal of habitat would be avoided during key periods for protected species, e.g., the bird breeding season (March 1st-July 31st).

It is very important to engage communities throughout the life of a solar project. Engaging the local community, including local conservation groups increases awareness of both solar technology and the local environment. Continued community engagement such as open days or local school trips are recommended.

Ultimately the best plans will be those developed through our engagement with the you as the landowner and the local community.



Habitat enhancement

Habitat enhancement is achieved by creating different habitats within a solar farm, including hedgerows, field margins, wildflower meadows, nectar-rich areas, winter bird crops and many others. We will list some of the most common below:

Boundary features

These are key features for biodiversity, not only as nesting and foraging areas but also as a means for wildlife to move between habitats. Boundary features include hedgerows, ditches, stone walls, hedge banks, field margins and scrub.

Hedgerows

These support a wide variety of wildlife, including plants, invertebrates, birds, reptiles and mammals. In solar farms existing hedges can be strengthened by planting gaps, and sections of new hedge may be planted.

Field margins

These present ideal locations for biodiversity enhancements which might benefit plants, invertebrates and ground nesting birds as well as reptiles and small mammals.

Grassland habitat

This can be established at the boundary of the site, under part or all of the solar arrays or a combination of both. The greatest biodiversity value is usually achieved via a variety of grassland habitats with best results from sites containing both wildflower meadows and areas of tussocky uncropped grassland.

Wildflower meadows

These are species-rich grassland composed of wildflowers and fine grasses which can support a wide range of invertebrates, small mammals, reptiles and birds. These can be sown beneath the array and requires only cutting or grazing at intervals through the year, with the timing dependent upon management goals. As a rule, a hay cut in July or August followed by grazing until Christmas is recommended. It is advisable to stop or reduce grazing through the summer to allow wildflowers to flower and set seed.

Habitat enhancement



Pasture

This is grassland established primarily for grazing by livestock either beneath the solar array or around the margins of the site. Pasture does require re-sowing at regular (3 -4 year) intervals and does require some agricultural inputs. Reducing or stopping livestock grazing through the summer will maximise flowering to the benefit of bees.

Security fencing

Fencing at the perimeter of the solar array provides an ideal surface for growing climbers such as honeysuckle or clematis, both of which are good nectar sources as well as providing additional screening for the site. A 20-30cm gap between the base of the fence and the ground or 'Hare hatches' enable movement of wildlife without compromising the security of the site.

Pollen and nectar strips

Pollen and nectar strips are designed to provide food for pollinating insects through the summer period. These can be sown in strips, either along rows within the solar farm, or at its edge. Such mixes usually require re-sowing every 3-4 years.

Wild bird seed mixes

These are sown in spring and left standing as seed crop for birds through the winter. These mixes are usually grown in strips and are ideal for boundaries or wayleaves, allowing arable wildflowers to grow, or including additional species such as flax, will add further value.

Habitat for invertebrates

Log piles should consist of a mixture of hard wood and soft wood and left undisturbed to rot down. Log piles should be placed in both sunny and shady habitats to benefit the widest variety of invertebrates. Butterflies and solitary bees prefer sunny areas while stag beetles prefer shade. Log piles can also provide suitable conditions for reptiles, amphibians, lichens and fungi.

Habitat enhancement

Grazing for biodiversity

Low intensity grazing is a cost-effective means of managing grassland as well as increasing its conservation value. Sheep are the usual choice for solar farms, being generally small enough to pass beneath the rows of panels. They are usually available and also easy to handle making them a favourite for use at multiple solar farms for several years. Hardy breeds are usually best suited to autumn and winter grazing where the grazing is less nutritious. Larger stock such as horses and cattle are not considered suitable due to their ability to damage the arrays.

Grazing should be stopped for periods of the spring and summer. Stopping grazing in the spring (April – June) will favour early flowering plants, whereas summer (July–September) will favour summer flowering herbs. Ceasing grazing April –September will return the greatest biodiversity benefits but it is appreciated this may not always be possible. A combination of low stocking density and breaks in grazing should lead to a high diversity of wildflowers and invertebrates as well as benefiting ground nesting birds and mammals.

Where grassland is being managed for ground-nesting birds light grazing is usually acceptable but topping or mowing must be avoided through the spring and summer months.

Roosting and nesting

Birds, bats and small mammals can benefit from the provision of artificial nesting and roosting structures. Usually these would be located within hedgerows and woodland but suitable habitat can also be created within the solar array itself; for example, planks have been affixed to frames as nesting habitats for blackbirds and other farmland birds. A number of more specialist structures can be built for invertebrates including 'bug hotels' with small holes for solitary bees and wasps, and beetle buckets for stag beetles to lay their eggs.



Monitoring

Monitoring is a fundamental element of biodiversity management and requires thorough planning to identify key indicators, establish baseline conditions prior to development and assess biodiversity changes through the lifetime of the project.

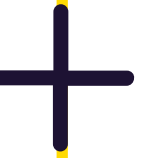
Monitoring should provide details of key elements of biodiversity to be monitored, the method of monitoring, frequency and time of year the activity should be carried out.

All habitat enhancements should be checked regularly to ensure they are working effectively. For example, any plantings should be assessed in spring and autumn to ensure the plants have taken and remain healthy. The entire site should be checked regularly for injurious weeds. Nesting and roosting boxes should be cleaned and checked for structural integrity outside of the breeding season.

A cooperative management approach should be adopted whereby the results of monitoring feed back into the management of the site. Therefore, any problems are identified during monitoring, e.g., a flush of injurious weeds on part of the site, results in appropriate management action rapidly taken. Likewise, if positive results are returned, e.g., an increase in a particular bird species nesting on site, consideration should be given as to how to maintain and maximise this success.

Monitoring

Please see an example of a monitoring schedule below.



Biodiversity element	Monitoring activity	Key indicators	Target	Frequency	Time of year
Hedgerows	Walk full length of hedgerows	Check for damage, dead whips, weeds, gaps	Species mix and density of original planting is maintained	Annually	Summer
Woodland	Inspect all new plantings	Check for damage, dead whips, weeds, gaps	Species mix and density of original planting is maintained	Annually	Summer
Wildflower meadow	Walk full length of grassland habitat	Count herbs flowering – check against seed mix species list. Check for injurious weeds in high density	ID indicator species for year 1. Species richness should approach seed mix by year 5.	3 times during first year of establishment, then annually.	3 times between March and July in 1st year, then July.
Nest boxes	Inspect each box	Check boxes are intact, secured, previously used for nesting, clean	25-50% of boxes occupied by target species in year 2	Annually	Winter
Birds	Walk-through of entire site + point surveys in early morning	Record all birds, especially arable priority species. Check against target bird species list	Bird species increase by year 5	Annually; repeat 2-3 times per session	Summer (March-August)
Reptiles	Check reptile suntraps	Record all species	Reptile species maintained or increased by year 5	Annually; repeat 2-3 times per session	Summer

Our mission & vision

**Protecting the environment -
Our goal is to reduce to the material requirement
of PV O&M by using a 'repair-not-replace'
approach, achieved through an enhanced
understanding of the technology.**

We will ensure that your asset works in harmony with the surrounding eco-system and manage the relationship with its neighbours.

Working with expert partners, we will deliver a proactive strategy to identify new opportunities, to lower the assets impact on the environment and look to exploit the land it sits on for a positive ecological contribution, with zero risk to the plant's output.

By 2023 50% of our maintenance fleet will be electric.



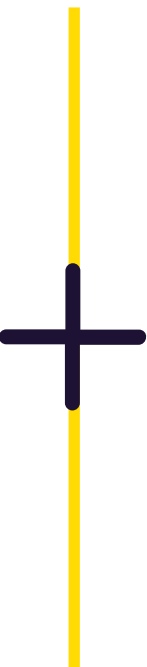
Accreditations

We pride ourselves on the accreditations gained across our SGU and supply partner portfolio.

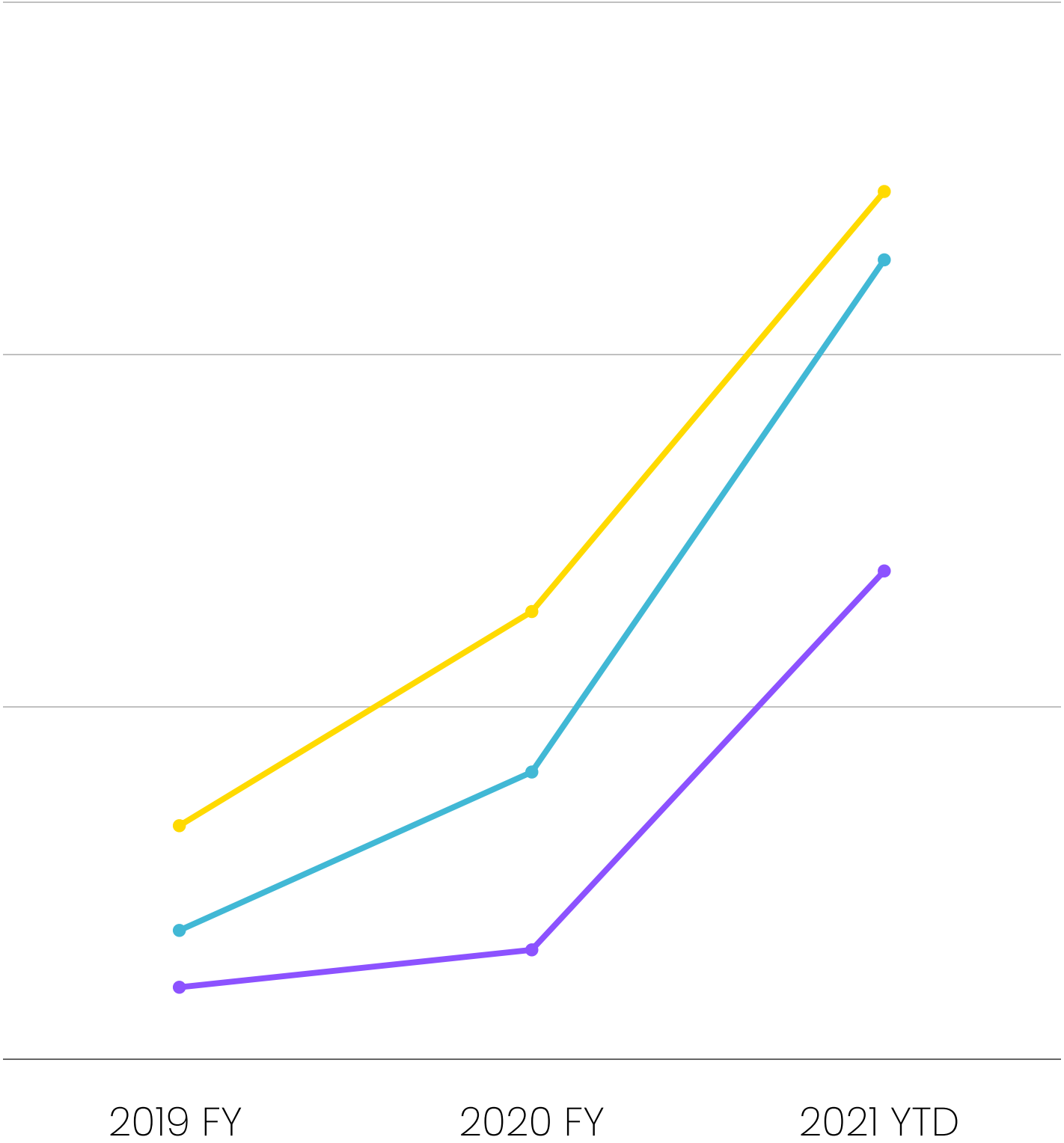
These accreditations demonstrate our ambition and commitment to the Solar Industry and our stakeholders.
All work is subjected BS-EN standards and IET regulations.



Financials



- Turnover
- Gross Profit
- Net Profit





We provide experience, expertise, a total dedication to the highest service levels and an industry leading approach to transparent, real-time reporting.

Contact us

+44 (0) 333 3111 012
info@solar-group.co.uk