

ABOUT EDEN RENEWABLES

Eden Renewables was founded in 2017 by the team behind the award-winning UK solar company, Solstice Renewables, which became known for its innovative, community focused, sustainable approach.

Eden is an international developer of solar and energy storage projects with a pipeline of sites across the UK, East Coast USA and in sub-Saharan Africa through our partner, GridX Africa.

Based at our UK offices near Marlborough, Wiltshire and in London we are working on several utility-scale solar projects; commercial & industrial such as rooftops, EV charging and solar carports; and battery storage.

Eden is known for setting industry-leading standards on our solar farms for:

- Biodiversity and ecological enhancement
- Continuing agricultural use
- Community and educational benefits
- Shared or community ownership

“In 2016, Minnesota legislators unanimously adopted the nation’s first standard for pollinator-friendly solar, now adapted to more than a dozen states and adopted into law by several. Learning from Solstice Renewables’ best practices and viewing the images of their sites was a major contributor to the work of US scientists and stakeholders to establish standards here.”

ROB DAVIS, FRESH ENERGY

**AWARD
WINNING
TEAM**

OUR TEAM



HARRY LOPES
CHIEF EXECUTIVE
OFFICER



GIOVANNI MARUCA
CHIEF DEVELOPMENT
OFFICER



ALEC GREENWELL
DEVELOPMENT



DR. GUY PARKER
BIODIVERSITY



ROSS WOLHUTER
TECHNICAL



MALCOLM EVANS
ELECTRICAL



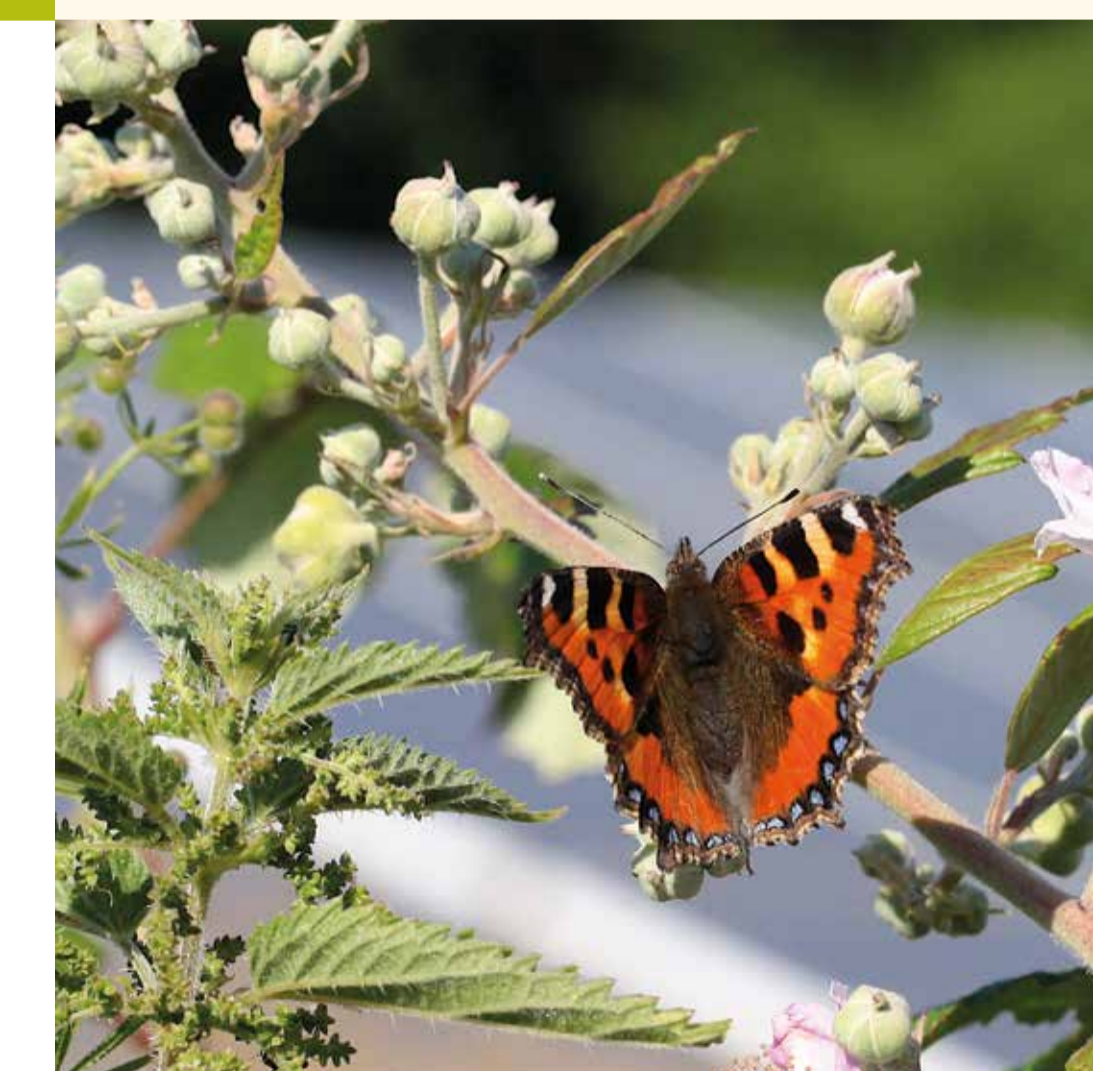
LORNA LYLE
EDUCATION



**SOPHY FEARNLEY-
WHITTINGSTALL**
COMMUNITY



REBECCA SYMON
COORDINATOR



“Projects such as these could lead to self-sustaining nature reserves, which would be a huge boost to wildlife, the local environment and the local community.”

LANCASHIRE WILDLIFE TRUST

**SOLAR
POWER
PORTAL**
AWARDS 2015

WINNER

Best ground-mount project:
SOLSTICE RENEWABLES

WHY SOLAR POWER?

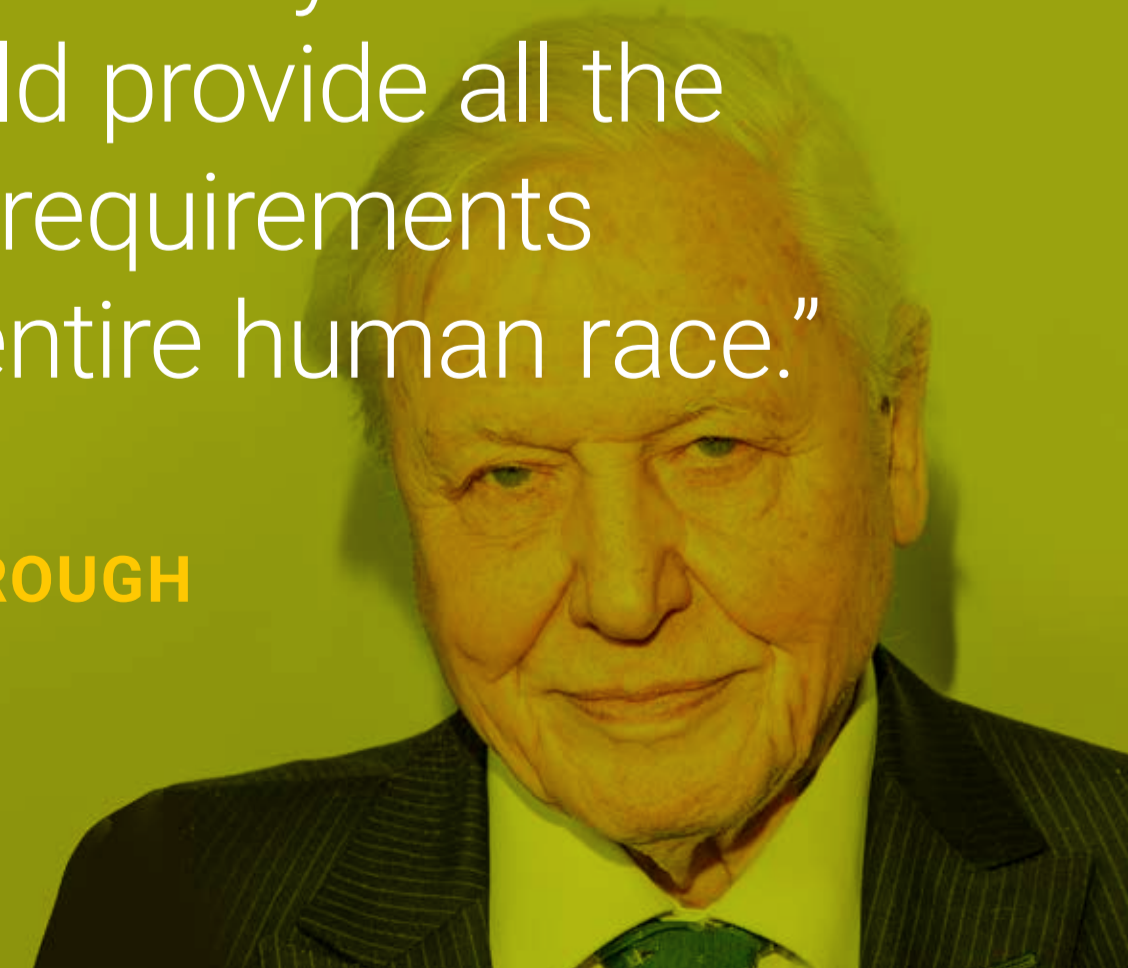
CLIMATE EMERGENCY

In 2019 the UK government became the first in the world to set a legally binding target of Net Zero carbon emissions by 2050. Two-thirds of UK councils, including Wiltshire, have declared climate emergencies. We have an urgent need to decarbonise our energy supplies and solar power is quick and easy to deploy, with a light impact on the land.

**COUNCILS
DECLARE CLIMATE
EMERGENCY**

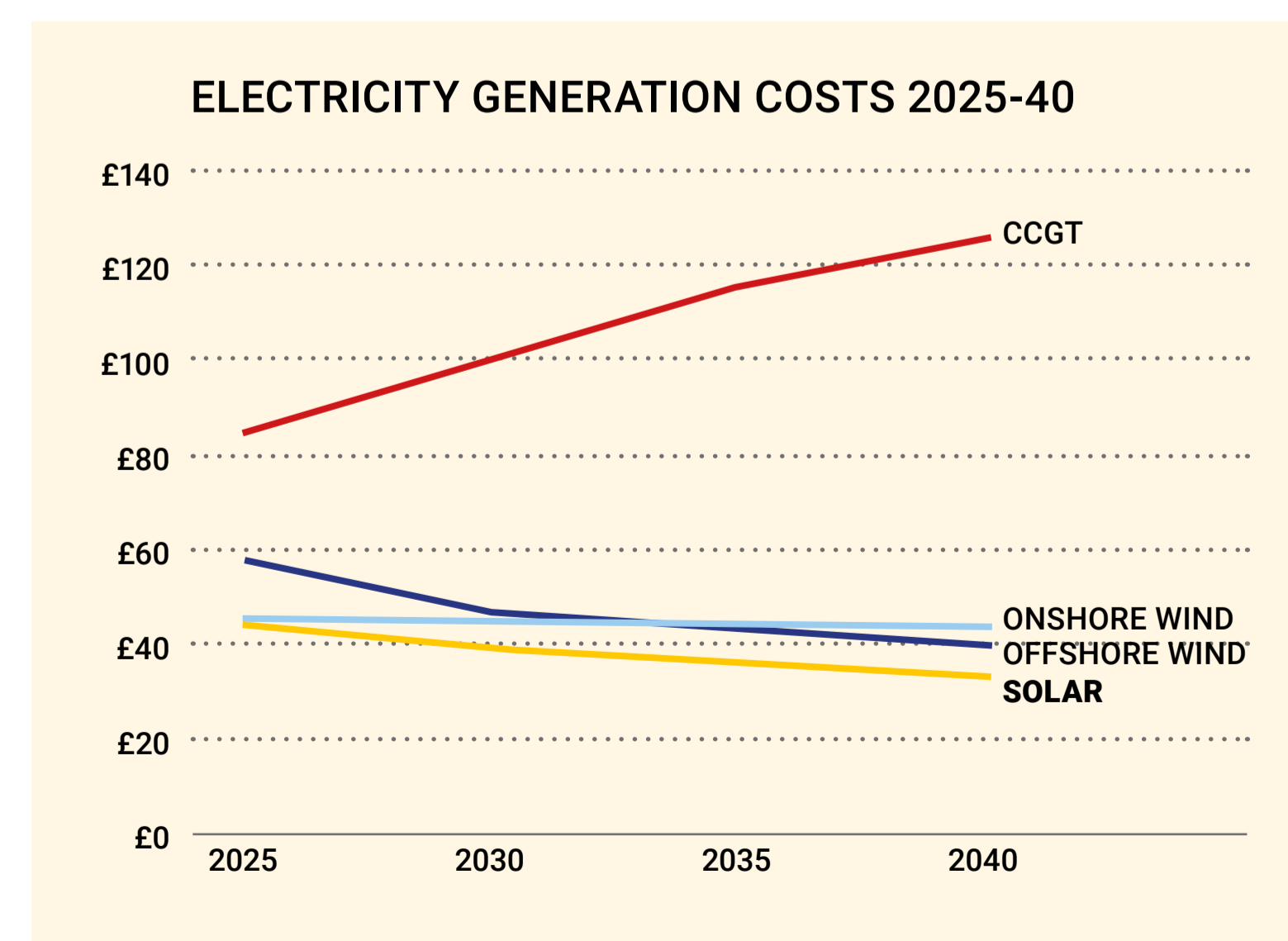
“If we could harness one 5,000th part of the energy that the sun sprays on the earth every 24 hours we could provide all the energy requirements of the entire human race.”

**SIR DAVID
ATTENBOROUGH**



LOW COST

Large-scale solar is now the cheapest form of new electricity generation in the UK, forecast to deliver power for £44/MWh by 2025 – a fraction of the cost of Hinkley nuclear power station. The more solar we have, the lower our energy bills can be.



SUBSIDY FREE

Following the withdrawal of government support for solar in 2017, costs have fallen and technology improved so that large-scale solar farms can be developed in the right places and conditions without subsidies.

LOW IMPACT

Solar electricity is carbon free. Taking into account the manufacturing and installation, a solar farm is expected to pay back its energy and carbon footprint within 1.5 years of its 40 year lifetime.

(Fraunhofer Institute Report, Sept 2020, & others)

REDUCING AIR POLLUTION

Generating energy from fossil fuels can be harmful to air and water quality. Solar PV produces no pollutants to damage the air we breathe and the water we drink.



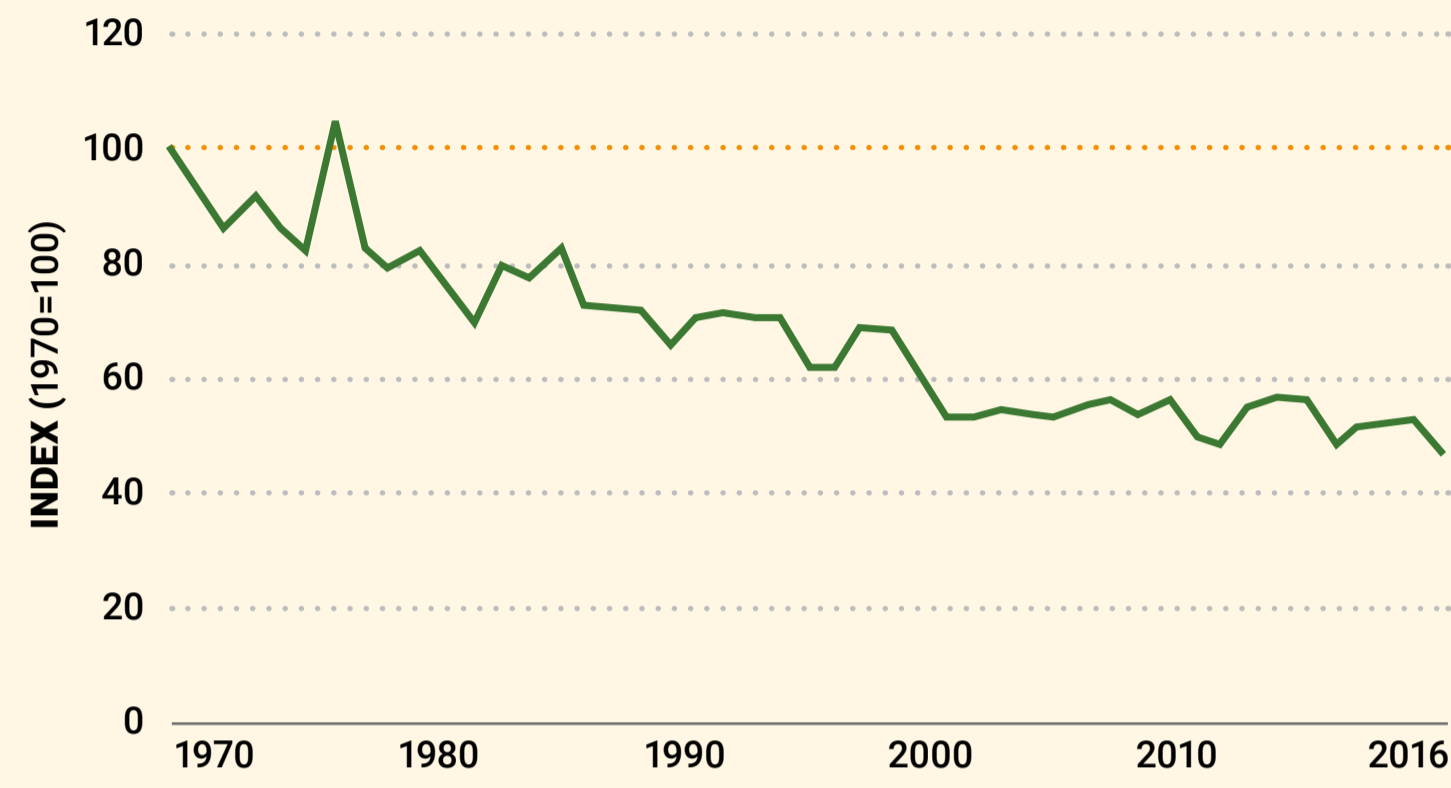
“I want you to act as if the house is on fire, because it is.”

GRETA THUNBERG

**UK GOAL
NET ZERO
BY 2050**

AGRICULTURE, BIODIVERSITY & ECOLOGY

UK BIODIVERSITY INDICATOR: CHANGE IN RELATIVE ABUNDANCE OF UK PRIORITY SPECIES, 1970 TO 2016 ABUNDANCE INDICATOR (214 SPECIES)



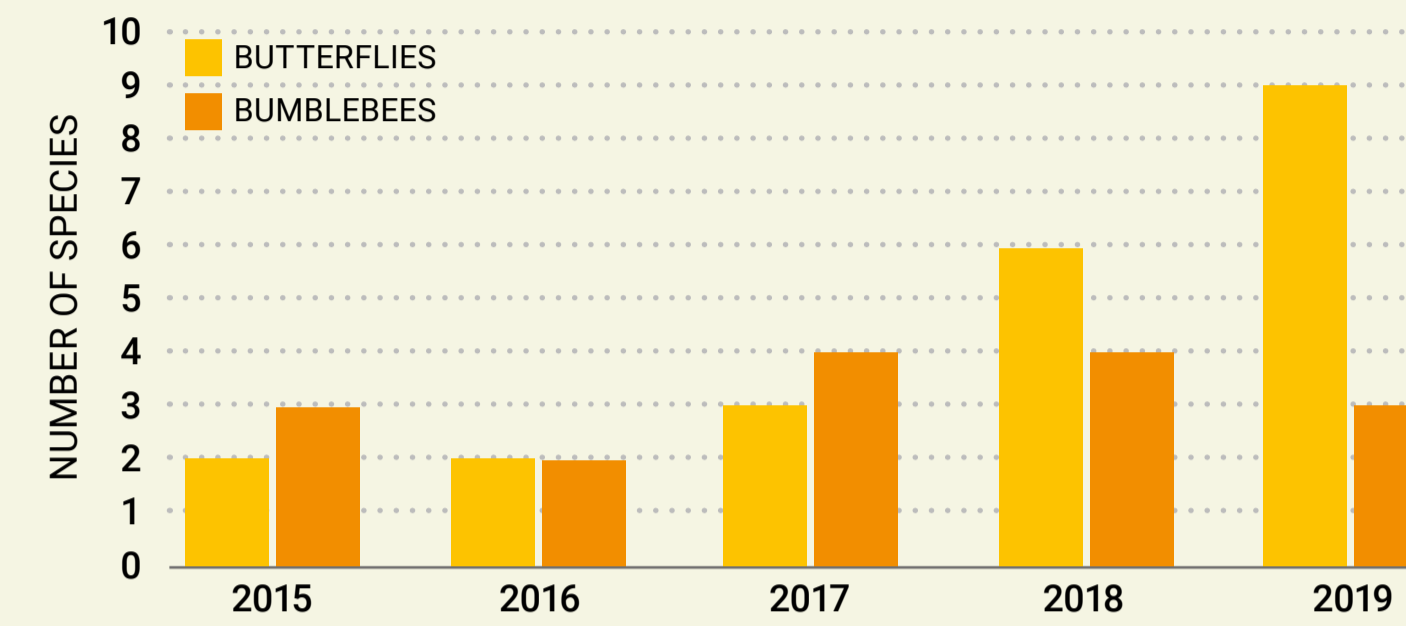
- Additional hedgerow and tree planting provides further habitat enhancement as well as screening.
- Ponds, bat and bird boxes and beehives and hibernacula for amphibians at most of our sites.
- We regularly monitor progress with annual ecological surveys. These consistently show growth in abundance of wild flowers and grasses, with increased numbers and varieties of species of bumblebees and breeding birds.
- Apiaries produce honey at many of our sites.
- Continued agricultural use by sheep grazing which maintains the grass and regenerates the soil.

The UK is not only facing a climate crisis, it is facing an ecological crisis too.

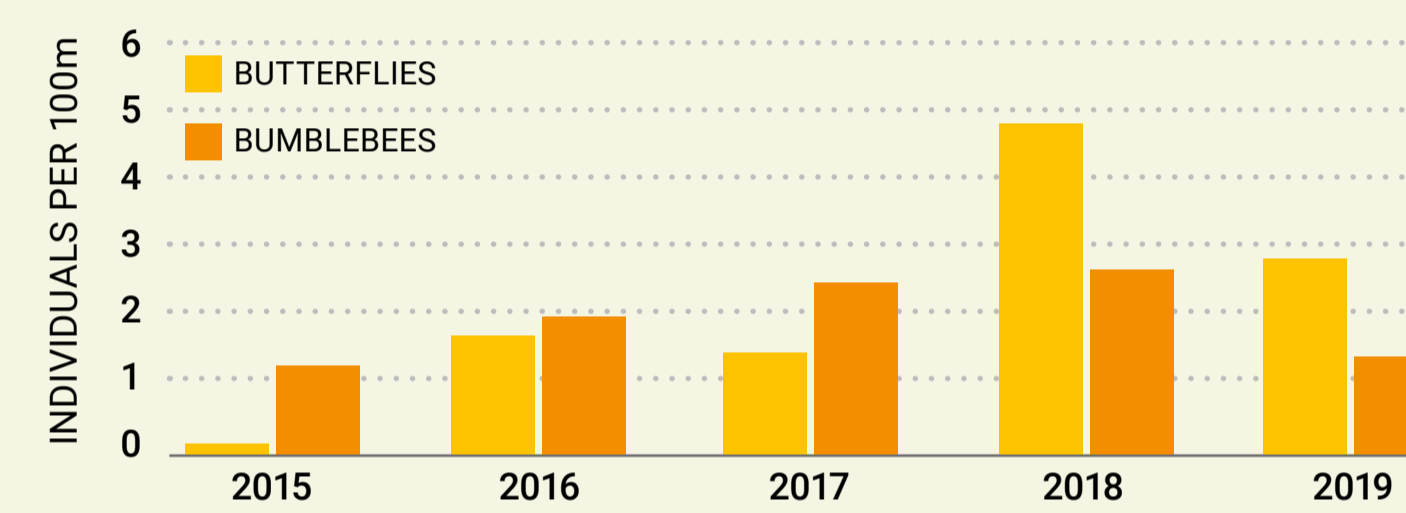
In Britain, wildflower meadows have decreased by 97% since the 1930s due to intensive farming practices. The decline in pollinators like bees and butterflies is particularly worrying, and has an economic as well as environmental impact – they are thought to be worth around £400m a year to the UK economy.

- Land around and under panels is sown with a mixture of native wildflowers and grasses to provide food and habitat for a range of wildlife; we can sometimes target specific endangered species.

SAWMILLS SOLAR FARM DIVERSITY BUTTERFLIES + BUMBLEBEES 2015-19



SAWMILLS SOLAR FARM ABUNDANCE OF BUTTERFLIES + BUMBLEBEES 2015-19



Solar Site Pollinator Habitat Scorecard

For site and seed mix planning, designing, and assessment. Pollinator planting area shall always be managed to prevent and eliminate invasive species as defined in 6 U.S.C. chapter 217 § 5101(2). Scorecards must be renewed every three years or sooner. Standards below refer either to the site plan or an established site. The site area is consistent with the 'Limits of Disturbance' per Net Meter Rule 5.103.

- Percent site's vegetative cover is flowering species (select one)
 - 1-15 percent (5 points)
 - 16-30 percent (10 points)
 - 31-45 percent (15 points)
 - 46-60 percent (20 points)
- Flowering perennial species to be used (select all that apply)
 - Includes species of Northern New England and adjacent New York provenance (5 points)
 - Amount of seed to be planted (biscuits) is determined according to seed provider's recommended application rate and/or planting density for planted species in the target area (5 points)
 - Includes only *Y.T. native or naturalized perennial* SPECIES (15 points). Species native to the biophysical region preferred.
- Cover diversity within the ground cover area (# of flowering plant species that constitute >2 percent cover each; select one)
 - 1-9 species (5 points)
 - 10-19 species (10 points)
 - 20 or more species (15 points)
- Seasons with at least 3 blooming species with >2 percent cover each (select all that apply)
 - Spring (10 points)
 - Early summer (5 points)
 - Late summer (5 points)
 - Fall (5 points)
- Observed pollinator nesting habitat within 0.25 miles (select all that apply)
 - Bare ground patches one square foot or larger, with undisturbed and well-drained soil (2 points)
 - Forest edge habitat that includes flowering shrubs and young trees (2 points)
 - Cavity nesting sites (e.g., dead trees, stags, fallen logs, shrubs, plants with pithy-stemmed twigs such as sumac, rose, raspberry) (2 points)
 - Creation of nesting habitat features (e.g. boxes, tunnels) (0.2 points per feature)
 - # features: 10 x 0.2 = 2.00 points
- Pollinator management practices (select all that apply)
 - Mowing occurs only after October 15, and before May each year; mowing height is 5" or higher (5 points)
 - Detailed establishment & management plan (10 points)
 - Detailed plant & wildlife monitoring plan (10 points)
- Pesticide risk (select if applicable)
 - On-site insecticide use on plants (includes prior application to seeds/plants) (-40 points)
- Vegetation buffer adjacent to the solar site (select all that apply)
 - At least 50% of buffer area vegetative cover planted with flowering plant species (5 points)
 - At least 50% of buffer area vegetative cover planted with *Y.T. native or naturalized shrub* species (5 points)
 - Species native to the biophysical region preferred.
 - Buffer at least 30 feet wide (10 points)

Site Owner or Designer: Beltlow Power Limited
 Date: 20/11/18
 Vegetation Consultant: Wychood Biodiversity
 Seed Supplier:
 Project Address: Sawmills, Devon
 Target Seeding Date: New Retrofit Revised Scorecard Attached Seed Mix Specs or Management Plans

Pollinator-Friendly Score: 93.0

Meets "Pollinator-Friendly Solar" Standard: >85
 Provides Excellent Habitat: >85

Upload completed scorecard at: go.vvm.edu/pollinator-friendly-solar



"A shining example of how you can turn a basic, unremarkable grassland site into an improved site and newt haven."

**BEEHIVES
BAT BOXES** LANCASHIRE WILDLIFE TRUST

"Solar farms could be a real asset in our countryside by giving declining wildlife like bees and farmland birds a home."

RSPB



COMMUNITY AND EDUCATIONAL BENEFITS

We believe that people living near a solar farm should share in the economic benefits it brings as well as the environmental ones.

These include:

- c. £100,000 p.a. in business rates to the local authority for a 50 MW solar farm.
- A community benefit fund for the lifetime of each of our solar farms. The community decides how to spend the income to bring economic, social and environmental benefits to the area.
- The opportunity for shared ownership or community investment where feasible.
- An educational benefits fund for nearby schools to educate future consumers and inspire careers in climate change, energy and ecology; relating this to their schools, communities and the wider world. Classroom-based learning plus field trips to our solar farms.
- More than 5,000 pupils have benefited from visits to solar farms developed by the team behind Eden Renewables.

COMMUNITY FUND



“Thanks to the community benefit fund from the solar farm, at last Ashcombe has joined the 21st century. This new Broadband technology, which has the potential to be upgraded in future, is a huge boost to everyone who lives or works here or enjoys their holidays here and should really help the local economy.”

**RALPH RAYNER, DIRECTOR OF
THE ASHCOMBE ESTATE, DEVON ***

* Here the community fund paid for the village to upgrade from dial up internet to high speed broadband, revolutionising social and working life for the residents.

“It has been a fantastic opportunity for the children to discuss possible future renewable energy solutions and to be able to relate these to their own schools and local community.”

**MRS. PRICE, HEADTEACHER,
PACKINGTON PRIMARY SCHOOL,
LEICESTERSHIRE**



CONSTRUCTION AND MAINTENANCE

Solar farms are quick to build and construction is expected to take around six months.

Eden Renewables will implement best practice during construction to minimise any nuisance to the local community where reasonably possible.

The majority of vehicle movements centre on the delivery of the panels and frames for the panels. A Construction Traffic Management Plan will be agreed with the local Highways Authority before building starts, which will ensure the safety of all road users.

During the installation period, construction noise is comparatively low aside from the 4 to 6 weeks when the legs of the solar framework are driven approximately 2 metres into the soil, removing the need for deep foundations. Plant associated with the solar park such as substations will be supported on small concrete platforms.

At the end of the solar farm's life (typically 40 years) all hardware can be easily dismantled, removed offsite and largely recycled. Planning authorities granting consent for a solar park will apply a condition to restore the site to its former use.

Once the solar farm is operational a small number of vehicle movements would be required for maintenance – about twice a month, typically in a small van.

“The record rainfall and storm surges that have brought flooding across the UK are a clear sign that we are already experiencing the impacts of climate change.”

LORD STERN

**FAST
BUILD**

**MINIMAL
NOISE**



FREQUENTLY ASKED QUESTIONS

CAN WE BUY POWER DIRECTLY FROM THE SOLAR FARM?

We would love to be able to sell you power at a reduced price from the solar farm but this isn't possible yet due to government legislation. The Local Electricity Bill is currently going through parliament which may change this in future. In the meantime energy suppliers such as Octopus and Coop Energy do offer renewable electricity tariffs.

IS THERE GLARE FROM THE SOLAR PANELS?

Solar panels are designed to absorb light, not reflect it. Any glare is minimised through using translucent coating materials to improve light transmittance through glass. Where there is glare, we will screen or angle the panels away at the appropriate hours. There are many solar farms next to main roads and major airports.

HOW IS THE LAND MANAGED?

A specialist land management team will maintain the site throughout the operation of the solar farm. The team will be responsible for implementing the landscape strategy that includes tree planting, hedges, a wildflower meadow and sheep grazing. Chemical pesticides and herbicides will be avoided wherever possible, to restore the land organically.

DO THEY INCREASE FLOOD RISK?

Rainwater runoff from the site will not increase and the solar arrays will not displace any floodwater. A flood risk assessment will be commissioned and form part of any mitigation that might be required.

DO SOLAR FARMS AFFECT HOUSE VALUES?

There is no evidence to suggest that house prices are affected by proximity to solar farms. They generate clean power, silently, without emitting pollution, in a setting that supports biodiversity, so are great neighbours.

CAN I PROVIDE MY COMMENTS DIRECTLY TO THE COUNCIL?

Yes, the local planning authority will carry out a public consultation after the planning application is submitted when you will have the opportunity to make formal comments.

IS THERE ANY NOISE FROM SOLAR FARMS?

PV panels convert sunlight into electricity with no vibration. The only noise is from inverters and battery storage, while the sound dissipates and becomes inaudible within about 100 feet, so these units are always located more than 100 feet from the edge of the solar farm.

CAN THE PANELS BE RECYCLED?

Solar arrays are comprised of glass, silica, aluminium, steel, copper and plastic which are largely recyclable with a good salvage value. PVCycle.org reports achieving recycling efficiency of c. 95% for solar panels, well above the EU requirement of 80%.



CHANGING TECHNOLOGY

In the decade since solar farms first started to be developed in the UK, there have been huge improvements in technology which have helped to increase the efficiency and reduce the costs of solar and other forms of renewable power generation.



ENERGY STORAGE

Large-scale batteries can store the energy generated at times of low demand and release it back onto the grid when it is needed. This helps to 'balance' the grid, to mitigate the variable characteristics of solar generation, contributing to lower energy bills overall. A typical energy storage system is about the size of a shipping container. They use lithium-ion batteries, such as are used in laptops, phones and electric vehicles but on a much larger scale.



BIFACIAL MODULES

These are able to generate solar power on both sides of the solar panel, utilising diffuse light that would otherwise be wasted and helping to increase the total amount of energy generated by 5%-20%.

SINGLE AXIS TRACKERS

Panels are fixed to a north/south axis which moves silently through the day from east to west in order to maximise generation. Combining single axis trackers with bifacial modules can increase power generation by about 10%-20% compared with traditional south facing 'fixed tilt' solar panels.



EV CHARGING

Decarbonising the transport sector is one of the biggest challenges the UK faces in achieving our target of Net Zero emissions by 2050, and the transition to electric vehicles will be a major part of this. The government is expected to bring forward the date for banning new sales of petrol and diesel vehicles to 2030 which will result in a challenge for EV charging infrastructure and an estimated increase in demand for electricity of 100 TWh (around a third higher than current levels, source: DUKES, National Grid). We aim to provide the infrastructure to enable superfast EV charging hubs charging points at or near our solar farms so that in future cars can be charged in the local community by renewable electricity.

33% INCREASE
IN ELECTRICITY
DEMAND



GOVERNMENT POLICY

NATIONAL

The UK government was the first national government in the world to declare a Climate Emergency in May 2019 and to set a legally binding target of Net Zero emissions by 2050.

Renewables now account for 38% of UK electricity consumption, and this is growing fast – proving they are a viable alternative to fossil fuels. To achieve our Net Zero targets requires an exponential increase in capacity in order to decarbonise power, heat and transport.

We are also facing the fallout from a global health crisis unprecedented in our lifetimes, with a devastating impact on the economy as well as on people's lives. The UK Citizen's Climate Assembly UK is calling for the economic recovery measures to also target Net Zero; as is the Committee on Climate Change (and many other institutions).

In October 2020, the Prime Minister called for the growth of offshore wind, solar and other renewables to power "the green industrial revolution that in the next ten years will create hundreds of thousands, if not millions, of jobs."

The government is expected to announce further support for solar and other renewables in its Energy White Paper, anticipated in November.

LOCAL

In February 2019, Wiltshire council became one of the first local authorities to declare a climate emergency. It set a Net Zero target of 2030, twenty years earlier than the national target, and set up a Climate Emergency Task Group to develop a strategy for achieving this, which Eden Renewables has fed into. The Swindon and Wiltshire LEP published its Local Energy Strategy in November, 2018 which identified four strategic objectives including smart grids and mitigating constraints, transition to low carbon transport and low carbon growth.

**WILTSHIRE
NET ZERO
2030**

"Now, as we build back better we must build back greener."

**PRIME MINISTER
BORIS JOHNSON**

"When done well, renewables can provide a host of benefits to people living in the countryside. Community and shared ownership opportunities allow people to enjoy the direct economic benefits, while cheaper energy and the possibility of new green jobs and the reinvestment of community funds contribute to a thriving rural economy."

CPRE REPORT, GREENER, BETTER, FASTER, JULY 2020

PUBLIC OPINION

Government studies have consistently shown that solar power is the most popular energy-generating technology in the UK. The BEIS quarterly public attitudes tracker surveys show support for solar energy has remained between 80% and 90% throughout the tracker, and at 86% in the most recent survey (May 2020).

Local groups campaigning for a greener future include Zero Chippenham, Sustainable Calne, and the Wiltshire Climate Alliance.

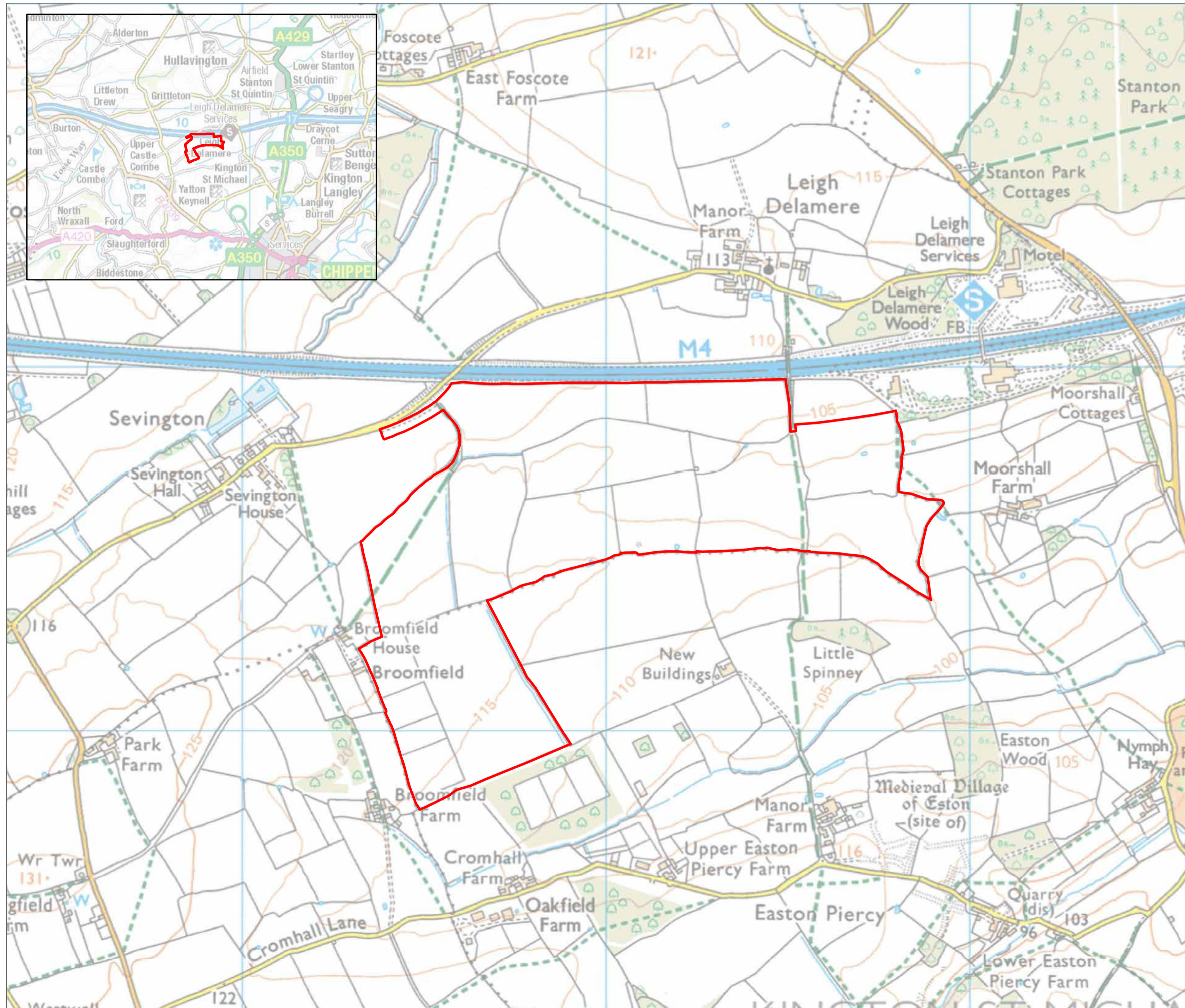
A 2019 poll by the Conservative Environment Network showed that 86% of constituents in North Wiltshire support solar.

**86%
SUPPORT
SOLAR**

"The transition to a low carbon economy presents a huge opportunity."

SWLEP LOCAL ENERGY STRATEGY, 2018

KEY FACTS



DETAILS

- Overall site approximately 220 acres (89 hectares) of predominantly Grade 3b land currently used for both arable and grazing
- Installed capacity: 49.9 MW to generate electricity equivalent to the consumption of approximately 13,825 homes
- Approximately 22,200 tonnes CO₂ saved each year
- Grid connection point secured at Chippenham sub station
- Panels will use latest technology with single axis trackers and bifacial modules for maximum efficiency
- Battery storage units installed so power can be distributed when it's needed most
- Easy access to site from M4 at Junction 17
- Proximity to the Motorway Services which can benefit from clean energy

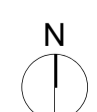
SITE DESIGN

- Existing hedgerows will be retained, protected and enhanced
- Bridleway will be retained, with new hedgerows planted alongside for screening
- A bespoke Landscape and Ecological Management Plan will substantially improve the biodiversity over the 40-year lifetime of the solar farm
- An appropriate native grass and wildflower mix will be sown around the panels to improve the biodiversity potential of the land, transforming it into a haven for wildlife
- Solar arrays are a maximum of 2.7m high and 0.8m off the ground to allow for sheep grazing and ecological measures
- Panels cover 30% of the total site area, but less than 5% is disturbed by the actual footprint

COMMUNITY BENEFITS

- Community benefit fund £350 per MW index linked for the lifetime of the solar farm. This could amount to £17,500 a year or over £700,000 in total
- Additional funding £2,000 a year for educational benefits shared among Sevington Victorian School, Stanton School and Bybrook Valley School

**13,825 HOMES
SUPPLIED WITH
CLEAN ENERGY**



LEIGH DELAMERE SOLAR FARM DESIGN

WILDFLOWER MEADOWS

The land around and beneath the solar panels will be sown with native wildflowers and grasses to provide habitats for bees and other pollinators.



BEEHIVES

Local beekeepers will be invited to keep hives to make honey.



BIRD AND BAT BOXES

These will be located around the perimeter of the site to encourage bats to roost and birds to nest.

TREES AND HEDGES

Trees and hedges will be added to reinforce the screening of the site, which will also provide excellent connectivity, foraging and shelter for wildlife.



EDUCATIONAL BENEFITS

We organise trips to the solar farm so children from local schools can learn about science, technology and energy, and provide interpretation boards and benches for community visits.



SHEEP GRAZING

The land around the panels will be maintained by sheep grazing in autumn, after the meadows have seeded, so the land continues in agricultural use.

SECURITY

Traditional rural fencing and discreet CCTV cameras will be used around the perimeter of the site to maintain security.



ENERGY STORAGE

Batteries store electricity from the solar array, enabling export to the grid when the power is needed most.

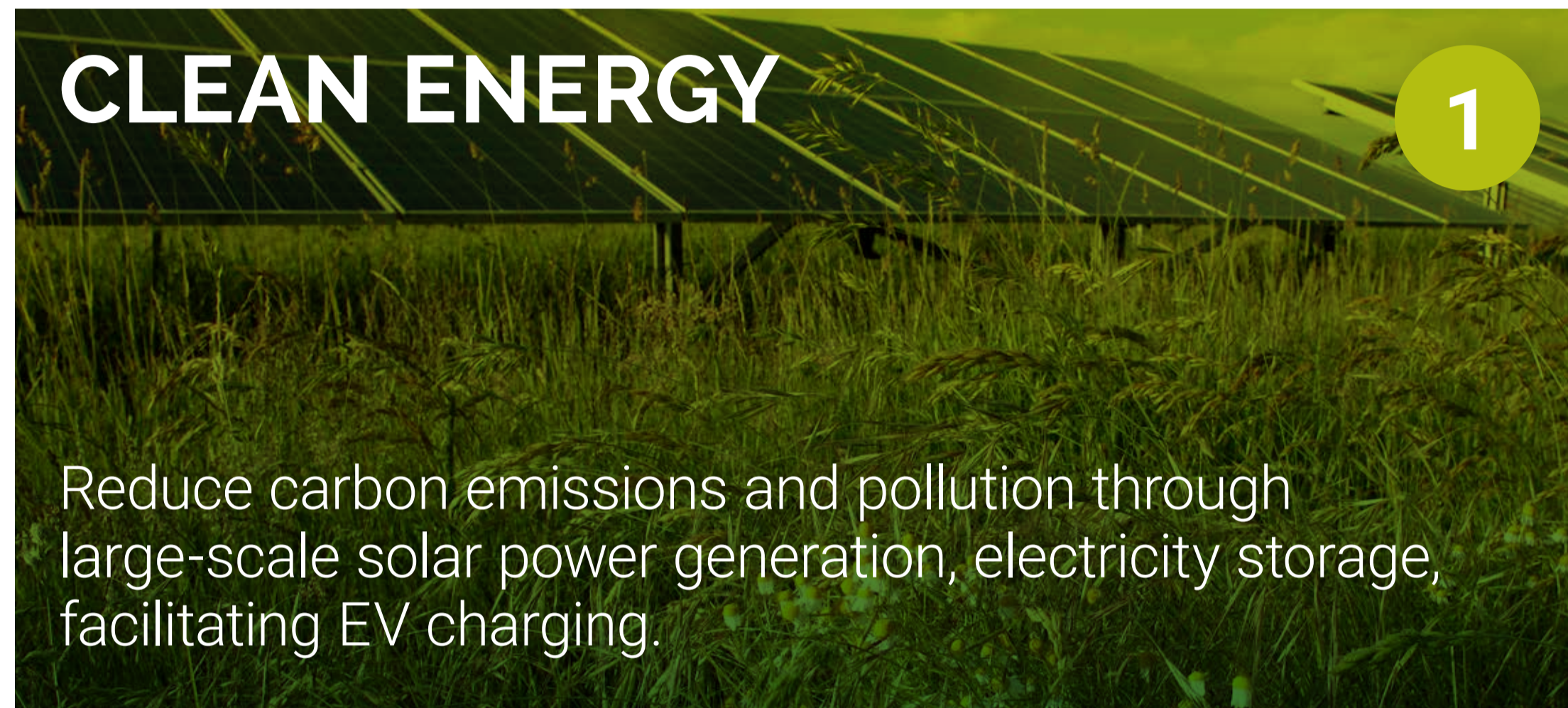


KEY	
	Wildflower Planting Area

MAXIMISING LAND USE

THREE LAND USES TO TACKLE THREE CRITICAL CHALLENGES OF OUR TIME

CLEAN ENERGY 1



Reduce carbon emissions and pollution through large-scale solar power generation, electricity storage, facilitating EV charging.

CLIMATE EMERGENCY

“Climate change is happening and is due to human activity, this includes global warming and greater risk of flooding, droughts and heat waves.”

BEIS, UK GOVERNMENT



BIODIVERSITY 2

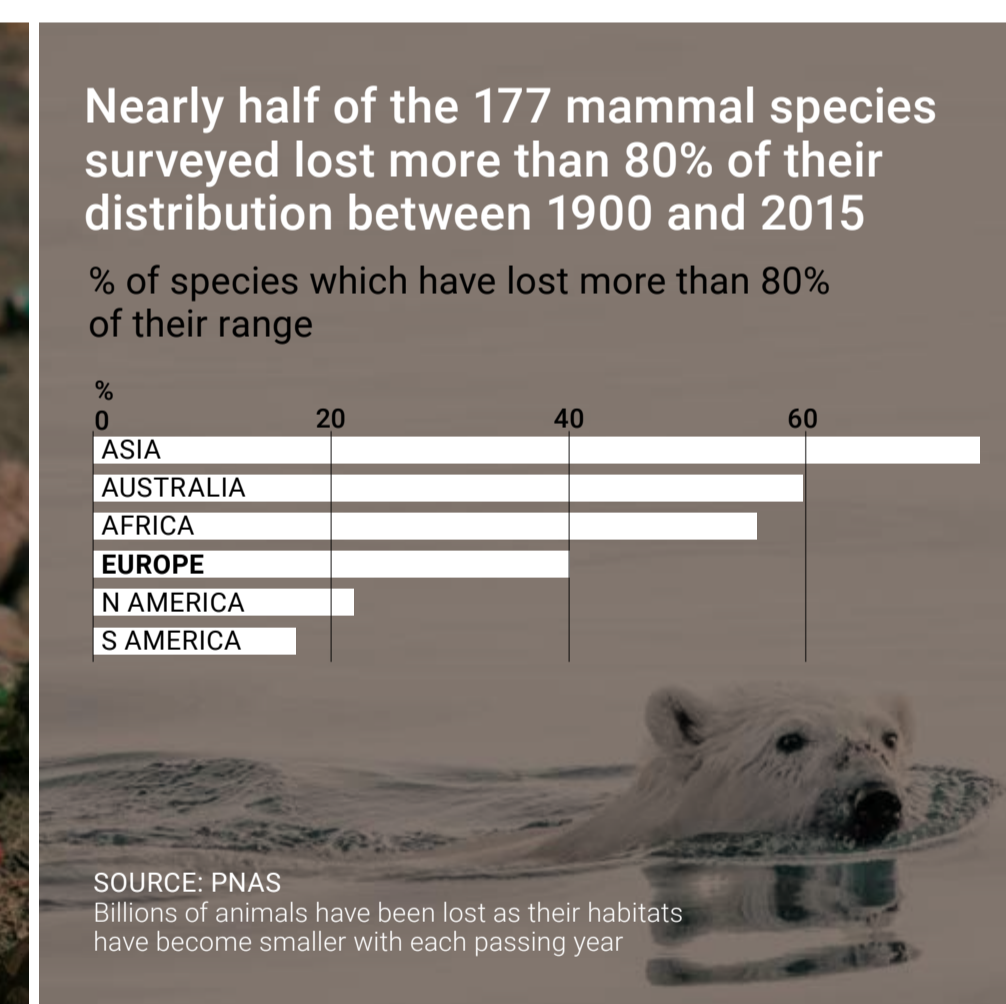


A range of ecological measures combined with stopping intensive high-input farming on the land means a solar farm is like a wildlife reserve that lies untouched for a generation or more.

ECOLOGICAL EMERGENCY

“This is definitely human impact, we’re in the **sixth mass extinction**.”

**WWF CONSERVATION
SCIENTIST MARTIN TAYLOR**



FARMING 3



Land continues in food production and sheep stocking density can remain high, sequestering carbon and regenerating degenerated soils.

AGRICULTURAL EMERGENCY

“This is an emergency and the way we eat and farm lies right at the heart of it.”

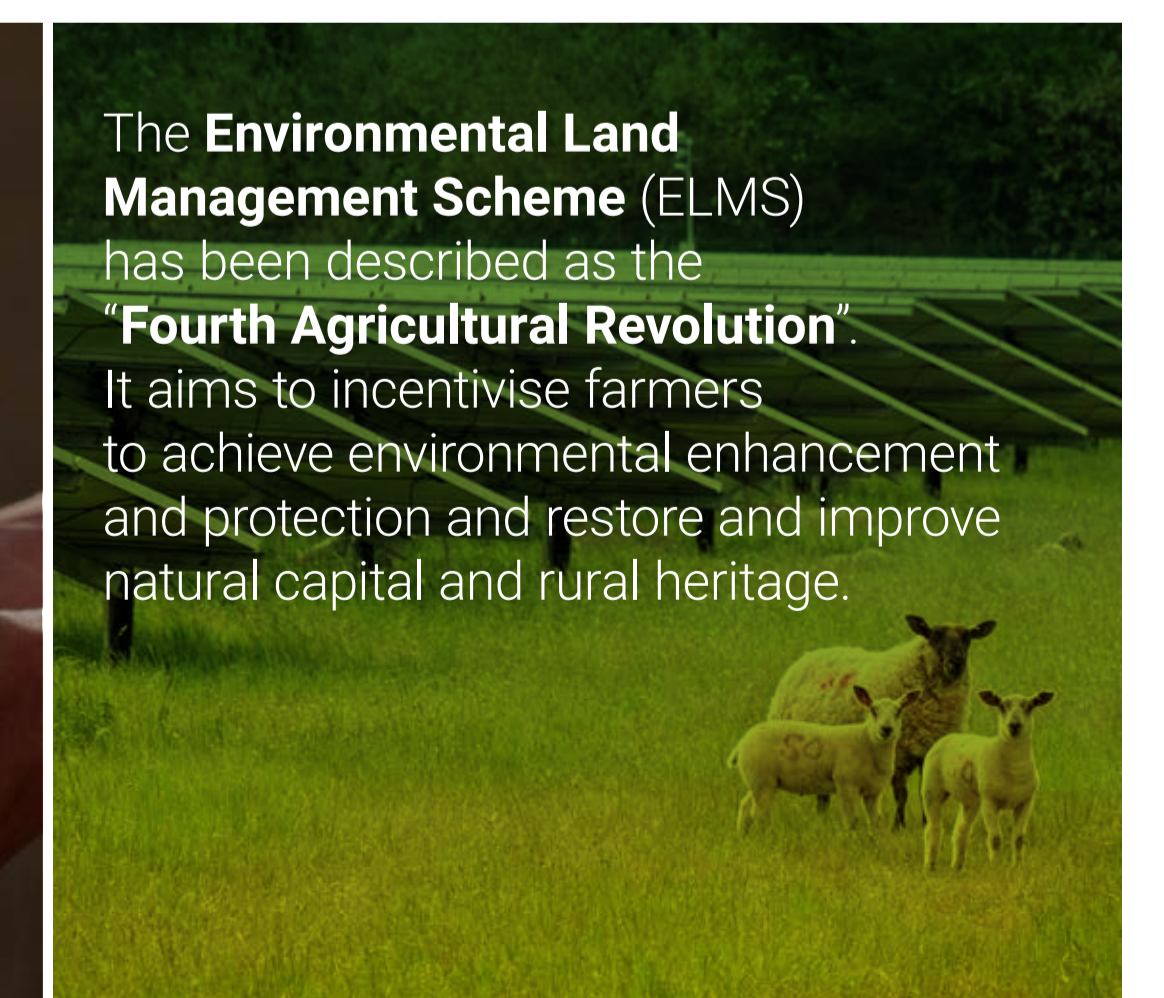
SOIL ASSOCIATION

“The world is losing 32 bn tonnes of fertile soils a year due to unsustainable farming practices, affecting 3.2 billion people. **Loss of soil carbon costs the UK over £3 billion a year.**”

SOURCE: SUSTAINABLE FOOD TRUST



The **Environmental Land Management Scheme (ELMS)** has been described as the “**Fourth Agricultural Revolution**”. It aims to incentivise farmers to achieve environmental enhancement and protection and restore and improve natural capital and rural heritage.



VIEWS OF SITE

From viewpoints to be agreed with Wiltshire Council subject to timescales



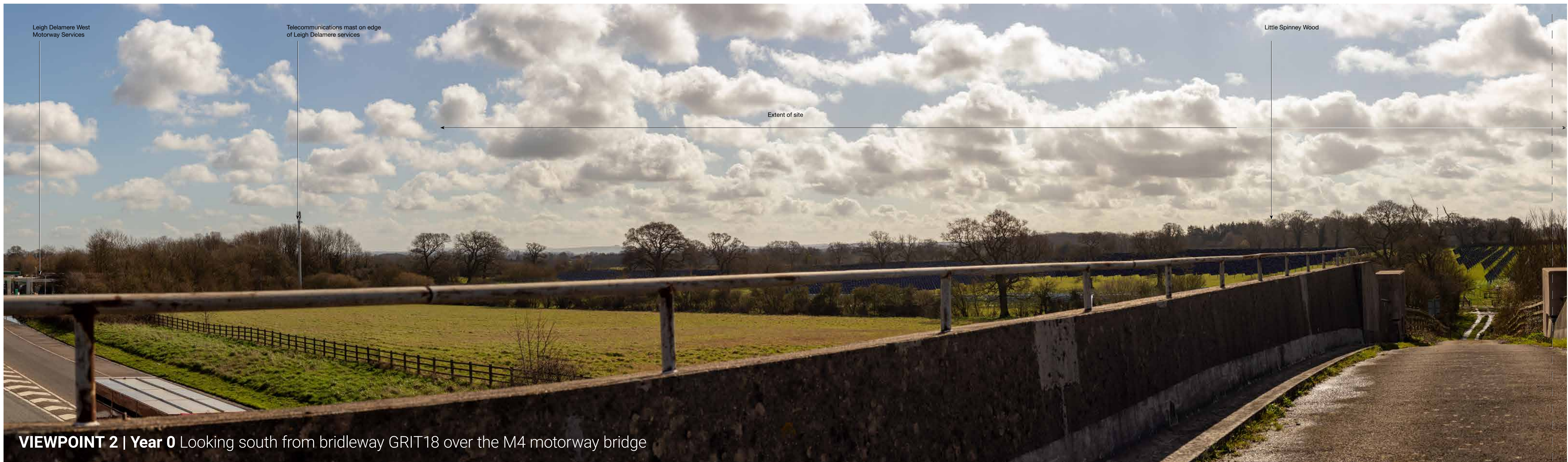
VIEWPOINT 1 Looking north east from bridleway GRIT15



VIEWPOINT 5 Looking west from footpath KSTM40

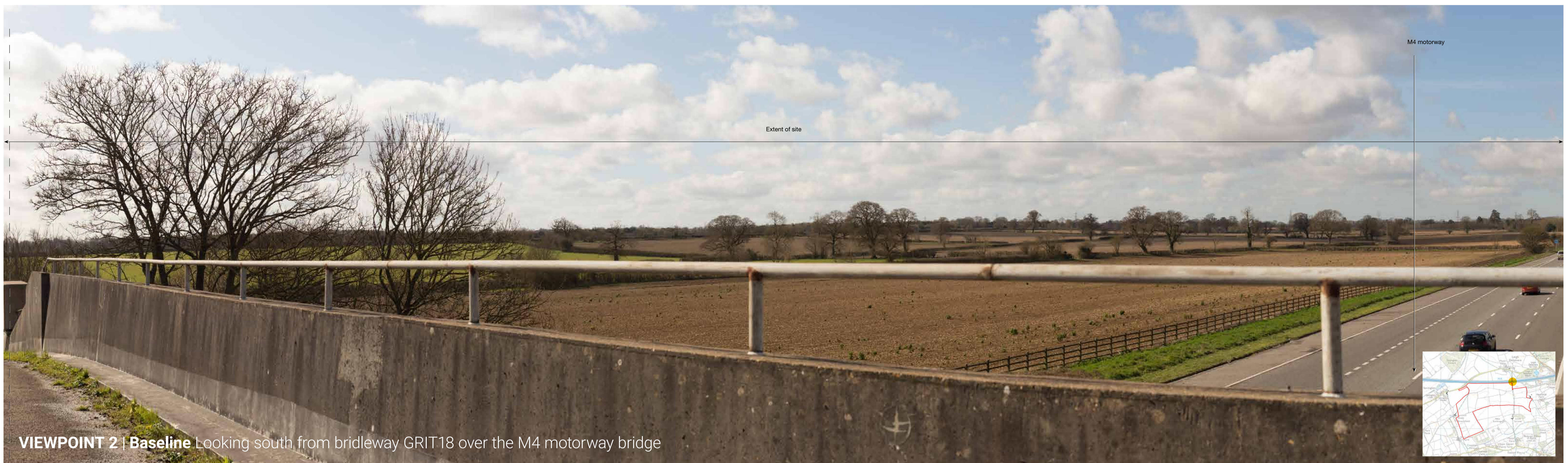
BEFORE AND AFTER VIEWS LEFT

Photomontages have been created to industry standards from viewpoints to be agreed with Wiltshire Council subject to timescales



BEFORE AND AFTER VIEWS RIGHT

Photomontages have been created to industry standards from viewpoints to be agreed with Wiltshire Council subject to timescales



VIEWPOINT 2 | Baseline Looking south from bridleway GRIT18 over the M4 motorway bridge



VIEWPOINT 2 | Year 0 Looking south from bridleway GRIT18 over the M4 motorway bridge

BEFORE AND AFTER VIEWS LEFT

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