

# Green Infrastructure

## Update on Solar Energy Across Kent

Kent County Council has long supported solar PV (a PhotoVoltaic solar panel converts sunlight into electricity via photovoltaic cells) with the first of 27 installations over a 3-year period at Hever Primary School in 2007 at a time when solar installations were typically small and grant funded. Subsequently during the feed in tariff years of government support, KCC invested in further sites that have subsequently already paid back the initial investment. Invicta House, Ashford Highways Depot and Broadmeadow Registered Care Centre are now producing carbon free energy and also providing an income for KCC. Subsequently Cyclopark, Gravesend and Simon Langton School for Boys, Canterbury along with Northfleet School for Girls have had installations using Salix Finance Ltd and KCC technical support with over 1,000 solar panels (286kW) deployed. Salix Finance Ltd provides interest-free government funding to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills.

### Phase 1

Initially five sites were chosen to have solar PV installed in 2020. These were: Worrall House, Kings Hill; Thanet Multi Agency Specialist Hub; Swale Multi Agency Specialist Hub; The Bridge, Dartford and The Swattenden Centre, Cranbrook (see table below). The approach for sites using Salix loan finance is to target the highest electricity using sites within the estate and then design systems that maximise onsite usage and provide savings from imported electricity from the grid. The cost of electricity equates to generating at a cost of 5p/kWh rather than a grid price of 14p/kWh.

### Key Facts:

- The design allows 87% of power generated to be used onsite.
- This will provide 25% of the total power used across all sites.
- Annual savings of £55,942 in reduced electricity costs.
- Saves 86.18 tonnes CO<sup>2</sup> equivalent per year.
- Funded by Salix Finance (80%) and KCC (20%).
- Provided 1,307 solar panels equivalent to 423 Kilowatt Peak – the total maximum power rating of the PV system.

The metrics used for the business case are backed up with post installation measurement and verification of the sites using data monitoring (see table below).

Post installation measurement and verification of the sites							
Site	Size kWp	no. of panels	Install cost	PV Generation kWh p.a.	%PV used onsite	%PV power export to grid	%PV used onsite as % of site total elec demand
Worrall House	188.48	608	£138,391	158,785	85.2%	14.8%	23.0%
Swattenden Centre	73.03	218	£74,704	62,963	95.0%	5.0%	39.2%
Dartford Bridge & Campus	73.78	217	£64,665	55,574	87.4%	12.6%	30.5%
Swale Mash (Orchards)	44.22	132	£35,798	40,169	82.3%	17.7%	35.3%
Thanet Mash (Green Banks Centre)	44.22	132	£36,423	40,187	84.7%	15.3%	31.2%
	<b>423.73</b>	<b>1307</b>	<b>£349,980</b>	<b>357,678</b>			

### Schools

With KCC Energy Team project management support, the following schools have had installations (with zero subsidy) using interest-free Salix Finance.

- Lady Joanna Thornhill Primary School, Wye with 45 kWp (164 panels).
- Foreland Fields School, Ramsgate with 101 kWp (352 panels).
- The Wyvern School, Ashford with 150 kWp (440 panels).

### KCC New Builds

Southborough Hub will have 49.5 kWp and 148 solar panels installed (far beyond building regulation compliance), following business case advice from the KCC Energy Team to Southborough Town Council.

### Phase 2

The following sites (see table opposite right) are going through the design process to come forward for the next stage of installation. The Kings Hill sites would be on a power purchase agreement with tenants paying market rate for the generated electricity they use onsite.

### Other KCC Projects

KCC and LASER (who provide a number of energy procurement frameworks for public sector bodies) are working together to provide a Power Purchase Agreement (PPA), to purchase 100% renewable energy from a new renewable energy generator.

### Community Energy Projects

KCC has also worked closely with local groups across Kent to help put solar PV on a number of community buildings including:

- The Friendship House in Minster
- Elham Parish Hall
- Orchards Solar Farm in Iwade, a community solar farm.

KCC continues to support the Kent Community Energy Partnership and the Sheppey Community Energy Trust in their promotion and installation programmes for Solar PV.

### Domestic Market

Solar Together Kent is a solar PV buying scheme to help able-to-pay households get a reduced-price installation of solar panels. It relies on large numbers of households

Proposed sites for future solar installations		
Site	Address	kWp
Kroner House, Ashford	Eurogate Business Park, Kroner House, Ashford	93.84
Kent Commercial Services Warehouse	Unit 1 Aylesford Commercial Park, Papyrus Way, Aylesford	200.10
Rainbow Centre (Ashford MASH)	Great Chart Bypass, Ashford	46.24
Brook House, Whitstable	Reeves Way, Whitstable	20.40
Brook House, Whitstable	Reeves Way, Whitstable	51.00
Swanley Link	London Rd, Swanley	20.40
The Sunrise Centre	London Road, Southborough, Royal Tunbridge Wells	32.64
		<b>1268.24</b>



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Worrall House at Kings Hill was one of five sites to have solar PV installed in 2020.

signing up to negotiate a better deal for everyone taking part. KCC are participating this year's autumn scheme which opened on 31st August 2020.

The scheme is being run in partnership with iChoosr (the collective buying provider) as well as Canterbury City Council, Dartford Borough Council, Dover District Council, Gravesham Borough Council, Maidstone Borough Council, Medway Council, Swale Borough Council, Thanet District Council, Tonbridge & Malling Borough Council and Tunbridge Wells Borough Council. Households living in Ashford, Sevenoaks and Folkestone & Hythe authority areas will still be able to apply for the scheme.

The scheme is primarily aimed at domestic residents who own their home but is also open to small businesses, landlords and community buildings, provided the installation is less than 50 panels. This scheme has been deployed in London Boroughs, Essex and Suffolk and is recognised as a robust mechanism for achieving uptake with minimal Local Authority resources.

**For more information:**

[https://solartogether.co.uk/kent/home?utm\\_source=google&utm\\_medium=cpc&utm\\_campaign=search&gclid=EAlaQobChMI6OeGhdyu7AIVcWHmCh1vTAZWEEAYASAAEgLC7fD\\_BwE](https://solartogether.co.uk/kent/home?utm_source=google&utm_medium=cpc&utm_campaign=search&gclid=EAlaQobChMI6OeGhdyu7AIVcWHmCh1vTAZWEEAYASAAEgLC7fD_BwE)

**The Green Blue Vision for the Thames Estuary**

Led by Thames Estuary Envoy Kate Willard, the Government-backed Thames Estuary Growth Board including KCC Leader Roger Gough, Medway Leader Alan Jarrett and Dartford Leader Jeremy Kite, published 'The Green Blue'. It is a vision to deliver the greenest, most productive estuary in the world. In setting out the Growth Board's ambitions to transform the area, the Green Blue includes plans to attract business and investors, boost connectivity, bring clarity to the housing debate, regenerate infrastructure and create jobs. Called 'The Green Blue' the plan signifies good, green growth using the important, blue waterway of the Thames that connects the area to the rest of the world.