

# Solar pv on RCVs in Darlington

Margaret Enstone

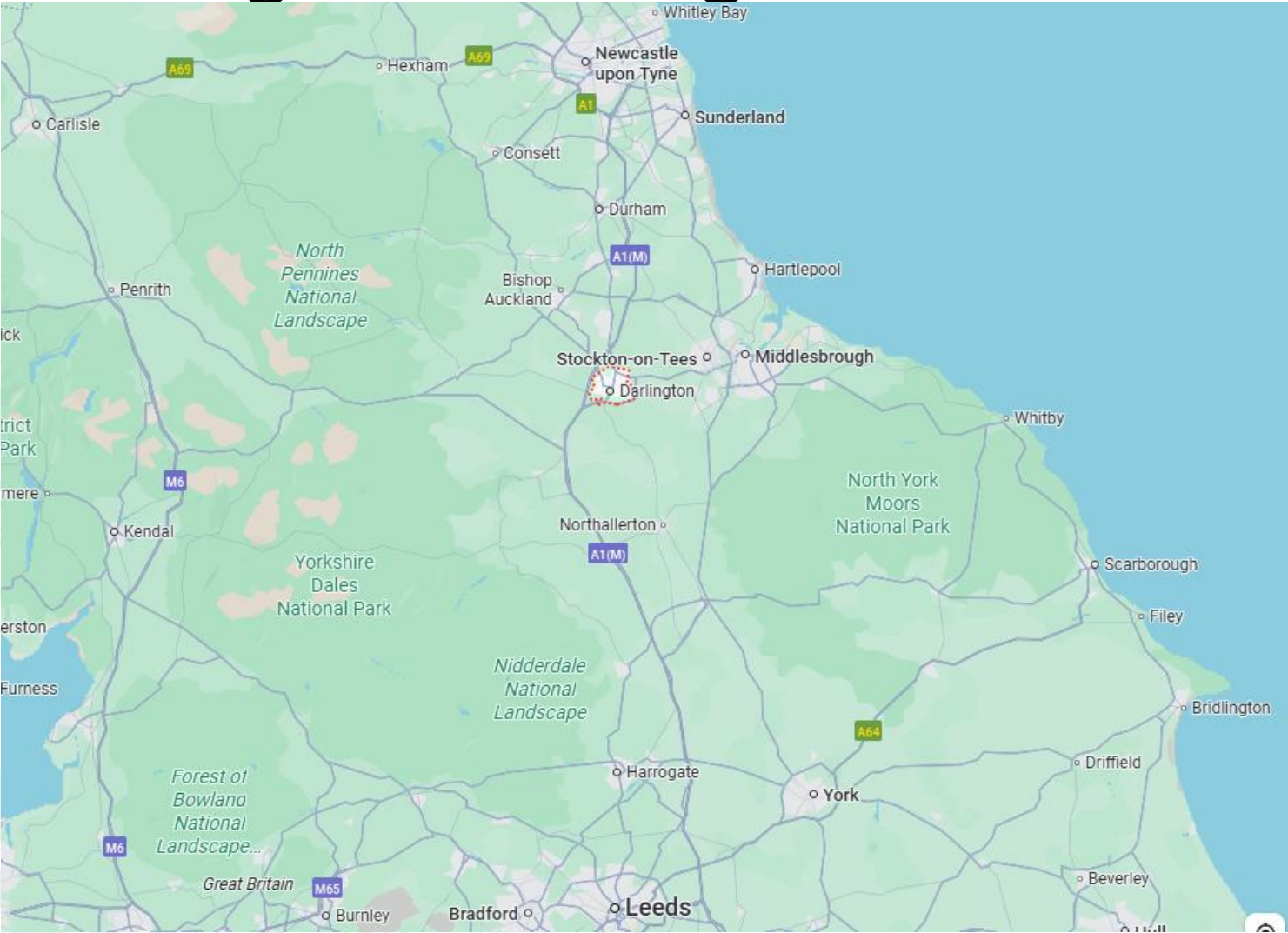
Sustainability and Climate Change Lead Officer

September 2025



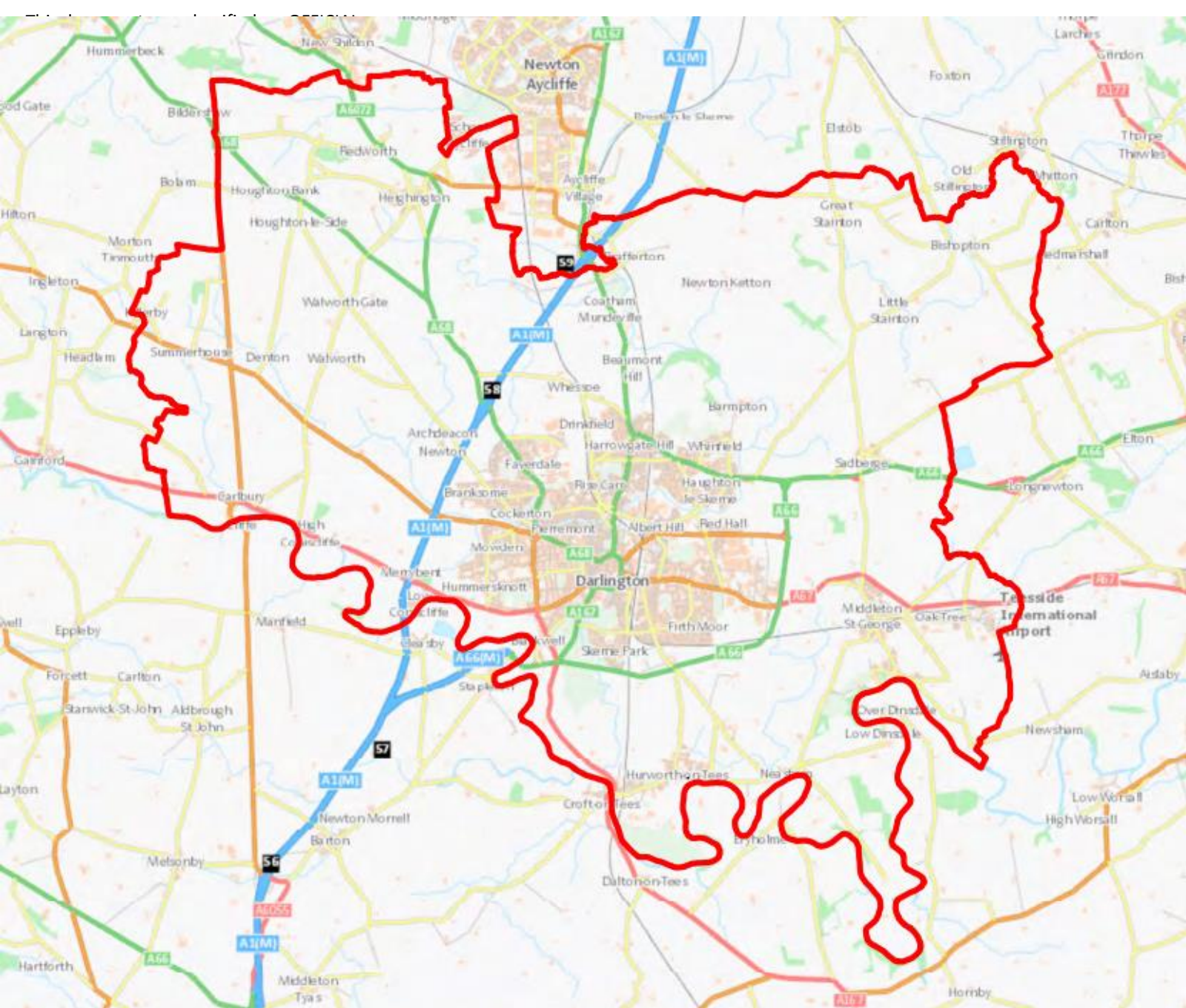
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Borough Council

# Darlington Borough Council



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- Area 7.62 sq miles
- Mileage covered 9,025 miles a year
- Net zero 2040 target for own emissions



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# Who is TRAILAR



In standard operation equipment runs off the alternator

- stereo
- heating
- sat nav
- tail-lifts
- deck-lifts
- fridges

TRAILAR applies ultra-thin solar mats to the roof

Connected to a controller, which regulates the transfer of energy from the alternator and solar mats to the battery

Sensors then monitor all electrical characteristics, calculating fuel & CO<sub>2</sub> saved



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# ROI MODELLING RESULTS



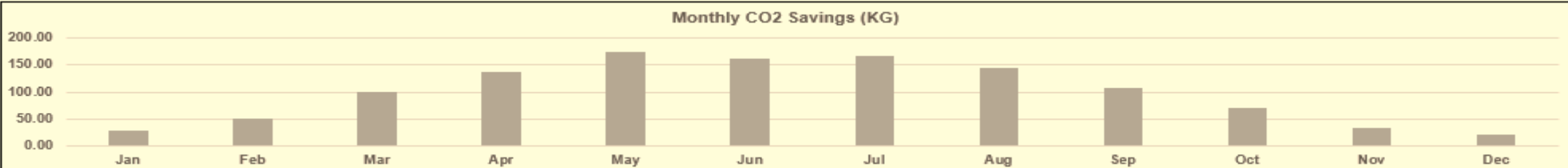
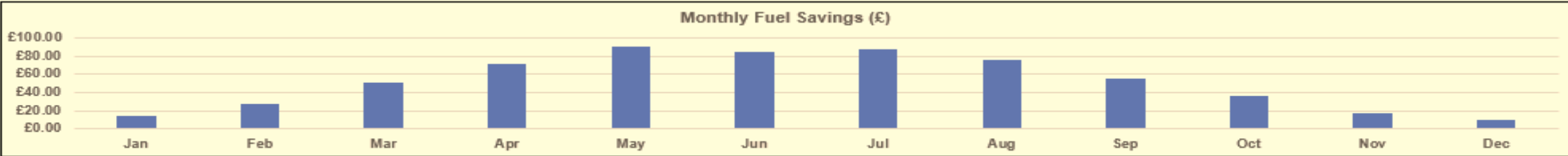
Annual Figures Per Asset	
Annual Fuel Saving (L)	447.40
Annual Fuel Saving (£)	£603.99
Annual Ad Blue Saving (L)	26.84
Annual Ad Blue Saving (£)	£20.13
Total Savings (£)	£624.12
Operational Benefits	£400.00
Total Savings (Inc. Operational Benefits)	£1,024.12

Per Asset	
ROI Years	2.2
% Fuel Saving	3.44%
% CO2 Saving	3.44%
Total Annual CO2 Saving	1.1 Tonnes

Annual Fleet Savings	
Annual Fuel Saving (L)	2,237.00
Annual Fuel Saving (£)	£3,120.62
Ad Blue Saving (L)	134.22
Ad Blue Saving (£)	£100.67
Annual Operational Savings	£2,000.00
Total Savings (Inc. Operational Benefits)	£5,120.62
Total Annual CO2 Saving	6 Tonnes

Total Fleet Life Savings	
Fuel Saving (L)	15,659.03
Fuel Saving (£)	£21,844.34
Ad Blue Saving (L)	939.54
Ad Blue Saving (£)	£704.66
Operational Benefits (£)	£14,000.00
Total Savings (Inc. Operational Benefits)	£35,844.34
Overall System Costs	£11,500.00
Overall	£24,344.34
Total CO2 Saving	42 Tonnes

Annual Figures	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Monthly Fuel Savings (£)	£14.69	£27.07	£51.82	£71.15	£91.26	£84.30	£87.39	£75.79	£55.68	£36.35	£17.79	£10.83
Monthly CO2 Savings (KG)	28.23	52.00	99.55	136.69	175.32	161.95	167.89	145.61	106.98	69.83	34.17	20.80






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Solar Savings

 **Diesel**  
**2244 Litres**

 Diesel Assets **5**

 Co2 Reduction **5.7 tonnes**

 AdBlue Saved **135 Litres**

DASHBOARD

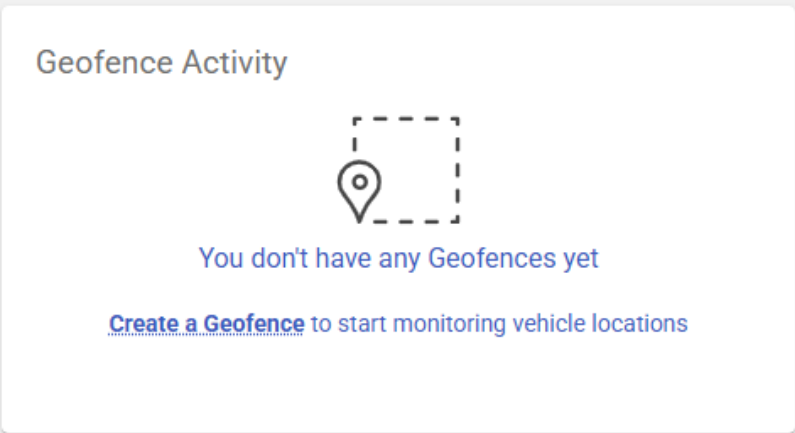
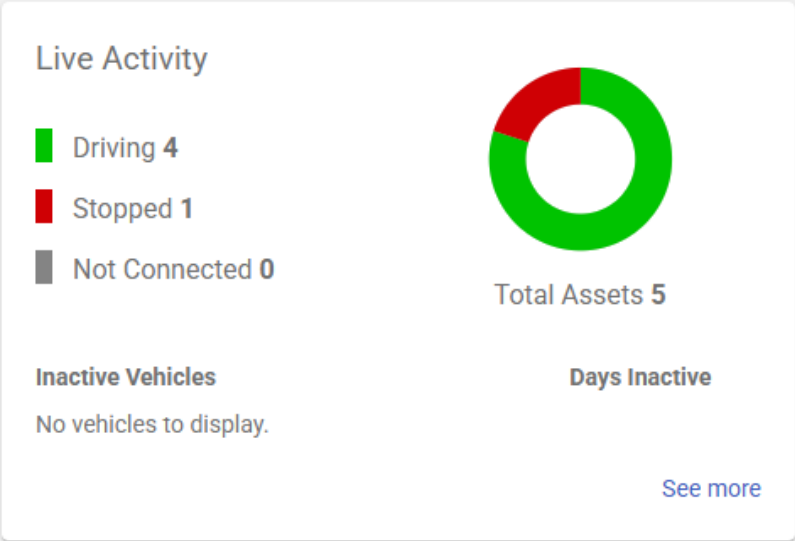
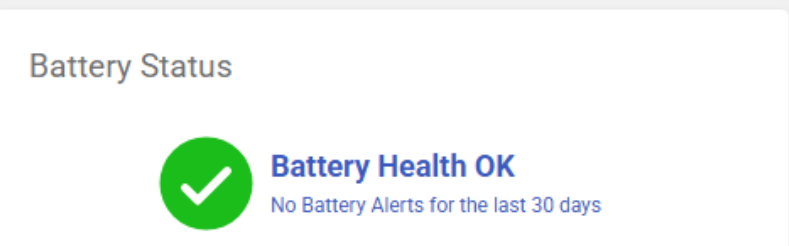
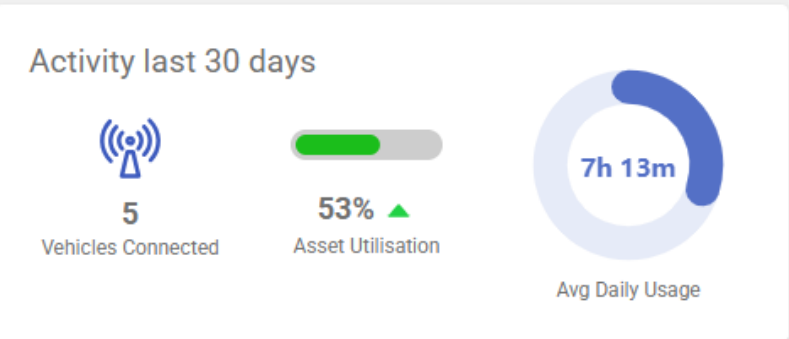
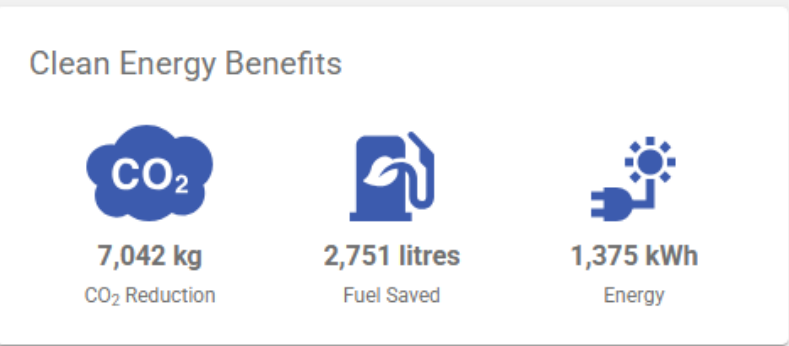
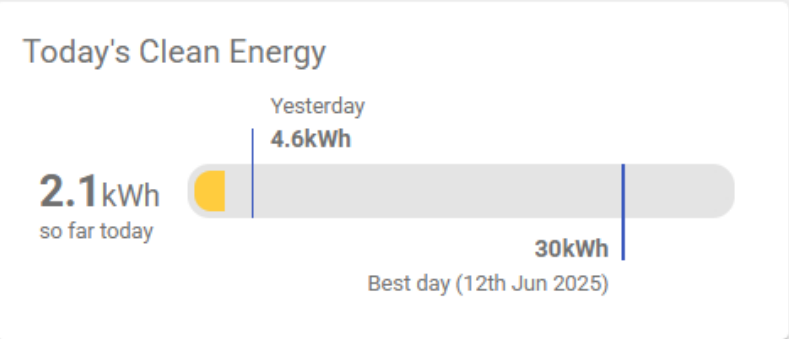
- Live Dashboard
- Interactive Map

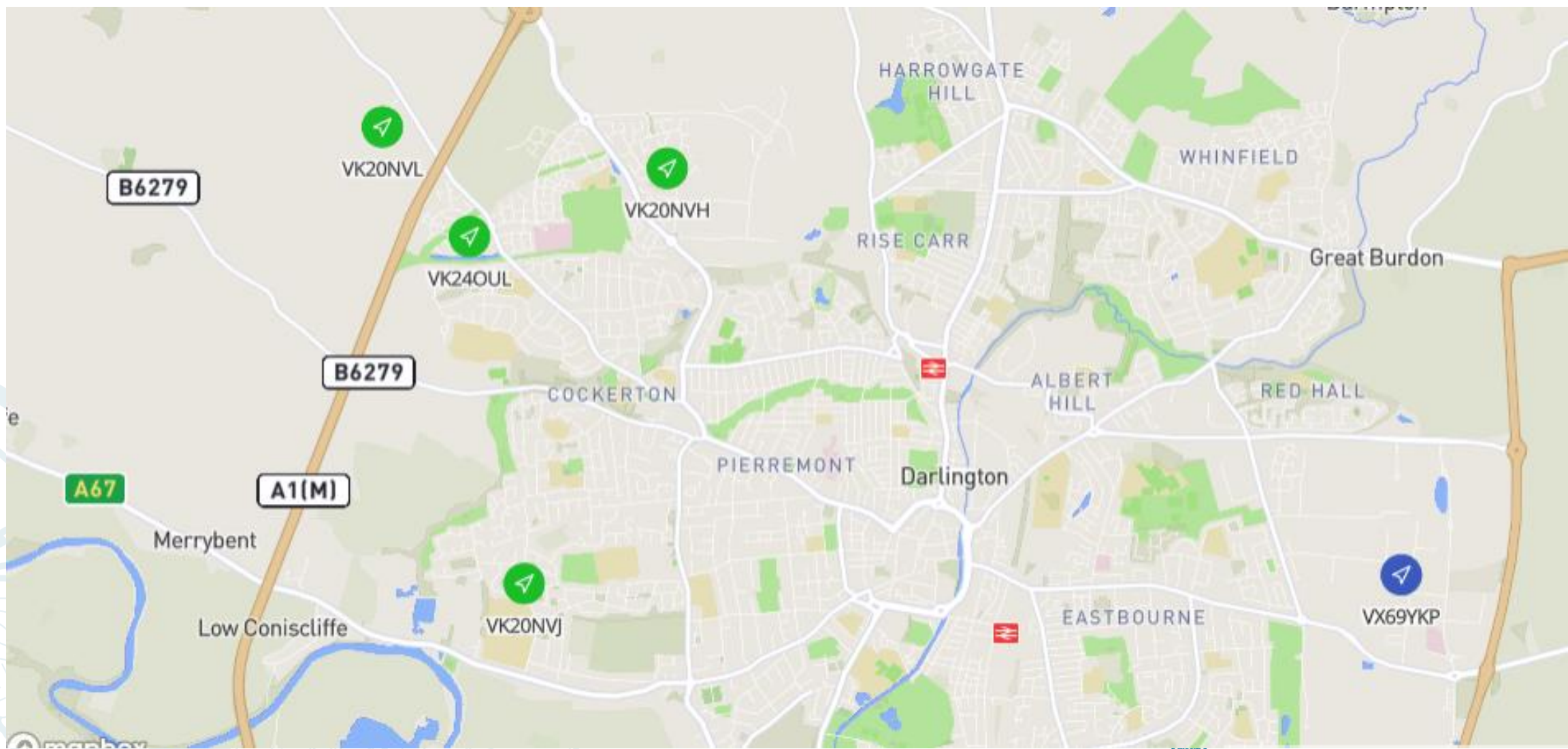
ANALYTICS

- Overview
- Utilisation
- Solar Energy
- Battery Health
- Distance Report
- Usage Profile
- Journeys
- Geofences

MY ACCOUNT

- Settings
- Sign Out





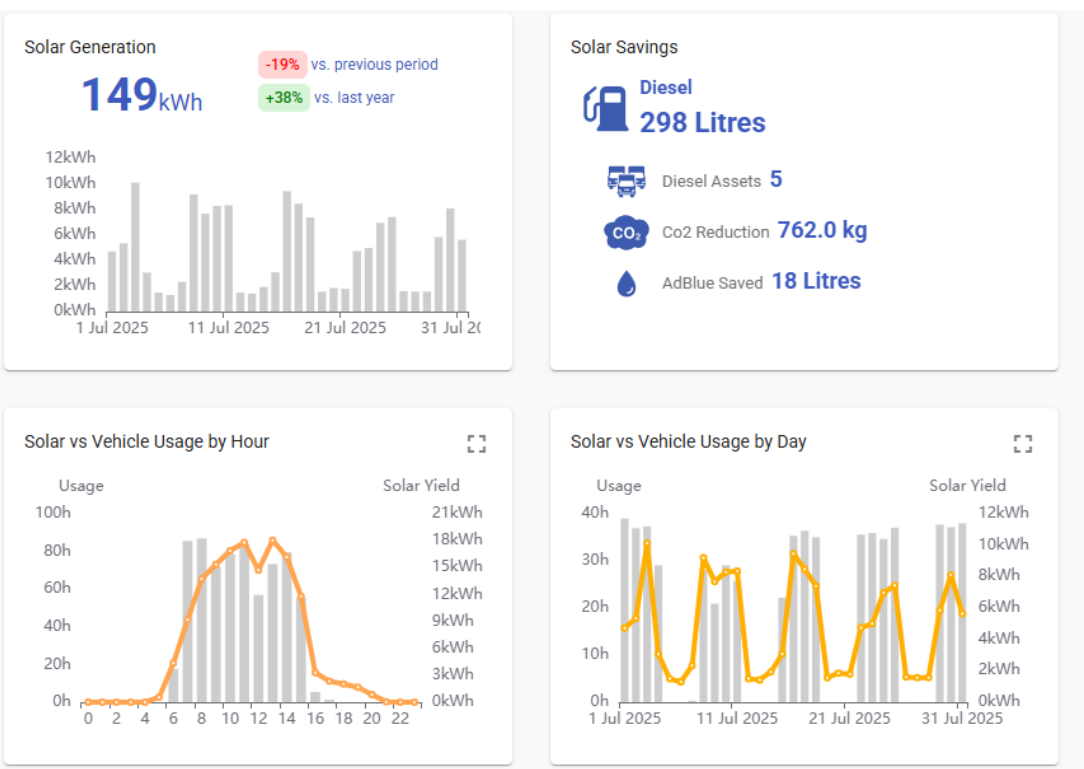
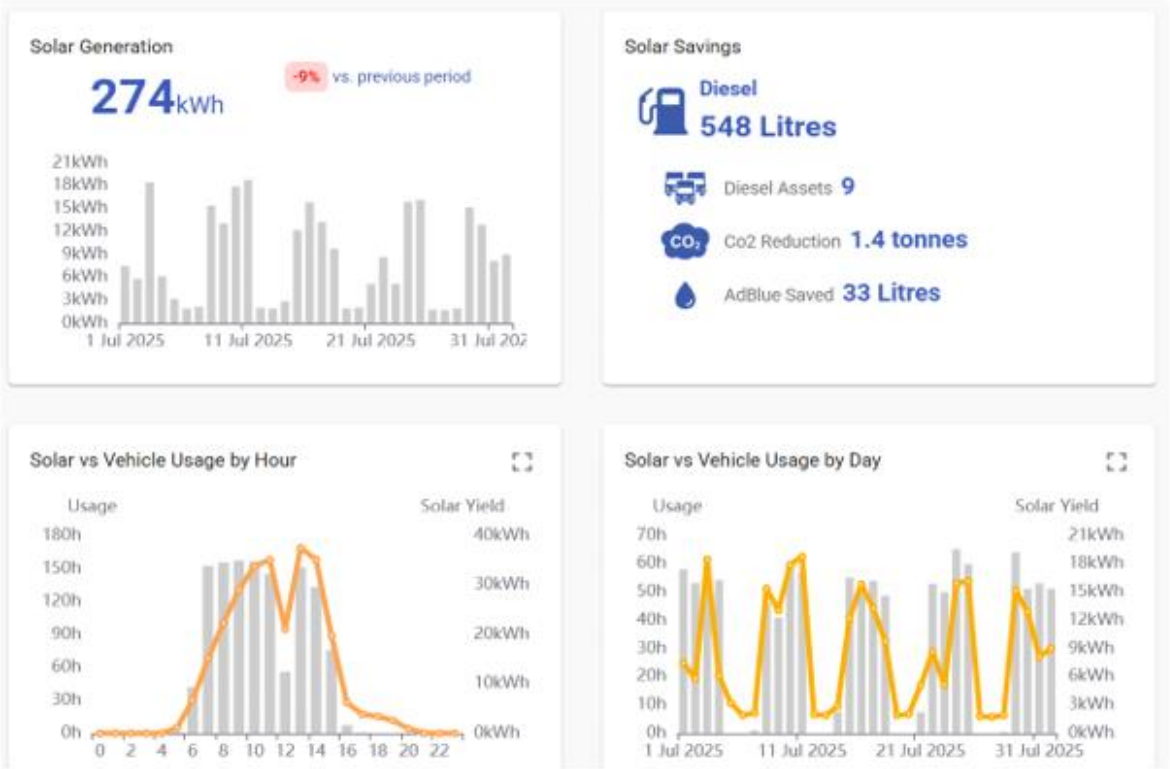
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# Comparing data



JULY 2025



Redcar & Cleveland BC

Darlington BC



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# Costs

- £13,605
  - 660w kit: £2300 + £325 fitting = £2625 for one system and fitting. 2 years free telematics - £2 per month ongoing
  - Full cost for lifetime per vehicle £2625+ £96 (additional 4 years) = £2721



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