

Solar Projects





EAST RIDING

OF YORKSHIRE COUNCIL



**Population of
342,200**



**an area of 930
square miles**



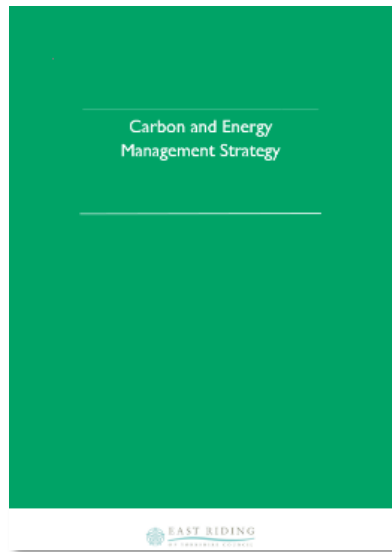
**Smallholdings
totalling 2,800
hectares**



**Over 79% of the
area is designated
as rural**



Carbon Targets



Recently completed the Council's energy and carbon management strategy (CEMS)

Council is on target to meet 2030 fifth carbon budget



The Council target is achieve to 'net-zero' by 2050

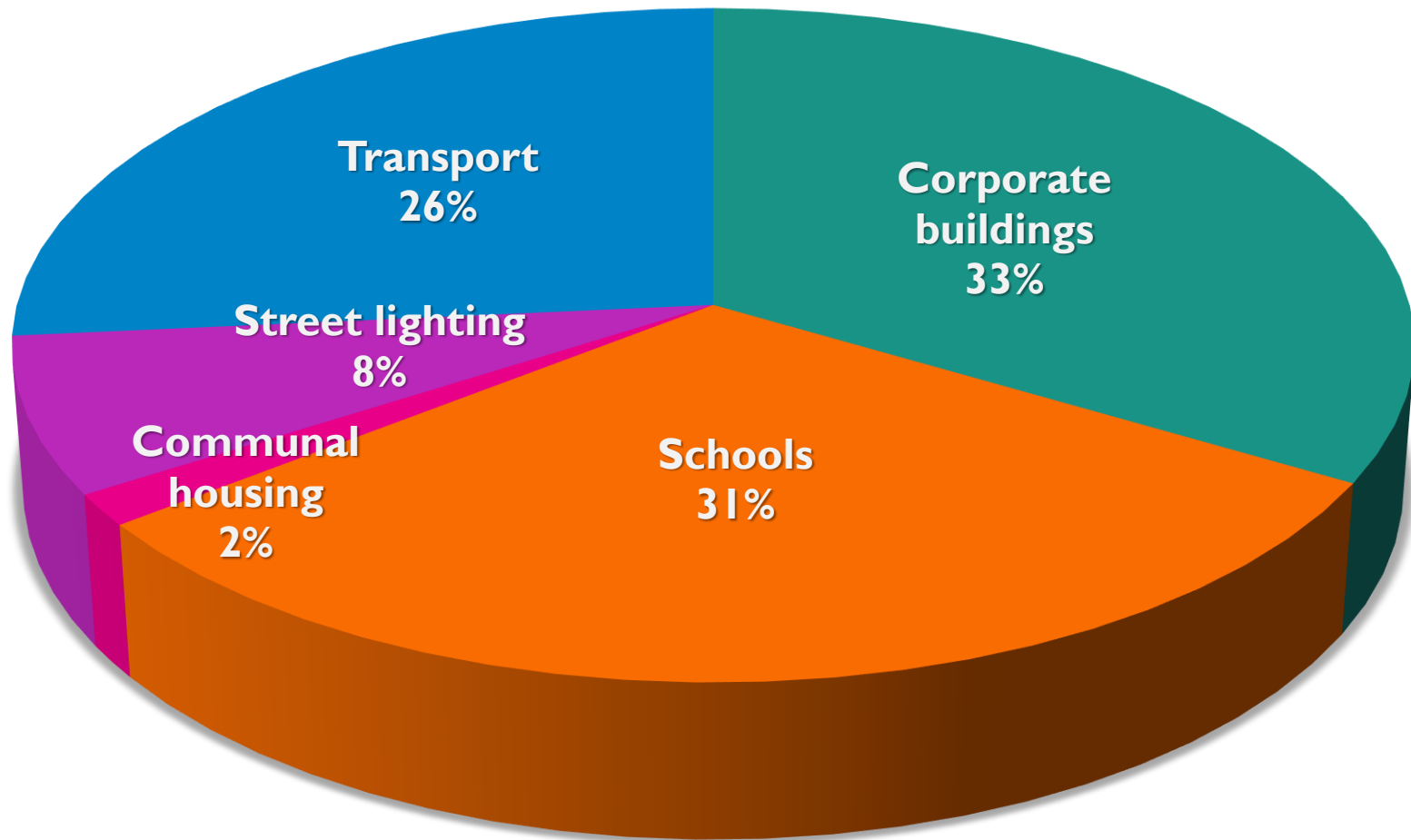
Carbon Emissions

Trend



Carbon Emissions

By Portfolio



Previous Solar Work

Corporate Buildings



46 Buildings



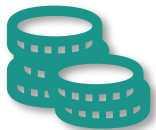
1,700 kW installed



£3.7 million spent



312 tonnes of carbon savings

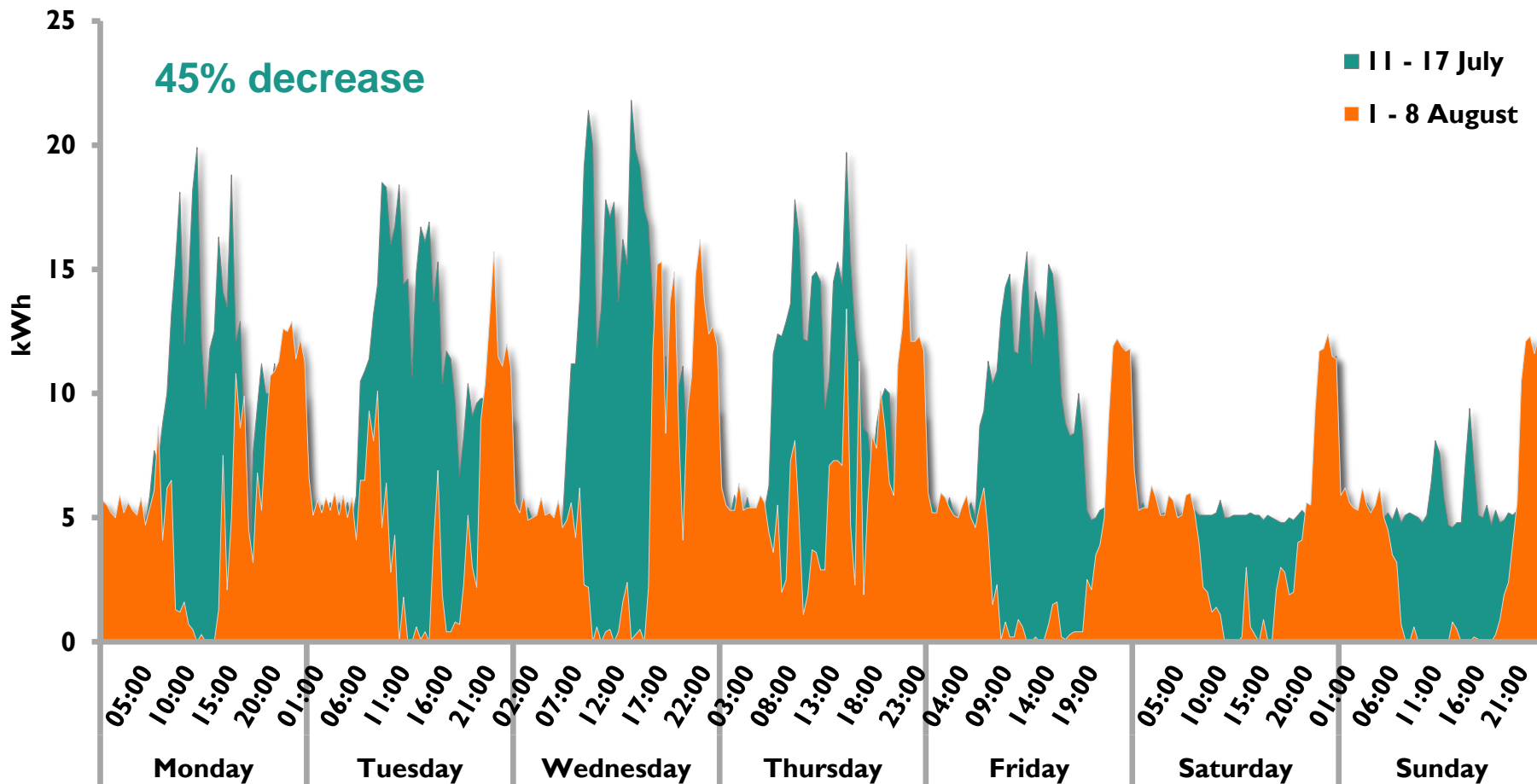


£595,000 electricity savings (at current prices)



Goole Depot PV

Before and After Installation



Previous Solar Work

Housing



438 Dwellings



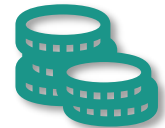
820 kw
Installed



£1.4 million
spent



312 tonnes of
carbon savings



£333,000
electricity
savings



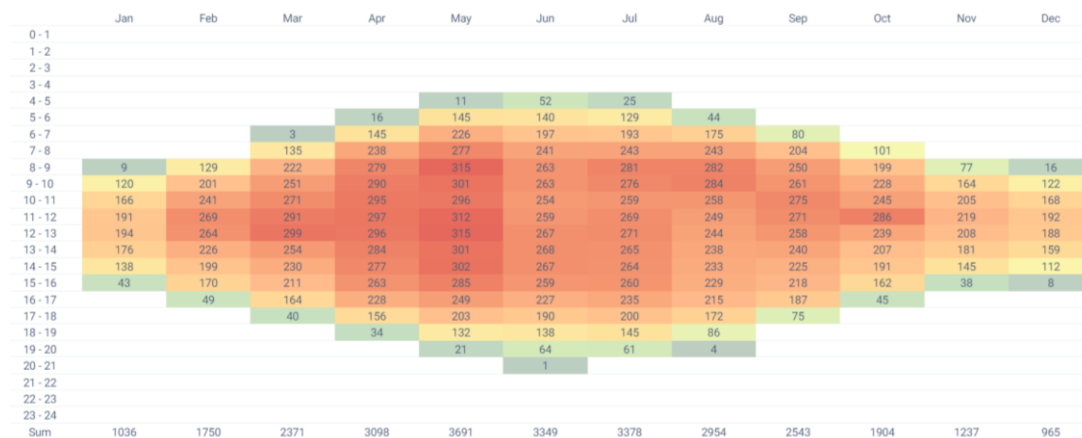
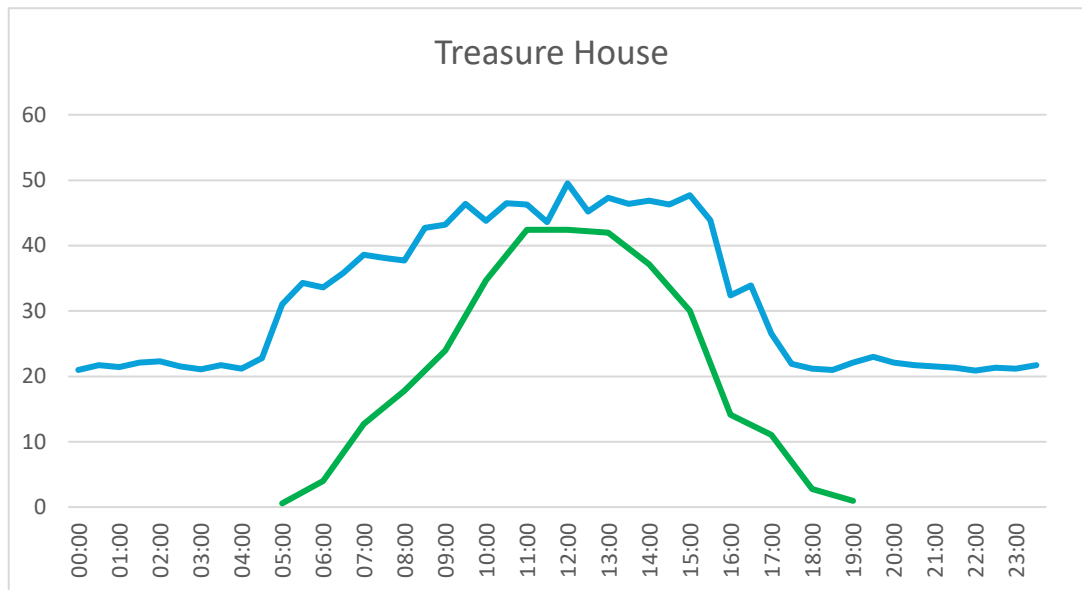
How Considered ?

Considerations:

- Planning (permitted development)
- Shading
- Structures
- Future of building (planned disposal)
- Roof Area
- When a re-roof was planned
- Included East/West
- IRR always greater than 8%

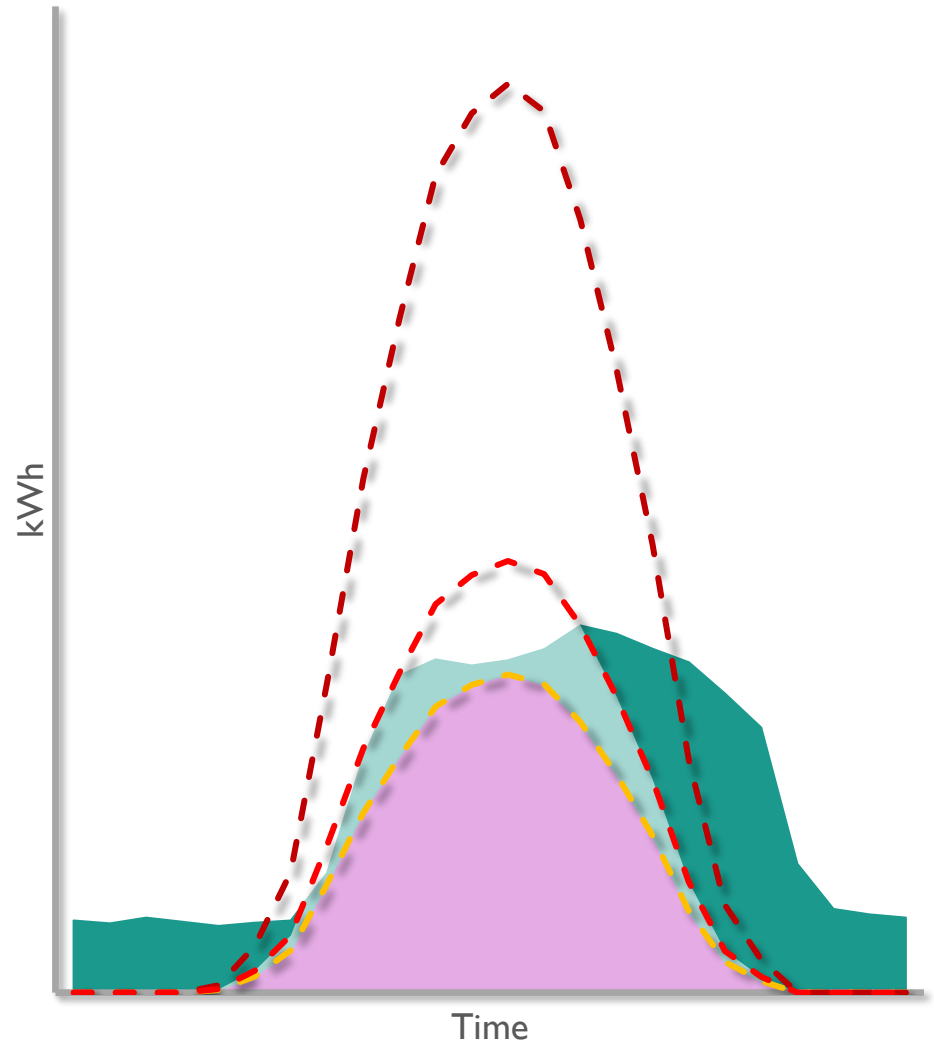
Sizing Method

- Building HH data
- Check seasonal profiles
- Check weekly profiles
- Size based on 6th May



Revised Sizing Methodology

- Developed sizing tool
- Generation vs consumption
- Potential 'oversizing'
- Battery storage
- Revisit existing sites

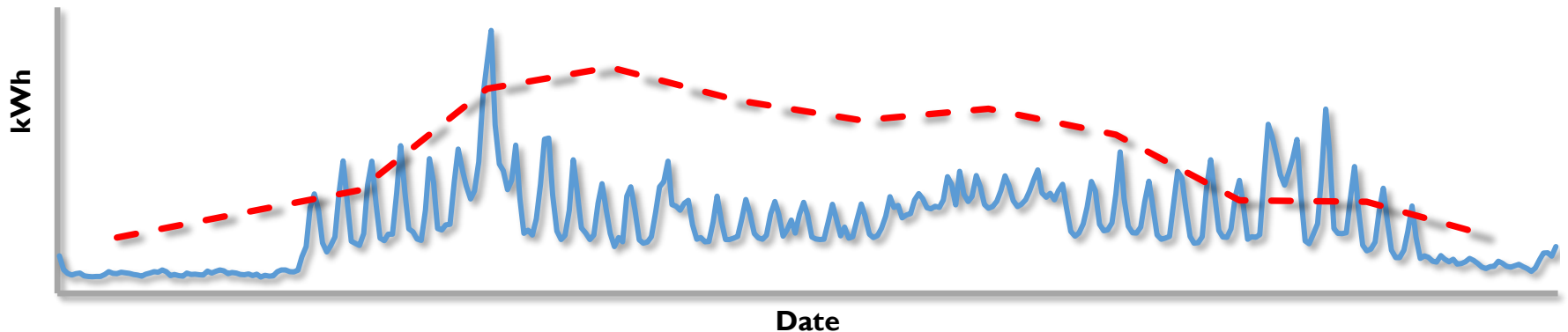


South Cliff Caravan Park

- Similar annual consumption and generation profiles
- Provides 50% of site's needs
- 2no 190kW systems (old and new site)
- £4600 grid connection
- Daily HH data shows opportunities for battery storage



Generation vs Consumption



Specific Projects

Drifffield Leisure – Solar Car Port

- PV already on roof
- Partially funded by ERDF
- Checked on-site electricity consumption to check how future energy efficiency schemes might impact on HH data
- Includes EV charge point
- Same sizing approach as South Cliff i.e day in May



Lessons Learnt

- HH data
- Condition of roof
- Planned energy reduction
- Electrification of heat
- Cooling loads
- Structural checks
- Educating schools
- Structural cost
- Orientation
- Lower IRR - CEMS



Future Work

Solar Farm 6MW

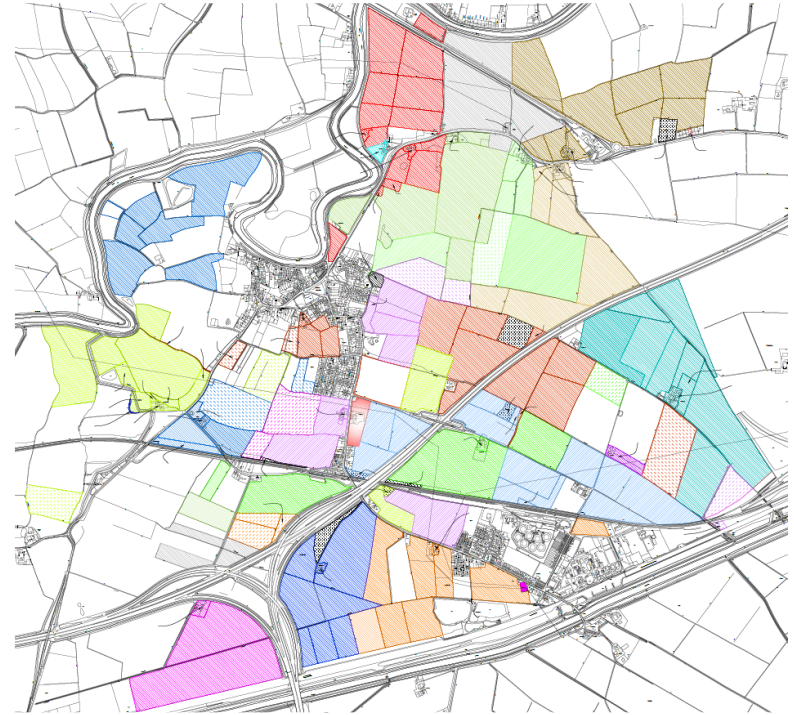
- Council Owned
- Secured grid connection
- 5% IRR
- PPA opportunities
- Start on site late 2023

PPA Opportunities

- 4MW to food manufacture
- 500kW to packaging company
- Schools – Rent a roof
- PPA prisons and hospitals
- Large cooling loads – condensers/chillers

Aggregated Solar and Flood Sites

- Solar car ports
- Flood alleviations sites
- Multiple <200KW – LV connection



THE END