

Leisure centre: designing for the future today

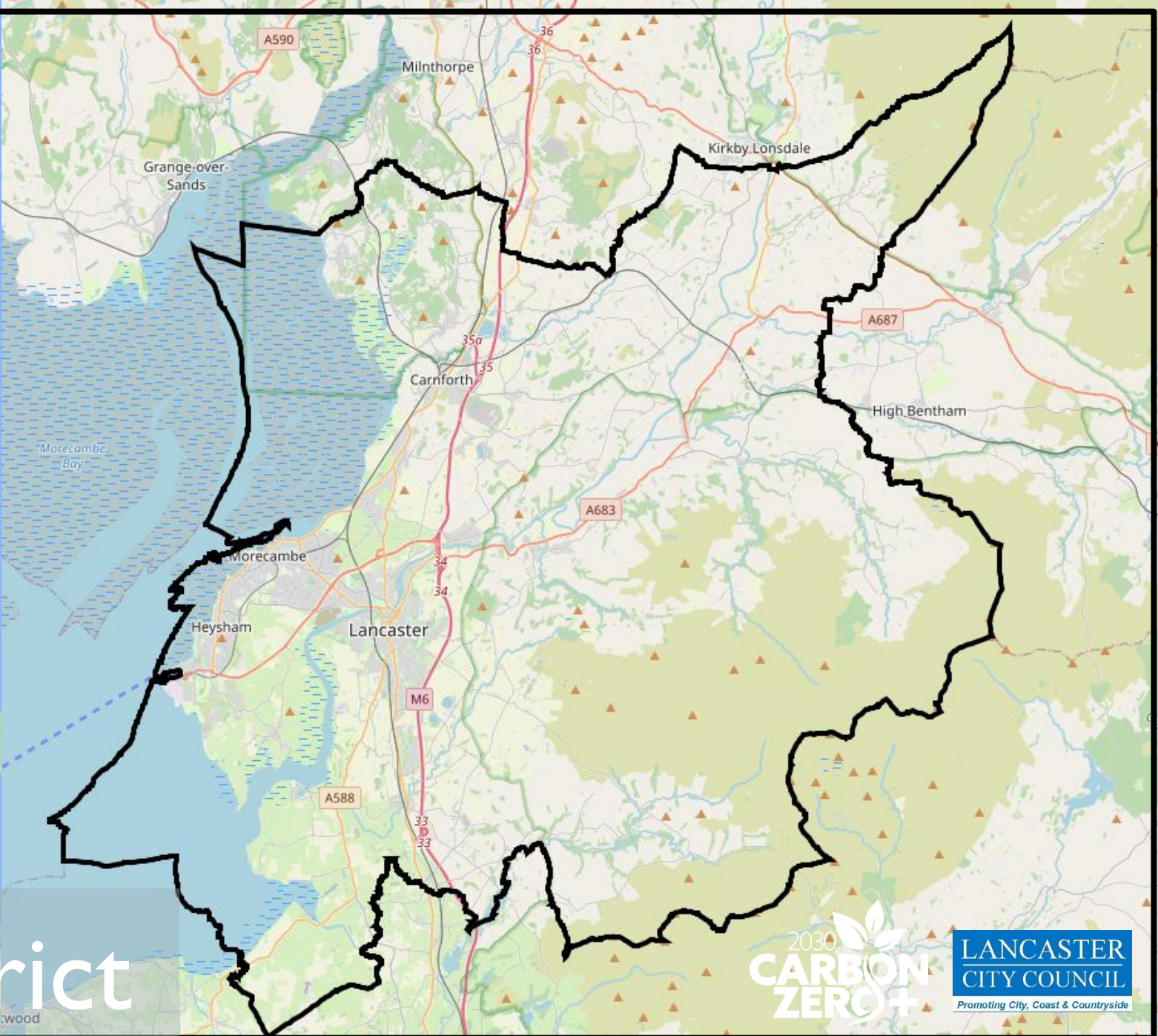


Cllr Caroline Jackson 5 July 2023

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<https://www.lancaster.gov.uk/sites/climate-emergency>





Lancaster District

2030
CARBON ZERO+

LANCASTER CITY COUNCIL
Promoting City, Coast & Countryside

LANCASTER CORPORATE PLAN 2020

Theme 3 A happy and healthy community

- Salt Ayre – “passionate about providing a friendly and welcoming atmosphere within which members of our local community can embrace a healthy and active lifestyle.”



“Our responsibility is to be accessible, to reach out to the vulnerable, to make everyone feel comfortable” Rachel Williams

- **Shaping the Programme**

- Events, classes, activities review community access – listening in council, in community – keeping budget control

- **The offer**

- accent on well-being, support for health, a place for additional needs

- **Getting it right–**

- community , 3rd sector and agency expertise, staff knowledge, relationship, observation, officers cross dept work



The GO card scheme covers:
housing benefit
guaranteed pension credit
job seekers allowance
disability benefits
council tax support
universal credit

young carers/looked after
children
talented athletes

for everyone in the family.
£2 per child



GO CARD

Affordable sport and leisure
in the Lancaster District

www.lancaster.gov.uk/gocard

LANCASTER
CITY COUNCIL
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Covering the costs

Average session costs

Footfall/targets

Business support

Club support

Cost of living crisis



WELL BEING – WHERE NEXT?

- Acknowledge success and budget limitations
- Develop cross department links
- People's Jury and co-design



Salt Ayre Leisure Centre: Designing for the Future Today



Resource for the
district

- Well- Being and community
- Energy saving and technological creativity



RENEWABLE ENERGY GENERATION

- **Solar Farm:** 20/21, budgeted £1 mill for 1MW solar array with battery storage on an adjacent landfill site with a direct wire.
- **Heat Decarbonisation:** replace end of life the gas system with ASHPs use electricity generated by Solar PV for the heating system.
- **Merge:** In September 2020, projects merged



SALC HEATING AND THERMAL EFFICIENCY REVIEW

April 2020: Existing gas boilers due for replacement. £300k for gas boilers.

June 2020: Unify Group to carry out an MEP Energy & Building Fabric Thermal Performance Appraisal

appraisal of building fabric upgrades and decarbonised heating solutions to reduce emissions

Technology reviewed: Solar Thermal, Biomass, Heat Pumps, CHP, gas boilers, roof replacements, curtain wall upgrades, glazing LED lighting

Metrics: Cost per tonne of CO2 saved & ROI based on BEIS projected energy costs

September 2020: Preferred measures two-stage heat pump system, glazing and LED lighting.

CLIMATE EMERGENCY DECLARATION



Lancaster City Council tCO2e Emissions: 01/04/22 - 31/03/23

Refresh



Gas	Fleet	Staff Travel	Electricity	Pool Cars	Staff Commute	Taxis	Council Housing	Water Sply	Water Treat.	Renewables	Total
1,874.252	1,233.664	11.61	529.675	6.19	482	2,044.03					7,997

Overview

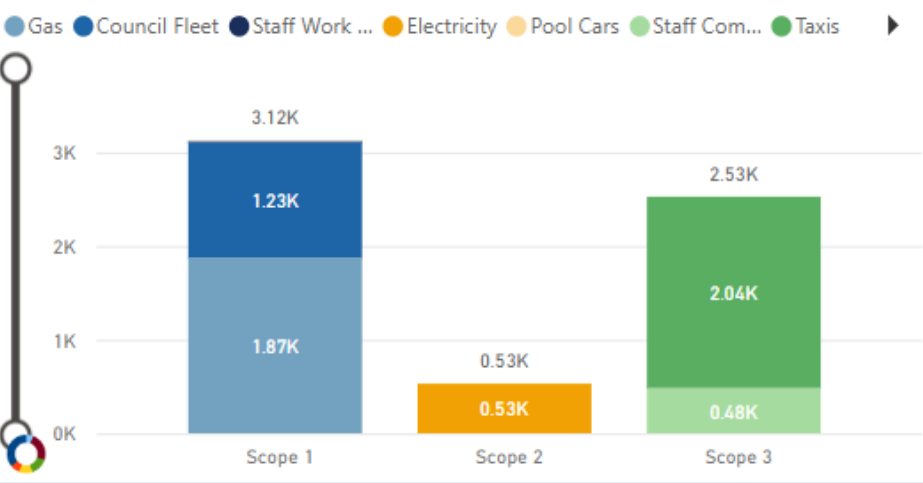
tCO2e Mileage kWh Cost

2020-2021 2021-2022 **2022-2023** 2023-2024

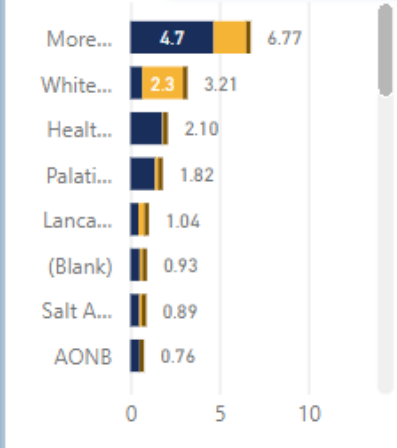
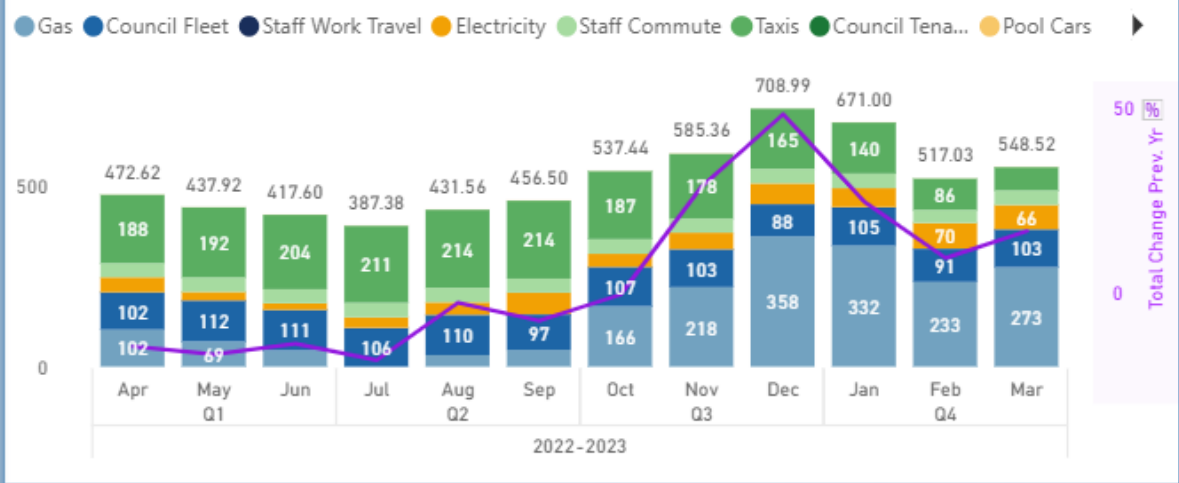
Scope 1 Scope 2 Scope 3

- EXT Activity
- LCC Activity
- Pool Car (Elec)
- Pool Car (ICE)
- Pool Car (Public)
- Staff Work Travel

Total by Emission Source and Scope



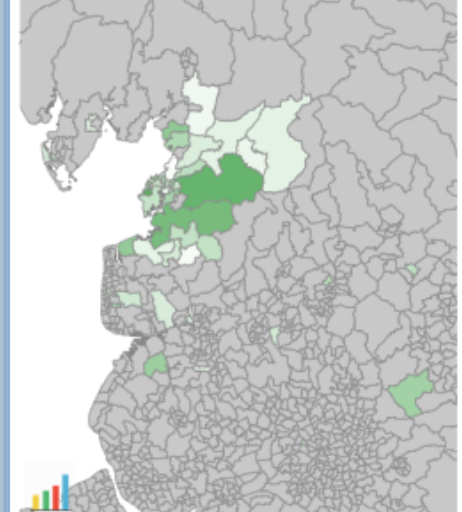
Total by Emission Source and Time



All	Gas	Electricity	Total	%	Change Prev. Yrs	DEC/EPC
Lancaster (Central) Housing Estate	235	0	235	9.8	107.2	
Hala Housing Estate	231	0	231	9.6	121.6	
Quernmore Road - Williamson Park	205	9	214	8.9	94.1	
Meeting House Lane - The Storey	181	13	194	8.1	68.9	D
Dalton Square - Lancaster Town Hall	153	13	167	6.9	54.4	B
Kingsway Housing Estate	142	0	142	5.9	69.0	
Westgate Housing Estate	133	0	133	5.5	60.3	
Greaves Housing Estate	130	0	130	5.4	65.6	
White Lund Road - White Lund Depot	88	11	99	4.1	24.2	
Dalton Square - Palatine Hall	71	3	74	3.1	27.7	
Marine Road Central - Old Station Building	60	0	60	2.5	9.6	B
Dalton Square - 4-6 - Citylab	48	7	55	2.3	9.9	C
Owen Road - Ryelands Park	42	0	42	1.7	17.9	
Market Square - City Museum	38	3	41	1.7	28.9	
Whitewater - Vehicle Maintenance Unit	24	3	27	1.1	11.0	C
Total	1,874	530	2,404	100.0	530.0	

Vehicle Type	Department	Miles	Litres	tCO2e	%	Change Prev. Yrs
Ref Collector	Public Realm Cleansing	156,560K	218K	589	47.7	-124.5
Van	Bulky Matters	47,891K	50K	136	11.0	-20.4
Rcv	Cleansing	18,418K	38K	102	8.3	-10.2
Sweeper	Cleansing	11,922K	29K	77	6.3	-37.5
Tipper	Cleansing	9,323K	17K	45	3.7	-5.4
Ride On Mower	Grounds Maintenance	51K	8K	21	1.7	-3.9
Pick Up	Grounds Maintenance	14,332K	7K	20	1.6	-8.2
Tractor	Grounds Maintenance	346K	7K	19	1.5	0.6
Caged Tipper	Public Realm Cleansing	26,913K	6K	17	1.3	-4.5
Emergency Key	Grounds Maintenance	2,530K	4K	12	1.0	7.8
Jcb	Business Support	6,540K	2K	5	0.4	-1.3
Mower	Grounds Maintenance	213K	2K	5	0.4	0.3
4 X 4	Vmu	344K	1K	2	0.2	0.3
Total		311,893K	457K	1,234	100.0	-96.6

Staff Commuting tCO2e



RENEWABLE ENERGY GENERATION

- **Solar Farm:** For 20/21, the council budgeted £1m to construct a 1MW solar array with battery storage on an adjacent landfill site and connect to SALC with a direct wire.
- **Heat Decarbonisation:** With the Gas boilers requiring replacement, the council seized on the opportunity to completely decarbonise the leisure centre by replacing the existing gas system with ASHPs and also use the electricity generated by the Solar PV to provide energy for the heating system.
- **Merge:** In September 2020, the two projects were merged to deliver a more comprehensive package of work.



PUBLIC SECTOR
DECARBONISATION
SCHEME
FUNDING(PSDS)

- **30th September 2020:** BEIS(Salix) launched PSDS 1 (£1bn) grants for COVID-19 recovery inc public sector heat decarbonisation
- **LCC's Application** - successful **Feb 2021** delivery by September 2021!
- **Expedite Process:** Focus shifted on streamlining process, detailed planning and internal governance

Energy Management

Day Month Year Lifetime

< 2022-07-09 >

Yield: **7.68** MWh



Consumed: **7.68** MWh

Fed to grid: **0.00** kWh

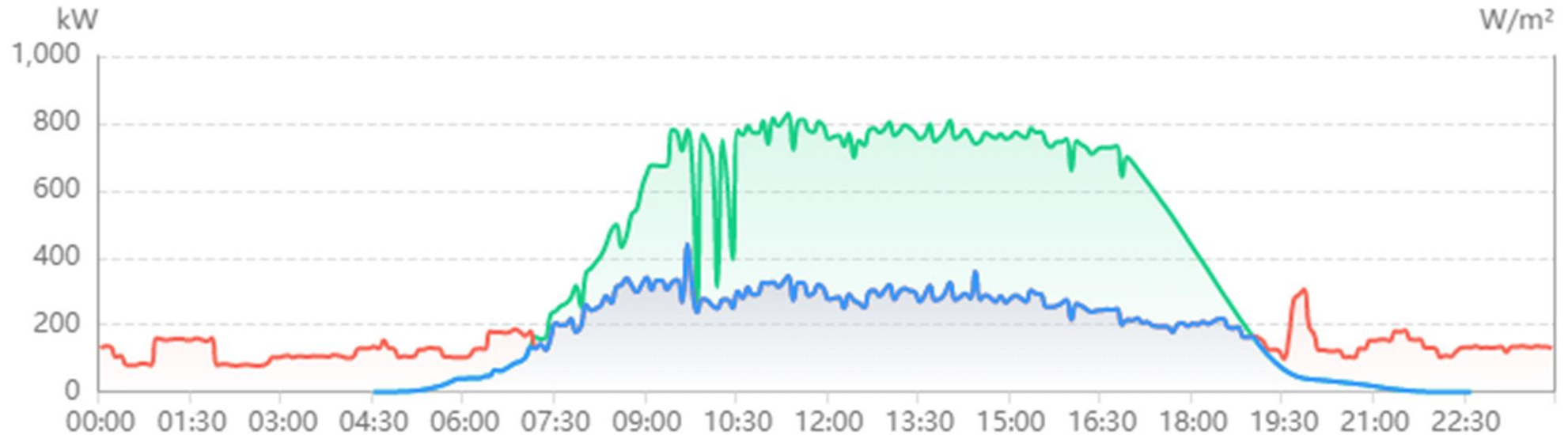
Consumption: **7.68** MWh



From PV: **7.68** MWh

From grid: **0.00** kWh

● PV output ● Total consumption ● Consumed from PV (kW) ● Irradiance(W/m²)



*FOR PERIODS DURING THE SPRING AND SUMMER MONTHS, THE LEISURE CENTRE HAS BEEN 'OFF GRID' FOR UP TO 12 HOURS. POWERED **COMPLETELY** BY THE 1.3MW SOLAR PLANT



WHAT HAS BEEN DELIVERED?

- £6.8M PSDS Funding Secured
- Fully decarbonised heating solution
- Completed 1.3MWp solar array plus new double glazing and external LED lighting
- Eliminated natural gas from site: CO2 saving of over 640 tonnes p/a
- 30% CO2 natural gas reduction net 12% CO2 reduction
- Delivered £156k of social value – local procurement
- **Practical completion: by Dec 21' Solar March 22'**
- Revenue savings estimated to be **£240k** p/a over previous system





SALT AYRE LEISURE CENTRE



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