

DECARBONISING SALT AYRE LEISURE CENTRE

BY
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Lancaster City Council tCO2e Emissions: 01/04/21 - 30/09/23

Projections About

Triggering

Gas	Fleet	Staff Travel	Electricity	Pool Cars	Staff Commute	Taxis	Council Housing	Water Sply	Water Treat.	Renewables	Total
2,281.487	3,198.670	25.71	1,617.358	15.88	1,203	3,383.93		97.18	168.53	-2	12,088

Overview

tCO2e Mileage kWh Cost

2018-2019 2019-2020 2020-2021 2021-2022

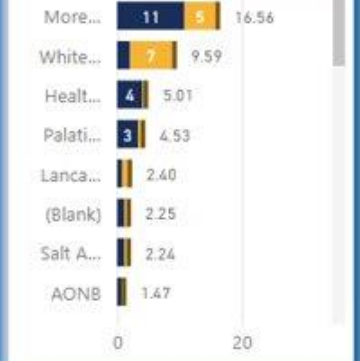
Scope 1 Scope 2 Scope 3

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

Total by Emission Source and Scope

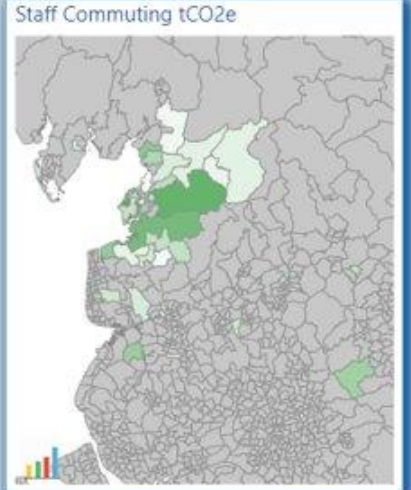


Total by Emission Source and Time



All	Gas	Electricity	Total	%	Change Prev. Yrs	DEC/EPC
Lancaster (Central) Housing Estate	280	6	285	7.3	-95.3	
Hala Housing Estate	460	5	268	6.9	-87.7	
Quernmore Road - Williamson Park	200	49	250	6.4	-26.8	
Doris Henderson Way - Salt Ayre Sports Centre	1000	875	1,095	28.1	-27.7	E
Meeting House Lane - The Storey	100	76	265	6.8	-28.7	D
Kingsway Housing Estate	169	2	171	4.4	-4.7	
Westgate Housing Estate	160	10	170	4.4	-36.6	
Dalton Square - Lancaster Town Hall	178	70	228	5.8	-19.7	A
Greaves Housing Estate	153	2	156	4.0	-31.7	
White Lund Road - White Lund Depot	97	49	146	3.7	-4.7	
Marine Road Central - Old Station Building	83	5	88	2.3	-3.2	B
Dalton Square - Palatine Hall	78	10	88	2.3	-4.7	C
Dalton Square - 4-6 - Citylab	53	32	85	2.2	-21.2	C
Owen Road - Ryelands Park	48	3	51	1.3	-18.6	
Market Square - City Museum	74	10	35	0.9	-4.7	C
Total	2,281	1,617	3,899	100.0	-847.9	

Vehicle Type	Department	Miles	Litres	tCO2e	%	Change Prev. Yrs
Ref Collector	Public Realm Cleansing	395,903K	555K	1,698	46.8	-343.0
Van	Bulky Matters	5,002K	77K	331	16.6	38.7
Rcv	Cleansing	5,087K	118K	319	10.0	-56.8
Sweeper	Cleansing	39,199K	94K	254	7.9	54.5
Tipper	Cleansing	45,228K	86K	232	7.2	-80.3
Pick Up	Cleansing	27,585K	38K	101	3.2	-11.0
Ride On Mower	Grounds Maintenance	25,939K	19K	51	1.6	-18.9
Tractor	Grounds Maintenance	70K	19K	50	1.6	5.5
Caged Tipper	Grounds Maintenance	1,094K	17K	45	1.4	0.9
Emergency Key	Public Realm Cleansing	38,518K	15K	42	1.3	-10.3
Jcb	Public Realm Cleansing	4,763K	11K	29	0.9	14.7
Mower	Business Support	9,851K	5K	13	0.4	-1.3
4 X 4	Business Support	433K	4K	11	0.3	-6.9
Total	Vmu	553K	2K	6	0.1	-1.1
Total		821,230K	1,184K	3,199	100.0	-68.2

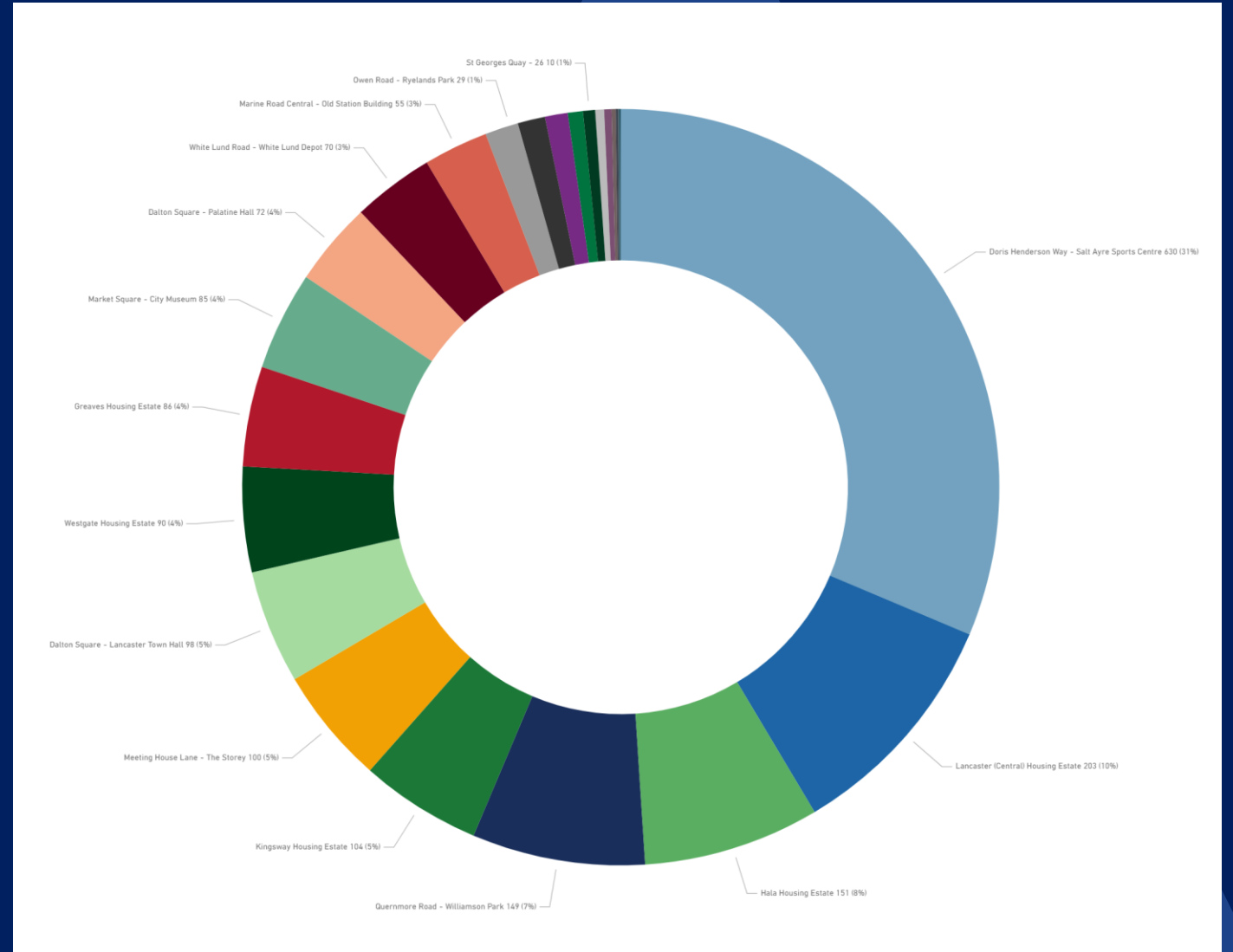


SCOPE 1 EMISSIONS BY BUILDING

- SALC IS THE SINGLE HIGHEST CO2 EMMITTER ACCOUNTING FOR UP TO 35% OF LANCASTER CITY COUNCIL'S CO2 FROM NATURAL GAS

- CHALLENGING SITES INCLUDE TOWN HALLS, MUSEUMS AND FLAGSHIP PARKS – MANY OF WHICH ARE OF LISTED STATUS

- BUILDING HEAT DECARBONISATION PLAN FOR ALL SITES WAS COMPLETED 31ST MARCH 2022



THE JOURNEY

SALC HEATING AND THERMAL EFFICIENCY REVIEW

APRIL 2020:

EXISTING GAS BOILERS AT SALT AYRE WERE DUE FOR REPLACEMENT. £300K BUDGETED FOR MODERN GAS BOILERS.

JUNE 2020

COMMISSIONED UNFY GROUP TO CARRY OUT AN MEP ENERGY & BUILDING FABRIC THERMAL PERFORMANCE APPRAISAL

REVIEW INCLUDED

AN APPRAISAL OF BUILDING FABRIC UPGRADES AND DECARBONISED HEATING SOLUTIONS. FOCUS ON EMISSION REDUCTIONS.

TECHNOLOGY AND MEASURES REVIEWED

SOLAR THERMAL, BIOMASS, HEAT PUMPS, CHP, MODERN GAS BOILERS, ROOF REPLACEMENT AND OVERLAYS, CURTAIN WALL UPGRADES, GLAZING AND LED LIGHTING

METRICS DEVELOPED

COST PER TONNE OF CO₂ SAVED & ROI BASED ON BEIS PROJECTED ENERGY COSTS

SEPTEMBER 2020

REPORT COMPLETED. PREFERRED MEASURES INCLUDED TWO-STAGE HEAT PUMP SYSTEM, GLAZING AND LED LIGHTING.

RENEWABLE

ENERGY GENERATION

- **SOLAR FARM:** IN 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
- **APSE ENERGY:** OFFICERS HAD BEEN WORKING WITH APSE ENERGY TO SCOPE OUT AND DELIVER THE SCHEME IN 21/22
- **CO2 SAVINGS:** FOCUS SHIFTED FROM SIMPLY SUPPLYING ELECTRICITY TO SALC, TO A FULLY DECARBONISED SOLUTION INCORPORATING THE FINDINGS OF THE DECARB REPORT.
- **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:** SUPPORTED BY SALIX FINANCE, BEIS LAUNCHED PSDS 1 PROVIDING £1BN IN GRANTS AS PART OF THE GOVERNMENT'S COMMITMENT TO SUPPORT THE UK'S ECONOMIC RECOVERY FROM COVID-19 AND PROVIDE FUNDING TO PUBLIC SECTOR BODIES TO FUND HEAT DECARBONISATION
- **LOCS APPLICATION** OFFICERS SUBMITTED AN APPLICATION TO FUND THE FULL SCOPE OF DECARBONISATION WORK AT THE LEISURE CENTRE AND IN FEBRUARY 2021 THE COUNCIL WAS INFORMED THAT IT HAD BEEN SUCCESSFUL WITH DELIVERY REQUIRED BY SEPTEMBER 2021!
- **EXPEDITE PROCESS:** FOCUS SHIFTED ON STREAMLINING PROCESS, DETAILED PLANNING AND INTERNAL GOVERNANCE

CHALLENGES ALONG THE WAY

UNEXPECTED GRID RESTRICTIONS:

LIMITED THE SIZE OF THE GENERATION (INC. BATTERY STORAGE) TO 1MW AT THE INVERTERS AND 0.5MW EXPORT

PLANNING CONSENT:

FOR THE SOLAR BUILD AND ASHP INSTALLATION GRANTED WITH CONDITIONS IN APRIL 2021

SUPPLY CHAINS:

LEAD TIMES AND SUPPLIES DURING THE COVID PANDEMIC

LEASE NEGOTIATIONS:

TO AMEND THE CURRENT PLANS WITH THE PERMIT HOLDER AND CARVE OUT THE SOLAR SITE

ENVIRONMENT AGENCY:

CONSENTS, ASSESSMENTS AND REPORTS TO GAIN CONSENT TO CONSTRUCT ON A LANDFILL SITE

LEISURE CENTRE

PROJECT WAS DELIVERED WHILST MAINTAINING AN OPEN AND OPERATIONAL LEISURE CENTRE DISRUPTIVE WORK WAS SCHEDULED OVERNIGHT

STORM ARVEN

SOLAR CONSTRUCTION OVER WINTER LED TO CHALLENGING WORKING CONDITIONS AND SOME DISRUPTION

WHAT HAS BEEN DELIVERED?

- £6.8M PSDS FUNDING SECURED
- FULLY DECARBONISED HEATING SOLUTION WITH A TWO-STAGE HEAT PUMP SYSTEM USING AIR SOURCE AND WATER TO WATER HEAT PUMPS
- COMPLETION OF A 1.3MWP SOLAR ARRAY ON ADJACENT DISUSED LANDFILL SITE, CONNECTED TO SALC WITH DIRECT WIRE
- NEW DOUBLE GLAZING TO IMPROVE THERMAL EFFICIENCY
- EXTERNAL LED LIGHTING
- ELIMINATED NATURAL GAS FROM SITE
- CO2 SAVING OF OVER 640 TONNES P/A
- 35% CO2 REDUCTION FROM NATURAL GAS FOR THE COUNCIL
- NET 12% CO2 REDUCTION TO THE COUNCIL'S BOTTOM LINE
- CARBON NEUTRAL LEISURE CENTRE SUPPORTED BY A NEW REGO-BACKED ELECTRICITY TARIFF – ONE OF THE FIRST IN THE UK
- DELIVERED £156K OF SOCIAL VALUE FROM LOCAL CONTRACTORS AND SUPPLY CHAINS
- PRACTICAL COMPLETION REACHED FOR WORK AT THE LEISURE CENTRE BY DEC 21' SOLAR WAS COMPLETED ON 31 MARCH 22
- SAVED £300K IN 2022/23

HOW IS THE SITE PERFORMING?



DURING PEAK TIMES DURING THE SPRING AND SUMMER MONTHS, THE LEISURE CENTRE HAS BEEN 'OFF GRID FOR UP TO 12 HOURS PER DAY, POWERED COMPLETELY BY THE SOLAR PLANT



CO-WHEELS

POOL CAR SCHEME

BY
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LANCASTER
CITY COUNCIL
Promoting City, Coast & Countryside



co wheels

CO-WHEELS POOL CAR SCHEME

CO-WHEELS

CO-WHEELS PROVIDED THE FOLLOWING –

- BOOKING SYSTEM
- INSURANCE
- CUSTOMER SERVICES
- MARKETING MATERIALS

KEYLESS RFID TECHNOLOGY

STAFF MEMBERS USE THEIR ID BADGES TO ENTER THE VEHICLE VIA A SENSOR ON THE WINDSCREEN MEANING ACCESS AT ANY TIME AND PLACE

WORKPLACE CHARGING SCHEME GRANT

7KW CHARGE POINTS WERE INSTALLED, THE CAR WOULD RETURN TO CHARGE AFTER EACH USE TO GREEN MARKED BAYS TO GUARANTEE CHARGING FOR CO-WHEELS VEHICLES.

EVENINGS AND WEEKENDS

DURING OFF PEAK TIMES THE PUBLIC ARE GIVEN ACCESS TO SOME OF THE VEHICLES ON A PAY-AS-YOU-GO SYSTEM THE AIM WAS TO HELP REDUCE THE NUMBER OF TWO-CAR HOUSEHOLDS.

THE POOL CAR SCHEME WAS INTRODUCED IN SEPTEMBER 2020. THE AIM WAS TO REDUCE CO2 EMISSIONS PRODUCED BY STAFF USING THEIR OWN VEHICLES DURING A WORKING DAY.

IN TOTAL THERE ARE 13 VEHICLES ON OFFER FOR STAFF SPLIT OVER FIVE DIFFERENT LOCATIONS.

DATA LEAD APPROACH



PARTNERSHIP



- WE PARTNERED WITH CARNFORTH TOWN COUNCIL AND LANCASHIRE COUNTY COUNCIL TO PROVIDE A VEHICLE TO CARNFORTH RESIDENTS
- WE ENGAGED WITH RESIDENTS AT EVENTS FOR BIG GREEN WEEK AND ENCOURAGED SIGN UP TO THE SCHEME WITH DISCOUNTED MEMBERSHIP

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LESSONS LEARNT

COMD19

STAFF
ENGAGEMENT

TAKING A
DIFFERENT
APPROACH

POOL CAR
ONLY

THANK-YOU FOR LISTENING

IZZY MAHER

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