

Streamlined Energy & Carbon Reporting 2019/20

Excalibur Academies Trust



Background

Excalibur Academies Trust is a multi academy trust of 14 schools including bot primary and secondary. The school buildings range from Victorian schoolhouses to modern day purpose built eco friendly buildings. Energy used across the trust is varied from school to school and made up of gas, oil, solar and electric.

This methodology follows the [GHG Reporting Protocol](#) and uses the 2020 [Government emission conversion factors for greenhouse gas company reporting](#).

Calculations

Energy Source	Consumption	Scope	Emissions calculation
Gas – total kWh (kilowatt-hours) used for the year taken from gas bills for each academy within the trust	2,798,685 kWh (gross CV (calorific value))	Scope 1	2,798,685 kWh * 0.18387 (2020 fuels, natural gas conversion factor gross CV to kg Co2e) = 514,594 kgCO2e = 514.594 tCO2e
Electricity – total kWh used for the year, taken from the electricity bills for each academy within the trust	2,061,553 kWh	Scope 2	2,061,553 kWh * 0.23314 (2020 electricity conversion factor to kgCO2e) = 480,630 kgCO2e = 480.630 tCO2e
Oil 2,285 litres of Kerosene used for the year	23,534 kwh	Scope 1	2,285 litres * 2.54039 (2020 Fuels – Kerosene conversion to kgCO2e) = 5,805 kgCO2e = 5.805 tCO2e
Oil 44,515 litres of Gas Oil used for the year	478,193 kwh	Scope 1	44,515 litres * 2.75776 (2020 Fuels – Gas Oil conversion to kgCO2e) = 122,762 kgCO2e = 122.762 tCO2e
LPG 12,176 litres used for the year	86,608 kwh	Scope 1	12,176 litres * 1.55537 (2020 Fuels – LPG conversion to kgCO2e) = 18,938 kgCO2e = 18.938 tCO2e
Transport – Minibuses St John's – 5814 Oare – 4440 Great Bedwyn – 5803 John O'Gaunt – 15317 Lambourn – 6888 FHS – 2042	41137 miles * 1.57 (2020 SECR kWh pass & delivery vehs, Vans average diesel – used in lieu of passenger vehicles conversion) = 64,585.09 kWh	Scope 1	41137 miles = 66,203.58 km 66,203.58 km * 0.2471 (2020 managed assets vehicles, Vans average diesel – used in lieu of passenger vehicles conversion) = 16,358.90 kgCO2e = 16.3589 tCO2e

Energy Source	Consumption	Scope	Emissions calculation
TWS – 833 Total = 41,137			
Transport – total mileage reimbursed from staff claims = 48,003.26 miles	48,003.26 miles * 1.16319 (2020 SECR kWh pass & delivery vehs, average petrol car conversion factor to kWh) = 55,836.91 kWh	Scope 3	48,003.26 miles * 0.28052 (2020 managed assets vehicles, average petrol car conversion factor to kgCO ₂ e) = 13,465.87 kgCO₂e = 13.4658 tCO₂e
Total	2,798,685 + 2,061,553 + 23,534 + 478,193 + 86,608 + 64,585.09 + 55,836.91 = 5,568,995 kWh		514.594 + 480.630 + 5.805 + 122.762 + 18.938 + 16.3589 + 13.4658 = 1,172.5537 tCO₂e
Intensity ratio	Emissions data (tCO ₂ e) compared with an appropriate business activity (pupil numbers as per Autumn census)		1,172.5537 tCO ₂ e/5,560 pupils = 0.21089 tCO₂e per pupil

Disclosure of Information

UK Greenhouse gas emissions and energy use data for the period 1 September 2019 to 31 August 2020

Energy consumption used to calculate emissions (kWh)

5,568,995

Scope 1 emissions in metric tonnes CO₂e

Gas consumption

514.594

Oil consumption (Kerosene)

5.805

Oil consumption (Gas Oil)

122.762

LPG consumption

18.938

Owned transport – mini-buses

16.3589

Total Scope 1

= 678.458

Scope 2 emissions in metric tonnes CO₂e

Purchased electricity

480.630

Scope 3 emissions in metric tonnes CO₂e

13.4658

Business travel in employee owned vehicles

UK Greenhouse gas emissions and energy use data for the period 1 September 2019 to 31 August 2020

Total gross emissions in metric tonnes CO ₂ e	<u>1,172.5537</u> tCO₂e / 5560
Intensity ratio Tonnes CO ₂ e per pupil	<u>0.211 tCO₂e</u>

Quantification and reporting methodology

We have followed the 2019 HM Government Environmental Reporting Guidelines. We have also used the GHG Reporting Protocol – Corporate Standard and have used the 2020 UK Government's Conversion Factors for Company Reporting.

Intensity measurement

The chosen intensity measurement ratio is total gross emissions in metric tonnes CO₂e per pupil, the recommended ratio for the sector.

Measures taken to improve energy efficiency across the Trust

- Excalibur Academies Trust entered the Less CO₂ sustainability project in September 2019 through a series of workshops.
- Students are actively engaged in school-based environmental action groups. Students have been at the forefront of behaviour changes in schools – focusing on small things that make a difference such as switching off lights and increasing recycling
- Energy consumption reviews took place in our secondary schools.
- Three were externally recognised as making a significant improvement to energy usage through the Powerful Allies 2020 Carbon Challenge and Awards.
- The Wren School reached the final of the DfE Sustainability Award
- LED lighting has continued to be installed in a number of our schools
- Travelling has been reduced as staff, volunteers and partners have become more comfortable with use of on-line meetings
- The three largest secondary schools operate a Building Energy Management system and have had independent reviews to ensure that it is working efficiently
- Desktop computers are automatically switched off in secondary schools
- New efficient boilers were installed in John O'Gaunt.

Annex I

Details of the Academy Trust's energy usage

Electricity

Site Name	MPAN	Usage (kWh) for period 01/09/2019 to 31/08/2020	Notes
Burbage Pre-School	2000052112511	8,627	
Burbage Primary School	2000007673286	29,786	
Easton Royal Academy	2000007618285	45,122	August 2020 usage is estimated as actual usage data not available
Fairfield High School	2200040902602	442,327	
Great Bedwyn CE School	2000007555909	33,743	
John O'Gaunt School	2000007876076	22,631	
John O'Gaunt School	2000027351214	193,696	
John O'Gaunt School	2000053010652	853	
Lambourn Primary School	2000007487746	15,457	September 2019 to April 2020 usage has been estimated as no actual usage data available
Lambourn Primary School	2000007487755	32,130	September 2019 to April 2020 usage has been estimated as no actual usage data available
Lambourn Primary School	2000007487764	9,346	September 2019 to April 2020 usage has been estimated as no actual usage data available
May Park Primary School	2200042216880	162,940	
NYTHE PRIMARY SCHOOL	2000012048577	63,026	Usage has been calculated as 50% of the total consumption for this MPAN, as supply is shared with other users
Oare Church of England Primary School	2000007613240	20,126	
Ogbourne C of E Primary School	2000007531545	15,175	
Ogbourne C of E Primary School	2000054514696	7,073	
St John's Marlborough	2000054479145	581,881	
St Katharine's CE Primary School	2000007552261	22,398	
The Wren School	2700003114914	355,215	

Gas

Site Name	MPRN	Usage (kWh) for period 01/09/2019 to 31/08/2020	Notes
Fairfield High School	9154191502	445,826	
John O'Gaunt School	16466802	9,086	September 2019 usage is estimated as actual usage data not available
John O'Gaunt School	16466903	229,965	August 2020 usage is estimated as actual usage data not available
Lambourn Primary School	2551104	3,153	September 2019 usage is estimated as actual usage data not available
Lambourn Primary School	2551205	155,499	September 2019 usage is estimated as actual usage data not available
Lambourn Primary School	2551306	15,180	September 2019 usage is estimated as actual usage data not available
May Park Primary School	13674401	93,609	
May Park Primary School	13674502	39,091	
May Park Primary School	9315586408	117,485	
Nythe Primary School	18784602	196,817	
St John's Marlborough	9205991101	749,536	
The Wren School	9366230909	743,438	

Oil

Site Name	Usage (litres) for period 01/09/2019 to 31/08/2020	Notes
Burbage Primary School	7,000	Oil type: Gas Oil
Oare Church of England Primary School	2,285	Oil type: Kerosene
John O'Gaunt School	26,534	Oil type: Gas Oil
St Katharine's CE Primary School	3,670	Oil type: Gas Oil
Great Bedwyn CE School	7,311	Oil type: Gas Oil

LPG

Site Name	Usage (litres) for period 01/09/2019 to 31/08/2020
Burbage Primary School	2,830
Easton Royal Academy	2,870
Ogbourne C of E Primary School	5,551
John O'Gaunt School	925

END OF REPORT