University of Exeter | Centre for Energy and the Environment

Exeter City Council's Carbon Footprint 2022/23

CENTRE FOR ENERGY AND THE ENVIRONMENT

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Author(s):	D Lash
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CENTRE FOR ENERGY AND THE ENVIRONMENT
University of Exeter
Hope Hall
Prince of Wales Road
Exeter, EX4 4PL
+44(0)1392 724172
www.exeter.ac.uk/cee

Cover image: Solar Farm at Water Lane

Management Summary

The Centre for Energy and the Environment at the University of Exeter was commissioned by Exeter City Council to produce their organisational GHG inventory for the 2022/23 period. This report summarises the main aspects of the footprint both for the overall scope and approach, and for data collection and analysis.

Contents

1 Introduction

The Centre for Energy and the Environment at the University of Exeter was commissioned by Exeter City Council to produce their organisational GHG inventory for the 2022/23 period. This follows the productions of previous footprints covering the 2018/19, 2020/21, and 2021/22 periods. This report summarises the main aspects of the footprint both for the overall scope and approach, and for data collection and analysis within each category, and reports the results using two categorisation schemes.

2 Inventory Scope and Method

2.1 General

The footprint is based on BS EN ISO 14064-1 [1] (referred to from here as ISO 14064) and the accompanying ISO/TR 14069 [2], and the Greenhouse Gas Protocol (referred to from here as the GHG Protocol) [3] and the accompanying documents [4] and [5] which provide more detail on quantifying emissions from supply chains.

A "carbon footprint" is taken here to be the net emissions of GHGs by the organisation over a year (i.e., an annual GHG inventory). The net emissions are established by calculating emissions from all sources (processes that release GHGs into the atmosphere), sinks (processes that remove GHGs from the atmosphere) and reservoirs (components other than the atmosphere that have the capacity to accumulate GHGs). The inventory includes all GHGs expressed in tonnes of carbon dioxide equivalent (tCO_2e), though these have not been disaggregated into emissions for each gas.

The footprint has been produced based on a "Financial Control" organisational boundary.

Emissions have been calculated for Scopes 1 (direct emissions), 2 (energy indirect), and 3 (other indirect) and the sub-categories within each of these as defined in ISO 14064 of which there are 23 in total. The relationship of direct and indirect emissions is shown in Figure 1. A further category (24) has also been included to include any offsets. The inclusion of each of these categories is shown in Table 1. The previous footprints have been produced within 10 categories as outlined in previous advice by the Government for its National Indicator 185. The approach taken this year and onwards aims to align ECC's approach with the most comprehensive and utilised standards.

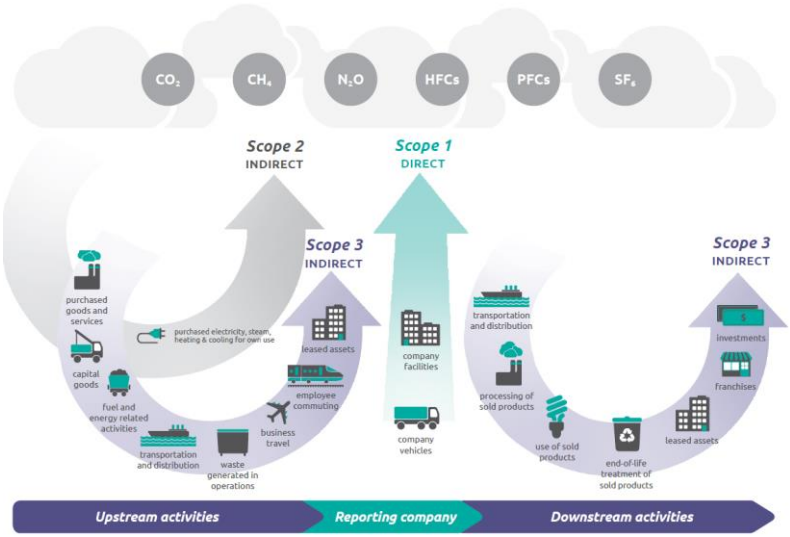


Figure 1: The relationship of direct and indirect emissions [Source: GHG Protocol]

Table 1: Inventory categories and their recommended inclusion or not within the footprint

Scope	Upstream/ Downstream	No.	Category ISO 14064-1	Include/ Exclude
Scope 1: Direct GHG emissions and removals				
1	Direct	1	Direct emissions from stationary combustion	Include
		2	Direct emissions from mobile combustion	Include
		3	Direct process related emissions	Exclude
		4	Direct fugitive emissions	Include
		5	Direct emissions and removals from Land Use, Land Use Change and Forestry (LULUCF)	Exclude
Scope 2: Energy GHG indirect emissions				
2	Upstream	6	Indirect emissions from imported electricity consumed	Include
		7	Indirect emissions from consumed energy imported through a physical network	Exclude
Scope 3: Other indirect GHG emissions				
3	Upstream	8	Energy-related activities not included in direct emissions and energy indirect emissions	Include
		9	Purchased goods and services[1]	Include
		10	Capital equipment	Include[2]
		11	Waste generated from organisational activities	Include
		12	Upstream transport and distribution	Exclude
		13	Business travel	Include
		14	Upstream leased assets	Exclude
		15	Investments	Exclude[3]
	Downstream	16	Client and visitor transport	Exclude
		17	Downstream transport and distribution	Exclude
		18	Use stage of the product	Exclude
		19	End of life of the product	Exclude
		20	Downstream franchises	Exclude
		21	Downstream leased assets	Include
		22	Employee commuting	Include
	Varies	23	Other indirect emissions not included in the other 22 categories	Exclude

In addition, an alternative categorisation scheme was defined to better align with the activities of the organisation. These were as follows:

1. Buildings (excluding housing): Corporate Estate, Leisure Centres, Other Non-Domestic, Waste from Buildings, Homeworking Energy, Construction and Maintenance, Leased Out.
2. Social Housing: Operational Emissions, Construction and Maintenance.
3. Transport: Own Vehicles, Grey Fleet, Business Travel, Commuting.
4. Procurement: Goods, Services.
5. Offsets: Exported Renewable Energy, Land Use Change, Purchased Offsets.

[1] This category is called "Purchased products" in ISO 14064 but the equivalent GHG Protocol category "Purchased goods and services" is deemed more appropriate.
[2] This is included by combined consideration with category 9 'Purchased goods and services'
[3] Though spend on pensions from procurement data has been included within category 9 'Purchased goods and services'

The emissions calculated for each of the ISO 14064 categories across to this alternative scheme.

The carbon footprint covers a period of one financial year (i.e., 6th April 2022 to 5th April 2023 where daily data is available, or April 2022 to March 2023 where data is monthly). It is referred to as the 2022/2023 year.

Emissions were calculated by multiplying activity data by an emission factor. The gathering and analysis of activity data has been undertaken following a hierarchy approach with the aim being to capture the best available data. Emission factors come from a range of sources, however the most extensively used are the UK GHG Conversion Factors for Company Reporting [6] (referred to from here as the "Government EFs"). Full rationale is described in the methodology report, and confirmation of the specific data used for each category in the sections for Scopes 1, 2 and 3 below.

2.2 Scope 1: Direct Emissions

2.2.1 Direct emissions from stationary combustion

Description

Direct emissions arising from the combustion of fuels (for example, natural gas or oil) on-site in plant (for example boilers or generators) within the organisational boundaries of the reporting organisation. Here this includes all energy consumed in boilers from non-domestic buildings, and social housing.

Data Hierarchy and Calculation Approach

Energy consumption data was available for each relevant non-domestic building in the form of kWh consumed for gas for the period. This was the same format as in previous footprint years. For social housing, an analysis was undertaken using EPC data of the housing stock to estimate energy consumption for each dwelling. Energy consumption was converted to GHG using the Government EFs.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Buildings (exc. housing) > Corporate Estate
- Buildings (exc. housing) > Leisure Centres
- Social Housing > Operational Emissions

2.2.2 Direct emissions from mobile combustion

Direct emissions arising from fuel burnt in transport equipment within the organisational boundaries of the reporting organisation. Here this covers emissions from all vehicles owned by ECC. Emissions from other transport are accounted for within various other Scope 3 categories.

Data Hierarchy and Calculation Approach

The amount of fuel consumed by vehicle was provided. This included the amount of fuel (litres of kWh), type (diesel, petrol) as well as vehicle type and department. This was converted to GHG emissions using the Government EFs. The amount of electricity used was also available, though was not separately calculated to avoid double counting from building emissions.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Transport > Own Vehicles

2.2.3 Direct process related emissions

This category has been taken to be out of scope as it is not relevant.

2.2.4 Direct fugitive emissions

Description

These are direct uncontrolled emissions of GHG, with any process that directly utilises GHG being a potential source of emissions. Here this includes cooling plant in buildings.

Data Hierarchy and Calculation Approach

Data was not available for this accounting period, so instead the data from the 2020/21 footprint was used. This included the weight and type of refrigerant from a number of systems (26 at Riverside, 2 at Exeter Arena, 12 at Civic Centre, 5 at RAMM and 10 at Corn Exchange), from which a leakage rate of 3% was assumed. In addition, leakage was assumed from 10 domestic heat pumps from the social housing stock.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Buildings (exc. housing) > Corporate Estate
- Buildings (exc. housing) > Leisure Centres
- Social Housing > Operational Emissions

2.2.5 Direct emissions and removals from Land Use, Land Use Change and Forestry (LULUCF)

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.3 Scope 2: Energy Indirect Emissions

2.3.1 Indirect emissions from imported electricity consumed

Description

These are indirect emissions associated with the import of electricity. It excludes upstream emissions associated with the production of fuels feeding power stations, embodied emission associated with the production of generation plant, and the transmission and distribution network (these are captured within Scope 3). In practice, this will be electricity consumption from buildings, and increasingly vehicles.

Data Hierarchy and Calculation Approach

The same data as used in the direct emissions from stationary combustion category was used to account for electricity imported in buildings. Where electricity was generated at sites, any self-consumed energy would reduce the imported electricity. Any exported electricity was accounted for as an offset. In all cased, the Government EFs were used to convert energy data into GHG emissions.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Buildings (exc. housing) > Corporate Estate
- Buildings (exc. housing) > Leisure Centres
- Social Housing > Operational Emissions

2.3.2 Indirect emissions from consumed energy imported through a physical network

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4 Scope 3: Other Indirect Emissions

2.4.1 Energy-related activities not included in direct emissions and energy indirect emissions

Description

These are indirect emissions associated upstream activities associated with fuel and electricity consumption by the reporting organisation. Examples include the extraction, production, transport, and distribution of fuel and energy. In practice, this will be an additional well to tank (WTT) uplift on all fuel use from stationary and mobile construction (Sections 2.2.1 and 2.2.2), imported electricity and energy consumed from a physical network Sections 2.3.1 and 2.3.2), upstream transport and distribution (Section 2.4.5), business travel (Section 2.4.6), client and visitor travel (Section 2.4.9) upstream leased assets (Section 2.4.7), downstream transport, product use, and leased assets (Sections 2.4.10, 2.4.11, and 2.4.14), and employee commuting (Section 0).

Data Hierarchy and Calculation Approach

The data collection was the same as from the above source categories, as described elsewhere in this report. When calculating the emissions, the original emission factor was replaced with the emission factor for WTT as stated in the Government EFs. For electricity, the upstream emissions include WTT emissions associated with combustion at the generation plant (e.g., remote power stations), the transmission and distribution (T&D) network, and then WTT emissions on the T&D network.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were added to the main emissions from each of the associated categories and allocated in the same way as that category.

2.4.2 Purchased products and services

Description

These are emissions associated with the consumption of goods and services by the reporting organisation that are not otherwise included elsewhere in the inventory. For example, capital equipment, business travel, or electricity consumption are all examples of goods and services that are consumed, but they are already accounted for within specific sub-categories in the inventory that have been created within the standards to improve transparency and consistency. The scope of these emissions are “cradle to gate” i.e., all emissions that occur up to the point of sale by a producer e.g., raw material extraction, transport to a manufacturing facility, processing etc., but not including onward transport to the customer (the reporting organisation here), which is covered in Section 2.4.5 “upstream transport and distribution”. This category will rely heavily on engagement with both procurement departments, and supply chain partners.

Data Hierarchy and Calculation Approach

The ultimate goal to aim for would be to have specific quantified emissions for each good or service purchased by the organisation. In practice, this will not at this moment be achievable, and there will need to be a balance found between having sufficient granularity and accuracy of outputs against the time and effort required to calculate emissions from supply chains. Reporting may be by supplier and/or sector.

The GHG Protocol supply chain guidance documents discuss four calculation methods, of which only first and last are likely to be practicable. The following hierarchy should be followed for data collection (best to worst):

1. Supplier-specific method: This involves obtaining product level data directly from the supplier, and three methods ranked best to worst are described here:
    a. The emissions from the product will have been calculated by the supplier ideally following the BS EN ISO 14067 standard [7] of Environmental Product Declarations (EPDs) [8]. The product emission factors used should be "cradle to gate" and not full lifecycle. These standards would provide the assurance that a fair and recognised approach has been adopted.
    b. If a supplier has undertaken product calculations but has not followed these standards then it may still be possible to use their data though this should be done with caution and in discussion with the supplier to understand the calculations.
    c. If this is not available, then the supplier may have produced their own emissions intensity value (e.g., $kgCO_2e$/£ spent) based on their own specific data, which could then be used with the value of the contract to estimate emissions.
2. Hybrid method: This approach effectively relies on gathering all the relevant data from a supplier (for example Scope 1 and 2 emissions, plus data such as mass of upstream materials) to enable the reporting organisation to then calculate the emissions. This option is discounted here as likely to be too resource-intensive to be applicable in most/all cases for the forces.
3. Average-data method: This method involves gathering quantified activity data (other than cost) such as mass of product, number of., hours spent etc. which can then be used with secondary data e.g., published databases, government statistics, literature studies, and industry associations. The GHG Protocol provides examples of databases [9], some of which are commercial. Adopting this method would rely on both capturing activity data using quantities other than contract value, and collectively deciding on the appropriate database for each product and applying it. As the former is not routinely undertaken and certainly not holistically across all categories of procurement, this option is discounted at this moment.
4. Spend-based method: This method involves assigning a sector (e.g., using the Standard Industry Classification [SIC] codes) to each item of spend, and then multiplying the value with a sector-specific emission factor. It may be more time-efficient to aggregate spend items by supplier and then rank suppliers by total spend. It is likely that a pareto principle will apply meaning that manual allocation of sector can be applied to the highest spend suppliers and then for the "tail" an average can be applied based on the top suppliers. This is the approach outlined in the ERG and Annex E, though the emission factors there are very out-dated. The most recent and applicable emission factors to be used are from the UK's carbon footprint dataset [10] in the "SIC multipliers" sheet. Whilst this method is effective at being able to relatively quickly calculate emissions arising from anywhere in the economy, it is important to recognise it is not likely to be accurate and cannot distinguish emissions between spend within a category or between suppliers, and is only really useful as an initial rough "snapshot" rather than as a tool that can identify specific opportunities or track changes over time (as the only two factors in the calculation are amount spent and the emission factor).

At present, it is likely that option 4 will be used for calculating emission from all purchased products and services, though if improved data as described in option 1 becomes available over time, then this can be used for those goods and services and the remainder continued with the spend-based method.

In all cases, it is important to avoid the potential for double counting by excluding calculation of emissions that are already accounted for elsewhere. For example, in the case of adopting a spend-based analysis, the amount spent on suppliers of energy and business travel should not be included here as they will be included elsewhere in the inventory. It is also important that any spend on non-relevant categories are excluded. For example, money spend directly on wages via an agency would not

be contributing to emissions (and their activities within the organisation e.g., occupancy of buildings or vehicles will be captured elsewhere), though the fees spent on employment agencies for their services should be included.

For ECC spend data was available covering 80,033 transactions with 8,432 unique suppliers. The total spend was £87.4 million (ex. Vat). Each transaction also included spend categories at different resolutions. The following process was undertaken:

- A combination of manual and automatic assignment using supplier name and detailed category was undertaken to allocate a sector based on the ERG Annex E sectors to each line of spend. The ERG was used as it had in previous years and much work had already been undertaken manually assigning suppliers to ERG categories.
- Rules were established to (where relevant) exclude transactions by:
    - Supplier, for example Allstars fuel card (counted elsewhere), HMRC payments (not relevant), and Strata (covered elsewhere).
    - Detailed Spend Category, for example Covid and other grant distribution, business rates etc.
    - Emissions category, for example electricity and gas supply (counted elsewhere).
- A mapping exercise was undertaken to match sectors from the UK Carbon Footprint to the ERG sectors, so that the emission factors from the newer UK Carbon Footprint could be used instead of the ERG emission factors.
- Emission factors from each UK Carbon Footprint sector was assigned to each item of spend and adjusted for inflation from the most recent year of publication of the emission factors (2019).
- Emissions were calculated for each transaction by multiplying spend by emission factor.
- Emissions were aggregated by supplier and detailed sector, and coarsely as goods, construction/maintenance (separately for homes and non-residential buildings), and services.
- From the above, a directory was produced that mapped each supplier to a spend category and assigned an emissions category for each combination. This directory could be used on subsequent footprint years, including adding new suppliers where relevant.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Procurement > Goods
- Procurement > Goods
- Buildings (exc. housing) > Construction and Maintenance
- Social Housing > Construction and Maintenance

2.4.3 Capital equipment

This category has not been separated out from spend data from the previous category (purchased products and services). It is therefore included in the footprint, but not reported as a separate category.

2.4.4 Waste generated from organisational activities

Description

Waste can impact on organisational GHG emissions in several ways, including:

- The use of recycled materials in the products the organisation purchases. These are already accounted for in Sections 2.4.2 and 2.4.3).

- The transport and subsequent processing of waste generated by the organisation. This is what is covered within this section. Technically, the transport of waste from the organisation to the waste treatment facility would constitute "downstream transport and distribution", however as the Government EFs combine the transport and waste processing impact, they are assumed to be included within this section.
- The onward disposal of waste from products sold by the organisation. This is not applicable here.

For waste generated by the organisation that is recycled, this has two potential GHG reducing benefits, firstly the reuse of material can lower embodied emissions from purchased products (this is accounted for in the purchase of those products), and secondly by avoiding sending that waste to be processed (e.g., preventing material from entering landfill sites). The second of these can be optionally reported as "avoided emissions", however as the supporting data is likely to be hard to obtain and the overall impact minimal, it is recommended that this is not reported.

Data Hierarchy and Calculation Approach

The aim should be to obtain data at building resolution (i.e., waste produced at each site), however this information was not available here. Benchmark data waste generation data [11] as shown in Table 2 was used with FTE employee numbers to establish total amounts of each waste stream. It was assumed all paper products were recycled, and the remained processed at an energy from waste plant. The derived annual mass of waste (tonnes) was then multiplied by the corresponding emission factor from the Government EFs. It should be noted that these factors include an allowance for typical transport distances to a waste processing site and for the processing itself. As the benefit of recycling and energy recovery from waste are accounted for in the supply of recycled material and energy, for most EFs that values are low as they only include the transport component. The notable exception to this is any organic waste (and the generic "commercial and industrial waste" category) sent to landfill, though this was not relevant here. As the emissions from this approach and category were so low, the previous year's values were used for this year's footprint.

Table 2: Breakdown of office waste per FTE to use if site specific data is not available (Source: Cundalls)

Waste Stream	Split	Mass (kg)
White paper	20%	40
Cardboard	14%	28
Newspaper and Magazines	13%	26
Other Paper	13%	26
Food	21%	42
Building (services and other)	4%	8
Plastic cups	1%	2
Cans	3%	6
Glass	3%	6
Office Equipment	2%	4
Other Plastic	6%	12
TOTAL	100%	200

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Buildings (exc. housing) > Waste from Buildings

2.4.5 Upstream transport and distribution

This category has been taken to be out of scope as it is not practicable to monitor or calculate in a meaningful way.

2.4.6 Business travel

Description

This section includes emissions from business travel in vehicles owned or operated by third parties and also includes emissions associated with hotel stays on business trips. Emissions associated with travel in vehicles owned or leased by the organisation, or from commuting, are covered in other sections.

Data Hierarchy and Calculation Approach

Mileage data was available for a number of generic vehicle sizes (small, medium, large) and fuel types (petrol, diesel). Emissions were calculated by multiplying the mileage by the emission factor of each vehicle type. Other modes of transport (bus and train) were estimated based on sped data.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Transport > Grey Fleet
- Transport > Business Travel

2.4.7 Upstream leased assets

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4.8 Investments

This category has been taken to be out of scope as the category in the GHG Protocol is more aimed at financial institutions and is in general not relevant to the activity of the organisation. The inclusion of pensions within the protocol is optional and has not been included here now.

2.4.9 Client and visitor transport

This category has been taken to be out of scope as it is likely to be very small and not practicable to monitor or calculate in a meaningful way.

2.4.10 Downstream transport and distribution

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4.11 Use stage of the product

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4.12 End of life of the product

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4.13 Downstream franchises

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.4.14 Downstream leased assets

Description

This section includes emissions from downstream assets, for example buildings owned by ECC that are leased out.

Data Hierarchy and Calculation Approach

The approach to data hierarchy and calculation is the same as for other categories with buildings emissions. This category had been excluded in previous years and was included for the first time this year. As it was shown to have such a significant impact on emissions, this category has been retrospectively added to previous years using the same asset list and therefore energy consumption data, but with emission factors for the given period.

The approach taken for ECC was to establish the floor area and building type of each leased asset and combining this with CIBSE TM41 benchmark data to estimate energy use (electricity and gas) for each building. These could then be converted to emissions using the Government's conversion factors.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Buildings (exc. housing) > Leased Out

2.4.15 Employee commuting

Description

This includes transport of employees between their homes and workplaces. This can cover a range of modes but in practice will be mainly driving (either single driver or car sharing) as well as potentially public transport modes and walking/cycling. Also included in this section "home working" i.e., emission arising from energy used to heat homes and operate work equipment whilst staff are home working.

Data Hierarchy and Calculation Approach

For the first time, data from a staff travel survey was available. This asked questions about number of days worked from home and commuted, commuting distance, main and alternative modes, and frequency of each. In total, 272 responses were obtained. The data was analysed to establish an average annual distance travelled by mode for a single member of staff (FTE). This was multiplied by total ECC staff to establish total distance travelled by mode, and annual hours per year of home working. These were then multiplied by the Government EFs to obtain annual emissions.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

- Transport > Commuting
- Buildings (ex. Housing) > Homeworking energy

2.4.16 Other indirect emissions not included elsewhere

This category has been taken to be out of scope as it is not relevant to the activities of the organisation.

2.5 Offsets

Description

This section covers any offset emissions, which could include generated and exported renewable energy, or purchased carbon credits.

Data Hierarchy and Calculation Approach

The only relevant offset in this category was exported renewable electricity. Metered export data was available for a number of sites, and this was multiplied by the emission factor for electricity generation. No offsets for WTT were assumed.

Alternative Categorisation and Mapping

For the alternative categories, emissions from this category were allocated to:

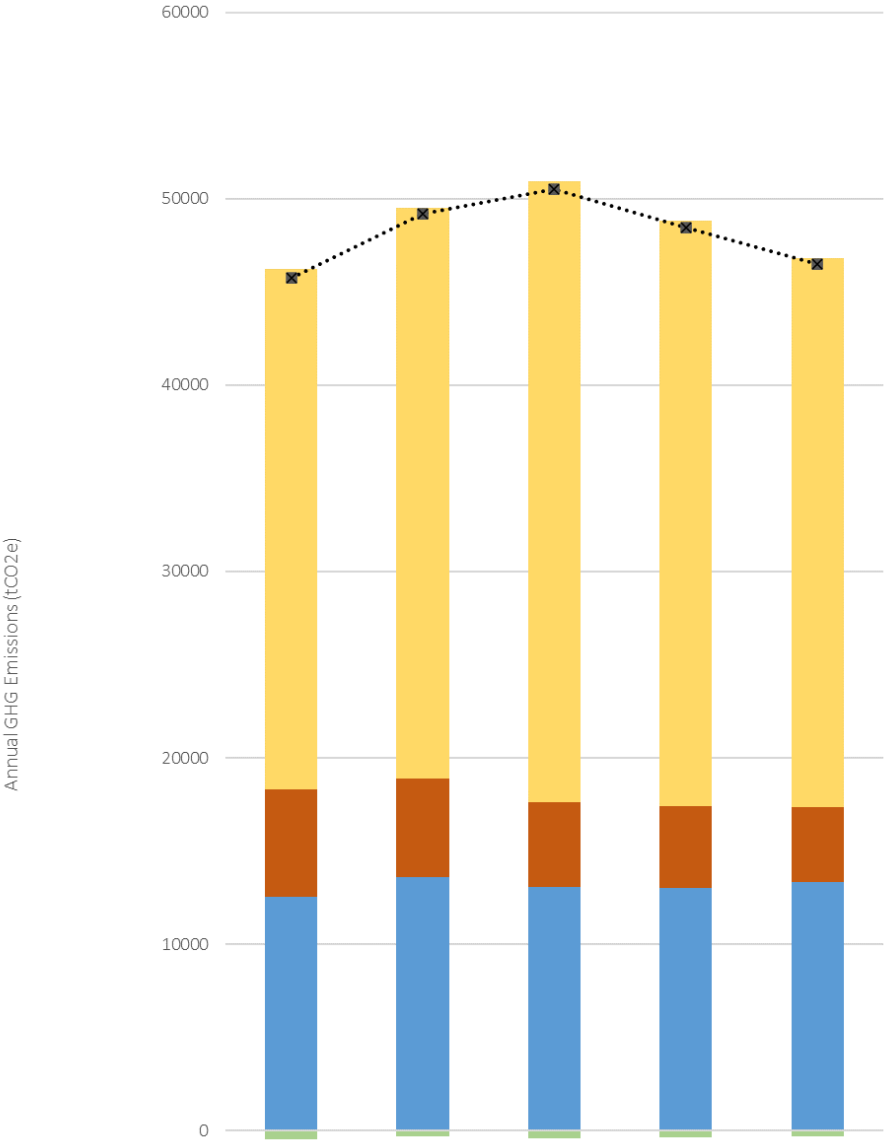
- Offsets > Exported Renewable Energy
- Offsets > Land Use Change

3 Inventory Results

The results for the 2022/23 inventory and previous years are shown by main and sub category for ISO 14064-1 categories and the alternative categorisation schemes in Figure 2 to Figure 5 and in Table 3.

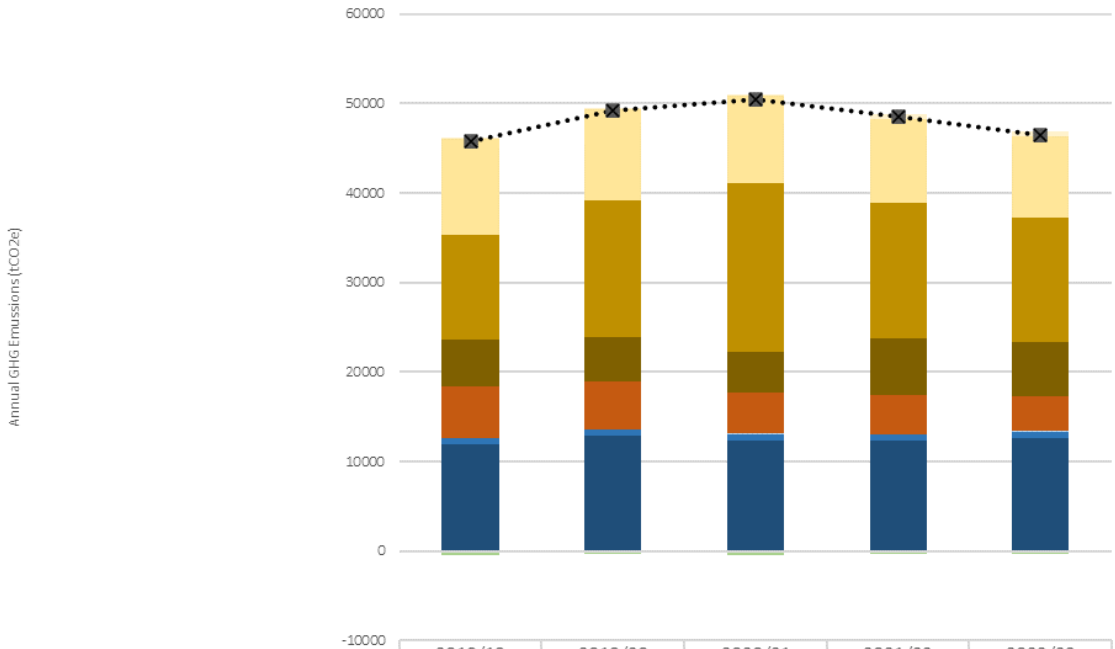
Emissions for the 2022/23 period were 46,495 tCO_2e. This represents a reduction of 1,959 tCO_2e (4%) on the previous year. Headline observations from the alternative categories are as follows:

- Non-Domestic Buildings (41% of footprint): This section now newly includes (for this year, and backdated to previous years) 'leased out' non-domestic buildings which represent 24% of the footprint. Overall, emissions from non-domestic buildings increased in 22/23 by 891 tCO_2e. This masks a whole range of factors some of which increased emissions, and others that decreased them. The electricity emission factor decrease compared to 21/22 which contributed to a general reduction. This was more than offset by increased emissions from leisure centres (Riverside increasing activity compared to 21/22, St Sidwells Point coming online, both of these more than offsetting Pyramids being retired). In addition, there was an increase in 1,278 tCO_2e from 'construction and maintenance' as identified from spend records.
- Social Housing (39% of footprint): Emissions in this category significantly reduced. This was mainly due to a reduction of 3,330 tCO_2e from 'construction and maintenance' as identified from spend records. Operational emissions remained similar to previous years, as the underlying housing stock has remained similar, with the decrease due to the lower electricity emission factor.
- Transport (3% of footprint): Emissions increased by around 16% in this category, however it remains a comparatively small part of the overall footprint. The main source of emissions were from refuse collection vehicles (though there was a 13% reduction in emissions from these, which was influenced by the new electric refuse vehicles in the fleet).
- Procurement (17% of footprint): Emissions from this category increased by 12%, driven by an increase in spend.
- Offsets (offsets 1% of footprint): The amount of carbon offset by PV panels fell by 8% over the year as whilst generation remained similar, as the wider national electricity grid decarbonises, PV has the potential to offset less fossil-based generation.



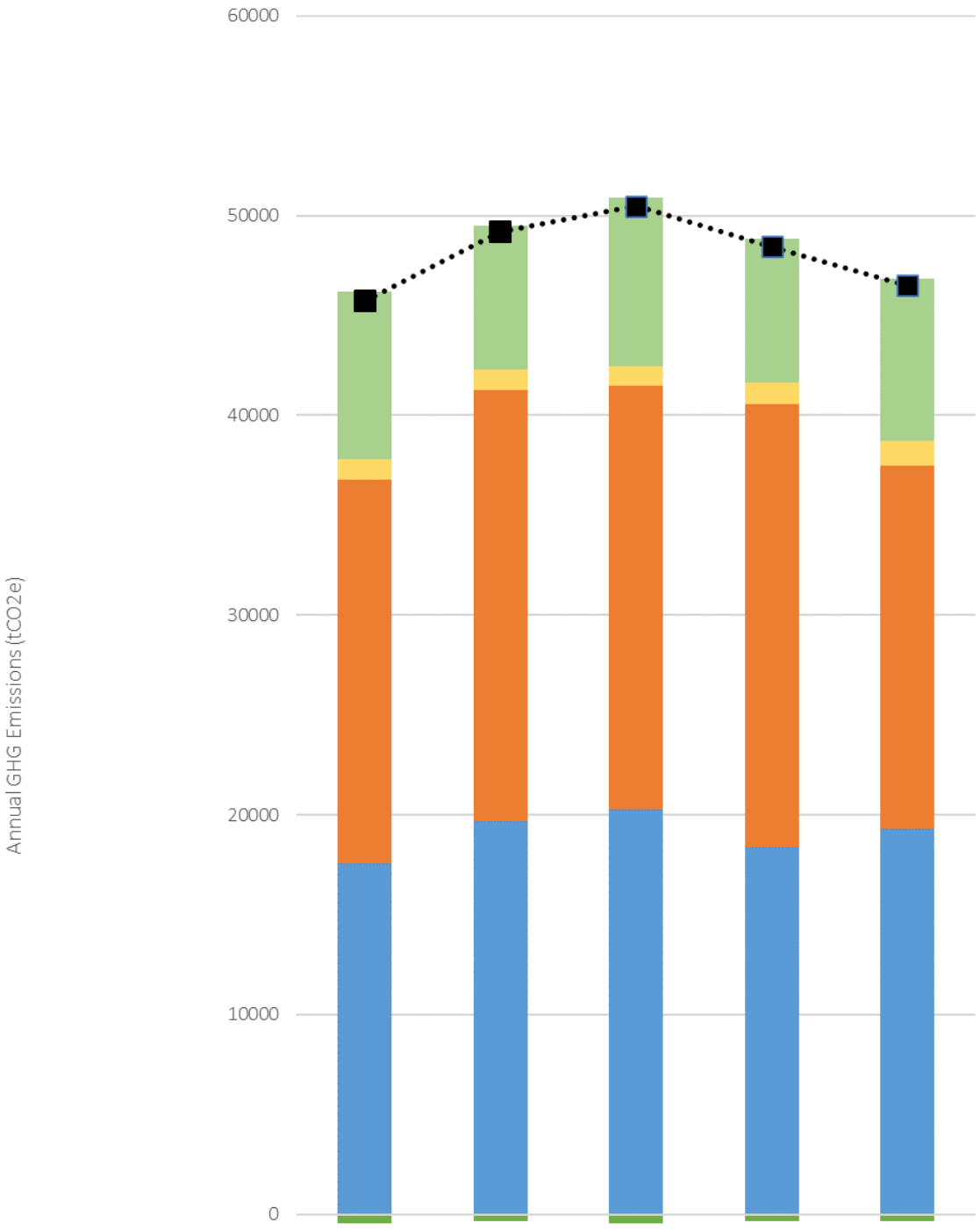
	2018/19	2019/20	2020/21	2021/22	2022/23
Offset Carbon	-468	-333	-423	-365	-334
Scope 3	27906	30631	33277	31400	29500
Scope 2	5757	5295	4537	4396	3974
Scope 1	12551	13587	13094	13023	13355
GRAND TOTAL (net)	45746	49181	50485	48454	46495

Figure 2: GHG emissions by ISO 14064-1 main category



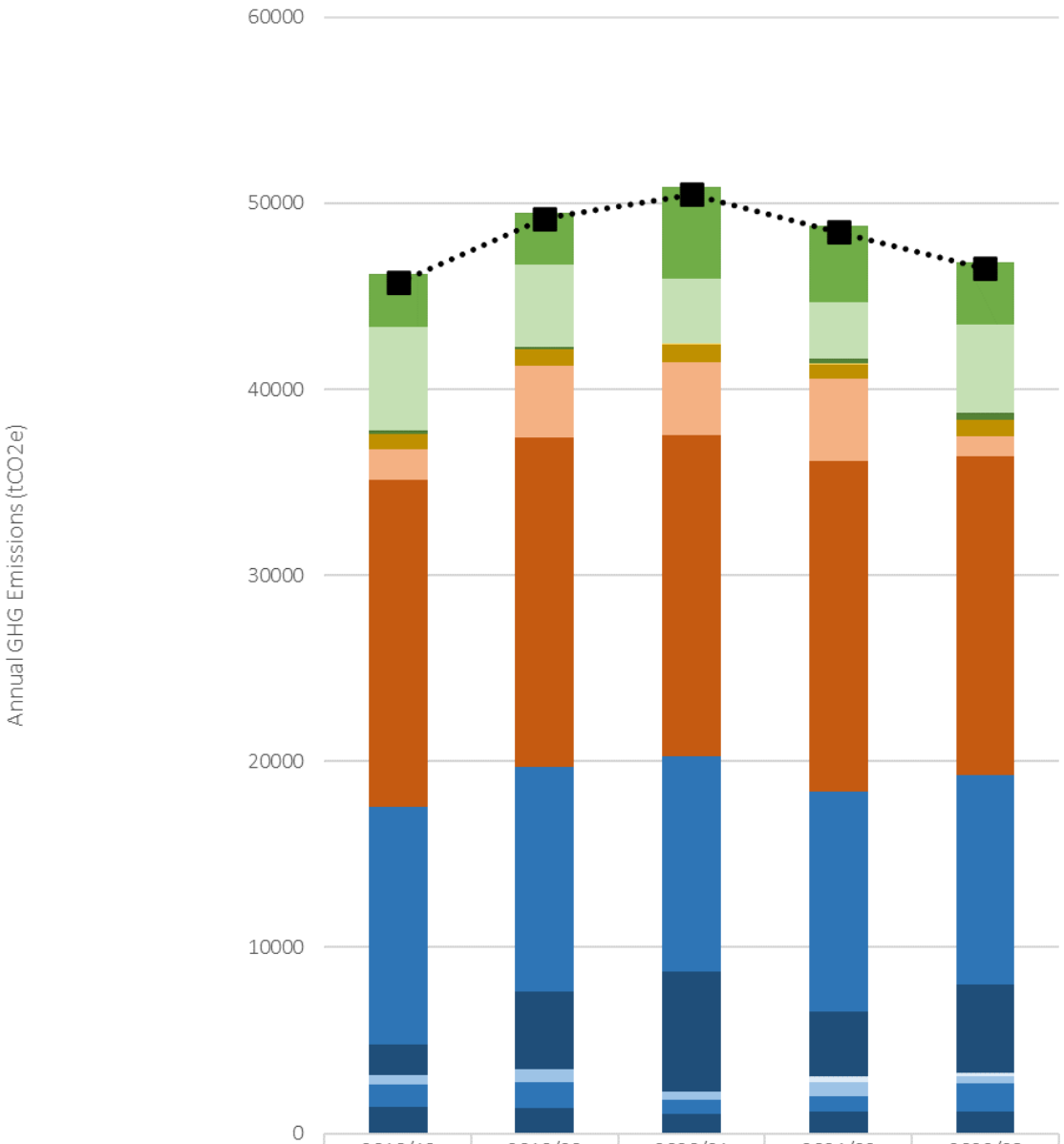
	2018/19	2019/20	2020/21	2021/22	2022/23
Offset Carbon	-468	-333	-423	-365	-334
Other indirect emissions not included in the other 22 categories	0	0	0	0	0
Employee commuting	129	126	19	521	496
Downstream leased assets	10762	10257	9847	9446	9081
Downstream franchises	0	0	0	0	0
End of life of the product	0	0	0	0	0
Use stage of the product	0	0	0	0	0
Downstream transport and distribution	0	0	0	0	0
Client and visitor transport	0	0	0	0	0
Investments	0	0	0	0	0
Upstream leased assets	0	0	0	0	0
Business travel	17	16	13	8	20
Upstream transport and distribuUpstream transport and distribution tion	0	0	0	0	0
Waste generated from organisational activities	3	3	3	3	3
Capital equipment	0	0	0	0	0
Purchased products	11682	15277	18800	15062	13907
Energy-related activities not included in direct emissions and energy indirect emissions	5315	4954	4595	6360	5993
Indirect emissions from consumed energy imported through a physical network	0	0	0	0	0
Indirect emissions from imported electricity consumed	5757	5295	4537	4396	3974
Direct emissions and removals from Land Use, Land Use Change and Forestry (LULUCF)	0	0	0	0	0
Direct fugitive emissions	18	18	18	18	18
Direct process related emissions	0	0	0	0	0
Direct emissions from mobile combustion	670	675	769	654	696
Direct emissions from stationary combustion	11863	12894	12306	12351	12641
GRAND TOTAL (net)	45746	49181	50485	48454	46495

Figure 3: GHG emissions by ISO 14064-1 sub-category



	2018/19	2019/20	2020/21	2021/22	2022/23
5. Offsets	-468	-333	-423	-365	-334
4. Procurement	8430	7213	8445	7181	8079
3. Transport	1009	1013	994	1094	1276
2. Social Housing	19192	21594	21183	22147	18187
1. Buildings (exc. housing)	17583	19695	20285	18397	19288
Series5	45746	49181	50485	48454	46495

Figure 4: GHG emissions by alternative main category



	2018/19	2019/20	2020/21	2021/22	2022/23
4.2 Services	2887	2779	4980	4137	3336
4.1 Goods	5544	4433	3466	3044	4743
3.4 Commuting	160	157	24	271	390
3.3 Business Travel	0	0	0	0	9
3.2 Grey Fleet	21	20	16	11	14
3.1 Own Vehicles	827	835	955	812	863
2.2 Construction and Maintenance	1639	3902	3902	4398	1067
2.1 Operational emissions	17553	17692	17282	17749	17120
1.7 Leased Out	12811	12086	11578	11841	11271
1.6 Construction and Maintenance	1613	4162	6453	3483	4761
1.5 Homeworking Energy	0	0	0	305	186
1.4 Waste from Buildings	3	3	3	3	3
1.3 Other Non-Domestic	509	660	426	750	364
1.2 Leisure Centres	1243	1421	793	848	1495
1.1 Corporate Estate	1404	1362	1032	1167	1208
Net Total	45746	49181	50485	48454	46495

Figure 5: GHG emissions by alternative sub-category

Table 3: Detailed GHG emissions by alternative category

Category	2018/19	2019/20	2020/21	2021/22	2022/23
1. Buildings (exc. housing)	**17583**	**19695**	**20285**	**18397**	**19288**
1.1 Corporate Estate	**1404**	**1362**	**1032**	**1167**	**1208**
RAMM	591	583	449	593	523
Guildhall	28	31	24	32	33
Carpenter Close Community Centre	2	2	1	0	
Exwick Cemetary	0	0	0	0	
Corn Exchange	86	52	59	64	63
Longbrook st Community Rooms	0	0	0	0	
Southlands	1	0	0	1	
Grandisson Court	2	2	1	0	
Weavers Court	1	0	0	0	
Faraday House Common Room	0	0	0	0	
Bodley Close Community Centre	3	4	2	1	
Livestock Centre	8	9	3	1	
Nelson Close	0	0	0	0	0
Abbeville Close Community Centre	0	0	0	0	
MRF	94	94	66	75	63
Carpenters Workshop Exton Rd	10	10	7	6	
Customs House	8	10	8	9	13
ARK Museum Store	0	0	0	0	
Toronto House	0	14	20	0	
Civic Centre	283	318	223	237	208
St Nicholas Priory	75	0	0	0	
St Georges Market - Corn Exchange	40	41	15	26	24
Cctv Control Centre	34	30	0	5	
Oakwood House	29	32	25	29	8
Other Buildings	104	41	33	19	
Glencoe, Alphington Street,		5	8	0	
25 Queens Road		7	34	0	
Night Shelter, Magdalen Street		3	7	0	
Matford Livestock Centre		70	41	61	43
Exton Road Depot - Oakwood House	4	4	3	5	6
Carpenter Close					2
Exwick Road					0
Longbrook Street					0
Bishop Road					2
Commercial Road					0
Grendon Road					1
Bodley Close					4
Carpenters Workshop					3
Prince Charles Road					1
Non-half hour electricity use					212

1.2 Leisure Centres	**1243**	**1421**	**793**	**848**	**1495**
Exeter Arena	58	66	36	38	42
ISCA Centre	122	124	89	45	98
Pyramids	464	440	280	257	2
Riverside	326	448	224	348	882
Wonford	68	53	47	44	51
Northbrook Pool	203	288	110	116	162
Northbrook Golf	1	0	0		
Clifton Hill Sports Centre		2	0	0	
Leisure others		0	6		
St Sidwells Point					257
1.3 Other Non-Domestic	**509**	**660**	**426**	**750**	**364**
Car Parks	221	219	140	200	
Facilities Management	49	54	24	38	
Public conveniences	16	16	8	10	
Public Realm	24	105	87	70	
Sheltered Accommodation	118	100	53	123	
Tenant Services	80	124	75	269	
UMS Energy	0	43	40	40	
Non-half hour electricity use					364
1.4 Waste from Buildings	**3**	**3**	**3**	**3**	**3**
Paper	2	2	2	2	2
Residual Waste	1	1	1	1	1
1.5 Homeworking Energy				**305**	**186**
Work at Home energy use				305	186
1.6 Construction and Maintenance	**1613**	**4162**	**6453**	**3483**	**4761**
Procured Construction: Non-residential	1613	4162	6453	3483	4761
1.7 Leased Out	**12811**	**12086**	**11578**	**11841**	**11271**
Bar, Pub Or Licensed Club	46	44	43	44	42
Clinic	56	54	52	53	51
Cultural Activities	697	666	646	662	639
Dry Sports And Leisure Facility	75	72	70	72	69
General Accommodation	1145	1108	1085	1115	1087
General Office	6558	6143	5848	5972	5644
General Retail	1170	1048	955	966	867
Hotel	913	874	849	871	842
Restaurant	1025	988	965	991	963
Schools And Seasonal Public Buildings	81	78	76	78	76
Storage Facility	475	459	449	461	449
Terminal	27	26	25	26	25
Workshop	543	526	515	530	517
2. Social Housing	**19192**	**21594**	**21183**	**22147**	**18187**
2.1 Operational emissions	**17553**	**17692**	**17282**	**17749**	**17120**
Council Owned Homes	17553	17692	17282	17749	17120
2.2 Construction and Maintenance	**1639**	**3902**	**3902**	**4398**	**1067**

Procured Construction: Homes	1639	3902	3902	4398	1067
3. Transport	**1009**	**1013**	**994**	**1094**	**1276**
3.1 Own Vehicles	**827**	**835**	**955**	**812**	**863**
Car Parking Services	12	4	4	4	4
Cleansing & Fleet Manager Refuse Trucks	558	563	556	642	556
Cleansing & Fleet Manager Other	55	153	152	54	96
Corporate Customer Services	5	0	0	2	0
Housing	13	1	2	0	2
Leisure and Museum Manager	5	1	1	0	7
Patrollers	7	0	0	0	
Pool Car	1	0	0	0	1
Pool Van Engineering	4	0	0	0	
Principal EHO	3	0	1	0	
Public & Green Spaces	159	110	236	107	133
Waterways	4	2	2	2	13
Unallocated					50
3.2 Grey Fleet	**21**	**20**	**16**	**11**	**14**
Grey Fleet	21	20	16	11	14
3.3 Business Travel					**9**
Bus					7
Train					2
3.4 Commuting	**160**	**157**	**24**	**271**	**390**
Commute by car	133	130	17	251	
Commute by bus	18	18	6	8	21
Commute by train	10	9	1	12	16
Car or Van (Petrol)					130
Car or Van (Diesel)					193
Car or Van (Electric)					3
Car or Van (Hybrid)					13
Car Share					6
Taxi					0
Motorcycle					7
Active transport (walking, running, cycling, scooting)					0
4. Procurement	**8430**	**7213**	**8445**	**7181**	**8079**
4.1 Goods	**5544**	**4433**	**3466**	**3044**	**4743**
Procured Goods	5544	4433	3466	3044	4743
4.2 Services	**2887**	**2779**	**4980**	**4137**	**3336**
Procured Services	2887	2779	4980	4137	3336
5. Offsets	**-468**	**-333**	**-423**	**-365**	**-334**
5.1 Exported Renewable Energy	**-468**	**-333**	**-423**	**-365**	**-334**
Council Owned Homes	-105	-74	-83	-76	-69
RAMM	-4	-1	-2	-3	-2
Livestock Centre	-280	-194	-268	-227	-190
MRF	0	0	0	0	-3
Civic Centre	0	0	0	0	-6
Oakwood House	-3	-2	-3	-2	-2

Belle Isle	-1	0	0	0	0
MA Car Park	-40	-32	-35	-30	-19
JL Car Park	-28	-23	-26	-21	-11
Wat Tyler	-3	-2	-3	-3	-2
Ark	0	0	0	0	-1
Climb Centre	-5	-3	-4	-4	-5
Water Lane Solar Farm					-23
5.2 Land Use Change	**0**	**0**	**0**	**0**	**0**
Valley Parks Tree Planting	0	0	0	0	0
Grand Total (net)	**45,746**	**49,181**	**50,485**	**48,454**	**46,495**

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