SUSTAINABLE SCOTLAND NETWORK
Climate Change Reporting

22nd June 2017

Section 3: Emissions, Targets and Projects.

3a: Emissions from start of the year which the body uses as a baseline to the end of the report year.

3a Emissions from start of the year which the body uses as a baseline (for its carbon footprint) to the end of the report year.

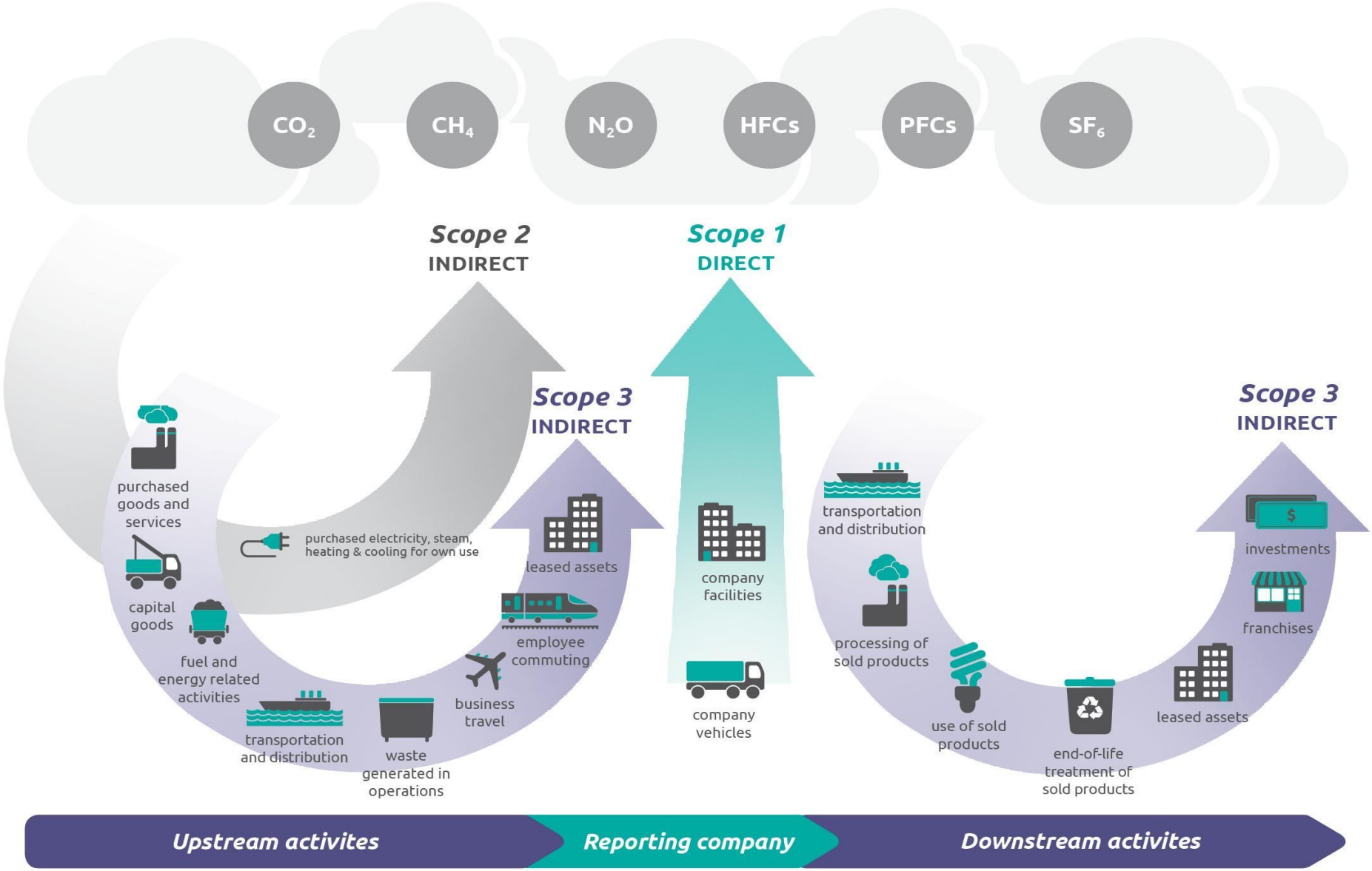
Complete the following table using the greenhouse gas emissions total for the body calculated on the same basis as for its annual carbon footprint /management reporti operations (a) (measured and reported in accordance with Scopes 1 & 2 and, to the extent applicable, selected Scope 3 of the Greenhouse Gas Protocol (b)). If data is r explanation in the comments column.

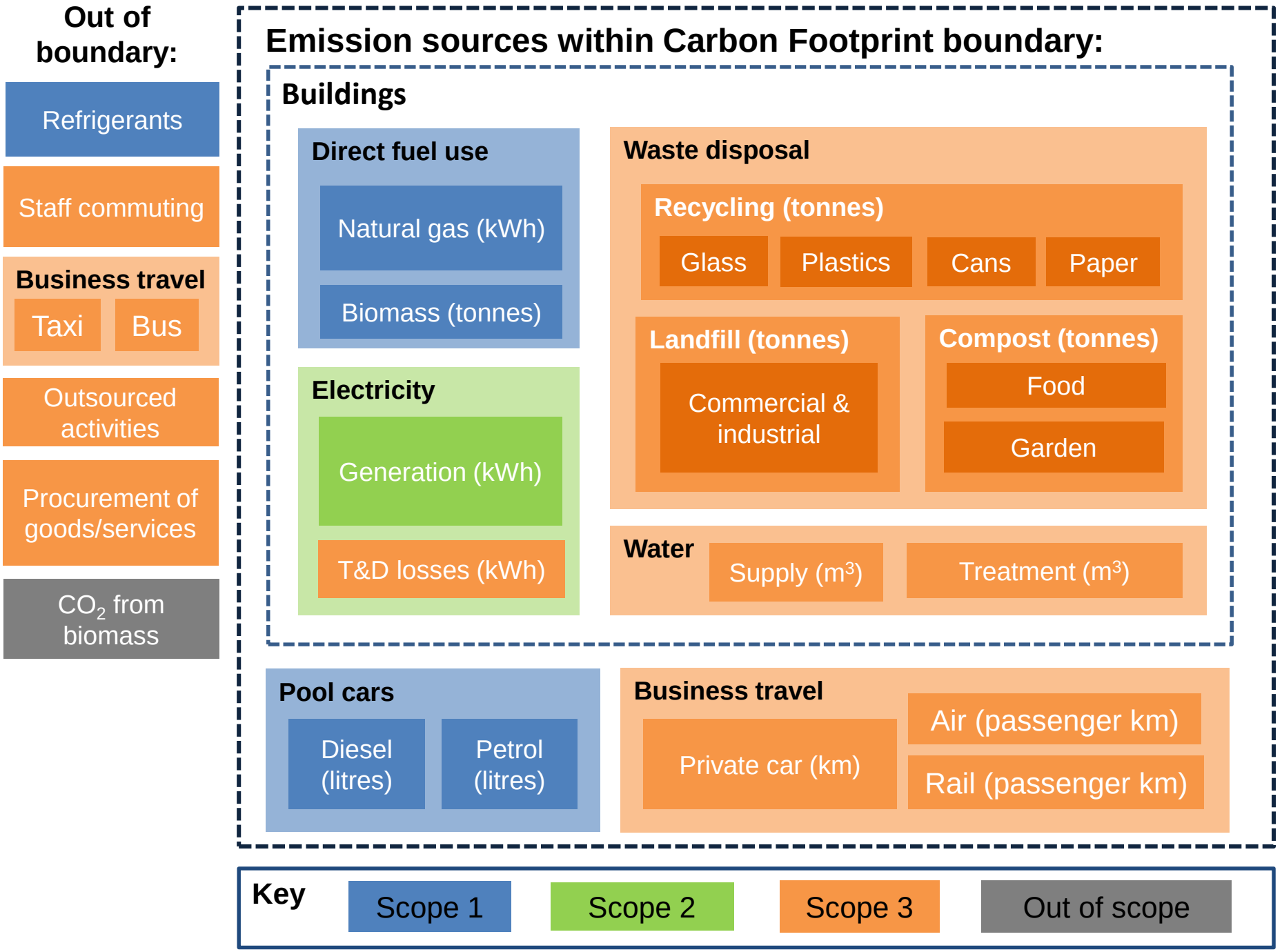
(a) No information is required on the effect of the body on emissions which are not from its estate and operations.

(b) This refers to the document entitled "The greenhouse gas protocol. A corporate accounting and reporting standard (revised edition)", World Business Council for Sus 568-9.

Reference Year	Year	Scope 1	Scope 2	Scope 3	Total	Units	Comments
Baseline carbon footprint	2012/13	0	18000	2000	20000	tCO2e	
Year 1 carbon footprint	2013/14	0	15500	1890	17390	tCO2e	
Year 2 carbon footprint	2014/15	3	13200	1750	14953	tCO2e	
Year 3 carbon footprint	2015/16	140	11673	1808	13621	tCO2e	

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain




Out of boundary:
Refrigerants
Staff commuting
Business travel
Taxi
Bus
Outsourced activities
Procurement of goods/services
CO_2 from biomass
Emission sources within Carbon Footprint boundary:
Buildings
Direct fuel use
Natural gas (kWh)
Biomass (tonnes)
Electricity
Generation (kWh)
T&D losses (kWh)
Waste disposal
Recycling (tonnes)
Glass
Plastics
Cans
Paper
Landfill (tonnes)
Commercial & industrial
Compost (tonnes)
Food
Garden
Water
Supply (m^3)
Treatment (m^3)
Pool cars
Diesel (litres)
Petrol (litres)
Business travel
Private car (km)
Air (passenger km)
Rail (passenger km)
Key
Scope 1
Scope 2
Scope 3
Out of scope

3b: Breakdown of emission sources.

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3b Breakdown of emission sources

Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3(a) above. Use t
of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the total em

If providing consumption data for Water – Supply, please also include the Emission Source and consumption data for Water – Treatment.
If providing consumption data for Grid Electricity (generation), please also include the Emission Source and consumption data for Grid Electricity (transmission & distribution losses).
(a) Emission factors are published annually by the UK Government Department for Environment, Food and Rural Affairs (Defra).

Emission Source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
Grid Electricity (generation)	Scope 2	25255000	kWh	0.46219	kg CO2e/kWh	11672.6	
Grid Electricity (transmission & distribution losses)	Scope 3	25255000	kWh	0.03816	kg CO2e/kWh	963.7	
Water - Supply	Scope 3	180500	m3	0.34400	kg CO2e/m3	62.1	
Water - Treatment	Scope 3	175000	m3	0.70800	kg CO2e/m3	123.9	
Refuse Commercial & Industrial to Landfill	Scope 3	700	tonnes	93.00000	kg CO2e/tonne	65.1	
Organic Food & Drink Composting	Scope 3	850	tonnes	6.00000	kg CO2e/tonne	5.1	
WEEE (Mixed) Recycling	Scope 3	40	tonnes	21.00000	kg CO2e/tonne	0.8	
Glass Recycling	Scope 3	10	tonnes	21.00000	kg CO2e/tonne	0.2	
Plastics (Average) Recycling	Scope 3	15	tonnes	21.00000	kg CO2e/tonne	0.3	
Metal Cans (Mixed) & Metal Scrap Recycling	Scope 3	10	tonnes	21.00000	kg CO2e/tonne	0.2	
Car - diesel (average - unknown engine size)	Scope 3	2000500	miles	0.29342	kg CO2e/mile	587.0	
Outside of Scopes - Biomass (Wood Pellets)	Scope 1	400000	kWh	0.34900	kg CO2e/kWh	139.6	
					Total	13620.6	

Add Remove

Putting in Grid Electricity

- Grid electricity is a special case: the total emissions are made up of two parts: generation (at power stations or renewable sites) and transmission & distribution losses (cost of moving the electricity to the point of use)

3b Breakdown of emission sources

Complete the following table with the breakdown of emission sources from the body's most recent carbon footprint (greenhouse gas inventory); this should correspond to the last entry in the table in 3(a) abov
of emission source entered in the first column. If, for any such category of emission source, it is not possible to provide a simple emission factor(a) leave the field for the emission factor blank and provide the

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If providing consumption data for Grid Electricity (generation), please also include the Emission Source and consumption data for Grid Electricity (transmission & distribution losses).
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Emission Source	Scope	Consumption data	Units	Emission factor	Units	Emissions (tCO2e)	Comments
Grid Electricity (generation)	Scope 2	25255000	kWh	0.46219	kg CO2e/kWh	11672.6	
							Add Remove
Grid Electricity (transmission & distribution losses)	Scope 3	25255000	kWh	0.03816	kg CO2e/kWh	963.7	

- All you need to do is enter two rows in question 3b: one for generation (scope 2) and one for transmission & distribution losses (scope 3). The consumption data for both rows is your total grid electricity consumption in kWh

Putting in Water Use

- Water use is another special case: the total emissions are made up of two parts: water supply and water treatment

Water - Supply	Scope 3	180500	m3	0.34400	kg CO2e/m3	62.1
Water - Treatment	Scope 3	175000	m3	0.70800	kg CO2e/m3	123.9

- All you need to do is enter two rows in question 3b: one for water supply (scope 3) and one for water treatment (scope 3). The consumption data for water supply is actual or estimated m3, the consumption data for water treatment is 95% of the total for supply

Putting in Biomass

- Biomass needs to be entered in two questions; both as an emissions source (input of biomass fuel) in Q3b
- And as a renewable output in Q3c

3c Generation, consumption and export of renewable energy

Provide a summary of the body's annual renewable generation (if any), and whether it is used or expo

	Renewable Electricity		Renewable Heat	
Technology	Total consumed by the organisation (kWh)	Total exported (kWh)	Total consumed by the organisation (kWh)	Total exported (kWh)
Solar PV	500000	200000		
Biomass			400000	200000

- Input in kWh should be higher than output (otherwise you have a boiler that is +100% efficient)

3c: Generation, consumption and export of renewable energy

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3c Generation, consumption and export of renewable energy

Provide a summary of the body's annual renewable generation (if any), and whether it is used or exported by the body.

	Renewable Electricity		Renewable Heat		
Technology	Total consumed by the organisation (kWh)	Total exported (kWh)	Total consumed by the organisation (kWh)	Total exported (kWh)	Comments
Solar PV	500000	200000			
					Add Remove
Biomass			400000	200000	
					Add Remove
Ground Source Heat Pump			200000	0	
					Add Remove

3d: Targets

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3d Targets

List all of the body's targets of relevance to its climate change duties. Where applicable, overall carbon targets and any separate land use, energy efficiency, waste, water, information and communication technology, transport, travel

Name of Target	Type of Target	Target	Units	Boundary/scope of Target	Progress against target	Year used as baseline	Baseline figure	Units of baseline	Target completion year	Comments
Carbon Emissions - Estate	percentag	15	total % reduction	All emissions	27000	2012/13	33000	tCO2e	2020/21	
										Add Remove
Energy	percentag	2	annual % reductio	Energy use in buildings	30000000	2012/13	40000000	kWh		Ongoing.
										Add Remove
Waste	absolute	18000	tonnes reduction	Waste	14500	2005/06	31000	tonnes	2017/18	
										Add Remove

3f: Detail the top 10 carbon reduction projects to be carried out by the body in the reporting year.

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3f Detail the top 10 carbon reduction projects to be carried out by the body in the report year

Provide details of the 10 projects which are estimated to achieve the highest carbon savings during report year.

Project name	Funding source	First full year of CO2e savings	Are these savings figures estimated or actual?	Capital cost (£)	Operational cost (£/annum)	Project lifetime (years)	Primary fuel / emission source saved	Estimated carbon savings per year (tCO2e / annum)	Estimated costs savings (£/annum)	Behaviour change aspects including use of ISM	Comments
Office energy efficiency project	Communications	2016/	Estimated	3000	0	5	Grid Electricity	100	1000	Staff information and training on equipment	
Boiler replacement	Salix Recycling Fund	2016/	Actual	12000	0	20	Natural Gas	100	600	No.	
LED Street Lighting Upgrade	Capital funding	2016/	Estimated	471000	0	25	Grid Electricity	350	500	No.	
Fleet vehicle management system	Departmental	2016/	Estimated	180000	230000	5	Diesel (average biofuel blend)	52	550	Yes - Identified as an action following ISM	
Increase in teleconferencing and communicating digitally.	Departmental	2015/	Estimated	5500	0	2	Average Car - Unknown Fuel	10	2000	Yes - Identified as an action following ISM	
Extension of the Garden Waste Collection	Capital funding	2015/	Estimated	800	0	10	Organic Garden Waste Composting	3	350	Yes - new waste disposal practices.	
Waste Contract - Energy From Waste	Capital Funding	2016/	Actual	1500	0	10	Refuse Commercial & Industrial to Landfill	5	200	No.	
PV Installations	Capital Funding	2016/	Estimated	46000	0	25	Grid Electricity	16	8271	No.	
Water Leak repair	Maintence	2016/	Actual	2900	0	20	Water - Supply	16	320	No.	

3e: Estimated total annual carbon savings from all projects implemented by the body in reporting year.

3e Estimated total annual carbon savings from all projects implemented by the body in the report year

If no projects were implemented against an emissions source, enter "0".
If the body does not have any information for an emissions source, enter "Unknown" into the comments box.
If the body does not include the emissions source in its carbon footprint, enter "N/A" into the comments box.

Emissions Source	Total estimated annual carbon savings (tCO2e)	Comments
Electricity	466	
Natural gas	220	
Other heating fuels		
Waste	8	
Water and sewerage	16	
Business Travel	10	
Fleet transport	52	
Other (specify in comments)		
		Add Remove selected
Total	772	

3h: Anticipated annual carbon savings from all projects implemented by the body in the year ahead.

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3h Anticipated annual carbon savings from all projects implemented by the body in the year ahead

If no projects are expected to be implemented against an emissions source, enter "0".

If the body does not have any information for an emissions source, enter "Unknown" into the comments b

If the body does not include the emissions source in its carbon footprint, enter "N/A" into the comments b

Emissions Source	Total estimated annual carbon savings (tCO2e)	Comments
Electricity	80	Behaviour change program for staff to reduce energy consumption out of office hours.
Natural gas	350	Contract to upgrade several boilers.
Other heating fuels	0	
Waste	0	
Water and sewerage	0	
Business Travel	140	Changes to staff travel policy and upgrades to video conferencing facilities.
Fleet transport	0	
Other (specify in comments)		
		Add / Remove selected
Total	570	

3g: Estimated decrease in the body's emissions attributed to factors (not reported elsewhere in the form) in the report year.

3g Estimated decrease or increase in the body's emissions attributed to factors (not reported elsewhere in this form) in the report yea

If the emissions increased or decreased due to any such factor in the report year, provide an estimate of the amount and direction.

Emissions source	Total estimated annual emissions (tCO2e)	Increase or decrease in emissions	Comments
Estate changes			
Service provision	220	Decrease	
Staff numbers			
Other (specify in comments)	2200	Decrease	Waste water production
Other (specify in comments)	50	Increase	Additional Air travel.
			Add / Remove selected
	Total	-2370	

3i: Estimated decrease or increase in the body's emissions attributed to factor (not reported elsewhere in this form) in the year ahead.

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3i Estimated decrease or increase in the body's emissions attributed to factors (not reported elsewhere in this form

If the emissions are likely to increase or decrease due to any such factor in the year ahead, provide an estimate of the amou

Emissions source	Total estimated annual emissions (tCO2e)	Increase or decrease in emissions	Comments
Estate changes			
Service provision	40	Increase	We are expecting to expand services to new clients in the next reporting year.
Staff numbers			
Other (specify in comments)			
			Add / Remove selected
	Total	40	

3j: Total carbon reduction project savings since the start of the year which the uses as a baseline for its carbon footprint

3k: Supporting information and best practice

3j Total carbon reduction project savings since the start of the year which the body uses as a baseline for its carbon footprint

If the body has data available, estimate the total emissions savings made from projects since the start of that year ("the baseline year").

Total savings	Total estimated emissions savings (tCO2e)	Comments
Total project savings since the baseline year	6379	Entered is savings made in since baseline year. However we know 1,332 tCO2e have been made in the current year and only 772 tCO2e of savings can be identified through projects

Further information

3k Supporting information and best practice

Provide any other relevant supporting information and any examples of best practice by the body in relation to its emissions, targets and projects.