

# Housing Review Board



**Report to:**  
**Date of Meeting:** 19 September 2019  
**Public Document:** Yes  
**Exemption:** None  
**Review date for release:** None

**Subject:** **Producing a carbon footprint for Housing**

**Purpose of report:** This report takes forward our commitment given as part of the Devon Climate Change Declaration, to produce an accurate carbon footprint for the Councils activities. This is a complex piece of work and is vital that we perform accurately as this will create a baseline against which we will be measuring our journey towards carbon neutrality.

I have engaged the expertise that can be found at the University of Exeter to assist us with this piece of work. This will also provide an independent and auditable assessment of our carbon baseline.

As members of SWEEG (South West Energy & Environment Group) we receive favourable rates when commissioning the University to provide advice and investigations in relation to environmental matters.

The Housing Service has a carbon footprint and calculating this will form an important part of the Council's overall footprint and therefore a key element of our ambition to become carbon neutral as a council

**Recommendation:** **To produce a carbon footprint for our Housing Service, identifying and quantifying the carbon emissions from our activities and assets. This includes our contractors work on our behalf and the homes and buildings in our ownership and control.**

**Reason for recommendation:** To establish a carbon emissions baseline for the Housing Service in order that we can accurately measure our carbon reductions in future years. The ultimate aim is to become a carbon neutral Council/Service, and producing a carbon footprint is an essential step in this process.

**Officer:** John Golding Strategic Lead – Housing, Health & Environment.

**Financial implications:** The financial implications at this stage will be any costs associated with contracting 3<sup>rd</sup> party experts to map out the carbon footprint of the council.

**Legal implications:** There are no legal implications on which to comment.

**Equalities impact:** Low Impact

If choosing High or Medium level outline the equality considerations here, which should include any particular adverse impact on people with protected characteristics and actions to mitigate these. Link to an equalities impact assessment form using the [equalities form template](#).

**Climate change:** Choose an impact level

**Risk:** Comments  
Medium Risk

Click here to enter text on risk considerations relating to your report.

- Links to background information:** ) Devon Climate Change Declaration  
) Cabinet report 10<sup>th</sup> July 2019  
)
- Link to Council Plan:** Outstanding Environment

## 1. Producing a carbon footprint

- 1.1 As part of signing up to the Devon Climate Change Declaration (July 2019) are aiming to become **Carbon neutral**. Carbon neutrality is a term used to describe the action that organisations, businesses and individuals take to remove as much carbon dioxide from the atmosphere as each put in to it. The overall goal of carbon neutrality is to achieve a much reduced **carbon footprint**.
- 1.2 The definition of a carbon footprint is the amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community. A **carbon footprint** is measured in tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) and CO<sub>2</sub>e is calculated by multiplying the emissions of each of the greenhouse gases by its 100 year global warming potential (GWP).
- 1.3 To become carbon neutral we need to accurately measure our carbon footprint and create a baseline against which future changes can be measured. In the past we have performed calculations to show our carbon use and these have been reported on our website:  
<http://eastdevon.gov.uk/property-services/carbon-footprint/>
- 1.4 The assessment needs to be brought up to date so we have a baseline from which to measure the reductions that we plan to make, and make informed intervention decisions.



- 1.5 There is no legal requirement for us to produce a carbon footprint and no definitive methodology for carbon foot printing. Where this is undertaken data is normally collected over the course of one year and all assumptions are clearly stated so this can form a baseline level. Emissions are then reported in tonnes of CO2 equivalent.
- 1.6 We need to be reporting on 7 gases mentioned under the Kyoto Protocol – carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF6); and nitrogen trifluoride (NF3).
- 1.7 The advice that we should turn to when determining our carbon footprint is the Environmental Reporting Guidelines published by HM Government in March 2019. The guidance contains a series of conversion factors to identify carbon equivalents.

## Environmental Reporting Guidelines



- LAs should follow DECC published guidance for businesses and organisations
- [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/791529/Env-reporting-guidance\\_inc\\_SECR\\_31March.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/791529/Env-reporting-guidance_inc_SECR_31March.pdf)
- Or google “Environmental Reporting Guidelines”
- Document is for:
  - Companies required to require with reporting legislation (i.e. large companies, see Chapter 2) and...
  - All organisations with voluntary reporting on a range of environmental matters, including voluntary energy and GHG emissions reporting i.e. LAs
- Chapter 3 covers “voluntary greenhouse gas reporting” (pp.59 – 67).

- 1.8 The guidance specifies seven general principles to follow for accounting and reporting on greenhouse gas emissions. These are set out below:

# General Principles for Accounting and Reporting (p.7)

- **Relevant**
  - Ensure all data reflects environmental impact
- **Quantitative**
  - KPIs need to be measurable; quantification enables evaluation and validation
- **Accuracy**
  - Seek to reduce uncertainties where practical
- **Completeness**
  - Quantify all sources of impact within reporting boundary
  - Disclose and justify any omissions
- **Consistent**
  - Use consistent methodologies to enable comparisons over time
  - Document any changes to boundaries, methods or other relevant factors
- **Comparable**
  - Use accepted methods and KPIs in preference to inventing own versions
- **Transparent**
  - Address all issues in a factual and coherent manner, keeping a record of all assumptions, calculations, and methodologies used
  - Include descriptions and report on any relevant assumptions and make appropriate references to methodologies and data sources used

1.10 The guidance then goes onto identify five steps and seven actions to follow when reporting on an organisations environmental impact through greenhouse gas emissions.

## Steps in Reporting Environmental Impact

### 5 Steps

1. Determine organisational boundaries
2. Determine data collection period
3. Determine key environmental impacts
4. Measure
5. Report

### 7 Actions

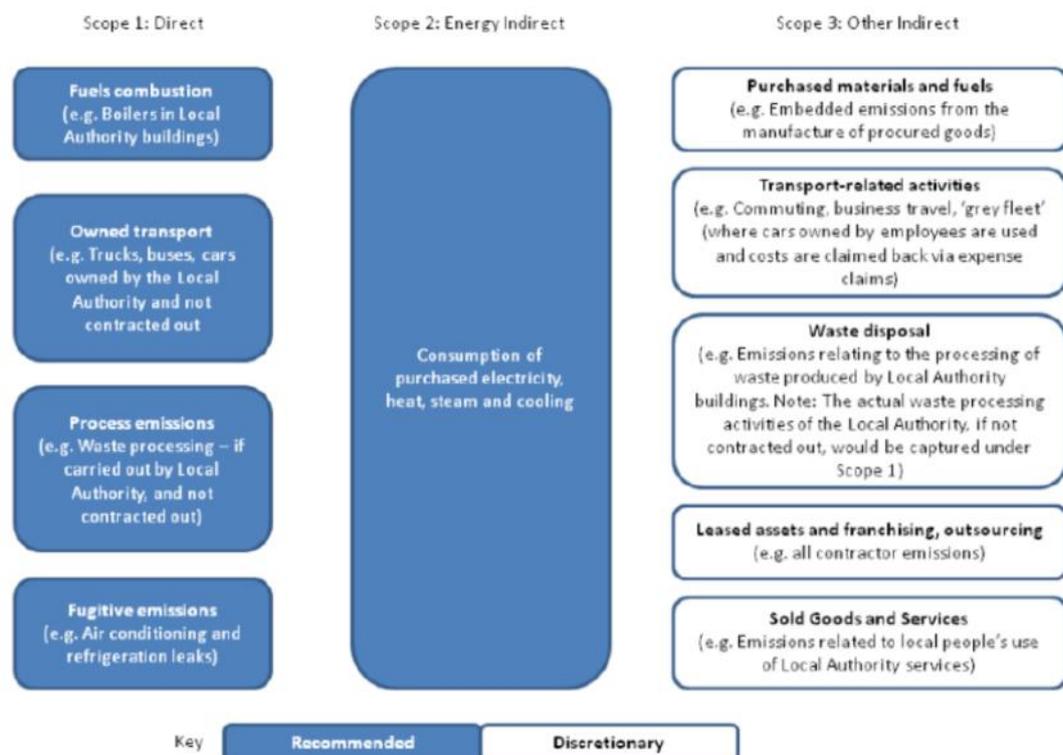
- i. Intensity ratios
- ii. Setting a base year
- iii. Setting a target
- iv. Verification and assurance
- v. Upstream supply chain
- vi. Downstream impacts
- vii. Business continuity and environmental risks

1.11 We need to determine the extent of our carbon footprint reporting. I am proposing that we commence with an accurate determination of scope 1 & 2 emissions, then follow this up with the more complex scope 3 emissions reporting.

# Scope of Emissions

- **Scope 1 (Direct emissions):** Emissions from activities owned or controlled (as previously defined in organisational boundary) by your organisation that release emissions into the atmosphere.
- **Scope 2 (Energy indirect):** Emissions released into the atmosphere associated with your consumption of purchased electricity, heat, steam and cooling.
- **Scope 3 (Other indirect):** Emissions that are a consequence of your actions, which occur at sources which you do not own or control and which are not classed as scope 2 emissions.
  - Accounting is harder as information resides with other organisations
  - Generally involves more estimation and generic information

## Scope Examples for LAs



- 1.12 I have commissioned expert advice and assistance from the University of Exeter in order to accurately establish a baseline for our carbon footprint.
- 1.13 I think it will be helpful to have this exercise performed independently and from an organisation with considerable expertise in this field. Researchers at the University are also familiar with the national guidelines and what other local authorities have reported.
- 1.14 We need to gather our data accurately, particularly from our business premises (energy consumption) and business mileage undertaken by our staff, as a starting point.

- 1.15 The commissioning of expertise for carbon foot printing has indicated that the tasks where the University of Exeter could assist include:

**Defining the boundaries.**

I am proposing that we undertake an initial assessment on scope 1 & 2 emissions. However, I have sought advice and guidance on this aspect of our carbon foot printing to ensure that we are doing sufficient to inform the next stages in our journey to becoming carbon neutral. I am also seeking assurance that this is consistent with the Devon Climate Change Declaration, and good practice advice for local authorities.

We need absolute clarity on what is in and out of scope, and the rationale for the decisions in this respect. Our assumptions will need to be clearly stated.

I am anticipating some narrative around the boundaries we have chosen.

I am also keen that we quickly move onto scope 3 emissions to produce a comprehensive picture of the impact of our business, and the commission can help us identify the work and data requirements to produce an accurate assessment.

**Gathering data.**

This is data that we need to identify and collate much of which will involve identifying our property portfolio, the energy consumption from these premises, plus business mileage etc. I am seeking advice on the best way of gathering the data, formatting and ensuring we have a comprehensive picture of emissions.

Gathering data for scope 3 emissions is more complex and time consuming.

The University will guide us on the data requirements and the appropriateness of any assumptions that we have to make.

**Analysing data.**

This stage will involve the use of data conversion factors to ensure that we have our data in the correct format to publish in tonnes of CO2 equivalent.

The University will produce tables and graphs using the data collected, which will contribute towards the report and our Climate Change Action Plan.

**Spreadsheet creation.**

The University will create and format a bespoke spreadsheet for capturing our carbon emissions and the conversion factors that are relevant to each type of emission.

We require a spreadsheet that is comprehensive in coverage, as we do not want to make any major changes to the spreadsheet in future years because this will complicate future comparisons and estimates of carbon reductions.

A scope 3 spreadsheet is to be developed as part of this commission to allow us to populate it when we move onto this part of the project.

**Report writing.**

East Devon will prepare the report on the data collected as part of this exercise. We can interpret the data and identify where we can have the greatest impact. We can consider phasing mitigations and adaptations to achieve carbon neutrality prior to 2050 and predict a more accurate date than the 2040 date set by Council.

**2. Next Steps**

- 2.1 Once our carbon footprint is established we can refine our ambitions through the Climate Change Action Plan and begin to predict with some accuracy the costs associated with our plans and the period over which we will be reducing our greenhouse gas emissions and hence our carbon footprint. For Housing this is likely to include a significant investment requirement to make our stock more energy efficient.

- 2.2 In order to populate the carbon emissions spreadsheet we will need data from all Council Services. This work has been prioritised to make meaningful progress in the timescale set by the Climate Change Declaration.
- 2.3 Contractors activities on our behalf (for example Ian Williams) can be considered in scope 3, but this will be a point for discussion during the setting the boundaries phase of the commission.
- 2.4 The infographic from a Committee on Climate Change February 2019 report in **annex 1** shows how new and existing homes can be designed or adapted to reduce carbon emissions.
- 2.5 The Housing data we need to collect is in relation to all carbon emissions associated with the Service. The table below needs to be expanded and populated.

<b>Description of carbon emitters</b>	<b>Quantum of emissions</b>	<b>Scope 1, 2 or 3</b>	<b>Comments</b>
Offices: Exmouth Town Hall Home Safeguard 5 no. Area Offices 14 no. Community Centres		2	Meter readings for electricity and gas in housing occupied buildings
Transport business mileage		1	Staff mileage travelled to provide the housing services and activities
Housing fleet		1	Vans used for service delivery
Tenant transport		1	Taxi, mini bus hire, and mileage claims
Ian Williams Liberty Gas Other maintenance and improvement contractors		3	
Tenants homes		3	
Community development activities		1	Transportation
Procurement: Boilers Kitchens Bathrooms Electrical etc.			

- 2.6 Our Housing **Service Plan** will need to reflect climate change as a new corporate priority and should include coverage of what the Service is doing to progress the climate change agenda in Housing. We might want to consider an amendment to the Service Plan template to encourage thinking and actions that contribute towards our Action Plan.
- 2.7 I want to immediately start work on plotting scope 3 emissions. DCC are identifying their top ten partners/contractors by value and encouraging them to undertaken their own carbon foot

printing. If we took a similar approach we would be encouraging/requiring LED; Suez; Ian Williams etc. to be performing their own carbon footprint calculations.

2.8 In conclusion, it is worth remarking that establishing a carbon footprint is not an end in itself, it is merely the start of being able to identify and deliver carbon reductions.