



Carbon Footprint Report: Aston (Birmingham)

10/12/2021

1. Your Footprint Report

Welcome to your community's carbon footprint report!

This report tells you about your community's carbon¹ footprint – both the scale of emissions and the main 'activities' responsible for the emissions. This information comes from *Impact* – an online region-level carbon emissions estimator: <https://impact-tool.org.uk/>.

Your report also shows how your community's footprint compares with the district average and the national average.

It shows your community's territorial *and* consumption footprints.

There are two ways of viewing a community's carbon footprint – territorial-based or consumption-based. A community's territorial footprint considers the emissions that are produced within their region's boundary – such as from heating buildings, transport, industry, and agriculture – regardless of whether the residents within the community are engaged in or demand those practices. For example, imagine there is a factory in that community and much of what the factory produces is 'exported' from that community and consumed elsewhere rather than locally; the factory's emissions would still be counted as part of that community's territorial footprint. A territorial footprint is largely created by taking national and local authority datasets and cutting these down to the local geography in as accurate a way as possible.

A community's consumption footprint captures all the emissions produced as a result of the 'activities' that the community's residents engage in, regardless of where geographically they occur – for example, emissions resulting from the food they eat, the clothes and household items they buy, the leisure activities they engage in, their travel behaviours, and the heating of their homes. The consumption-based footprint is based on household and address-level data, which is then aggregated up to the relevant geography (rather than cutting down from a higher geography as with the territorial approach).

Take your footprint as a guide, not as gospel.

The carbon footprints are modelled, drawing on data from more than 30 datasets (some of which are themselves made up of multiple further datasets!). As with all models, decisions have been taken in terms of what data is used, and how the data is 'cut' and analysed. The Impact footprints have been developed with the intention that they are as useful as possible, but remember to take them as a guide, not as gospel.

¹ Whilst the report details your community's carbon footprint, it is actually a footprint of carbon dioxide and other gases which impact the climate.

If you would like to read more detail about the method and datasets there is a Methodology paper on the Impact website: <https://impact-tool.org.uk/methodology>

You can also download the raw data: <https://impact-tool.org.uk/download>

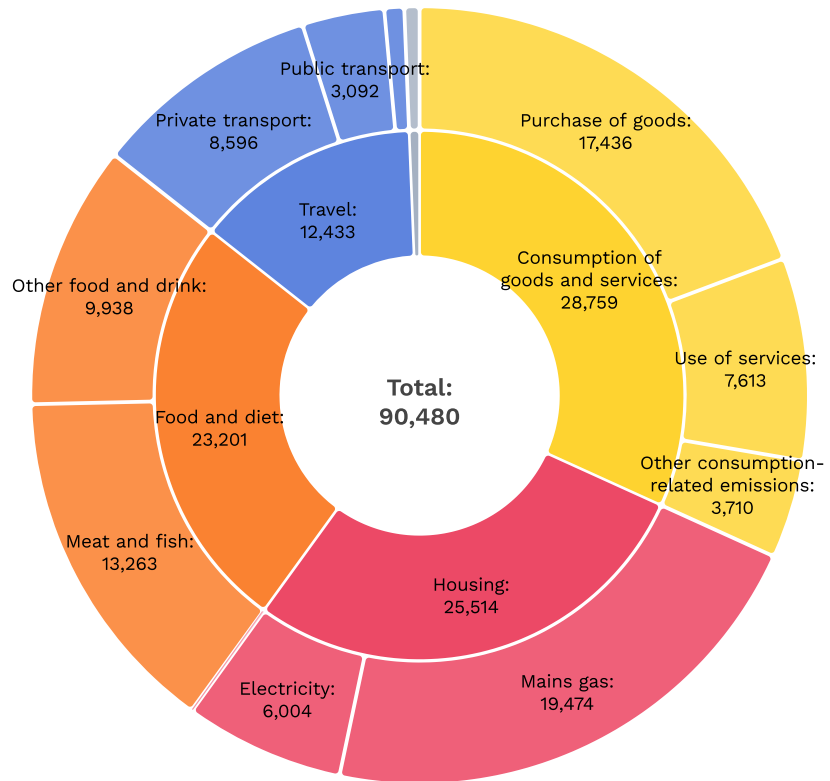
How does knowing our carbon footprint help us tackle climate change?

Footprint information can guide us to where we should target our efforts to reduce emissions and have the greatest impact. To help you think about what to do next with your footprint information, in each section of this report there are some trigger questions to help you think about possible areas for action.

2. Your Community’s Consumption Footprint

Your whole footprint

This figure shows the annual carbon emissions (measured in tonnes) emitted as a result of the different ‘activities’ that residents within your ward’s boundary engage in – from heating to eating.



Goods – all household goods (not food), including homeware, toiletries, medicines, furnishings, electronic goods, appliances, & large items such as cars.

Services – use of services, including the maintenance and repair of home, vehicles and other equipment, banking and insurance, medical services, treatments, education costs, communications (e.g. TV, internet and phone contracts), and other fees and subscriptions.

Other – leisure, entertainment, sporting or social activities.

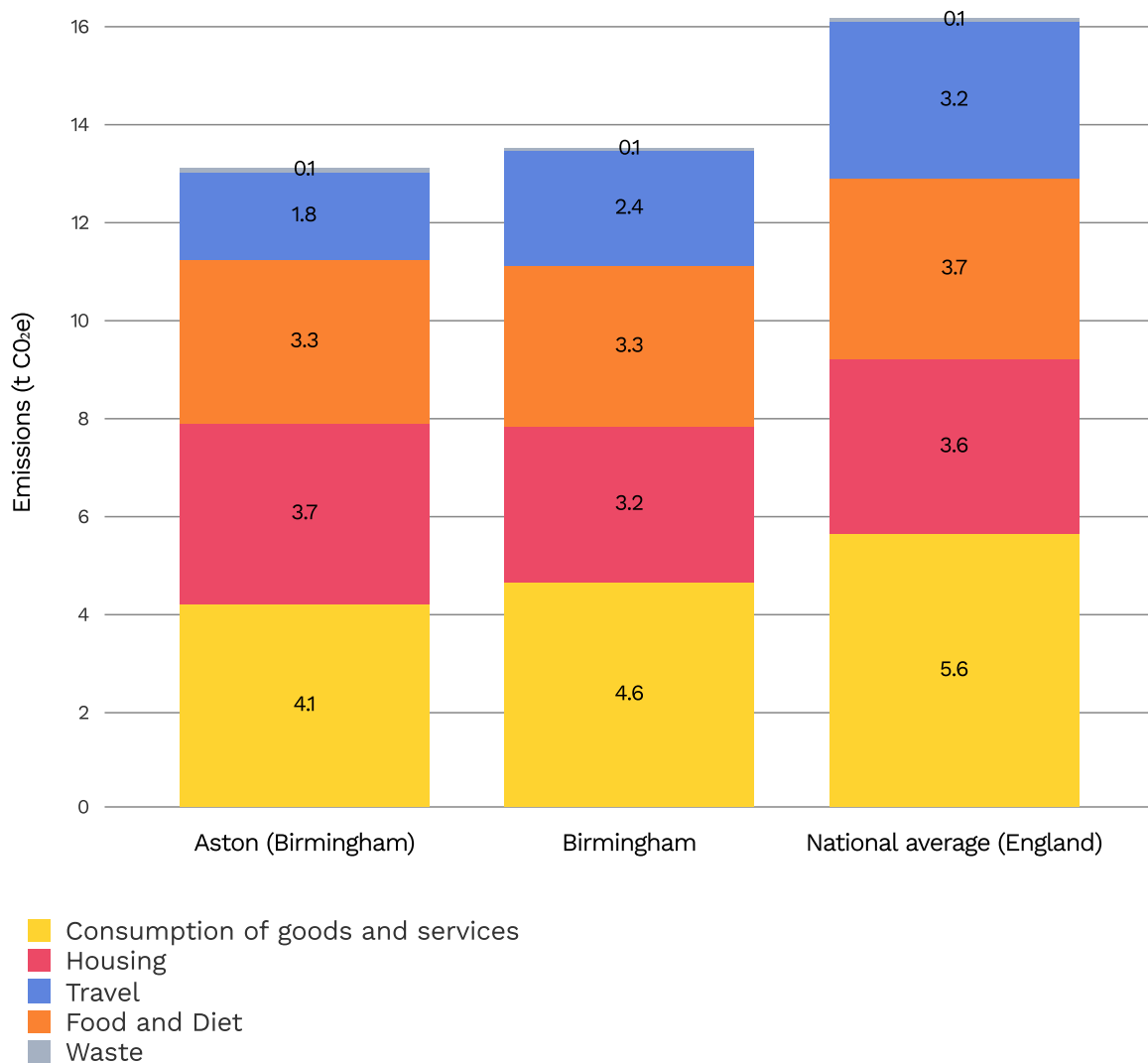
A breakdown of the numbers

Below is your community’s consumption footprint tabulated – total and per-household – so that you can see a breakdown of the numbers.

	Total emissions (t CO ₂ e)	Per-household emissions (t CO ₂ e)	%
Total emissions	90,480	13	100
Consumption of goods and services	28,759	4.1	32
Housing	25,514	3.7	28
Food and diet	23,201	3.3	26
Travel	12,433	1.8	14
Waste	572	0.1	1

How does your community compare?

Here is what your community’s consumption footprint looks like per household, and how this compares with the district average and the national average.



Housing

Your community's residents' use of energy in their homes results in annual carbon emissions per household of 3.7 t CO₂e. This compares with 3.2 t CO₂e at the district level and 3.6 t CO₂e at the national level.

In the average UK home, 64% of energy is used for space heating, 17% for heating water, 16% for lighting and appliances, and 3% for cooking². As such a large proportion of household energy is used for heating, the type of heating system (i.e. is it low carbon?), and how well the home retains heat, are critical factors shaping the scale of a home's emissions. How well a home retains heat depends on: when and how it was built; how much insulation has been installed; how draughty the home is; and the efficiency of the windows.

Below are some trigger questions to help you to start to think about the implications of your community's household footprint information.

- How does your community's household energy use compare with the district and national averages? What might the reasons be for the differences?
- What type of housing is there in your community? And what is the main heating fuel (oil, gas, electricity, etc.)?
- Is the housing easily retrofitted to improve how well it retains heat and install low carbon heating? Do you know if residents are doing this? Do you think there are community initiatives that could encourage and support residents to do this – e.g. a green open homes event?
- What opportunities are there to retrofit community buildings?
- To focus your efforts: many homes, public and commercial buildings have an Energy Performance Certificate (EPC) which measures the energy efficiency of the property. You can look at the EPCs of the buildings in your community here: <https://epc.opendatacommunities.org>
- Could the local council or groups in your community run an event to share learnings between residents and building managers who have made changes, such as through an 'open homes' event?
- Has your community explored the possibility of a community renewable energy scheme, such as a solar farm or wind turbine?
- Are there opportunities to shift households in your community onto green energy tariffs, where energy is generated from renewable sources?

² Energy facts from: Energy consumption in the UK, BEIS (January 2021)

Transport

Car use: Residents' car use results in annual carbon emissions per household of 1.2 t CO₂e. This compares with 1.3 t CO₂e at the district level and 1.6 t CO₂e at the national level.

Air travel: Residents' air travel results in annual carbon emissions per household of 0.1 t CO₂e. This compares with 0.6 t CO₂e at the district level and 1.1 t CO₂e at the national level.

Public transport: Residents' use of public transport results in annual carbon emissions per household of 0.4 t CO₂e. This compares with 0.4 t CO₂e at the district level and 0.5 t CO₂e at the national level.

Below are some trigger questions to help you to start to think about the implications of your community's transport footprint information.

- How does your community's car use-related emissions compare to public transport emissions? And how do these both compare with the national averages? What might the reasons be for the differences?
- Do you think community schemes could help residents shift their transport behaviours to using public transport (if this is a choice) or more active travel options (e.g. electric bike hire or subsidised purchase schemes)? These are already being trialled in communities across England – look at Hook Norton community's e-bike scheme and electric car club for inspiration: <https://www.hn-lc.org.uk/electric-bikes>
- What is the provision of walking and cycling routes through your community and to local service centres?
- What do you think are the key reasons for air travel in your community? It is good to remember that about 10% of England's population take more than half of all international flights – so trying to address 'frequent flying' is a good way to target any activities or communications campaign.

Food & diet

Meat and fish: Residents' consumption of meat and fish results in annual carbon emissions per household of 1.9 t CO₂e. This compares with 1.8 t CO₂e at the district level and 2 t CO₂e at the national level.

Other food and drink items: Residents' consumption of other food and drink items results in annual carbon emissions per household of 1.4 t CO₂e. This compares with 1.4 t CO₂e at the district level and 1.7 t CO₂e at the national level.

So, where do the emissions from our food actually come from? Without understanding this it can be difficult to know what we can do to change the carbon footprint of what we eat and drink.

Research shows us that changing what we eat will have the greatest impact on carbon emissions, rather than necessarily where our food has travelled from – although, of course, eating locally-produced food brings multiple other benefits such as supporting local economies, having more control over mandating more ethical and environmentally-beneficial growing practices, and creating opportunities for people to better understand where the food they eat comes from and how it's grown or made.

Whilst the emissions from a food item can really vary depending on how it is grown or reared, it is clear that animal products, and most significantly beef and lamb, account for the largest proportion of food-related emissions. Explore the BBC's Climate Change Food Calculator to better understand how food and drink items compare:

<https://tinyurl.com/y8cvstuh1>³.

Below are some trigger questions to help you to start to think about the implications of your community's food and diet footprint information.

- How does your community's food and diet-related emissions compare with the district and national averages?
- Could your community run a behavioural change campaign to encourage people to reduce the amount of meat and dairy they consume? (It is critical that any community-based activity or communications campaigns around dietary changes is sensitive to concerns about farmers' livelihoods and people's cultural and traditional links to meat-eating).
- The amount of food wasted 'post-farm-gate' in the UK is equivalent to 22% of food purchased – what community initiatives could raise awareness about food waste and encourage unwanted food to be redistributed, e.g. through a 'community fridge'?

Goods & services

Goods & services: Residents' consumption of goods and use of services results in annual carbon emissions per household of 4.1 t CO₂e. This compares with 4.6 t CO₂e at the district level and 5.6 t CO₂e at the national level.

³ For further information, you can also read this Our World in Data (Oxford University) study: <https://ourworldindata.org/food-choice-vs-eating-local>

All goods that we buy will have had carbon emitted in their making (including the sourcing of raw materials), packaging, shipping and sale. Without clear carbon labelling, it is difficult to know the scale of emissions resulting from each item, but it is clear that with every new product made, more carbon is emitted (and more resources are extracted and sourced – which itself can have huge environmental and social impacts). Reducing how many *new* goods we buy in the first place is the best place to start in terms of reducing goods-related emissions; and then of course re-using and repairing items where goods are needed.

Carbon emissions from the services we use will relate to the energy used by that service provider (e.g. heating in a leisure centre, pub or hospital), as well as the carbon emitted as a result of goods they buy and use (e.g. gym equipment, vehicle repair machinery).

- How does your community's goods and services-related emissions compare with national average? What might the reasons be for the differences?
- Are there opportunities in your community to: grow the second-hand market; enable residents to upcycle and repair household items; share larger/more expensive/rarely used items, such as power tools?
- Are there opportunities to encourage businesses in your community to switch to green energy tariffs, where energy is generated from renewable sources?

Waste

Waste: The management of residents' waste results in annual carbon emissions per household of 0.1 t CO₂e. To note, emissions associated with waste management are distributed out evenly across the population.

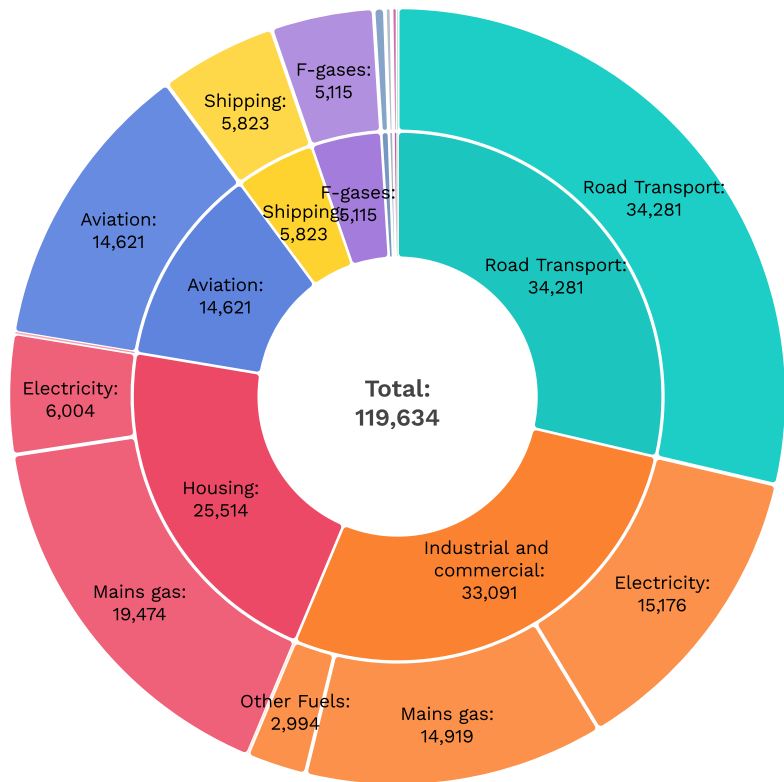
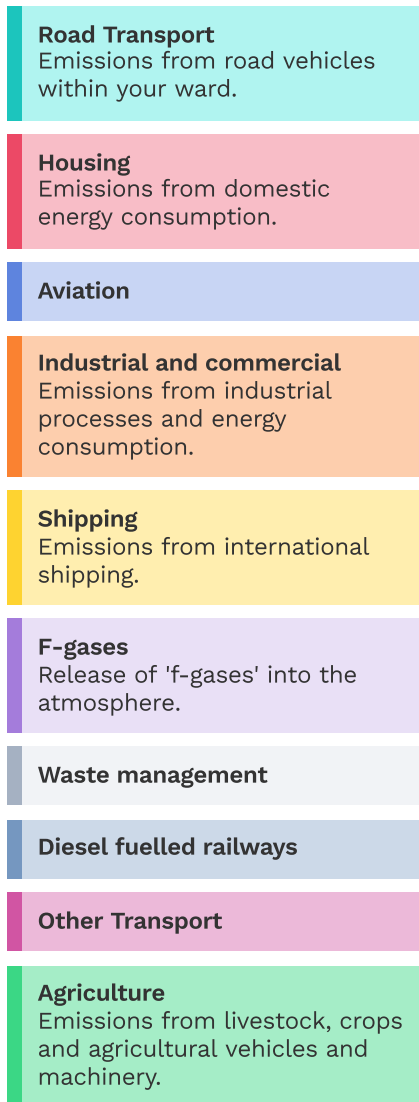
The waste 'wedge' in your carbon footprint may look small, but remember that emissions from the management of waste represent a small fraction of the total emissions associated with every item that ends up in our bins or recycling boxes. So reducing waste in the first place is critical.

3. Territorial Footprint

Your whole footprint

This figure shows the annual carbon emissions (measured in tonnes) emitted as a result of ‘activities’ taking place within your ward’s boundary.

While these figures should give you a reasonable indication of the major sources of emissions within your ward’s boundary, they should be taken with a small pinch of salt, as some sectors are difficult to apportion territorially. For example, emissions from international shipping are calculated for the whole country and apportioned to each ward based on its population. For more information, see the [Impact methodology paper](#).



A breakdown of the numbers

Below is your community's territorial footprint tabulated – total and per-household – so that you can see a breakdown of the numbers.

	Total emissions (t CO ₂ e)	Per-household emissions (t CO ₂ e)	%
Total emissions	119,634	15	100
Road Transport	34,281	4.4	29
Industrial and commercial	33,091	4.2	28
Electricity	15,176	1.9	13
Mains gas	14,919	1.9	12
Other Fuels	2,994	0.4	3
Large industrial consumers	1	< 0.1	< 1
Housing	25,514	3.3	21
Mains gas	19,474	2.5	16
Electricity	6,004	0.8	5
LPG	28	< 0.1	< 1
Coal	8	< 0.1	< 1
Biomass	1	< 0.1	< 1
Oil	0	< 0.1	< 1
Aviation	14,621	1.9	12
Shipping	5,823	0.7	5
F-gases	5,115	0.7	4
Diesel fuelled railways	560	0.1	< 1
Waste management	327	< 0.1	< 1
Other Transport	301	< 0.1	< 1
Agriculture	1	< 0.1	< 1
Livestock and crop-related emissions	0	< 0.1	< 1
Fuel	0	< 0.1	< 1

Below are some trigger questions to help you to start to think about the implications of your community's territorial footprint information.

- Are there particular sectors which account for a high proportion of the territorial emissions in your community?
- Based on your knowledge of your local area, are these sectors surprising or what you would expect?
- Who are the key stakeholders you would need to engage with to address the emissions from this sector, and is this actionable by residents in your community? For example – for agricultural emissions can you engage with local land owners, or the NFU/other farmer groups to understand what is happening in your area to reduce emissions from agriculture? For industrial and commercial emissions, can you speak with the Chamber of Commerce or council about how they can support businesses with reducing their emissions? For road transport can you lobby your county council on providing better public and active travel links?

4. Sources of information

There are lots of sources of support and information on how to reduce carbon footprints – too many to list here! Here is an introductory range of resources that we hope will help you take your next steps now that you know your carbon footprint (hover over each listed item – they are hyperlinks so you can access them by pressing Ctrl and clicking on the title). Most of these contain many other links relevant to the topic under discussion:

- Developing a climate emergency action plan for your community ([.xlsx](#)).
- Communicating climate change ([pdf](#)).
- Energy efficient buildings ([docx](#)).
- Funding and grants for community responses to the climate emergency ([docx](#)).
- Making your community EV ready ([pdf](#)).
- Planting trees, and better land management ([pdf](#)).
- Further resources and useful links compendium ([pdf](#)).
- The National Association for Local Councils has also produced a list of case studies of local councils doing work on the climate emergency ([link](#)).
- The National Farmers Union has recently published guidance on how local government can engage with the farming community on climate change ([link](#)).