

Charmouth Environment Day

Carbon Footprints

Dr Chris Lockyear

Sidmouth Town Council

Carbon Footprints

Definition: 'The amount of carbon dioxide released into the atmosphere as a result of the activities of a particular individual, organisation, or community.'

Why it matters?

Climate change is caused by excessive release of carbon dioxide.

Make it personal by reducing your own environmental impact.

Small changes by everyone in Charmouth will therefore be significant.

What can you do?

Use a carbon footprint tool and then consider what changes you can make to your lifestyle that will reduce your own carbon footprint.

Carbon Footprint Tools

There are lots of on-line carbon footprint tools
Which one should we use?



We need one that is easy to use but with sufficient detail that allows changes to your lifestyle to be measured

Activities of a model family

Home Energy

- 3 bedroom semi detached house build in 1975 (90m² floor area)
- Occupied by 2 adults, 2 children and a spaniel dog
- Uses 4000kwh electricity and 12,000 kwh of gas a year with no wood, coal, heating oil or bottled gas
- Heating set in winter to 20C
- Energy saving lightbulbs are installed
- Windows are double glazed
- Loft has 200mm of insulation

Food

- Eats meat 4 days a week, with fish, chicken and vegetarian meals on other days
- Dairy eaten daily and eggs 3 days a week
- 15% of food is wasted
- No home grown food
- Non season and non locally sourced food eaten
- Dog food costs £25 pcm

Transport

- Small/medium sized petrol car (Skoda Fabia), 6 years old, doing 40mpg (18l/100km)
- 8000 miles (12,800km) driven each year
- 8 hours spent in the car each week
- Used 100% by owner
- No motorbike
- No buses, trains, taxis or hire cars used

Goods and Services

- 4 hours per week watching videos
- 4 hours per week listening to music
- £50 pcm on phone and internet
- £65 pcm each on eating out & take aways
- £45 pcm (£540pa) spent on clothes
- £800 pa on holidays excl flights / person
- Some clothes bought second hand
- £15 pcm on toiletries and beauty products
- £480 pa on furniture and white goods
- £200 pa on insurance per person
- £10 pcm on gym membership
- No health or sports spending

Flights

- One return journey Bristol to Malaga per year for holiday (2.5 hours flight, 1020 miles)

Gender makes a difference as some footprint models assume males eat more than females but the same principles elsewhere applies to both

Infrastructure

- NHS:350kgCO₂e
- Schools:300kgCO₂e
- Colleges & Universities:220kgCO₂e
- Local Authorities:290kgCO₂e
- Defence:150kgCO₂e
- Police & Fire:30kgCO₂e
- NGOs:70kgCO₂e
- Central Government:40kgCO₂e

Which category do you think has the biggest contribution to the Carbon Footprint?

Home Energy

Transport

Flights

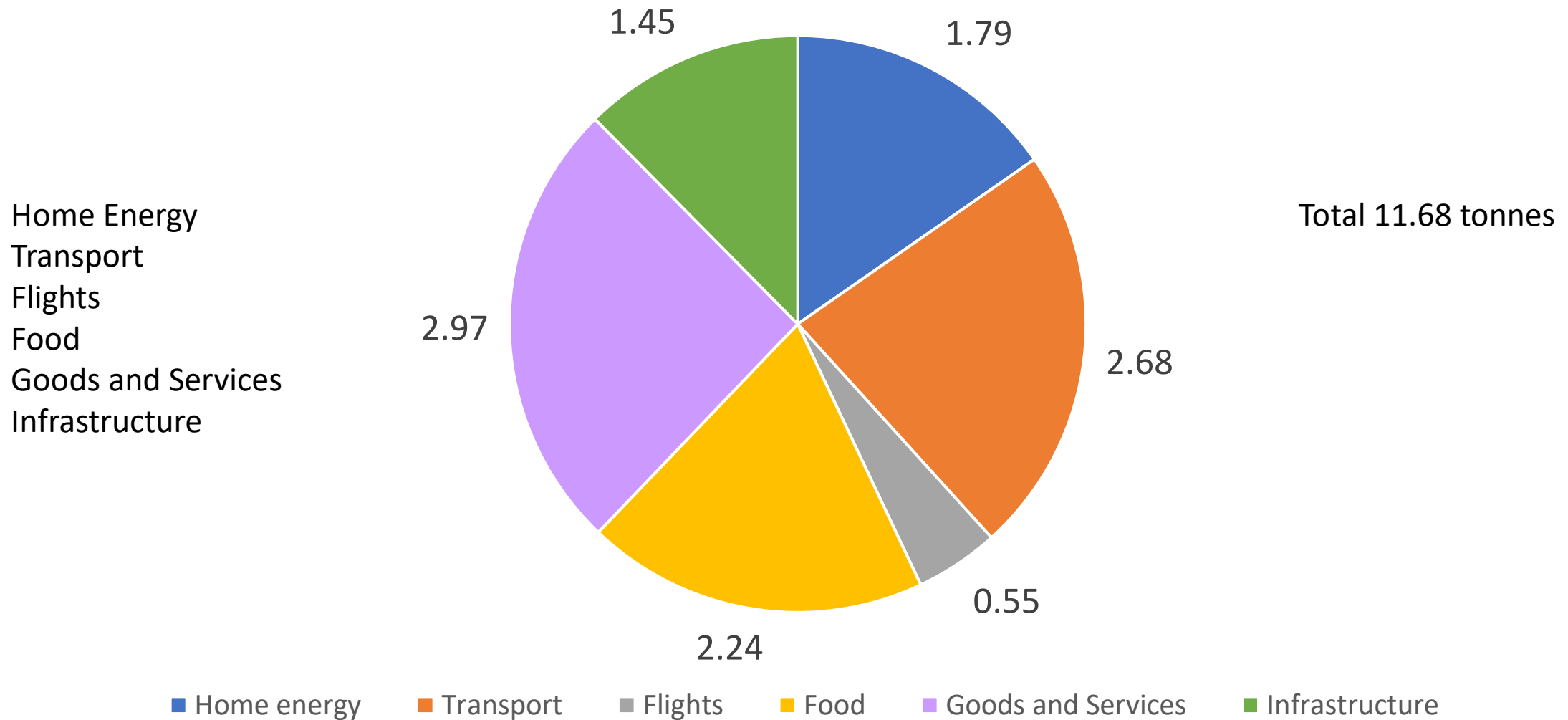
Food

Goods and Services

Infrastructure

Carbon Breakdown (Tonnes CO₂ pa)

For Model Family



Carbon Footprint Tools

Estimated footprint from 6 different tools



14.2 tonnes



11.6 tonnes



9.6 tonnes



6.24 tonnes

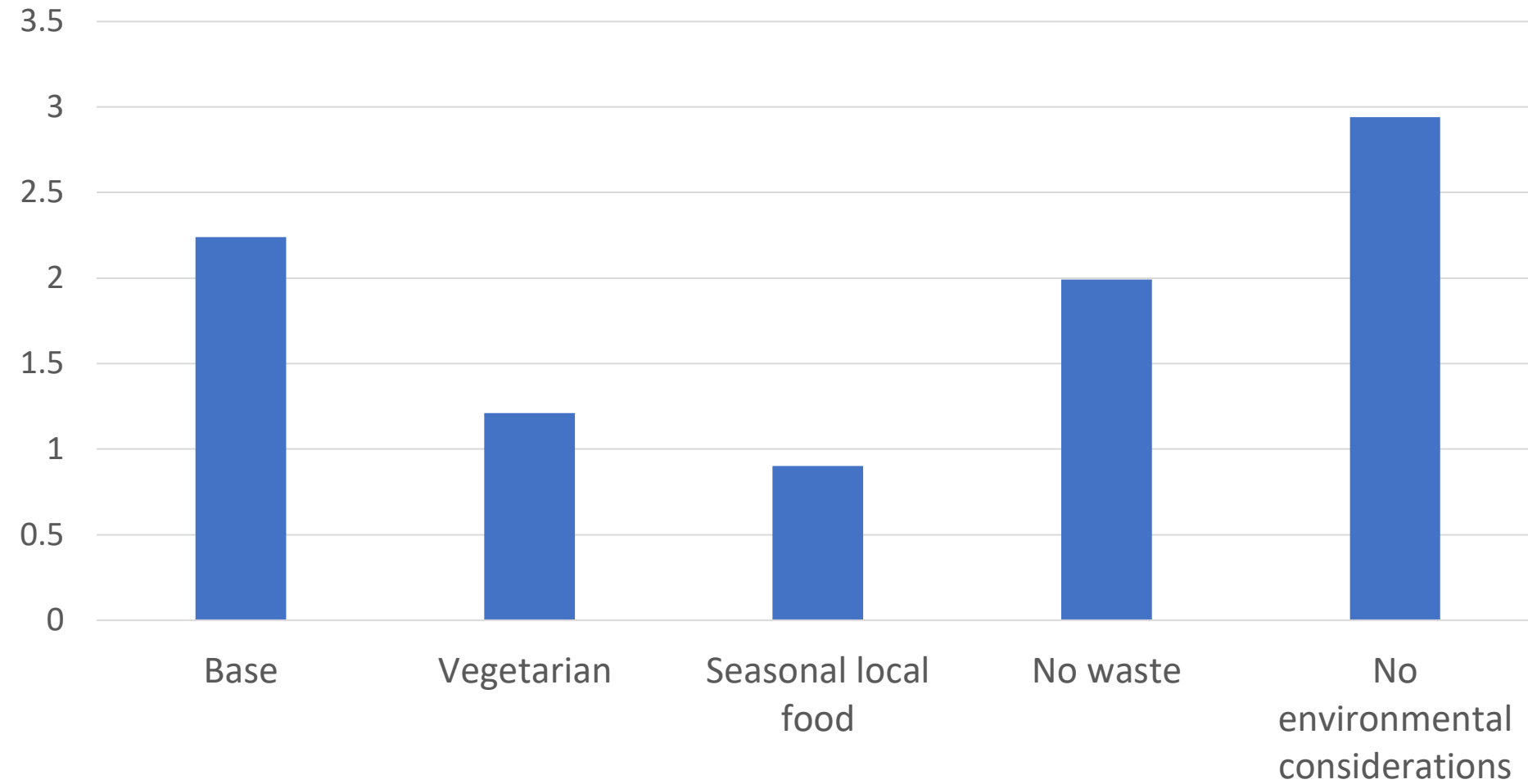


11.7 tonnes



11.5 tonnes

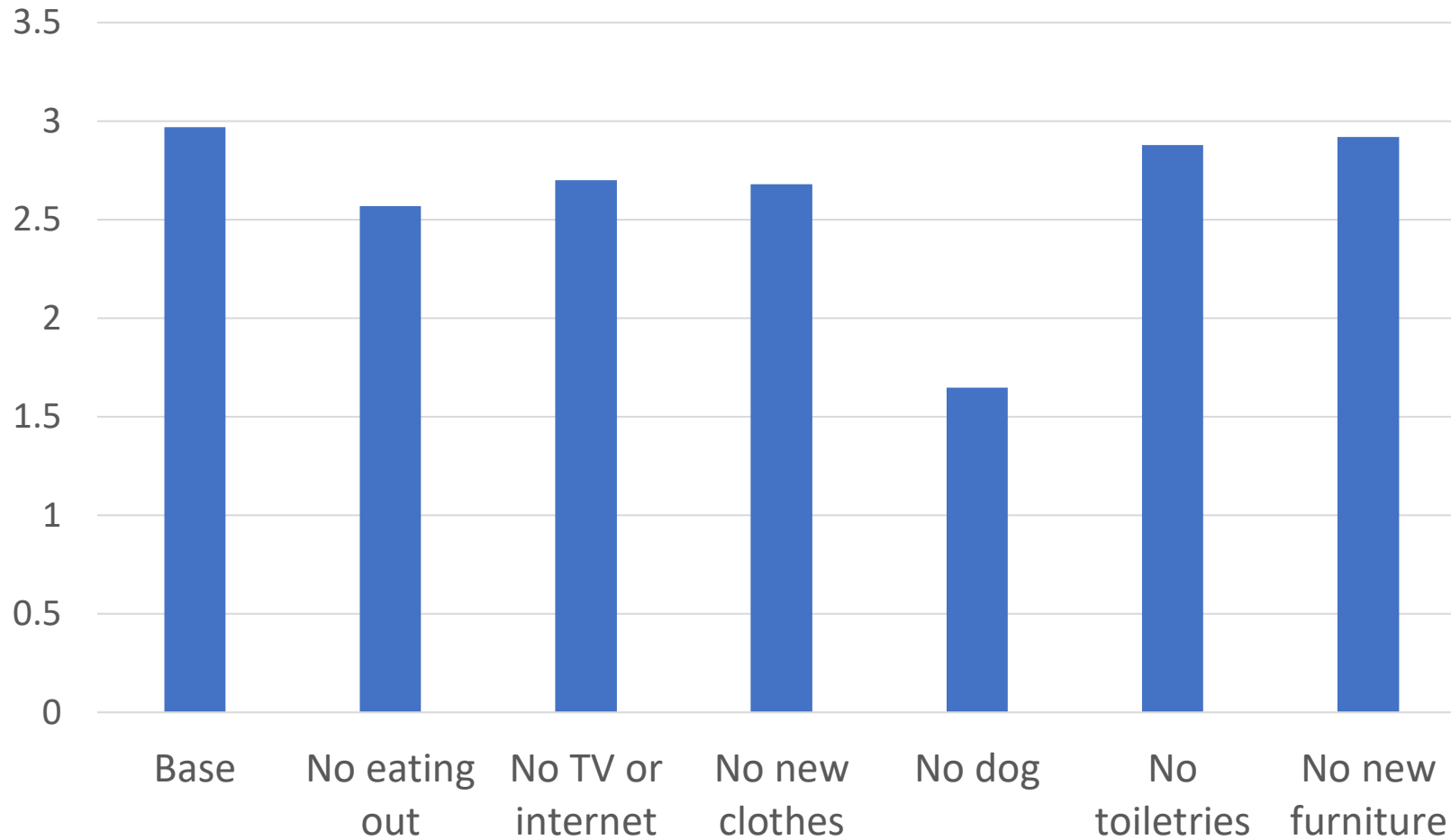
Sensitivity on Food Choices



Food

- Eats meat 4 days a week, with fish, chicken and vegetarian meals on other days
- Dairy eaten daily and eggs 3 days a week
- 15% of food is wasted (approx. 20% nationally)
- No home grown food
- Non season and non locally sourced food eaten

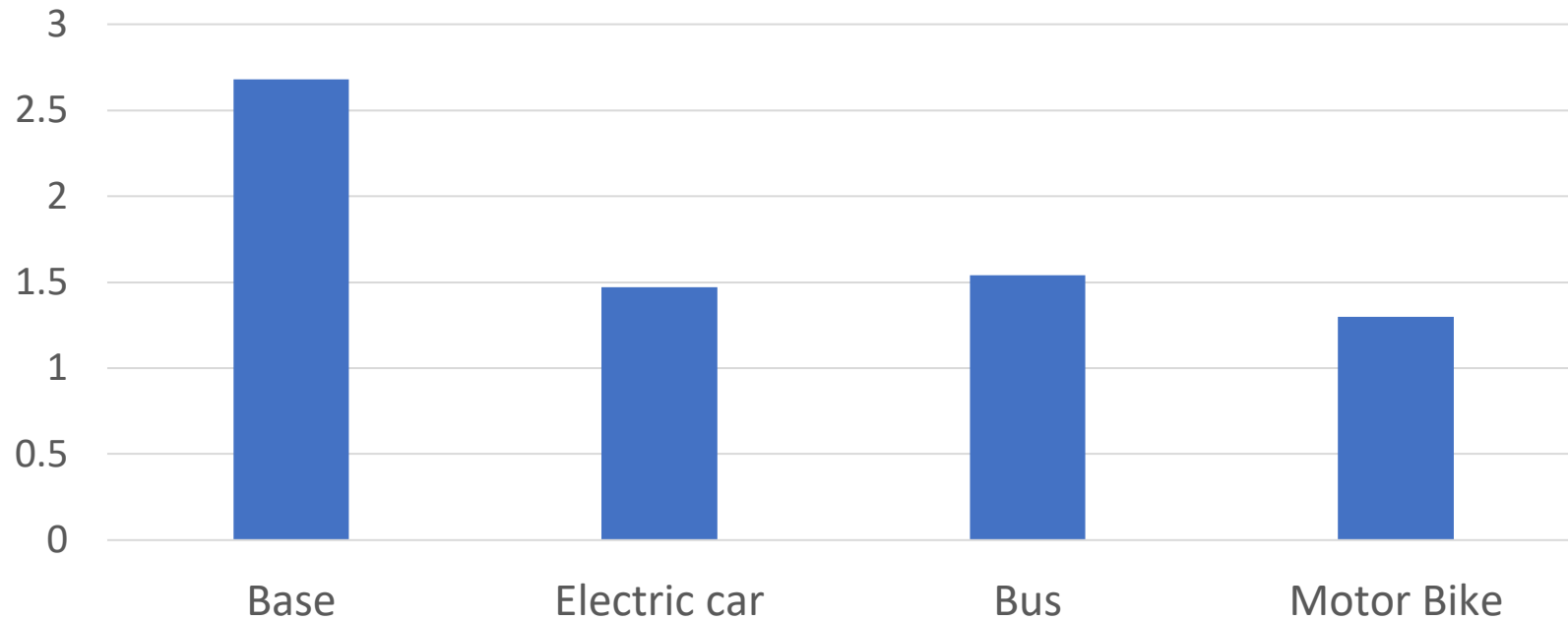
Sensitivity on Goods and Services Choices



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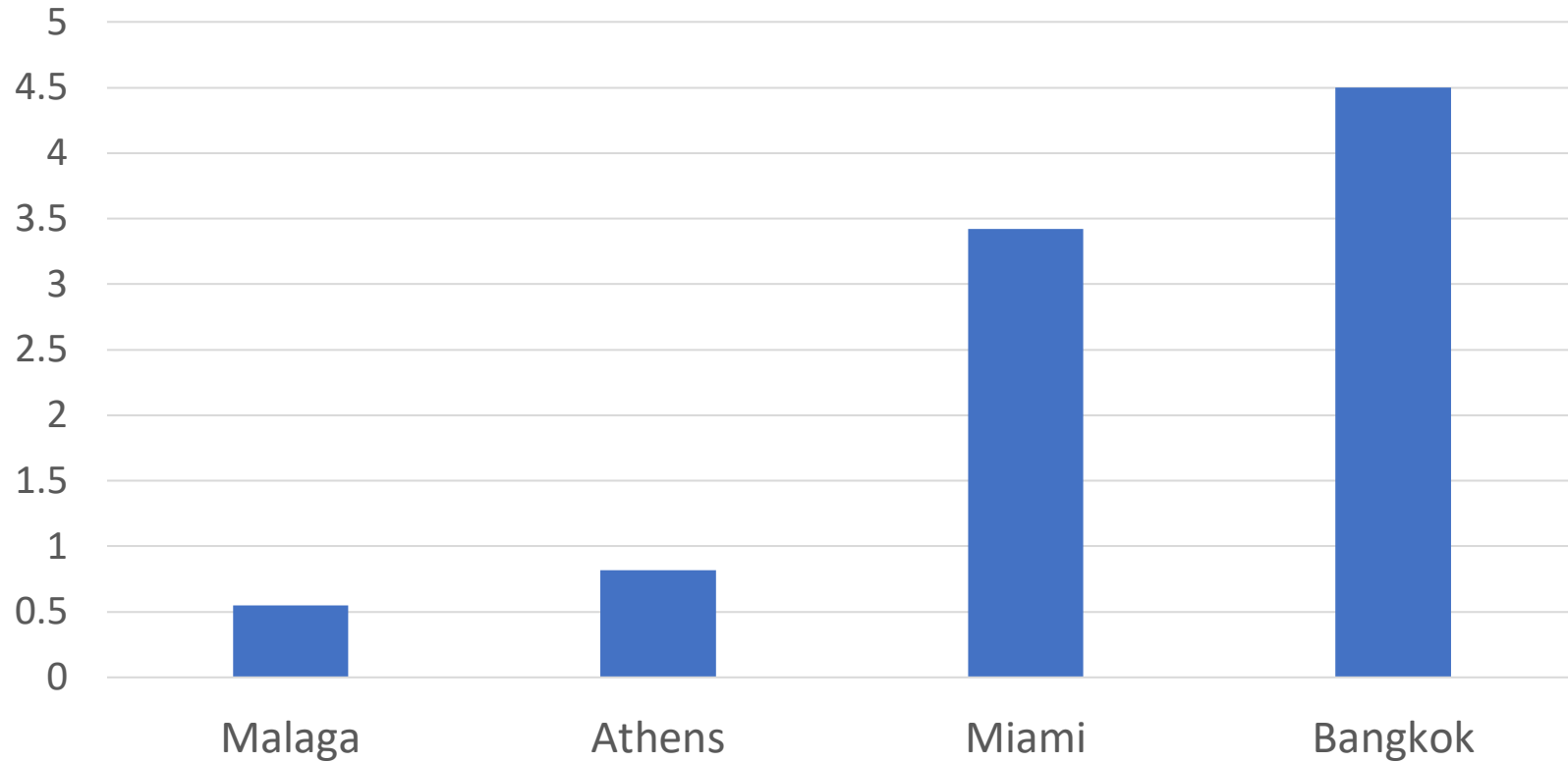
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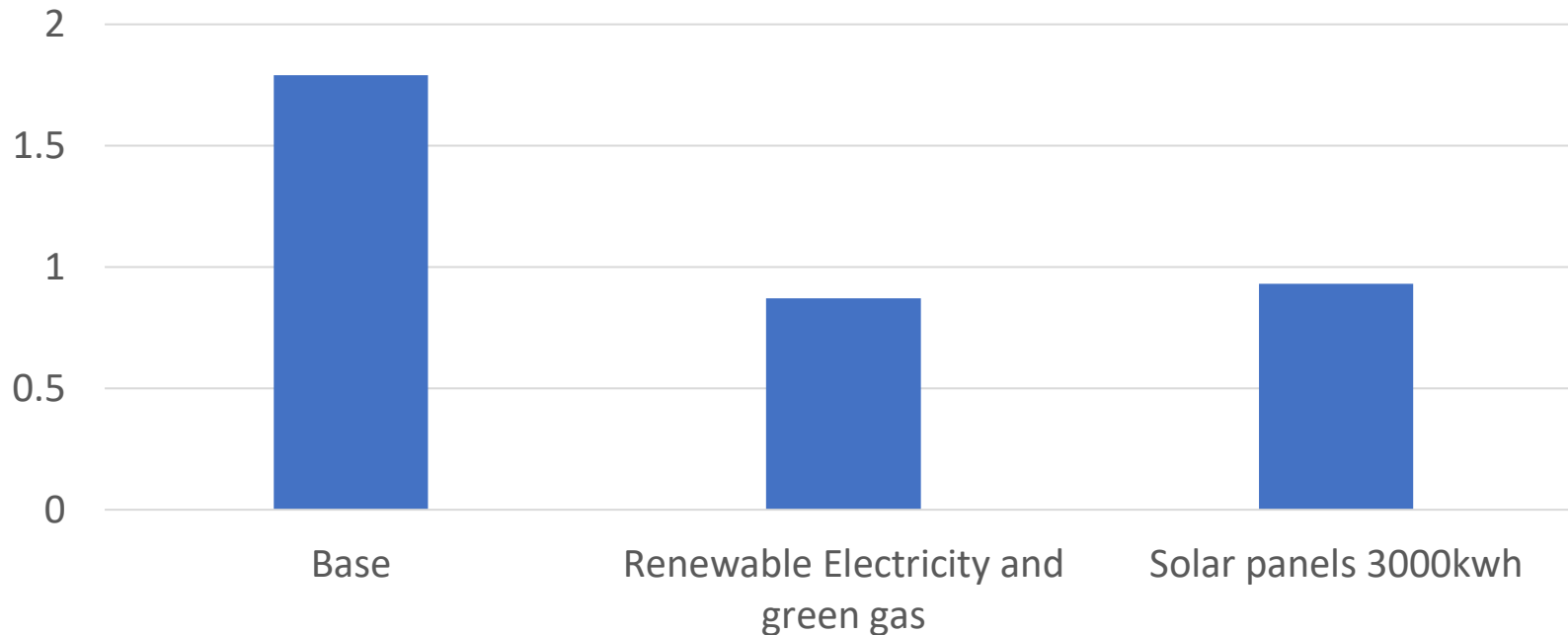
Sensitivity on Flights



Flights

- Return flights
- Business Class is 3 times Economy

Sensitivity on Home Energy Choices



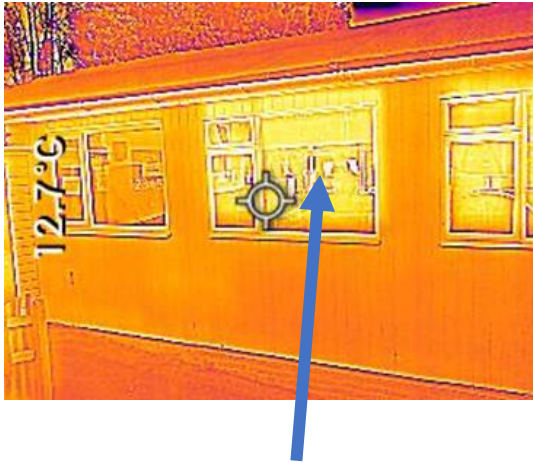
Other carbon reduction strategies

- Reducing thermostat temperature (1C = 7% reduction?)
- Increasing loft insulation (0 -> 270mm reduces by 0.6 tonnes for semi)
- Double glazing (if not already installed)
- Reducing draughts (unknown quantity – but identify using infrared camera)

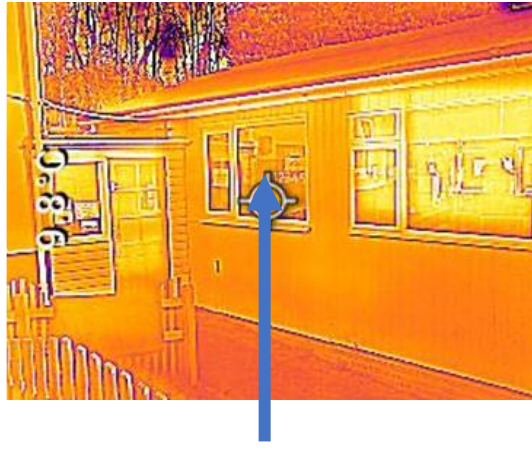
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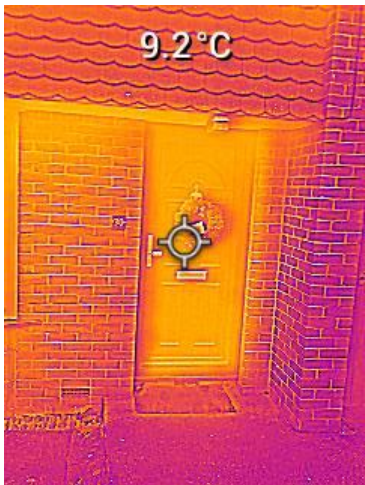
Infrared Camera to 'see' Heat Loss



Single Glazed Window



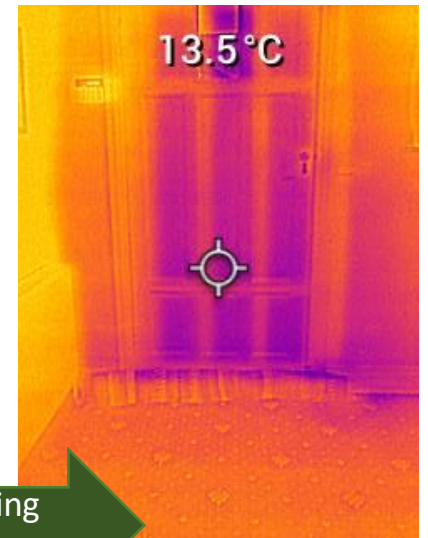
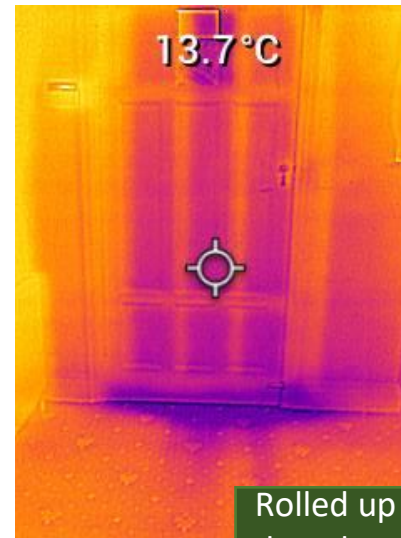
Double Glazed Window



Poor quality door



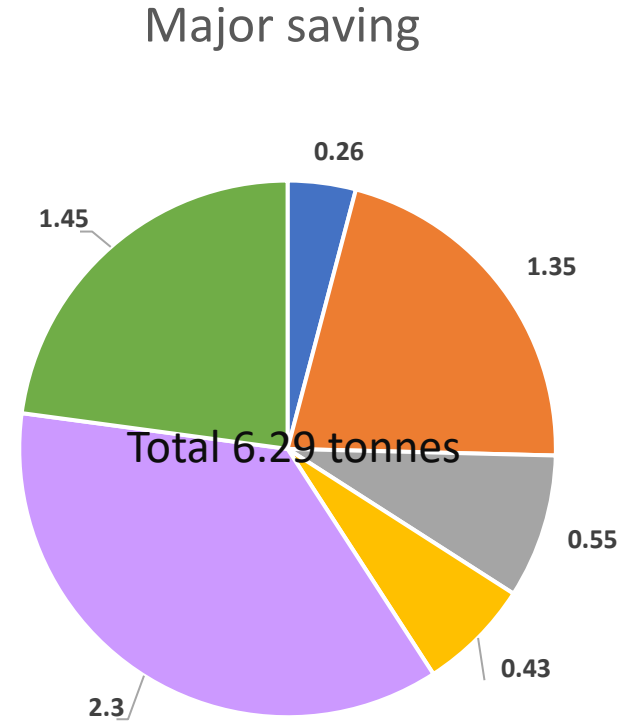
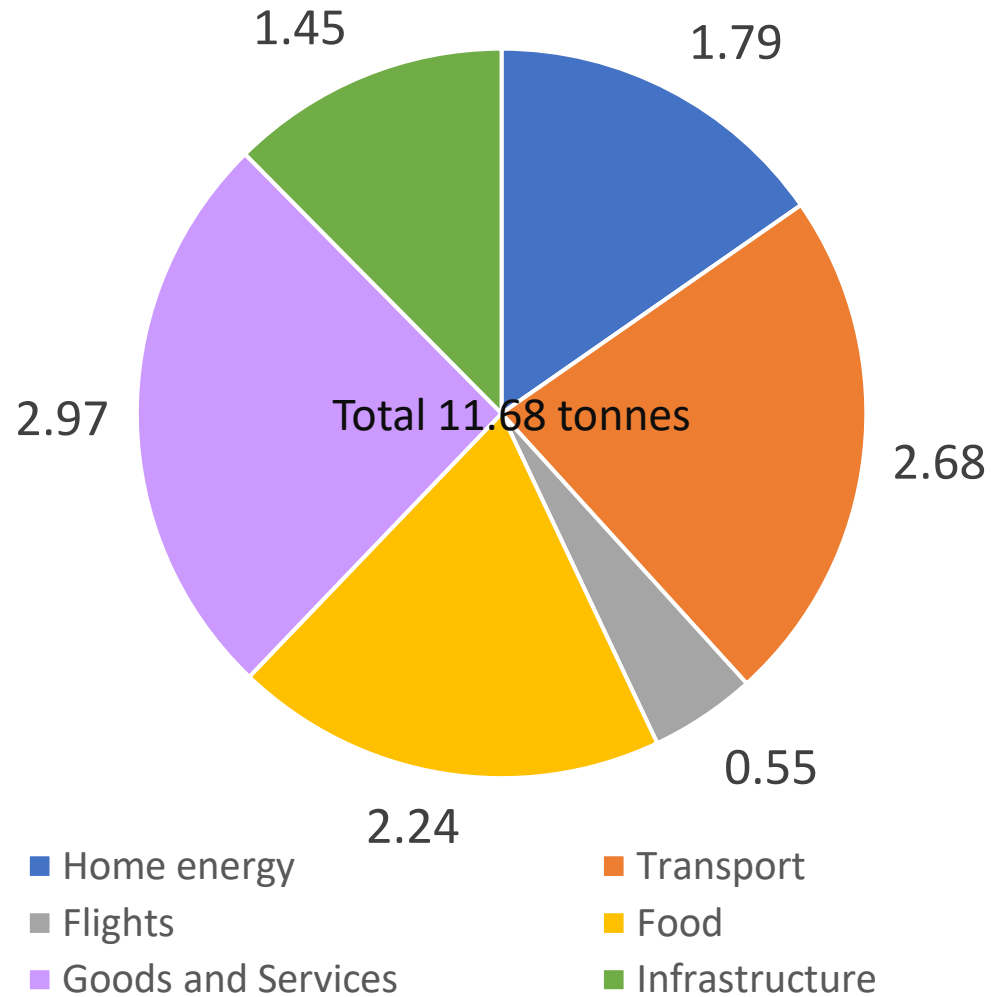
Cool damp area in corner of room



Rolled up rug reducing draughts

Doors seals ineffective allowing in draughts and cold air

Impact of Selected Changes



Changes

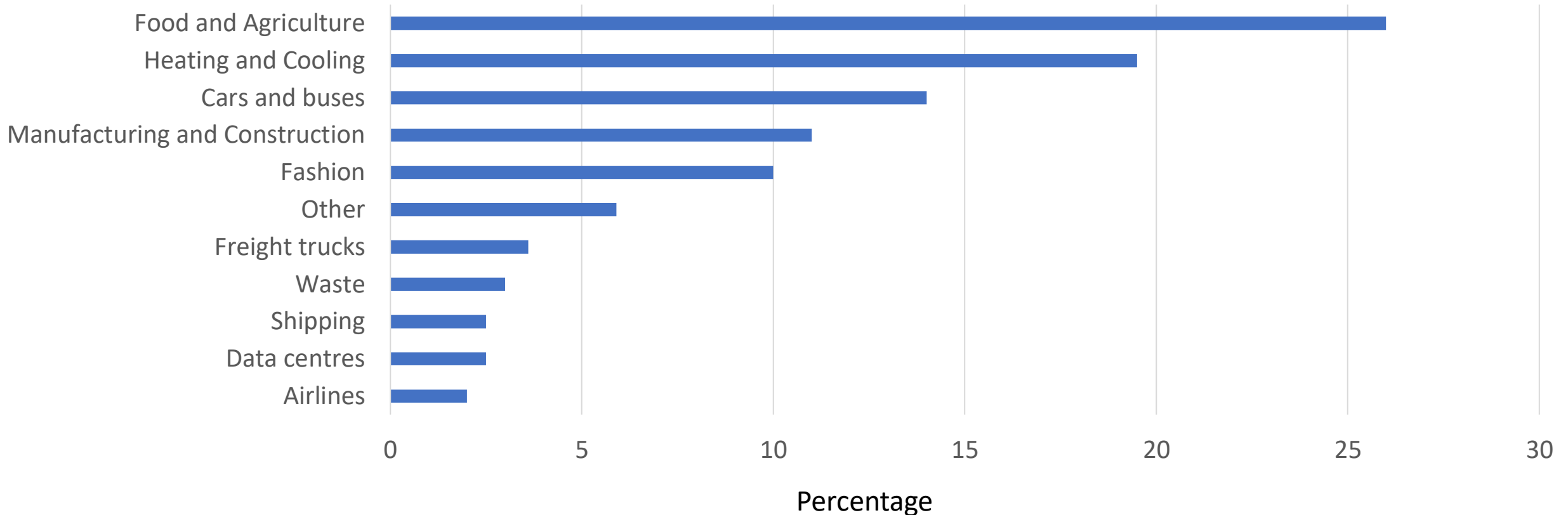
Vegetarian diet
Local and seasonal food
No food waste
Electric car
Green energy tariffs
Solar panels

No Changes

Holiday
Pet
Gym
Entertainment
Eating Out
Clothes
Furniture purchases

Greenhouse gas emissions by sector (UK)

Total 450 M tonnes CO2 eq.



Summary

- Understanding Carbon Footprint is key to reducing it
- Many ways to achieve this and everyone will be prepared to do something
- Work out what you are prepared to do.....and then do it!
- Everything will make a difference and so it worthwhile doing
- When summed up with everyone else's contribution, we can make a significant difference to Charmouth's Carbon Footprint