

Carbon Footprint report prepared by *Charmian Larke* from *Community Works*

the idea is to get to zero emissions where possible so that we can live sustainably



Principles for climate action

- cut your demands on the earth
- stop to ask *do I really need this*?
- go local vital for success
- share the journey
- 💠 keep learning



SHARE What is the carbon footprint data based on?

 Electricity data for both private and commercial customers, from Western Power distribution, parish level

heating oil usage for both private and commercial customers, Cornwall county level

transport data for both private and commercial vehicles,
Cornwall county level

 where parish level information is not available, the size of the parish (~450 people) is compared to the Cornwall county level (~532,300 people)

Data includes energy for manufacturing and transport of items

SHARE Some definitions

CO₂e –Carbon dioxide (CO₂) equivalent is a measure of how much a gas contributes to global warming, relative to carbon dioxide.

This enables us to see the impact of different fuels which are producing greenhouse gases such as heating oil, natural gas etc.

SHARE Some definitions

kWh- if energy is transmitted or used at a constant rate over a period of time, the total energy in kilowatt hours is equal to the power in kilowatts multiplied by the time in hours

one kilowatt hour equals the use of 1000 watts for one hour



Energy Supply and Demand in South Hill total 2017 MWh



Data for electricity taken from available statistics for our Parish

Data for gas/oil/coal/lpg **estimated** from Cornwall overall data

Data includes carbon footprint for items in your home, which will have manufacturing and transport energy costs



Carbon emissions South Hill Parish 2017 total 2761 tonne CO₂e



	Emmissions
Energy	coefficent
Source	kg CO ₂ e/kWh
Coal/ LPG	0.36
Oil	0.26
Electricity	0.38
Gas	0.20

the above table shows how oil produces much less CO₂e compared to electricity





Energy demand by season



Assumptions: Night storage heaters (ran on electricity), dehumidifiers and tumble driers are the likely candidates to increase the electricity usage in winter. Heating is only needed in winter. Transport increases in summer due to tourists visiting the area.



Tourists use the Parish more during summer season

However:

Is your house (2014 Survey)



- Your permanent home ?
- Used as a holiday let ?
- Used as a second home ?

Used for business as well as a home ?

Traffic *here*

B3257 CONGDON'S SHOP

JAN	1963
FEB	2203
MAR	2294
APR	2139
MAY	2198
JUN	2201
JUL	2229
AUG	2232
SEP	2251
OCT	2205
NOV	2288
DEC	1926
AADT	2177

Traffic North coast

B3314 PENDOGGETT

JAN	1510
FEB	1767
MAR	2020
APR	2894
MAY	2771
JUN	3197
JUL	3518
AUG	3975
SEP	3059
OCT	2579
NOV	1810
DEC	1575
AADT	2561

Traffic figure given for each month is average 24 hr daily flow from Cornwall Traffic Statistics 2017



Potential renewable energy availability by season





Estimated Energy Demand South Hill Parish in MWh per year



Final Zero Carbon Energy Demand: 4226 MWh per year (electricity only)



Reductions assume that

Electricity

- Lights being replaced by LED lights
- Appliances switched off when not in use

Heating

- Households use wood (20%) for heating
- Households use ground source heat pumps (80%) for heating
- Commercial properties use ground source heat pumps (100%) for heating

Transport

• All cars are electric (*including commercial vehicles*)

However, the current grid would need upgrading to allow for all these changes



To get to Zero Emissions we have to:

- cut our energy demand
- change remaining demand to renewable energy
- reduce our consumption of material goods
- produce our food locally
- cut emissions from agriculture and land use
 - start to remove CO₂ from the air into nature



Household and individual actions

reduce energy demand

- switch off at the wall
- draw the curtains at night in winter
- switch off lights & change to LEDs
- insulate- walls, floors, roof, windows/curtains
- do not heat when/where not needed
- 💠 put on a jumper









reduce travel demand

- walk, cycle, share a lift
- dramatically reduce flying: staycations etc *****
- live near to workplace
- minimise travel needs
- use public transport where ***** possible



Working habits South Hill Parish 2014

Within the parish Outside Not working at present



learn how to count carbon

for equity we have to get to

1 tonne carbon dioxide (tCO₂e) per year per person

 $return flight to Greece 1.7 t CO_2e$

return flight to Disney World, Florida 4 t CO₂e



 $Citroen C1 \sim 6 tCO_2 e$ Ford Mondeo $\sim 17 tCO_2 e$



>30% of our individual carbon footprint are items

c 4.9 tonnes per year

- buy second-hand
- make things last, repair, renew, swap
- go for local made using natural materials
- buy quality for lasting appeal
- suggest not buying!!!
- Oxfam campaign: Second-hand September



>20% of our individual footprint is food related

UK imported food 3.3 tonnes per year

- 💠 buy local
- buy organic increases soil carbon
- eat more vegetables
- eat free range
- grow your own get an allotment, forage
- cook meals from scratch, make extra to reheat
- share meals with neighbours



Where SHARE will help

investigating new renewable energy opportunities

- community initiatives
- Iocal wood supply
- recycling
- educating people



In Conclusion

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