

Selected Highlights


Anthesis Carbon Pathways Report

April 2021

WARWICK & STRATFORD-ON-AVON DISTRICT COUNCILS

South Warwickshire Climate Action Support

April 2021



The image shows the logos for Stratford-on-Avon District Council (a green square with a crest), Warwick District Council (a purple square with a crest), and Anthesis (an orange circular logo with the word 'Anthesis' next to it).



2. EMISSIONS BASELINE REVIEW

DISTRICT-LEVEL SCATTER INVENTORY

The current emissions profiles for the areas administered by Warwick and Stratford-on-Avon District Councils are shown below, based on the SCATTER Inventory Tool. This covers three greenhouse gases: carbon dioxide, nitrous oxide and methane, and relates to the 2017 reporting year. The emissions profiles cover emissions generated within the District boundary (scopes 1 & 2) as well as emissions that occur outside of the District as a result of activities taking place within the District (scope 3). Not all subsectors can be neatly summarised as a “slice” within these charts, as emissions from land use sequester carbon from the atmosphere. A breakdown of what is included within each emissions sector is detailed on pages 12 & 13.

Warwick District

In 2017, Warwick’s energy system was responsible for net emissions totalling 1259.6 ktCO₂e. The majority resulted from buildings & facilities (42.2%) and transport (53.7%). A detailed comparison of the SCATTER emissions baseline in the CEAP main report and the baseline below can be found on page 15.

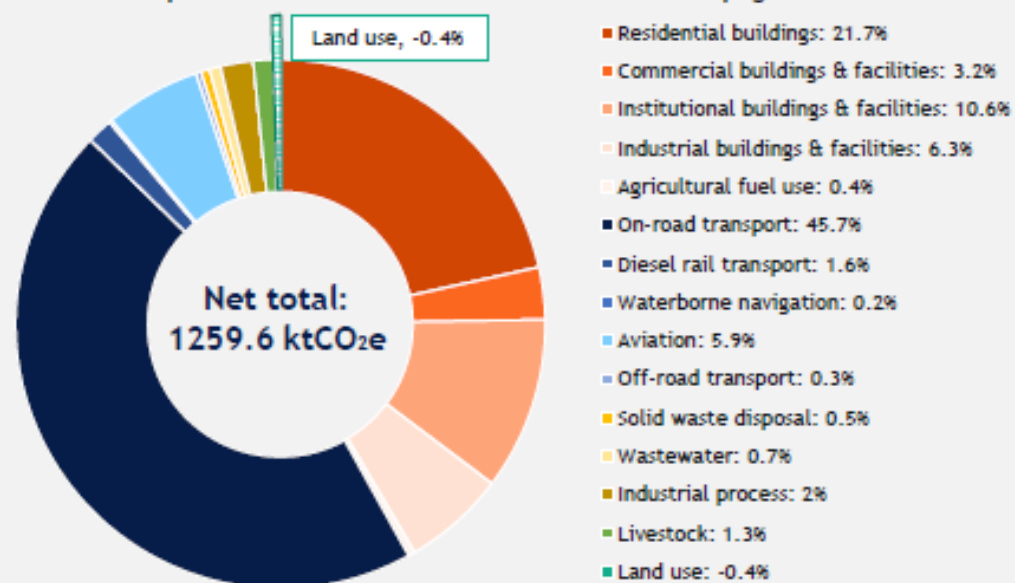


Figure 1: SCATTER emissions inventory for Warwick District, 2017. Appendix 3 details the full SCATTER inventory dataset for Warwick District.

Stratford-on-Avon District

In 2017, Stratford-on-Avon’s energy system was responsible for net emissions totalling 1484.9 ktCO₂e. Like Warwick, the majority resulted from buildings & facilities (39.3%) and transport (51.3%), however Stratford-on-Avon also have considerably larger livestock emissions (6%), which are detailed in Chapter 3.

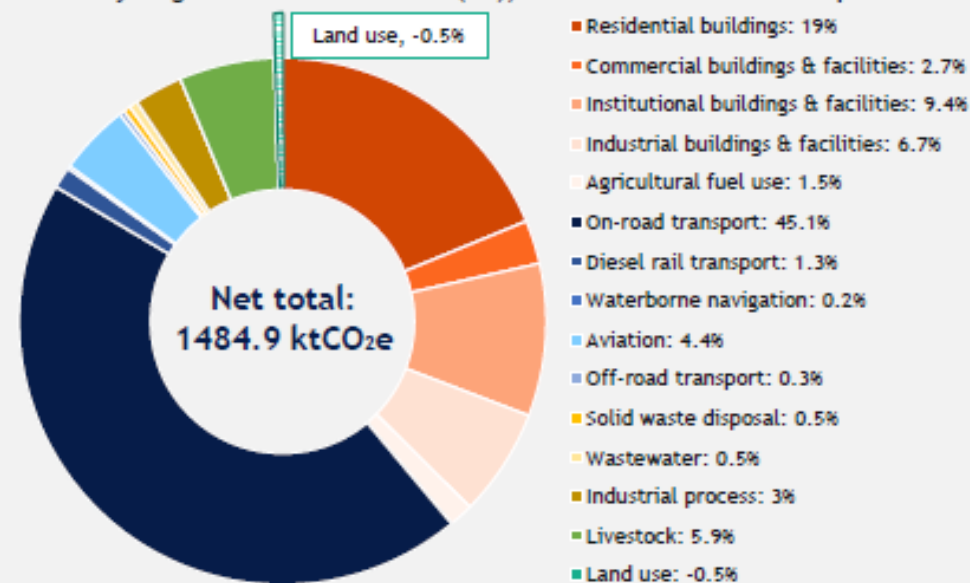


Figure 2: SCATTER emissions inventory for Stratford-on-Avon District, 2017. Appendix 4 details the full SCATTER inventory dataset for Stratford-on-Avon District.

2. EMISSIONS BASELINE REVIEW

SOUTH WARWICKSHIRE SCATTER INVENTORY

A combined net total emissions baseline for South Warwickshire has been calculated to align with both Council's ambitions to collaborate on climate action.

In 2017, South Warwickshire's energy system was responsible for net emissions totaling 2744.5 ktCO₂e. This is composed of 1259.6 ktCO₂e from Warwick District and 1484.9 ktCO₂e from Stratford-on-Avon. The majority of emissions across South Warwickshire resulted from buildings & facilities (40.6%) and transport (52.4%). Emissions from waste (1.1%) and industry (2.6%) contributed a small amount to South Warwickshire's overall profile. Emissions from livestock were much higher in Stratford-on-Avon (5.9%) compared to Warwick District (1.3%), and land use sequestration was approximately the same across both Districts. See Appendix 5 for the full emissions data table for South Warwickshire.

The profile shown opposite includes emissions generated within the two District boundaries (scope 1 & 2) as well as outside both boundaries (scope 3).

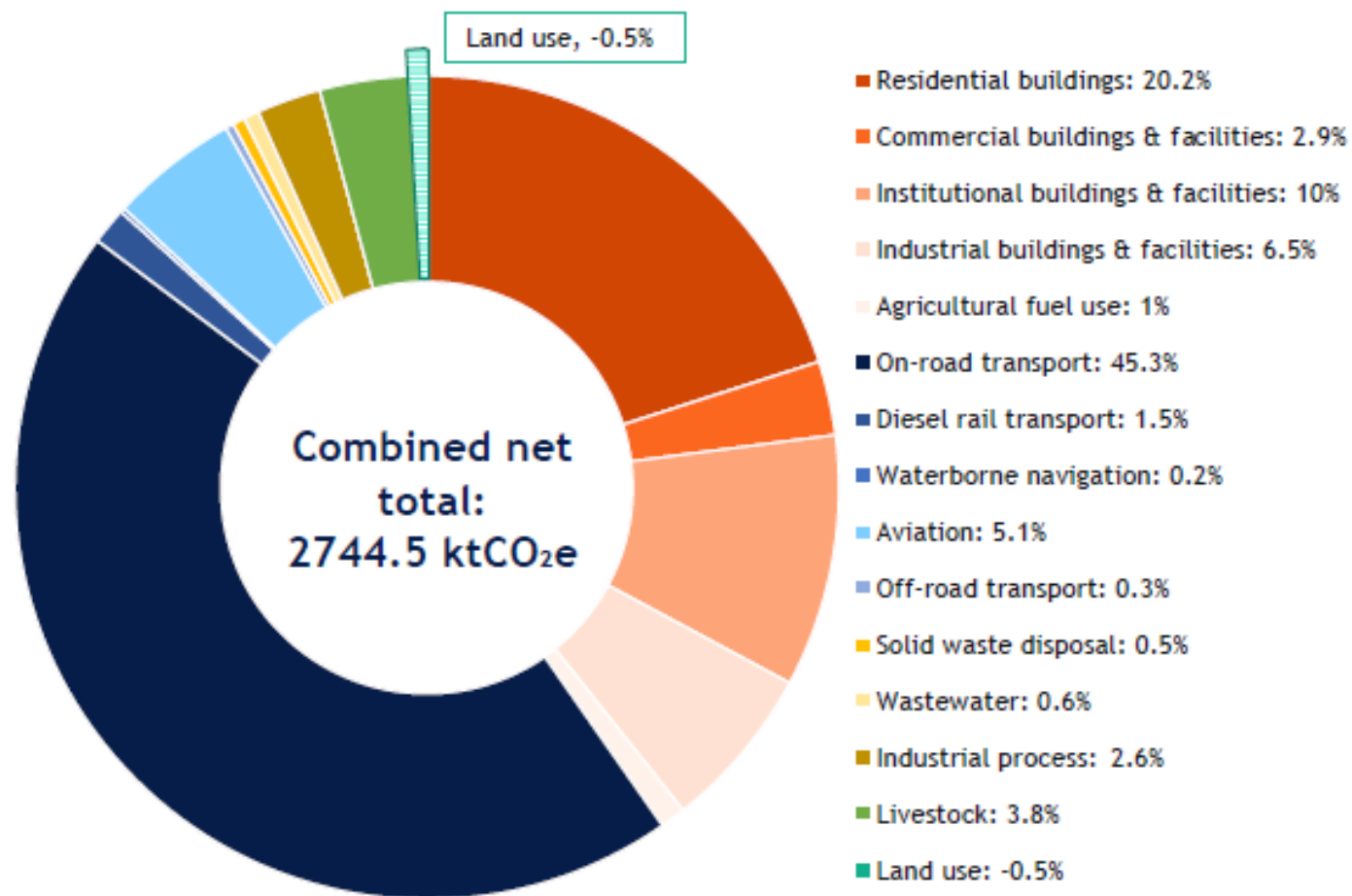


Figure 3: SCATTER 2017 inventory for South Warwickshire, shown by sub-sector.

5. EMISSIONS REDUCTION PATHWAYS

SOUTH WARWICKSHIRE SCATTER PATHWAY

Combining the SCATTER pathways for Warwick District and Stratford-on-Avon District result in a BAU, High Ambition and Tyndall Paris-aligned pathway for South Warwickshire shown in figure 14.

Adoption of the High Ambition Pathway interventions across both Districts delivers emissions reductions of 55% by 2030.

There is an emissions “gap” to zero at 2030 which persists even at the trajectory endpoint of 2050. This is due to residual emissions. More radical measures beyond the High Ambition Pathway for South Warwickshire will be needed to close this “gap”. This is further detailed on page 40.

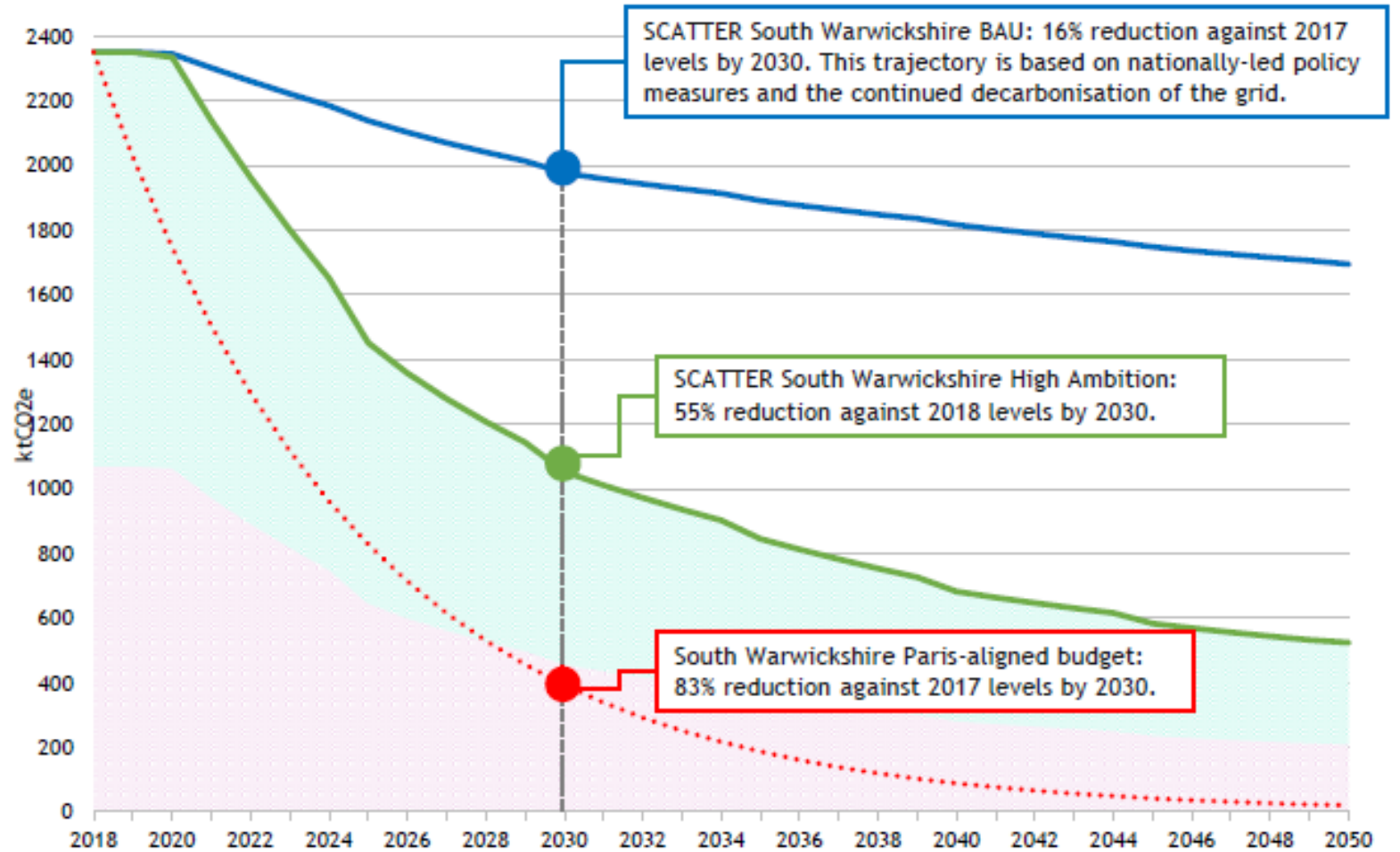
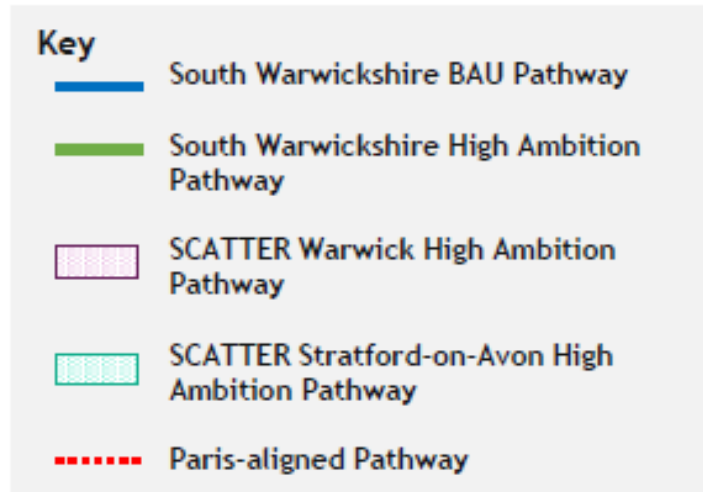


Figure 14: Future emissions pathways for South Warwickshire (2018-2050), with Stratford-on-Avon’s high ambition pathway highlighted in teal and Warwick’s high ambition pathway highlighted in purple.

5. EMISSIONS REDUCTION PATHWAYS

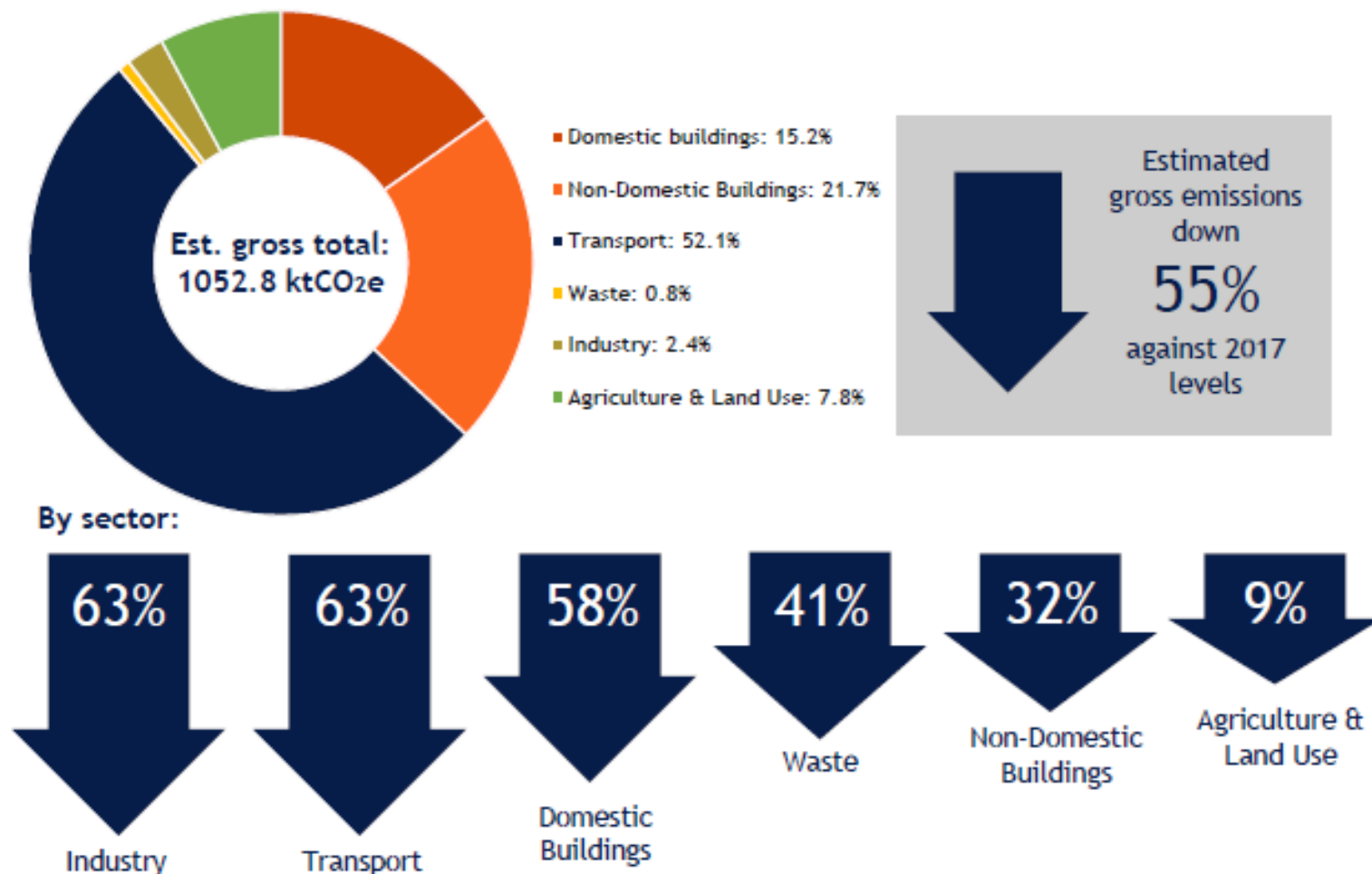
SOUTH WARWICKSHIRE HIGH AMBITION PATHWAY 2030 SUMMARY

Figure 18: Estimated 2030 emissions profile (top). Emissions reductions in key sectors under the High Ambition Pathway (bottom).

By 2030, the emissions profile for South Warwickshire is predicted to look very different from today.

Concerted local actions can have a significant effect on district emissions, resulting in reductions from the 2017 baseline of around 55%. Transport emissions dominate the 2030 profile whilst reductions in building energy consumption have shown significant decreases in the sector's emissions.

Despite the aggressive actions described in the next chapter, hard-to-remove emissions in industry and freight transport persist. Whilst emissions from the domestic buildings and waste sectors are substantially reduced, the scale of improvement is not enough to reach net zero by 2030. Further ambition and a variety of additional technological and nature-based solutions will need to be considered to close this gap. These are explored on the next page.



6. EMISSIONS REDUCTION INTERVENTIONS

SCATTER INTERVENTIONS

The interventions that will be assessed will initially be taken from the measures considered in the SCATTER pathways tool (summarised opposite). Activity in each of these areas underpins the pathways' trajectories.

Measures have been grouped into different sectors, which also link directly to the sectors described within the annual emissions profile.

Each group of measures has some sort of activity focused on *demand-side* reductions, switching to electrified systems, or greening energy *supply*.

The SCATTER measures are not exhaustive, but help to define "*what needs to happen*" rather than answering the question of "*how will Warwick and Stratford-on-Avon get there?*".

