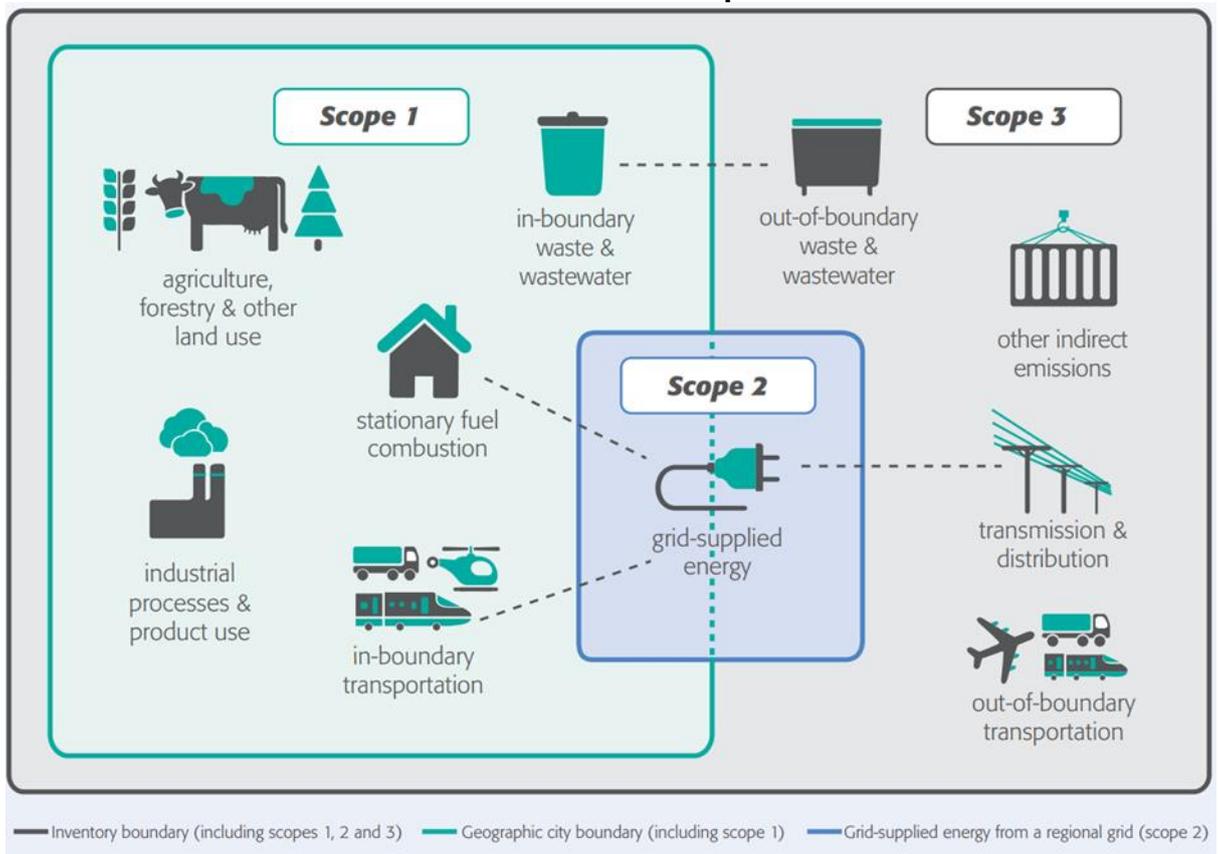


Appendix B: Overview of Perth and Kinross Emissions

1.11 Greenhouse gas emissions are classified into three scopes. Scope 1 and 2 emissions are directly under the control of Perth and Kinross Council, businesses and residents. Scope 3 emissions are ones that are emitted outside of Perth and Kinross, but generated to meet the needs of Perth and Kinross. Appendix B provides further details of this along with detailed information about the emissions associated with Perth and Kinross Council.

Figure 1 Overview of Greenhouse Gas Emission Scopes



Source: C40 Cities, https://www.c40knowledgehub.org/s/article/The-Global-Protocol-for-Community-Scale-Greenhouse-Gas-Emission-Inventories-GPC?language=en_US Accessed on 18/11/2021

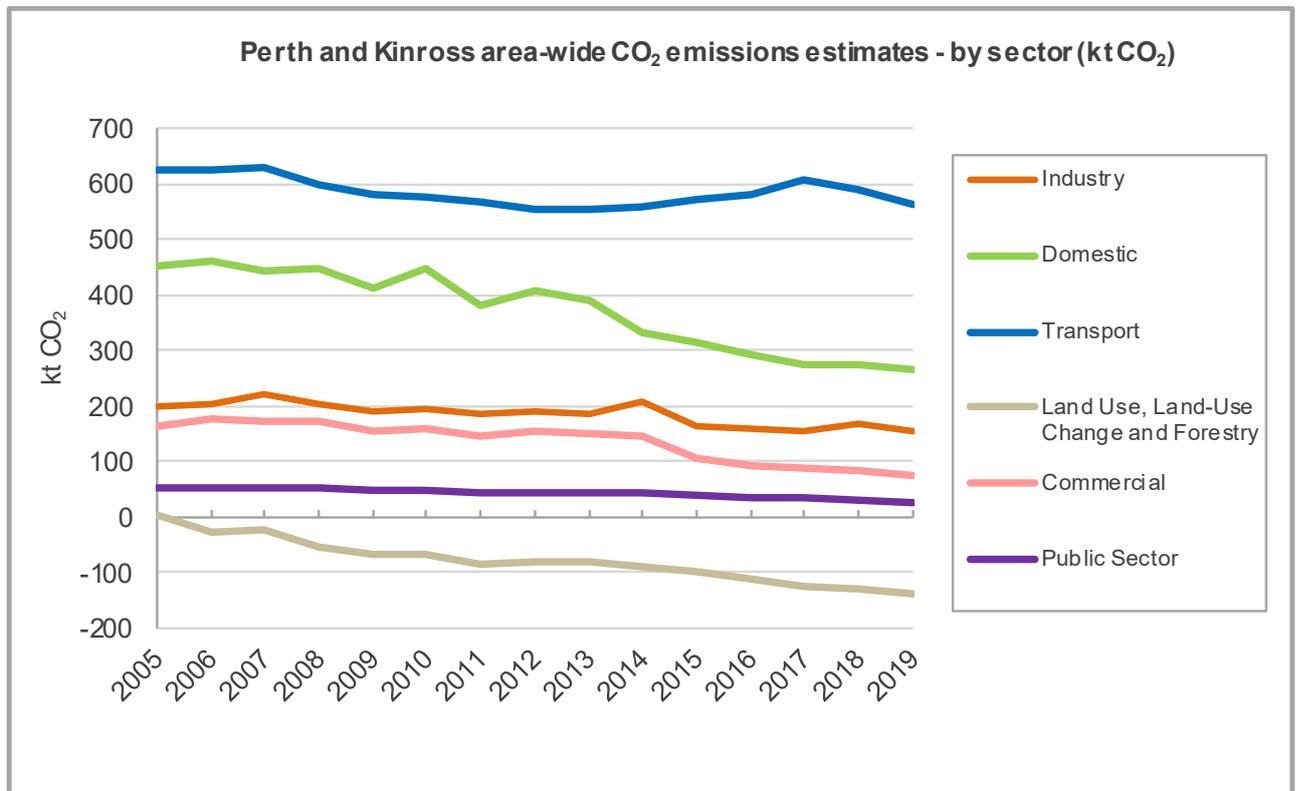
1.12 The latest available Business, Energy and Industrial Strategy (BEIS) [emissions data](#) (2019) is presented in Table 1. It recorded gross emissions of 1,089 kilotonnes of carbon dioxide (kt CO₂) for all activities in the Perth and Kinross area. However, this is offset by land use such as forestry, acting as a “carbon sink” which absorbs CO₂. Therefore, the balanced net CO₂ emissions by Perth and Kinross, contributing to climate change in 2019 were 953 kt CO₂.

Table 1 2019 Emissions Data for Perth and Kinross (BEIS, 2021)

Emission Category	2019 Emissions (kt CO₂)	% of total emissions
Industry Total	156.6	14%
Commercial Total	76.6	7%
Public Sector Total	28.1	3%
Domestic Total	266.5	24%
Transport Total	562.2	52%
Total emissions	1090.0	
Land Use (Sequestration)	-136.8	-13%
Net total	953.1	

- 1.13 It should be noted that the above figures are only the CO₂ emissions – BEIS does not currently calculate the emissions associated with the other six greenhouse gases (e.g., Methane), which are estimated to be in the 15-25% of total emissions range. Following convention, where these greenhouse gases have been included as their CO₂ equivalent warming potential, the combined figures are expressed as CO₂e.
- 1.14 The figures of 953 kt of CO₂ equates to an annual reduction of 6.4%. This is better than the Scottish average of 3.2%, however it is below the annual 7.1% target needed in Perth and Kinross to meet the Scottish Government’s 2030 target 75% reduction against 1990 levels. This puts the Perth and Kinross emissions reductions from 1990-2019 at approximately 44%. There is a significant gap between this and the 56% Scotland-wide reductions by 2020 put into law by the Climate Change Act.
- 1.15 In 2019, transport sector sources were responsible for 52% of net area-wide emissions, with the remaining 48% covering emissions from domestic (24%), industry (14%), commercial (7%) and public sector (3%). Transport sector emissions for 2019, along with commercial, domestic and public sector emissions, showed a percentage reduction when compared to the 2017 figures reported in the Council’s 2019 Interim Climate Emergency Report and Action Plan – with only industry showing an increase (1%) against 2017 emissions.

Figure 2 Per capita CO2 emissions (BEIS, 2021)



1.16 As shown below, data across all sectors in 2019 indicates a reduction against the 2005 baseline and the 2017 data which was the basis of the 2019 Interim Climate Emergency Report. 2005 is the earliest that emissions data is broken down to a local authority level.

Table 2 Change in emissions by sector

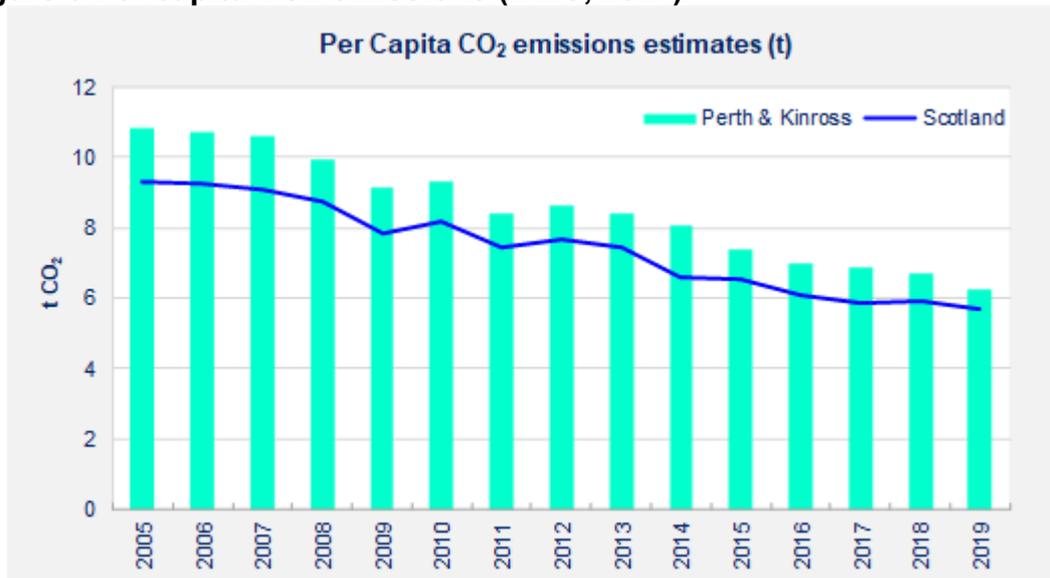
Emissions sector	2019 figures as % change against 2005 baseline	% change in emissions from 2017 to 2019
Industry	21.1% reduction	1% increase
Commercial	53.7% reduction	15% reduction
Public Sector	47.7% reduction	15% reduction
Domestic	41.1% reduction	3% reduction
Transport	10.1% reduction	8% reduction

1.17 In 2019, 91% of Perth and Kinross area-wide emissions were identified as being within the Council’s **scope of influence** (as defined by BEIS). Of the 91%, transport sector emissions accounted for 47%, domestic 29%, industry 13%, commercial 8% and public sector 3%. The remaining 9% of emissions

outside the Council's scope of influence were from large industrial sites, railways, motorways and selected land-use.

- 1.18 Across Perth and Kinross, there is a continued reduction in both total CO₂ emissions and per capita (per person) CO₂ emissions. This follows a trend across Scotland, although per capita emissions in Perth and Kinross remain consistently higher than the average across Scotland – with 2019 per capita estimates of 6.3t CO₂ for Perth and Kinross compared to a Scottish average of 5.7t CO₂. This is in line with other more rural local authority areas, including Aberdeenshire (6.5 t) and Angus (5.9 t).

Figure 3 Per capita CO₂ emissions (BEIS, 2021)



- 1.19 The organisational emissions from Perth and Kinross Council's operations are produced annually as part of the Public Sector Report on Compliance with Climate Change Duties, under the 2019 Climate Change Act. The latest emissions figures for 2020 showed a total Scope 1,2 and 3 emissions of 35 kt CO₂e. This showed a 25% reduction year on year in Scope 2 emissions (electricity), which is largely attributed to the closures associated with Covid-19. The Scope 1 emissions only had a small change (-4.9%) despite the closures due to the increased heating and ventilation demands.
- 1.20 It is not possible to compare year-on-year Scope 3 data due to changes in methodology. Homeworking was a new emissions category this year and accounted for 3% of overall emissions. This emissions rise is expected to be more than quantified by reduced staff transport, however robust figures for that comparison are not available.

Table 3 Over of emissions from Council Operations

	<i>Emissions (tCO2 e)</i>	<i>% of emissions</i>
Scope 1		
<i>Transport</i>	2478	7%
<i>Energy</i>	7830	22.4%
Scope 2		
<i>Grid purchased electricity</i>	5545	16%
Scope 3		
<i>Waste</i>	18563	53%
<i>Water</i>	50	0.2%
<i>Homeworking</i>	570	1.5%
Total	35,036	