



IMPROVING SUSTAINABLE TRANSPORT CONNECTIONS – Strategy & Action Plan Appendix A



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How Emissions Savings Have been Estimated

The Department for Business, Energy and Industrial Strategy (BEIS) publish data on current emissions by mode of transport and Council area. Data is also available on fuel sales by Council area. Scottish transport statistics also show the split of road traffic by type of vehicle in each Council area. Using the vehicle type to identify the proportion of fuel used by type of vehicle, the CO2 emissions have been estimated in Table A1.

Progress towards emissions reduction by each vehicle type can be monitored using updated data as it is published each year by the Scottish Government and BEIS. This will allow the progress with emissions reduction to be measured and monitored.

Table A1 – Estimation of Transport Emissions by Mode of Transport

Vehicle type	% of fuel used ¹	kT CO2 ²
Cars	59.0	86.8
LGVs	18.4	27.0
HGVs	18.2	26.7
Buses	4.1	6.0
Other (including motorcycle)	0.3	0.5
Railways/Waterways	-	0.1
Total	100	147.1

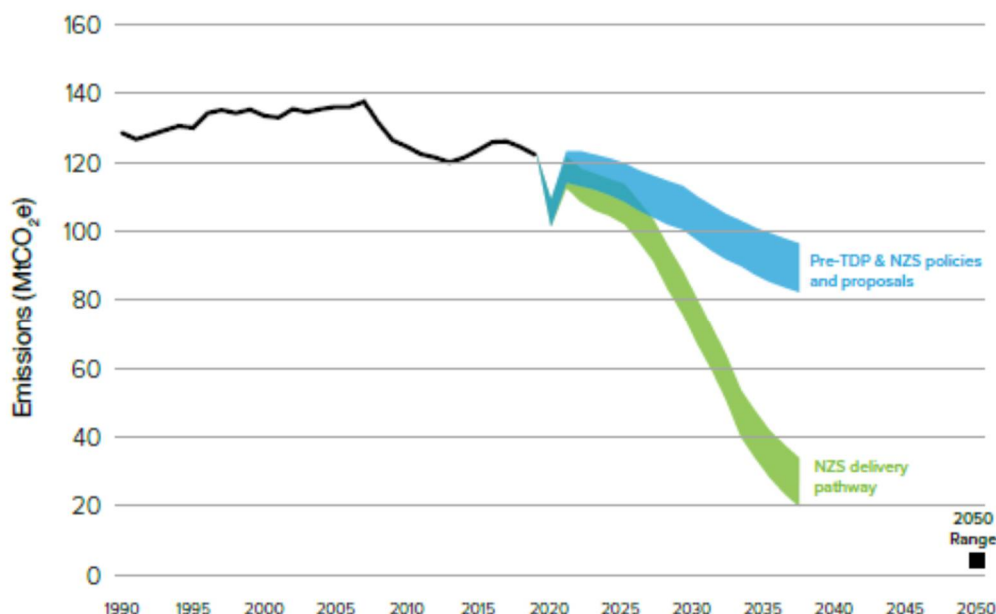
The [Climate Change Committee](#) and [Scottish Government](#) have published their plans showing how they expect that transport emissions can be reduced drawing from the modelling by BEIS and others. The largest contribution to emissions reduction in these plans comes from replacing vehicles powered by fossil fuels with zero emission vehicles. However not all emissions reductions can be delivered using these approaches since there is insufficient space for all of the zero emission vehicles that would be needed. Important contributions are also achieved by reducing the distance travelled, more use of shared vehicles including public transport, and travel without using vehicles largely by walking and cycling.

Figure A1 shows the modelled effects of these policies on transport emissions reduction.

¹ Scottish Transport Statistics 2020 – Road Traffic by Council Area. Fuel used by each vehicle type has been applied to determine the proportion of emissions by each vehicle category.

² From BEIS total transport emissions in West Dunbartonshire are 147.1kT CO2 of which road transport is 146.96kT and railways/waterways 0.11kT

Figure A1 – BEIS Modelling of Transport Emissions Reductions Impacts of Net-Zero Strategy (NZS)³



Applying the expected impacts of each transport emissions reduction programme to the plans in West Dunbartonshire, the approximate contribution by each programme is shown in Table A2. These estimates show the scale of ambition for each type of intervention that can be expected based on the available research. However each programme and project should be monitored to confirm that intended impacts are being achieved and modified as required to ensure that the overall emissions reductions are achieved.

Table A2 – Emissions Reduction by Proposed Programme

Programme	Impact ⁴	kT CO2 reduced
Less Travel	33	48.5
Net-zero vehicles	53	78.0
Active travel	14	20.6
Total	100	147.1

Of this total of 147 kilotonnes (kT) CO₂, about 2.4 kT can be associated with Council emissions for the Council vehicle fleet, including the the journeys made in personal or hire vehicles on Council business (the grey fleet)⁵.

³ UK Government October 2021 – Net-Zero Strategy

⁴ Brand, C., Anable, J. and Morton, C. (2018) Lifestyle, efficiency and limits: modelling transport energy and emissions using a socio-technical approach, Energy Efficiency

⁵ With a vehicle fleet of nearly 400 vehicles, West Dunbartonshire Council is not just a large employer facing the need to manage change in vehicle use but can also make useful reductions in total emissions from modernizing the fleet - West Dunbartonshire Council 2021. Climate Change Strategy

Figure A2 shows the controbution made to this total from each type of vehicle used on Council business.

Figure A2 – Emissions reduction plan for travel on Council business

