

Case Study



Zero Waste Scotland – Embodied Carbon in Office Equipment Police Scotland

Zero Waste Scotland has collated lifecycle carbon figures for procured items including commonly used office items (i.e. furniture and IT equipment).

Police Scotland took part in a pilot to commence their journey to quantify the embodied carbon¹ associated with office equipment.

Background

To date public sector mandatory climate change reporting under the Climate Change (Scotland) Act 2009 has primarily focussed on Scope 1 and Scope 2 emissions.

The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Amendment Order 2020 sets out that public bodies will be required to provide in their annual reports:

“Where applicable, targets for reducing indirect emissions of greenhouse gases”

This new requirement (among others) outlined in the Amendment Order 2020 will apply to reports submitted to Scottish Government in November 2022.

Scope 3 emissions typically account for the largest proportion of corporate emissions but they are complex and challenging to measure.

Zero Waste Scotland collated lifecycle carbon figures on ten common pieces of office equipment to assist organisations to get an indication of what the associated footprint of these items would be.

By quantifying the carbon emissions associated with purchases, organisations can begin to inform procurement policy, help generate and in turn utilise circular economy opportunities and change procurement choices. It may also help inform areas for action on their journey to net zero.

The best way for organisations to reduce the impact of items is to extend the lifetime of existing items by upgrading and repairing them and, when purchasing items, buy second-hand, refurbished products from accredited suppliers, instead of buying new items.

(Zero Waste Scotland 2020)

The Pilot

Police Scotland focused the pilot on the Clyde Gateway building situated in the Clyde Gateway regeneration area of Dalmarnock in the east end of Glasgow.

The building, opened in 2015, accommodates approximately 1000 staff, the majority of which are desk based.

The building is non-operational and therefore does not house specific policing related equipment.

¹ Embodied Carbon: Emissions associated with the creation of a product, namely Green House Gas emissions arising from raw materials, energy and industrial processes used in

the processing, manufacture and delivery of materials, products and components.

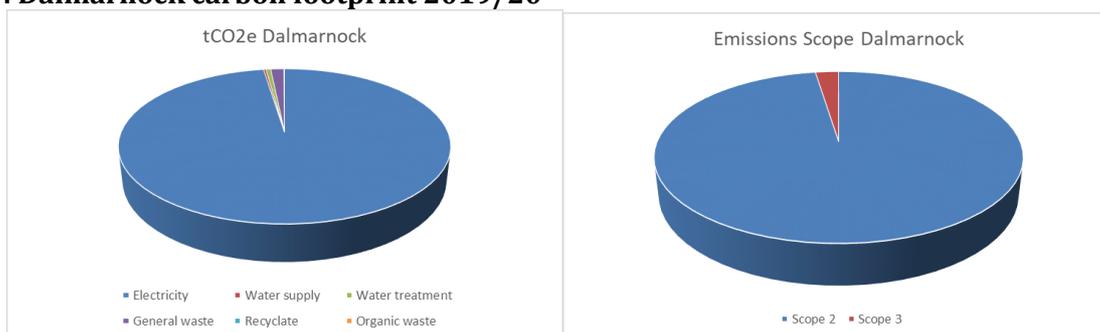
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The majority of the emissions from the building operations are related to electricity used on site (Scope 2). Scope 3 emissions currently measured include water supply and treatment, general waste, recycling and organic waste as depicted in Figure 1.

Figure 1: Dalmarnock carbon footprint 2019/20



Police Scotland chose to apply the pilot to a limited range of standard office items based on an assumption of the total number of staff on site.

Observations

- ❖ Taking the results of this pilot into account changed the carbon split of the building significantly making embodied carbon the largest source of emissions within the building. See Figure 2.
- ❖ This calculation is approximate (based on staff numbers and expected use of different types of equipment). If exact numbers were used it is likely the embodied carbon total would rise due to excess equipment at site such as additional chairs, tables and IT assets in meeting rooms as well as unused and stock equipment.
- ❖ Further work is required to provide additional metrics for the guidance to be applicable to the rest of the Police Scotland estate (i.e. Police Stations) to account for specific policing equipment such as mobile data and communication technology.
- ❖ This pilot serves as a significant reminder of the resource/energy consumed in order to fabricate the goods required and should inform whole equipment use lifecycle.

Figure 2: Dalmarnock carbon footprint taking account of embodied carbon of office items

