

The background is a vibrant yellow. It is decorated with several abstract geometric shapes in shades of blue, teal, and white. These include circles, semi-circles, and rounded rectangular forms, some of which are layered or overlapping. The shapes are scattered across the page, with a notable concentration in the top right and bottom left corners.

# Appendix A8.1

## Embodied Carbon

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## Appendix A8.1: Construction Phase Embodied Carbon

This Appendix provides the key parameters and greenhouse gas (GHG) outputs associated with embodied carbon emissions during the Construction Phase are shown in Table 1. The most significant contributor to the embodied carbon emissions is GGBS (Ground Granulated Blast-furnace Slag) which accounts for 35% of total embodied carbon emissions, followed by asphalt at 21% as listed in Table 1.

**Table 1: Embodied Carbon Emissions during Construction of the Proposed Scheme**

Embodied Carbon Material	Tonnes CO <sub>2eq</sub> / Total	% Contribution
Asphalt	1,190,556	21%
Aggregates	348,579	6%
GGBS	1,970,675	35%
Steel Columns	189,429	3%
Other	1,788,852	32%
Transport of Materials	125,143	2%
Total	5,613,234	100%

The key parameters and associated GHG outputs associated with embodied carbon emissions during the maintenance phase are shown in Table 2. The most significant contributor to the embodied carbon emissions is asphalt which accounts for 90% of total embodied carbon emissions, followed by steel at 10%.

**Table 2: Embodied Carbon Emissions during Maintenance of the Proposed Scheme**

Embodied Carbon Material	Tonnes CO <sub>2eq</sub> / Total	% Contribution
Asphalt	152.5	90%
Steel Columns	17.0	10%
Total	169.5	100%