

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, creating a modern and dynamic visual effect.

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. These are shown in Table 1. The most significant contributor to the embodied carbon emissions is asphalt which accounts for 33% of total embodied carbon emissions followed by ground granulated blast slag (GGBS) at 26% as listed in Table 1.

Table 1: Embodied Carbon Emissions During Construction of the Proposed Scheme

Embodied Carbon Material	Tonnes CO _{2eq} / Total	% Contribution
Asphalt	2144.9	33%
Aggregates	157.8	2%
Precast concrete	666.2	10%
GGBS	1676.3	26%
Steel	1146.6	18%
Other	462.3	7%
Transport of Materials	184.7	3%
Total	6438.7	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 will be asphalt which will account for 46% of total embodied carbon emissions followed by road markings at 44%.

Table 2: Embodied Carbon Emissions During Maintenance of the Proposed Scheme

Embodied Carbon Material	Tonnes CO _{2eq} / Total	% Contribution
Asphalt	70	46%
Road markings	68	44%
Other	17	10.28%
Total	155	100%