Appendix A8.1
Embodied Carbon

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1.1 Construction Phase Embodied Carbon

This appendix provides the key parameters and greenhouse gas (GHG) outputs associated with embodied carbon emissions during the Construction Phase of the Proposed Scheme, as shown in Table 1. The most significant contributor to the embodied carbon emissions is asphalt which accounts for 31% of total embodied carbon emissions followed by GGBS at 25% 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	736	31%
Aggregates	30	1%
GGBS	593	25%
Steel	529	22%
Other	229	10%
Transport of Materials	237	10%
Total	2,353	100%

1.2 Maintenance Phase Embodied Carbon

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 96% of total embodied carbon emissions followed by steel at 2%.

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

Embodied Carbon Material	Tonnes CO_{2eq} / Total	% Contribution
Asphalt	66.2	96%
Steel Columns	1.6	2%
Other	1.6	2%
Total	69.0	100%