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 as shown in Table 1. The most significant contributor to the embodied carbon emissions is Ground Granulated Blastfurnace Slag (GGBS) which accounts for 46% of total embodied carbon emissions followed by asphalt at 43% as listed in Table 1.

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

Embodied Carbon Material	Tonnes CO_{2eq} / Total	% Contribution
Asphalt	1,288	43%
Aggregates	83	3%
Precast concrete	102	3%
GGBS	1,376	46%
Other	51	2%
Transport of Materials	71	2%
Total	2,971	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 all of the embodied carbon emissions.

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

Embodied Carbon Material	Tonnes CO_{2eq} / Total	% Contribution
Asphalt	1,109	100%
Total	1,109	100%