

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 shapes, some of which are layered or overlapping. The shapes are scattered across the page, with a concentration in the top right and bottom left corners.

Appendix A8.1

Embodied Carbon

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Appendix A8.1: Embodied Carbon

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% |