

The background is a vibrant yellow. It is decorated with several abstract geometric shapes. There are teal-colored shapes, some of which are elongated with rounded ends and contain a white circle. There are also dark blue shapes, including a large circle and several elongated forms. Light blue shapes are also present, including a large circle and some elongated forms. The shapes are scattered across the page, creating a dynamic and modern aesthetic.

Appendix A8.1

Construction Phase 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 asphalt which accounts for 62% of total embodied carbon emissions followed by precast concrete at 17% 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 | 2,801 | 62% |
| Precast concrete | 784 | 17% |
| GGBS - RC 25/30 (25/30 MPa) - 50% | 3.3 | 0.1% |
| Plastic cable ducting | 195 | 4% |
| Steel columns | 220 | 5% |
| Other | 139 | 3% |
| Transport of Materials | 1,230 | 3% |
| Total | 4,521 | 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 85% of total embodied carbon emissions followed by concrete at 14%.

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

| Embodied Carbon Material | Tonnes CO _{2eq} / Total | % Contribution |
|--------------------------|----------------------------------|----------------|
| Asphalt | 119 | 78% |
| Road markings | 13 | 8% |
| Steel Columns | 24 | 15% |
| Other | 0.1 | 0.1% |
| Total | 155 | 100% |