

The background is a vibrant yellow. It is decorated with several abstract geometric shapes in shades of blue, teal, and white. These shapes include circles, semi-circles, and rounded rectangles, some of which are partially cut off by the edges of the page. The overall aesthetic is modern and clean.

## **Appendix A8.1** Embodied Carbon

**Contents**

**Appendix A8.1: Embodied Carbon ..... 1**

1.1 Construction Phase Embodied Carbon ..... 1

1.2 Maintenance Phase Embodied Carbon..... 1

## Appendix A8.1: Embodied Carbon

### 1.1 Construction Phase Embodied Carbon

This appendix provides the key parameters and 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 47% of total embodied carbon emissions followed by precast concrete at 23% as listed in Table 1.

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

Embodied Carbon Material	Tonnes CO <sub>2eq</sub> / Total	% Contribution
Asphalt	2,961	47%
Aggregates	272	4%
Precast concrete	1,442	23%
GGBS	71	1%
Steel	848	13%
Other	496	8%
Transport of Materials	211	3%
Total	6,301	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 86% of total embodied carbon emissions followed by steel at 8%.

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

Embodied Carbon Material	Tonnes CO <sub>2eq</sub> / Total	% Contribution
Asphalt	380	86%
Steel Columns	36	8%
Other	23	5%
Total	440	100%