

APPENDIX I:

CLIMATE CHANGE ADAPTATION AND MITIGATION

Table 1 Embodied Carbon in Construction Materials

Material*	Square meters (m²)	Total Emissions (tonnes CO₂e)
Foundation concrete	8,577	500
Bricks	27,040	717
Concrete Blocks	33,800	1,775
Roof Tiles	17,520	167
Plasterboard	27,040	32
Glazing	4,056**	498
Asphalt***	26,707	762
Total TCO₂		4,451

*These figures have been assumed based upon a typical home type from similar project examples undertaken by the applicant

**Glazing taken as 15% of brick/plasterboard area

***The total impermeable area for the Proposed Development has been taken from the Flood Risk Assessment and Sustainable Drainage Systems (SuDS) Strategy (Table 6) subtracted by the Land Use Area found in Volume 2 Chapter 5 (Table 5.1) to provide a high-level estimate of the area of the roadways being constructed.

Figure 1 Contribution of the construction materials by resource type

TOTAL kg CO2e - Resource types

This is a drilldown chart. Click on the chart to view details

- Precast - 43.6%
- Bricks and ceramics - 16.1%
- Asphalt - 17.1%
- Ready-mix - 11.2%
- Glass - 11.2%
- Gypsum and plaster - 0.7%

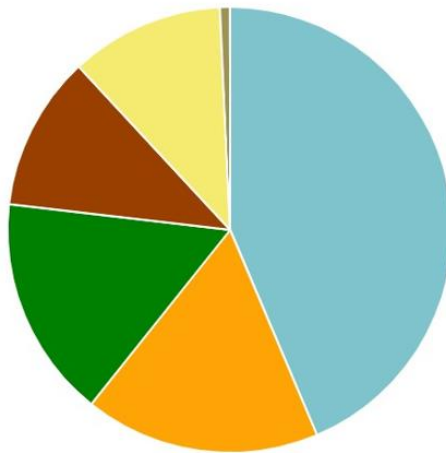


Table 2 CO₂ (kg) Resulting from Construction Traffic through the Construction Phases

Year	AADT	AADT (HDV)	Total Assumed Distance (LGV) km	Total Assumed Distance (HGV) km	Total emissions
2022	85	25	50.0	50.0	494.0
2023	85	25	50.0	50.0	492.8
2024	85	25	50.0	50.0	491.7
2025	85	25	50.0	50.0	490.6
2026	85	25	50.0	50.0	489.5
Total					2,458.6
Total TCO2e					2.4586

Table 3 Operational Traffic Generated

Road Link	All vehicles on road link (AADT)	% HGV's	Link Length (km)
Kidmore End Road North	1060	5%	0.96
Kidmore End Road South	3547	5%	0.30
Peppard Road North	11907	6%	0.53
Kiln Road	2754	5%	0.59

Fairfax Properties

T4328 – Reading Golf Course

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Caversham Park Road	6138	5%	0.44
Peppard Road Central	12791	6%	0.23
Buckingham Drive	17755	5%	0.27
Peppard Road South	15231	5%	1.21
Henley Road	9829	8%	0.37
Prospect Street	15925	6%	0.29
Total			3,135.24
Total TCO₂e			3.135

Table 4 Operational Traffic CO₂ Emissions (tonnes) based upon 100-year lifecycle

Vehicle Type	CO ₂ (tonnes)
Other vehicles	312.81
HGV	0.710
Total	313.52