



Technical Appendix

14.1: GHG Assessment

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14 GHG ASSESSMENT

14.1 Emission Factors

- 14.1.1.1 For all scopes, the GHG assessment uses the conversion figures set out in the latest Government Conversion Factors for Company Reporting.
- 14.1.1.2 For the scope 3 embedded emissions, weight and unit values for specific materials were converted to GHG life cycle values using average conversion factors from UK Government (DESNZ and DEFRA 2024) and Ecoinvent 3.10 (accessed through SimaPro). Emission factors were mapped as accurately as possible using the descriptions provided.
- 14.1.1.3 For the Scope 3 decommissioning emissions, the GHG assessment uses the calculated embedded emissions for each type of material and applies a 20% decommissioning factor as set out by the National Renewable Energy Laboratory assessment of life cycle GHG emissions from solar photovoltaics (NREL, November 2012)¹.
- 14.1.1.4 For all avoided or displaced emissions, the GHG assessment uses the 'Generation-based' UK grid factors as set out in the latest Government Conversion Factors for Company Reporting.
- 14.1.1.5 The GHG emissions intensity for alternative generation types is presented as set out in Annex III: Technology-specific Cost and Performance Parameters, Mitigation of Climate Change, AR5, IPCC, 2014.

¹ Life Cycle Greenhouse Gas Emissions from Solar Photovoltaics (Fact Sheet), NREL (National Renewable Energy Laboratory)

14.2 GHG emissions inventory for proposed development

14.2.1.1 **Table 14.1** details the significant sources of GHG emissions associated with the Proposed Development and categorises these into scope 1, scope 2 and scope 3 GHG emissions for reporting purposes.

TABLE 14.1 INVENTORY OF GHG EMISSIONS ASSOCIATED WITH CONSTRUCTION, OPERATION AND DECOMMISSIONING OF THE PROPOSED DEVELOPMENT

SCOPE	GHG EMISSIONS SOURCE (FROM CONSTRUCTION, OPERATION AND DECOMMISSIONING)	TOTAL GHG EMISSIONS (TCO ₂ E)
Construction		
Scope 1	Stationary and Mobile Combustion	2,000
Scope 2	Electricity consumption	-
Scope 3	Embedded emissions	403,000
	Transportation	4,000
Operation		
Scope 1	Stationary Combustion	-
Scope 2	Electricity consumption	24,000
Scope 3	Embedded emissions	-
Decommissioning		
Scope 1	Stationary Combustion	-
Scope 2	Electricity consumption	-
Scope 3	Decommissioning	109,000
Total GHG emissions (from construction, operation and decommissioning)		542,000