

Appendix C: Sustainability Reporting Requirements







Introduction

The sustainability reporting requirements for the transport portfolio are summarised in this guidance and apply to all transport infrastructure design, construction and operation. The reporting template or online reporting tool will be provided as part of contract documents – the tables in this document indicate the minimum reporting requirements at portfolio level. There are several tools available that can be used to support sustainability reporting including: NABERS embodied emission factors tools¹ and National Guidance on measurement of embodied emissions.²

This document should be read in conjunction with:

- The Transport Portfolio Sustainable Infrastructure Policy
- Appendix A: Sustainable Procurement and Contracts Guidance
- Appendix B: Carbon Hierarchy and Life cycle Assessment Guidance

The table below summarises data requirements at different life cycle stages.

					
Business Case and Options Analysis	Concept Design	Detailed Design	Construction	Operation & Maintenance	End of life
High-level life cycle assessment (LCA) for water, energy, and materials.	More granular LCA for base case/ reference design.	More granular LCA with performance against base case and targets set at each design gate.	Quarterly reporting of actual construction data and performance against LCA base case.	Operational energy, materials and water usage data.	Landfill / recycling / reuse data
Table 1	Table 1	Table 1	Table 1 - 6	Table 2-5	Table 5
Bill of Quants (BoQ), cost estimates	BIM model / cost estimates / BoQ	BIM model / cost estimates / BoQ / EPDs	Actual usage data	Actual usage data	Actual waste/reuse/ recycling data

¹ [NABERS Embodied Carbon | NABERS](#)

² Infrastructure and Transport Ministers Meeting, 2024, Embodied Carbon Measurement for Infrastructure: [Microsoft Word - Embodied Carbon Measurement for Infrastructure FINAL 20240626.docx](#)

Table 1: Scenarios Modelled	Base: Business As Usual / Do Nothing / Reference Scenario	Planned: Proposed / Approved Design / Actual Build Scenario	Unit
Water LCA Key Quantities Modelled			
Water (Construction) (Phase/Module A5)			
Total water use amount in construction			KL
Potable water use amount in construction			KL
Non-potable water use amount in construction			KL
Water (Operation) (Phase/Module B7)			
Total water use amount in operation: annual forecast			KL
Total water use amount in operational design life			KL
Potable water use amount in operational design life			KL
Non-potable water use amount in operational design life			KL
Materials LCA Key Quantities Modelled			
Material (Construction) (Phase/Module A1-A5)			
Amount of tCO2-e GHG emissions embodied in materials brought in during construction			tCO2-e
Material (Operation) (Phase/Module B1-B5)			
Amount of tCO2-e GHG emissions embodied in materials brought in after construction (end of life replacements)			tCO2-e
Material (End of Life) (Phase/Module C1-C4)			
Amount of tCO2-e GHG emissions in materials deconstruction or demolition, waste processing, recovery or disposal and associated transport.			tCO2-e
Energy LCA Key Quantities Modelled			
Energy (Construction) (Phase/Module A5)			
Amount of tCO2-e GHG emissions in energy for construction			tCO2-e
Amount of annual forecast operational grid electricity			kWh
Amount of annual forecast operational diesel			kL
Amount of annual forecast operational petrol			kL
Amount of annual forecast onsite renewable electricity generated			kWh
Energy (Operation) (Phase/Module B6 excl. B8 - enabled energy consumption by third party users)			

Amount of annual forecast operational grid electricity			kWh
Amount of annual forecast operational diesel			kL
Amount of annual forecast operational petrol			kL
Amount of annual forecast operational gas			GJ
Amount of annual forecast onsite renewable electricity generated			kWh
Amount of tCO ₂ -e GHG emissions in energy for whole of operational period design life - forecast			tCO ₂ -e
Energy (Operation) (Phase/Module B8 – user enabled)		Use ATAP PV5 Guidance	

Construction data – resource input and outputs

Table 2: Construction Energy and Fuel Use	Unit
Purchased grid electricity	kWh
Purchased green grid electricity	kWh
On-site renewable energy generated	kWh
Petrol on-road	KL
Petrol off-road	KL
Diesel on-road	KL
Diesel off-road	KL
Renewable diesel / biodiesel	KL
Liquefied petroleum gas (LPG)	KL
Hydrogen	tonnes
Oil	KL

Table 3: Construction Water Use	Units
Potable Water	KL
Non-Potable Water	KL
Recycled/wastewater	KL

Table 4: Resource Input Data (tonnes)

Virgin	Recycled	Reused onsite/offsite
Concrete	Crushed Glass	Sand
Steel	Steel	Spoil
Sand	Crushed recycled concrete	Limestone
Gravel	Mulch (FOGO)	Topsoil
Clay	Asphalt	Asphalt
Aggregate	Aggregate	Road base
Asphalt	Topsoil	Aggregate
Mulch	Sand	Ballast
Ballast	Clay	General fill
Topsoil	Crumb rubber	Mulch
Crushed limestone	Low carbon concrete (50% improvement on standard mix using EPD data) ³	Clay
Crushed rock	Aluminium	Road Base
Bitumen	Plastic	Rail Track
Aluminium	Timber	Rail Sleepers
Plastic		Timber
Glass		
Timber		

³ [MECLA's guide to low-carbon concrete - Version 1, Revision Number: 3 \(final draft\)](#)

Table 5: Resource Outputs Data (tonnes) Landfill/Recycled/Reused onsite/offsite	
Construction and Demolition	Site Office
Asphalt	Municipal solid waste
Mixed C&D	Mixed recycling
Spoil	FOGO
Concrete	Containers for change
Road Base	E-waste
Bricks and pavers	Cardboard/paper
Steel	
Metals	
Timber	
Mulch	
Plastic	
Asbestos	
Acid Sulphate Soils	
Contaminated material	

Table 6: Land Management	Units
Area of vegetation cleared	Hectares
Area revegetated/rehabilitated	Hectares
Number of trees retained	No.
Number of trees felled	No.
Number of trees planted	No.