

Waste Management Sub-Plan

Cross River Rail – Rail, Integration and Systems Alliance

Project number:	Q01080
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Document Approval

Rev	Date	Prepared By	Reviewed By	Approved By	Remarks
A	28/06/19	UNITY – Environment Manager	UNITY – Delivery Manager		IFR
	15/10/19	UNITY – Environment Manager	UNITY – Delivery Manager		IFR
C	26/11/19	UNITY – Environment Manager	UNITY – Delivery Manager		IFR
D	19/12/19	UNITY – Environment Manager	UNITY – Delivery Manager	UNITY – Environment Manager	IFU
00	24/01/20	UNITY – Environment Manager	UNITY – Delivery Manager	UNITY – Environment Manager	IFU
01	23/06/20	UNITY – Senior Environmental Advisor	UNITY – Environment Manager		IFR
02	07/09/20			UNITY – Environment Manager	IFU
03	26/08/21	UNITY – Senior Environmental Advisor	UNITY – Environment Manager		IFR
04	12/10/21			UNITY – Environment Manager	IFU
Signature:					

Plan Control

This Waste Management Sub-Plan (the plan) has been developed for the Cross River Rail – Rail, Integration and Systems Project.

Approvals, Revisions and Amendments

Plan approval is in accordance with Section 4.1.2 of the Construction Environmental Management Plan (C-EMP).

Plan reviews and updates is in accordance with Section 7 and Section 8.1 of the C-EMP.

Revision Details

Revision	Remarks
A	Final C-EMP for Review and endorsement by the Environmental Monitor
B	Updated to incorporate IEM comments dated 06 September 2019
C	Updated to incorporate IEM comments dated 04 November 2019
D	Updated to incorporate IEM comments dated 13 December 2019
00	Plan updated to include minor clarification on monitoring and reporting process for unrestricted endorsement
01	6 monthly review and updated to incorporate changes linked to RfPC-7 and Updated O-EMP where relevant The update does not include new or additional Relevant Project Works
02	Issued for Use
03	Issued for review to the IEM 6 monthly review No updates required because of: <ul style="list-style-type: none"> • RfPC-11, and • The addition of the Southern Area Scope of Works (Dutton Park and Buranda)
04	Issued for Use

1 Purpose of this Plan

This sub-plan has been prepared to demonstrate how UNITY will to comply with:

- Imposed Condition 11(a) – Schedule 2 – Environmental Design Requirements
- Final Outline-Environment Management Plan (O-EMP) – Outline Waste Management Plan.

Component	Details
Environmental Outcome(s)	<ul style="list-style-type: none"> • Construction activities, including demolition, are designed planned and implemented to minimise the generation of waste materials • Storage, handling, transportation and disposal of waste materials generated during construction are carried out to avoid environmental harm and adverse impacts on communities • Reuse and recycling of construction waste materials generated by project construction activities is optimised.
Relevant Area	Site wide
Relevant Works / Activities	<ul style="list-style-type: none"> • Construction processes generated waste streams such as: <ul style="list-style-type: none"> – Contaminated spoils – General waste – Recyclable and recoverable waste • Plant maintenance • Operation and maintenance of offices and crib huts.
Performance Criteria	<ul style="list-style-type: none"> • Construction activities are conducted in accordance with an approved Waste Management Plan that includes: <ul style="list-style-type: none"> – Waste management principles (avoid, reduce, reuse and recycle) and sustainable disposal strategies – Targets to recover and reuse construction waste, including demolition waste for all classes or categories of waste – All reasonable and practicable steps are taken to minimise the impacts of handling and disposal of construction waste at the worksites, and at the disposal sites • Hazardous waste is handled and disposed of in accordance with specific management plans approved by Workplace Health and Safety Queensland • Waste generated by the project is managed in accordance with the statutory requirements and recovery targets set out in the <i>Queensland Government's Waste – Everyone's Responsibility Queensland Waste Avoidance and Resource Productivity Strategy (2014- 2024)</i>.
Sustainability	Was-1 and Was-2.
Mitigation Measure	<ul style="list-style-type: none"> • The project will adopt and implement the principles of the Waste Management Hierarchy wherever possible to contribute to meeting the <i>Queensland Waste Management and Resource Recovery Strategy (the Strategy)</i>. The hierarchy follows: <ol style="list-style-type: none"> 1. Waste avoidance 2. Waste reuse 3. Waste recycling 4. Energy recovery from waste 5. Waste disposal • Opportunities are investigated during the detailed design phase for the use of recycled materials during construction, including for Project infrastructure produced from concrete, road base, asphalt and other construction materials. • The feasibility of reusing materials from the project will be investigated during the design phase, using the design review process in addition to sustainability workshops initiated as part of the ISCA framework (e.g. "<i>Waste materials / circular Economy workshops</i>").

Component	Details
	<ul style="list-style-type: none"> Classify, store, track, transport, dispose and treat all wastes in accordance with regulatory requirements, including the use of licensed transporters and treatment facilities Construction activities are to take into consideration the minimisation of waste materials with reuse of materials where possible, Recovery and reuse targets for waste are included within the Sustainability Management Plan with specific reference to achieving ISCA scoring. Targets will be specified within the sustainability Management Plan and success demonstrated through monthly reporting streams. The relevant licences of waste transporters and disposal facilities used for the disposal or handling of waste are reviewed to ensure they are legally compliant Storage containers (bins, skips, tanks, etc.) are provided at each work area in sufficient numbers to facilitate segregation of waste at the source of generation, wherever possible. The correct bin type must be used to avoid contamination Containers are sign-posted if required to inform all project personnel of the correct material to be placed within each bin type Containers are emptied at a frequency sufficient to ensure their correct use An adequate number of concrete washout pits will be maintained on the site at all times during concreting activities Excess concrete and concrete washout will not to be discharged to land or stormwater; a concrete washout facility must always be used Any contaminated material needing disposal off site will be disposed of at a licensed facility in compliance with legal requirements, and accompanied by a Waste Tracking Certificate or Soil Disposal Permit (refer Contaminated Land Sub-plan) when triggered The handling, storage and disposal of hazardous materials (such as dangerous goods and asbestos) is in accordance with the Project Approved WHS Management Plan (RIS-UNA-SAH-MPL-00200)
Monitoring	<p>Monitoring is undertaken in accordance with the Construction Monitoring Program (Attachment 4 of the C-EMP)</p> <p>The waste register is reviewed monthly to monitor success against the waste reduction targets set in the Sustainability Management Plan</p>
Reporting	<p>Tracking and reporting of trackable regulated waste will be undertaken in accordance with statutory requirements under the <i>Environmental Protection Act 1994</i>.</p> <p>All waste data (trackable regulated and non-trackable) will be recorded in the Master Waste Register (included in the Monthly Alliance Report).</p> <p>Alternative reporting is in accordance with Section 8.2 of the C-EMP.</p>
Corrective Action	<p>Management of corrective actions will be undertaken as per Section 6 of the C-EMP.</p>
Auditing	<p>UNITY will undertake regular subcontractor audits, inclusive of waste transporters, to confirm compliance with waste management requirements</p> <p>Additional auditing is as per Section 7 of the C-EMP.</p>

2 Waste Stream Management Strategy

The below table summarises the potential materials / waste streams to be generated by the project.

The Unity Team has identified strategies for the minimisation of waste going to landfill inclusive of opportunities to re-use some of the materials on site where lawful to do so.

The Unity team will work closely with the Department of Environment and Science Waste and Contaminated Land teams to ensure the waste hierarchy can be implemented without compromising the legal obligations the Project must abide by.

Some of the waste detailed in the strategy are proposed to be re-used within the QR network.

The Unity team will work closely with Queensland Rail to ensure that this strategy:

- Is aligned with Queensland Rail EMS requirements
- Does not create a negative operational legacy issue (legal compliance or management)

Materials / Waste stream description	Project Strategy for Management (in order of preference)
Filter cake (other than filter cake waste generated from the water treatment plants)	<ul style="list-style-type: none"> • Landfill Disposal
Profilings (asphalt)	<ul style="list-style-type: none"> • Re use profiling in fill • If profiling cannot be reused - send to a recycling facility • Landfill Disposal
Slurries from non-destructive digging operations	<ul style="list-style-type: none"> • Re use separated water as dust suppression (or let evaporate) and dried out solids in fill • Disposal to water treatment plant
Acidic Basic (alkaline) solutions such as concrete washout water Concrete washout waters, residual liquids in containers / drums etc including hydro acid	<ul style="list-style-type: none"> • Disposal to landfill
Asbestos Waste <u>excluding</u> asbestos contaminated spoil	<ul style="list-style-type: none"> • Disposal to landfill
Lead acid batteries (intact)	<ul style="list-style-type: none"> • Send to a reconditioning facility • Disposal to landfill
Oil and water mixtures or emulsions, or hydrocarbons and water mixtures or emulsions (e.g. washdown bay water)	<ul style="list-style-type: none"> • Send to a reconditioning /recovery facility • Send to wastewater treatment plant
Septic, sewage sludge and residues	<ul style="list-style-type: none"> • Connect to trade waste • Send to wastewater treatment plant
Tyres	<ul style="list-style-type: none"> • Send to recycling facility • Disposal to landfill
Waste Oil	<ul style="list-style-type: none"> • Send to a reconditioning /recovery facility • Send to wastewater treatment plant
Waste chemicals and their containers such as dangerous goods and hazardous chemicals	<ul style="list-style-type: none"> • Disposal to landfill
Hydrocarbon Spill Clean-up Material	<ul style="list-style-type: none"> • Re-use on site following some bioremediation • Disposal to landfill
Oily filters / Rags	<ul style="list-style-type: none"> • Send to a reconditioning /recovery facility • Disposal to landfill

Materials / Waste stream description	Project Strategy for Management (in order of preference)
Excess Spoil excluding CLEAN EARTH (excluding ASS, Asbestos presence, and other contaminated soils) from non EMR / CLR listed lots	<ul style="list-style-type: none"> Re-use on site Send to landfill for re-use as day cover material Send to landfill for disposal
Excess Spoil - CLEAN EARTH ONLY	<ul style="list-style-type: none"> Re-use on site Re-use at another site Send to landfill for re-use as day cover material Send to landfill for disposal
Contaminated Spoil material (including ballast) from EMR / CLR Listed lots	<ul style="list-style-type: none"> Re-use on site Send to landfill for re-use as day cover material Send to landfill for disposal
Acid Sulfate Soil	<ul style="list-style-type: none"> Re-use on site (treated) Send to landfill for re-use as day cover material Send to landfill for disposal
Chemically Treated Solid Timber (e.g. rail sleepers / poles)	<ul style="list-style-type: none"> Re-use by Queensland Rail Send to recycling facility (if comply with EoW code) Landfill disposal
Timber (excluded treated timber)	<ul style="list-style-type: none"> Re-use by Queensland Rail Send to recycling facility Landfill disposal
Steel (e.g. track, mast foundations)	<ul style="list-style-type: none"> Re-use by Queensland Rail Send to recycling facility Landfill disposal
Other Metals	<ul style="list-style-type: none"> Re-use by Queensland Rail Send to recycling facility Landfill disposal
HDPE / Plastics (including composite sleepers)	<ul style="list-style-type: none"> Re-use by Queensland Rail Send to recycling facility Landfill disposal
Cardboard	<ul style="list-style-type: none"> Send to recycling facility Landfill disposal
Office Waste – Recycling (or comingled)	<ul style="list-style-type: none"> Send to recycling facility Landfill disposal
Green waste	<ul style="list-style-type: none"> Reuse on site for ESC or landscaping Send to composting facility Landfill disposal
Concrete, including concrete washout waste (excluding wash out water)	<ul style="list-style-type: none"> Reuse on site Send to recycling facility Landfill disposal
Office Waste – General	<ul style="list-style-type: none"> Landfill disposal