Construction Environmental Management Framework

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northwestraillink

North West Rail Link Construction Environmental Manaqgement Framework

Version Register

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1 Introduction

1.1 Purpose and Scope

This Environmental Management Framework (Construction Environmental Management Framework) is a North West Rail Link (NWRL) project wide framework which sets out the environmental, stakeholder and community management requirements for the construction of the project.

The NWRL project is approved staged infrastructure under Part 5.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act). The project is proposed to be implemented in two stages under this approval, with each stage having its own Environmental Impact Statement (EIS) and approval process as follows:

- **Stage 1 –** Major Civil Construction Works (EIS 1). Stage 1 received planning approval on 25 September 2012.
- **Stage 2 –** Stations, Rail Infrastructure and Systems (EIS 2).

The project will be delivered under multiple, separate construction contracts.

This Construction Environmental Management Framework provides a linking document between the planning approval documentation and the construction environmental management documentation to be developed by the Principal Contractors relevant to their scope of works.

NWRL Principal Contractors will be required to implement and adhere to the requirements of this Construction Environmental Management Framework in designing and constructing the NWRL works. The requirements of this Construction Environmental Management Framework will be included as a contract document in all design and construction contracts related to the NWRL.

1.2 Status

This is a controlled document. It will be updated as required through the life of the NWRL project.

1.3 Environment and Sustainability Policy

Transport for NSW (TfNSW) has developed an Environment and Sustainability Policy (Appendix A) for the NWRL Project. NWRL Principal Contractors will be required to undertake their works in accordance with this policy. Specifically the policy reflects a commitment in the delivery of the NWRL to:

- Optimise environmental and sustainability outcomes, transport service quality, and cost effectiveness.
- Develop effective and appropriate responses to the challenges of climate change, carbon management, resource and waste management, land use integration, customer and community expectation, and heritage and biodiversity conservation.
- Be environmentally responsible, by enhancing the natural environment and reducing the project ecological footprint, while complying with all applicable environmental laws, regulations and statutory obligations

1.4 Project Description

The NWRL will provide eight new stations and services over a 23 kilometre addition to the rail network from Epping to beyond Rouse Hill in north west Sydney as shown on **Figure 1**. The base scope of the project includes the construction of stations at Cherrybrook, Castle Hill, Showground, Norwest, Bella Vista, Kellyville, Rouse Hill and Cudgegong Road. Bus, pedestrian, taxi and cycle access facilities would be provided at all stations with park and ride spaces proposed at Cherrybrook, Hills Centre, Bella Vista, Kellyville and Cudgegong Road Stations. The project scope also includes a train stabling facility at Tallawong Road beyond Rouse Hill to accommodate 16 eight car train sets, with the potential to later increase this capacity for up to 24 train sets.

The greater majority of the railway, approximately 15.5 km, is underground in tunnel from Bella Vista to Epping. Such significant lengths require multiple, simultaneous excavation processes by TBM and roadheaders. The balance of the NWRL is 7.5 km of above ground civil works dominated by a 4.2 km long elevated viaduct structure, with some shorter sections of embankment and cutting. Two major concrete batch plant and precast facilities are also proposed, at Balmoral Road and Memorial Drive to service the construction of the tunnel and viaduct components of the project respectively.

The full project description is provided within the two EISs.

Figure 1 Overview of alignment

2 Legislative and Other Requirements

The key NWRL environmental obligations to be addressed at different stages of the project are contained within:

- Legislative requirements.
- Project approval documentation.
- Ministers' Conditions of Approval.
- Environment Protection Licences.
- Other permits, approval and licences.
- Standards and guidelines.

2.1 Key Legislative Requirements

Table 1.1 below identifies key NSW environmental legislative requirements and their application to the construction of the NWRL current as at the date of this document. TfNSW and its Contractors should regularly review their legislative requirements.

Table 1.1 NSW Legislative Requirements

Legislation and Administering Authority	Requirements	Application to NWRL
Contaminated Land Management Act 1997 NSW Environment Protection Authority (EPA)	The Act provides a process for the investigation and remediation of land where contamination presents a significant risk of harm to human health or some other aspect of the environment.	The NWRL must follow the process where contaminated land is identified.
Dangerous Goods Act 1985 EPA Workcover	A licence is required for the storage (Workcover) and /or transport (EPA) of prescribed quantities of dangerous goods.	The NWRL Principal Contractors must obtain a licence where storage of dangerous goods would exceed licensable quantities.
Environmental Planning and Assessment Act 1979 Department of Planning and Infrastructure (DP&I)	Planning approval required for the proposal as State Significant Infrastructure.	The NWRL must adhere to mitigation measures (including Statement of Commitments) within the EIS and comply with any Minister's Conditions of Approval.
Fisheries Management Act 1994 Department of Primary Industries (Fisheries)	The relevant objectives of the Act are to conserve threatened species, populations and ecological communities and promote ecologically sustainable development, including the conservation of biological diversity	The NWRL is exempt from permits required under sections 201, 205 or 219.

Legislation and Administering Authority	Requirements	Application to NWRL
Heritage Act 1977 NSW Office of Environment and Heritage (OEH)	The Act aims to encourage the conservation of the State's heritage and provides for the identification and registration of items of State heritage significance.	The NWRL is exempt from approvals required under Part 4 and permits required under section 139.
National Parks and Wildlife Act 1974 OEH	The objectives of the Act are for the conservation of nature and the conservation of objects, places or features (including biological diversity) of cultural value within the landscape.	The NWRL is exempt from obtaining an Aboriginal Heritage Impact Permit required under section 90.
Native Vegetation Act 2003 OEH	The objective of the Act is to protect and improve the value of native vegetation.	The NWRL is exempt from section 12 authorisation to clear native vegetation.
Noxious Weeds Act 1993 Department of Primary Industries	The Act aims to prevent the introduction of new weeds and restrict the spread of existing weeds.	The NWRL Principal Contractors must control weeds as required on land under the management of the Contractor.
Protection of the Environment Operations Act 1997 EPA	The relevant objective of the Act is to prevent environmental pollution.	The NWRL is a scheduled activity under Schedule 1 of the Act. Therefore the NWRL must obtain an Environment Protection Licence (EPL). Further details on the requirements to obtain an EPL are provided in Section 2.2.
Roads Act 1993 Roads and Maritime Service	The relevant objective of the Act is to regulate the carrying out of various activities on public roads.	The NWRL Principal Contractor must obtain consent under section 138 for carrying out work in, on or over a public road, or digging up or disturbance of the surface of the road.
Waste Avoidance and Resource Recovery Act 2001 EPA	The objectives of the Act are to reduce environmental harm and provide for the reduction in waste generation.	NWRL Principal Contractors must implement strategies to reduce waste volumes and report on waste generated.
Water Management Act 2000 NSW Office of Water	The relevant objective of the Act is to protect, enhance and restore water sources, their associated ecosystems, ecological processes and biological diversity and their water quality.	The NWRL is exempt from obtaining water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91.

Table 1.2 below identifies key Commonwealth environmental legislative requirements and their application to the construction of the NWRL current as at the date of this document. TfNSW and its Contractors should regularly review their legislative requirements.

Table 1.2 Commonwealth Legislative Requirements

Legislation and Administering Authority	Requirements	Application to NWRL
Environment Protection and Biodiversity Conservation Act 1999 Department of Sustainability, Environment, Water, Population and Communities	The relevant objective of the Act is to provide for the protection of the environment, especially those aspects of the environment that are matters of national environmental significance.	The NWRL submitted a referral as its works may have an impact on the matters of national environmental significance outlined in Section 2.3.
National Greenhouse and Energy Reporting Act 2007 Department of Climate Change and Energy Efficiency	The Act established a framework for reporting of greenhouse gas emissions, abatement actions, energy consumption and production data.	NWRL Principal Contractors must report on greenhouse gas and energy usage data as required by the Act.

2.2 Environment Protection Licence Requirements

The NWRL meets the definition of a number of scheduled activities under Schedule 1 of the *Protection of the Environmental Operation Act 1997* (POEO Act) and as such must obtain an Environment Protection Licence (EPL).

a. Where required NWRL Principal Contractors will be required to:
   - Hold an EPL which covers their scope of works as necessary under the POEO Act.
   - Undertake their scope of works in accordance with the conditions of the applicable EPL/s as issued by the EPA.

2.3 Environment Protection and Biodiversity Conservation Act 1999 Referral

The NWRL has submitted a referral under the E*nvironment Protection and Biodiversity Conservation Act 1999* to the Commonwealth Department of Sustainability, Environment, Water, Population and Communities as it may have an impact on the following Matters of National Environmental Significance:

Four listed ecological communities as follows:

- Blue Gum High Forest of the Sydney Basin Bioregion (critically endangered ecological community).
- Cumberland Plain Shale Woodland and Shale-Gravel Transition Forest (critically endangered ecological community).
- Shale / Sandstone Transition Forest (endangered ecological community).
- Turpentine-Ironbark Forest in the Sydney Basin Bioregion (critically endangered ecological community).

Potential habitat for six listed fauna species as follows:

- Green and Golden Bell Frog (vulnerable).
- Grey-headed Flying Fox (vulnerable).
- Large-eared Pied bat (vulnerable).
- Regent Honeyeater (endangered; migratory).
- Spotted-tailed Quoll (endangered).
- Swift Parrot (endangered).

Potential habitat for nine listed migratory fauna species as follows:

- Black-faced Monarch.
- Cattle Egret.
- Fork-tailed Swift.
- Great Egret.
- Latham's Snipe.
- Regent Honeyeater.
- Rufous Fantail.
- Satin Flycatcher.
- White-throated Needletail.

As the NWRL has been determined to be a controlled action under the Environment Protection and Biodiversity Conservation Act, TfNSW and the Principal Contractors will comply with the conditions of any approval issued under the this act

2.4 Standards and Guidelines

Numerous environmental publications, standards, codes of practice and guidelines are relevant to the NWRL construction and are referenced throughout this Construction Environmental Management Framework. A summary of these applicable standards and guidelines is provided in **Table 1.3.**

Table 1.3 Environmental Standards and Guidelines

Standard / Guideline	Relevant Authority	Construction Environmental Management Framework Reference
Transport for NSW Sustainable Design Guidelines	TfNSW	-
ISO14001 Environmental Management System – Requirements with Guidelines for Use	DP&I	Section 3.1
Guideline for the Preparation of Environmental Management Plans (Department of Infrastructure, Planning and Natural Resources, 2004)	DP&I	Section 3.1
Interim Construction Noise Guidelines (Department of Environment and Climate Change, 2009)	EPA	Section 5.1 and 9.2
Traffic Control at Worksites Manual Version 4 (NSW RTA, 2010)	Roads and Maritime Service (RMS)	Section 8.2
AS1742.3:2009 Manual of Uniform Traffic Control Devices – Traffic Control Devices for Works on Roads	RMS	Section 8.2
Guide to Traffic Management – Part 2: Traffic Theory (Austroads, 2008)	RMS	Section 8.2
Managing Contaminated Land Planning: Planning Guidelines SEPP 55 – Remediation of Land (Department of Urban Affairs and Planning & Environment Protection Authority, 1998)	DP&I	Section 6.2
Acid Sulphate Soil Manual (NSW Acid Sulphate Soils Management Advisory Committee, 1998)	EPA	Section 6.2
Managing Urban Stormwater: Soil and Construction (Landcom, 2008)	EPA	Section 15.2
AS2436:1981 Guide to Noise Control on Construction, Maintenance and Demolition Sites	EPA	Section 9.2
Interim Guideline for the Assessment of Noise from Rail Infrastructure Projects (Department of Environment and Climate Change, 2007)	EPA	Section 9.2
Assessing Vibration: A Technical Guideline (Department of Environment and Conservation, 2006)	EPA	Section 9.2
AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting	OEH	Section 12.2
Code of Practice for the Safe Removal of Asbestos 2nd edition (National Occupational Health and Safety Commission, 2005)	National Occupational Health and Safety Commission (NOHSC)	Section 15.0
Code of Practice for the Management and Control of Asbestos in Workplaces (National Occupational Health and Safety Commission, 2005)	NOHSC	Section 15.0
AS2601:1991 Demolition of Structures	DP&I	Section 15.0
Waste Classification Guidelines (Department of Environment, Climate Change and Water, 2008)	EPA	Section 17.1 and 17.2
Waste Reduction and Purchasing Policy (Environment Protection Authority, 1997)	EPA	Section 17.1

3 Environmental Management

3.1 Environmental and Sustainability Management System

a. All NWRL Principal Contractors will be required to have a corporate environmental management system certified under ISO 14001.

b. All NWRL Principal Contractors will be required to develop an environmental and sustainability management system for the project. The E&SMS must:

   i. be consistent with the principles of *ISO 14001 Environmental Management Systems – Requirements with Guidelines for Use;*

   ii. be consistent with the NWRL Sustainability Strategy and NWRL Environment and Sustainability Policy;

   iii. include specific procedures to address the following:

   - Identification of and compliance with legal and regulatory obligations, environmental provisions of the contract documentation, relevant approval documentation, their own corporate requirements and this Construction Environmental Management Framework.
   - Identification and assessment of environmental aspects.
   - Identification of environmental risks and development of appropriate control measures to be implemented to provide environmental protection.
   - Tracking and monitoring of design and construction sustainability targets.
   - Assurance frameworks to audit the sustainability program.

   iv. include provision to produce monthly reports.

c. All sub-contractors engaged by the Contractor will be required to work under the Principal Contractor's E&SMS.

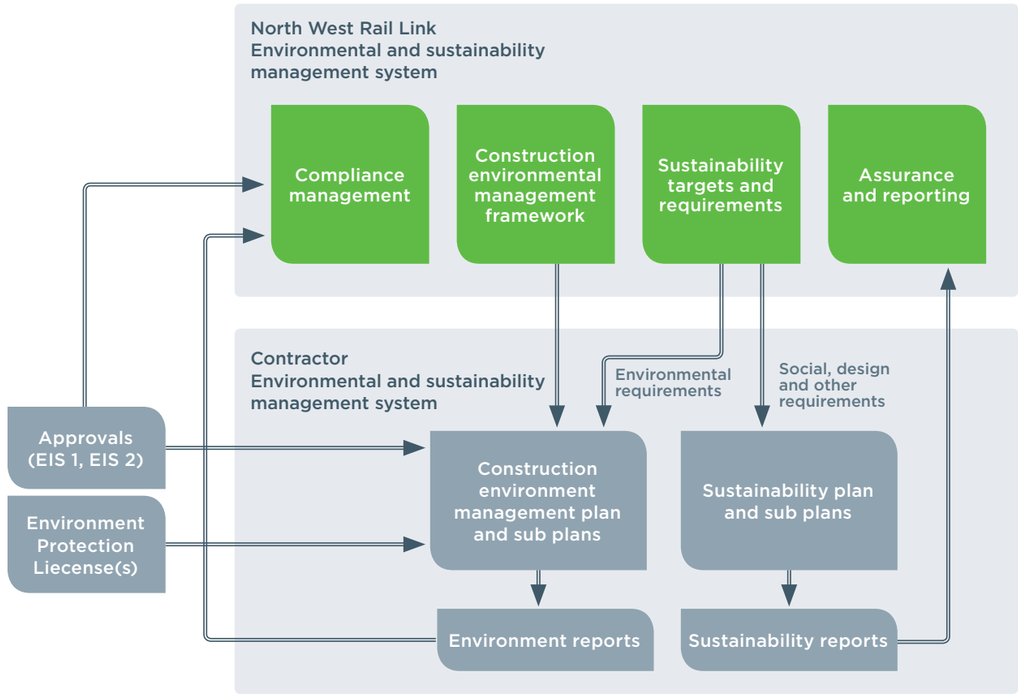
d. The relationship between key documents within the NWRL Environment and Sustainability Management System and the Principal Contractor's Environment and Sustainability Management System is shown in **Figure 2**. Notably:

   i. the Construction Environment Management Plan and its sub plans will capture the construction environmental requirements emerging from the EISs, subsequent planning approvals and the NWRL Sustainability Strategy.

   ii. The Sustainability Plan and its sub plans will capture governance and design requirements as well as social sustainability initiatives arequired by the NWRL Sustainability Strategy.

   iii. These plans will vary in scope across different delivery packages.

Figure 2 Environmental Management and Sustainability Structure



3.2 Construction Environmental Management Plans

a. All NWRL Principal Contractors will be required to prepare and implement a Construction Environmental Management Plan (CEMP) relevant to the scale and nature of their scope of works.

b. The CEMP will cover the requirements of the relevant planning approval documentation, the project approval conditions, the conditions of all other permits and licences, the Contractor's corporate EMS, the environmental provisions of the contract documentation and this Construction Environmental Management Framework.

c. The purpose of the CEMP will be to detail how the project will deliver the environmental requirements and how issues that arise are handled. As a minimum the CEMP will include:
   i. Project specific environmental policy, key performance indicators, objectives and targets.
   ii. Identification of legislative and other requirements.
   iii. Procedures to identify project specific environmental risks.
   iv. Resource requirements, roles and responsibilities, including those of sub-contractors.
   v. Communication requirements, including liaison with stakeholders and the community.
   vi. Induction and training requirements.
   vii. Identification of project specific environmental risks.
   viii. Identification of appropriate control measures.
   ix. Procedures for monitoring and evaluating environmental performance.
   x. Reporting requirements.
   xi. Procedures for emergency and incident management.
   xii. Procedures for non-conformance control, corrective and preventative actions.
   xiii. Procedures for audit and review.
   xiv. Procedures for the control of environmental records.
   xv. Development and maintenance of Environmental Management Sub-Plans and site / activity specific environmental procedures.

d. The CEMP and associated sub-plans will require the approval of TfNSW prior to any construction works commencing. Depending on the conditions of approval the CEMP and certain sub-plans may also require the approval of Department of Planning and Infrastructure (DP&I), and other government agencies.

3.3 Construction Environmental Management Sub-Plans

a. Where required, the Principal Contractor will prepare issue-specific environmental sub-plans to address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub-plans will include:
   i. Spoil management
   i. Groundwater management
   ii. Soil and water management
   iii. Traffic and transport management.
   iv. Noise and vibration management.
   v. Heritage management.
   vi. Flora and fauna management.
   vii. Visual amenity management.
   viii. Carbon and energy management.
   ix. Air quality management.
   x. Waste management.

3.4 Environmental Procedures

a. The Principal Contractor will prepare and implement site and / or activity specific environmental procedures. These procedures may include method statements, control maps or other documents as required by the Principal Contractor.

b. The procedures will include:
   i. A breakdown of the work tasks relevant to the specific site and / or activity.
   ii. Potential impacts associated with each task.
   iii. A risk rating for each of the identified potential impacts.
   iv. Mitigation measures relevant to each of the work tasks.
   v. Responsibility to ensure the implementation of the mitigation measures.
   vi. Constraints maps and / or drawings as appropriate to each site and / or activity.

c. Relevant workers will be trained in the requirements of and will sign off the procedures prior to commencing works on the specific site and / or activity.

3.5 Additional Environmental Assessments

A number of works may require additional environmental assessment to be undertaken, eg the provision of high voltage power supply to a number of the construction sites.

a. Where the requirement for an additional environmental assessment is identified, this will be undertaken prior to undertaking any physical works. The environmental assessment will include:
   i. A description of the existing surrounding environment.
   ii. Details of the ancillary works and construction activities required to be carried out including the hours of works.
   iii. An assessment of the environmental impacts of the works, including, but not necessarily limited to, traffic, noise and vibration, air quality, soil and water, ecology and heritage.
   iv. Details of mitigation measures and monitoring specific to the works that would be implemented to minimise environmental impacts.
   v. Identification of the timing for completion of the construction works, and how the sites would be reinstated (including any necessary rehabilitation).

3.6 Existing Condition Surveys

a. Principal Contractors will offer condition surveys, in writing, to all relevant land and infrastructure owners (those where the works have potential to cause cosmetic or structural damage). If accepted, the Principal Contractor must produce a comprehensive written and photographic condition report prior to relevant works commencing.

3.7 Register of Hold Points

a. TfNSW and NWRL Principal Contractors will identify hold points, beyond which approval is required to proceed with a certain activity. Examples activities include vegetation removal and water discharge. Hold points will be documented in relevant CEMPs.

b. **Table 1.4** provides the structure for the register of hold points as well as a preliminary list of hold points which will be implemented.

Table 1.4 Preliminary Register of Hold Points

Hold Point	Release of Hold Point	By Who
Prior to Vegetation Clearing / Ground Disturbance	Pre-clearing inspection	Qualified Ecologist
	Erosion and sediment control plan	Contractor's Environmental Manager or delegate
Discharge of water	Water tested to verify compliance and approval to discharge	Contractor's Environmental Manager or delegate

3.8 Training, Awareness and Competence

a. NWRL Principal Contractors will be responsible for determining the training needs of their personnel. As a minimum this will include site induction, regular toolbox talks and topic specific environmental training as follows:
   i. The site induction will be provided to all site personnel and will include, as a minimum:
      - Training purpose, objectives and key issues.
      - Contractor's environmental policy and key performance indicators.
      - Due diligence, duty of care and responsibilities.
      - Relevant conditions of any environmental licence and the relevant conditions of approval.
      - Site specific issues and controls including those described in the environmental procedures.
      - Reporting procedure for environmental hazards and incidents.
      - Communication protocols.
   ii. Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring environmental issues.
   iii. Topic specific environmental training, eg erosion and sediment control training, will be undertaken for relevant site personnel as determined by the Principal Contractor.

3.9 Emergency and Incident Response

a. NWRL Principal Contractors will develop and implement a Pollution Incident Response Management Plan, in accordance with the requirements of the POEO Act. Contractors' emergency and incident response procedures will be in accordance with any TfNSW procedures and will include:
   i. Categories for environmental emergencies and incidents.
   ii. Notification protocols for each category of environmental emergency or incident, including notification of TfNSW and notification to owners / occupiers in the vicinity of the incident. This is to include relevant contact details.
   iii. Procedures for the immediate notification of each relevant authority when the incident results in material harm to the environment.
   iv. Identification of personnel who have the authority to take immediate action to shut down any activity, or to affect any environmental control measure (including as directed by an authorised officer of the EPA).
   v. On-site rectification actions.
b. The Contractor will make all personnel aware of the plan and their responsibilities.

3.10 Roles and Responsibilities

a. TfNSW will be the proponent of the works and will retain responsibility for:
   i. The provision of contracts and procurement of Principal Contractors. The procurement of Contractors will consider past environmental performance and proposed environmental management system.
   ii. Undertaking regular audits, of the Contractors against their environmental obligations.
b. Additionally TfNSW will engage independent Environmental Representatives (ERs) to undertake the following, along with any additional roles as required by the project approval conditions:
   i. Review, provide comment on and endorse (where required) any relevant environmental documentation to verify it is prepared in accordance with relevant environmental legislation, planning approval conditions and relevant standards.
   ii. Monitor and report on the implementation and performance of the above mentioned documentation and other relevant documentation.
   iii. Provide independent guidance and advice to TfNSW and the Contractors in relation to environmental compliance issues and the interpretation of planning approval conditions.
   iv. Be the principal point of advice for the DP&I in relation to all questions and complaints concerning the environmental performance of the project.
   v. Ensure that environmental auditing is undertaken in accordance with all relevant project requirements.
   vi. Recommend reasonable steps, including 'stop works', to be taken to avoid or minimise adverse environmental impacts.
c. NWRL Principal Contractors will be responsible for all aspects of environmental management relevant to their scope of works. This will include:
   i. Development and implementation of the Environmental Management and Sustainability System, Construction Environmental Management Plan, sub-plans and procedures.
   ii. Compliance with the environmental considerations of the contract and this Construction Environmental Management Framework.
   iii. Obtaining all necessary approvals, permits and licences required for its works (in addition the planning approval).
   iv. Compliance with relevant approval, permit, licence and legislative conditions.
d. Principal Contractors must employ an Environmental Manager with relevant experience.
e. All sub-contractors engaged by the Principal Contractor will be required to operate within the EMS documentation of that Principal Contractor.