

TRANSPORT FOR NSW (TfNSW)

SPECIFICATION D&C G36

ENVIRONMENTAL PROTECTION

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ENVIRONMENTAL PROTECTION

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FOREWORD

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This document should be read with all the documents forming the Project Deed.

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BASE SPECIFICATION

This document is based on Specification TfNSW G36 Edition 4 Revision 8.

TfNSW QA SPECIFICATION D&C G36

ENVIRONMENTAL PROTECTION

1 GENERAL

1.1 SCOPE

This Specification describes an environmental protection management process which you must implement, as a minimum, to provide environmental protection during execution of the Work Under the Contract. It also identifies environmental safeguards and management measures or conditions of planning consent/approval for the project which you must satisfy.

Undertake your activities in such a manner that damage to the environment is limited to that which is unavoidable.

When carrying out the Work Under the Contract, apply:

- (a) your corporate Contractor's Environmental Management System (CEMS) (refer to Clause 2);
- (b) your project specific Contractor's Environmental Management Plan (CEMP) (refer to Clause 3);

which must be developed in accordance with this Specification, and guided by AS/NZS ISO 14001 Annexure A.

The environmental protection requirements in this Specification, together with the Project Deed, are complementary to, and not in substitution for any statutory requirements or any of the technical requirements of the Specifications and Design Documentation drawings.

Ensure compliance with all relevant environmental statutory requirements and procedures defined within the CEMP and all supplementary plans.

1.2 STRUCTURE OF THE SPECIFICATION

This Specification includes a series of annexures that detail additional requirements and information.

1.2.1 Supplementary Project Information

Supplementary Project Information is shown in Annexure G36/A.

1.2.2 (Not Used)

1.2.3 Schedules of HOLD POINTS and Identified Records

The schedules in Annexure G36/C list the **HOLD POINTS** that must be observed. Refer to Specification TfNSW D&C Q6 for the definition of **HOLD POINTS**.

The records listed in Annexure G36/C are **Identified Records** for the purposes of TfNSW D&C Q6 Annexure Q/E.

1.2.4 Referenced Documents and Legislation

Standards, specifications and test methods are referred to in abbreviated form (e.g. AS 1234). For convenience, the full titles are given in Annexure G36/M.

Environmental legislation which may be relevant to the Work Under the Contract is listed in Annexure G36/M. The list may not be current or complete for this Contract.

1.3 DEFINITIONS AND ACRONYMS

1.3.1 Definitions

References to Acts include any amendments to Acts together with a reference to Regulations and instruments made under them.

The terms “you” and “your” mean “the Contractor” and “the Contractor’s” respectively.

The following definitions apply to this Specification:

- (a) The definitions contained in AS/NZS ISO 14001, Clause 3.
- (b) “Aboriginal object” as defined in *National Parks and Wildlife Act 1974 (NSW)*, refers to any deposit, object or material evidence (not being a handicraft made for sale) relating to the Aboriginal habitation of the area that comprises New South Wales, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.
- (c) “Aquatic habitat” includes all areas of land submerged by water, permanently or intermittently, and includes both artificial and natural bodies of water. It includes wetlands, creeks, lakes, dry river beds and estuaries.
- (d) “Contaminated land” is land with the presence of a substance in, on or under the land at a concentration above that which it is normally found in that locality, such that there presents a risk of harm to human health or to the environment.
- (e) “Controlled access road” and “main road” have the same meaning as that within the *Roads Act 1993 (NSW)*.
- (f) “Dangerous goods” has the same meaning as that within the *Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)*.
- (g) “Environment” means the natural and the built environment and all aspects of the surroundings of human beings (including physical, biological and aesthetic aspects).
- (h) “Environmental incident” means a discrete (one-off) occurrence that may result in an adverse impact (or impacts) on the environment or a breach of a legislated requirement(s), as defined in TfNSW publication “Environmental Incident Classification and Reporting Procedure”.
- (i) “Environmental Work Method Statement” (EWMS) means a component of the CEMP and/or CEMS that addresses environmental management issues relevant to a specific site and/or activity.
- (j) “Fish” has the same meaning as that within the *Fisheries Management Act 1994 (NSW)*.
- (k) “Physical Work on Site” means any work on or in the vicinity of the Site carried out in connection with construction of the Works. It also includes alteration, conversion, fitting-out, commissioning, renovation, repair, maintenance, decommissioning, and demolition of a structure.

- (l) “Pesticide” has the same meaning as within the *Pesticides Act 1999 (NSW)*, and includes herbicide.
- (m) “Pollution incident” as defined in *Protection of the Environment Operations Act 1997 (NSW) (POEO Act)* means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur.
- It includes an incident or set of circumstances in which a substance has been placed or disposed of on the premises, but it does not include an incident or set of circumstances involving only the emission of any noise.
- (n) “Relic” as defined within *Heritage Act 1977 (NSW)* refers to any deposit, artefact, object or material evidence that relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and is of State or local significance.
- (o) “Sensitive Area Maps” are a consolidation of environmental and socially sensitive areas, sites or places shown on a series of map-based sheets that extend the length of the Site, used to assist with the planning and management of Work Under the Contract.
- (p) “Sensitive place” is defined within Clause 39 of the *Pesticides Regulation 2017 (NSW)* to be any:
- School or pre-school;
 - Kindergarten;
 - Childcare centre;
 - Hospital;
 - Community health centre;
 - Nursing home;
 - Place declared to be a sensitive public place by the Environment Protection Authority (EPA) by order published in the NSW Government Gazette.
- (q) “Work Under the Contract” means the Project Works which you are or may be required to execute under the Contract and includes all variations, remedial work, constructional plant and temporary work, design and design documentation.
- (r) “Waters”, as defined in the *POEO Act*, means the whole or any part of:
- any river, stream, lake, lagoon, swamp, wetlands, unconfined surface water, natural or artificial watercourse, dam or tidal waters (including the sea), or
 - any water stored in artificial works, any water in water mains, water pipes or water channels, or any underground or artesian water.

1.3.2 Acronyms

CEMP	Contractor’s Environmental Management Plan
CEMS	Contractor’s Environmental Management System
EIS	Environment Impact Statement
ENM	Excavated Natural Material
EPA	Environment Protection Authority
EPL	Environment Protection Licence
EPRM	Excavated Public Road Material
ESR	Environmental Site Representative

EWMS	Environmental Work Method Statement
GREP	NSW Government Resource Efficiency Policy
<i>POEO Act</i>	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
REF	Review of Environmental Factors
VENM	Virgin Excavated Natural Material
WMS	Work Method Statement

2 GENERAL REQUIREMENTS

At all times, exercise any necessary and reasonable precautions appropriate to the nature of the Work Under the Contract to protect the environment.

Develop, implement and maintain for the duration of the Contract, a Contractor’s Environmental Management System (CEMS) that meets the requirements of the NSW Government Environmental Management System Guidelines.

You may, with the Environmental Management Representative’s approval, substitute environmental control measures included in this Specification with other environmental control measures which achieve the same, or better, environmental outcomes.

Your environmental protection management process must include the following tasks:

1. Operate an effective CEMS to control the planning and implementation of environmental protection measures for the Contract
2. Identify statutory requirements, compliance limits and adverse environmental effects which could occur during execution of the Work Under the Contract (refer to Clause 3.2.2).
3. Plan work activities and environmental protection measures to minimise environmental risks and comply with specified environmental protection requirements (refer to Clause 3.2). The CEMP is the outcome of this planning process.
4. Set up the planned environmental protection measures (refer to Clause 4) and train site personnel to be environmentally aware (refer to Clause 3.5).
5. Monitor the effectiveness of the environmental protection measures (refer to Clause 3.9).
6. Set up response procedures which will initially contain, then remedy, any environmental damage that does arise (refer to Clause 4.3).
7. Improve environmental protection measures and revise the CEMS and the CEMP promptly when deficiencies are identified (refer to Clauses 3.1 and 3.9).

3 CONTRACTOR'S ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

3.1 PREPARATION AND SUBMISSION OF CEMP

Prepare a Contractor's Environmental Management Plan (CEMP) for the Work Under the Contract. The CEMP must be prepared in accordance with NSW Department of Infrastructure, Planning and Natural Resources (DIPNR) publication "Guideline for the Preparation of Environmental Management Plans". Your CEMP must be consistent with, and incorporate, all relevant elements of your CEMS.

Your CEMP must:

- (a) include an Environmental Policy that contains a commitment to the principles of Ecologically Sustainable Development as detailed in the *Protection of the Environment Administration Act 1991 (NSW)*;
- (b) describe all relevant elements of, and include references to, the CEMS documentation and how these will apply to the Work Under the Contract;
- (c) address all aspects and stages of the Work Under the Contract.

Include any Sub-Plans specified in Annexure G36/A2 that are required to address specific issues.

The CEMP must also include the following elements:

Detail here any specific CEMP requirements, such as from the EIS, REF, Submissions Report or planning consent/approval. It may be useful to include here an itemised schedule of safeguards and management measures that clearly describe the respective responsibilities of TfNSW and the Contractor for meeting project approval.

The CEMP may be either incorporated as a discrete and readily identifiable part of the PROJECT QUALITY PLAN (refer TfNSW D&C Q6), or separate from but consistent with the PROJECT QUALITY PLAN. Include in the CEMP appropriate cross-referencing to your Quality Management System and PROJECT QUALITY PLAN.

List here the CEMS documents that are essential and must be provided by the Contractor together with the CEMP prior to commencement of any Physical Work on Site, such as:

- *Incident Reporting and Investigation procedure;*
- *Nonconformity and Corrective and Preventive Action procedure;*
- *Complaints Handling procedure;*
- *Environmental Monitoring and Site Inspections procedure;*
- *EWMS such as Clearing and Grubbing, Work in Environmentally Sensitive Areas, etc.*

If agreed to by the Principal, you may submit the CEMP and any supporting CEMS documentation progressively in stages to suit the construction, similar to that in TfNSW D&C Q6 for the staged submission of the PROJECT QUALITY PLAN.

If the CEMP is submitted progressively, submit the CEMP documents for each stage of the Work Under the Contract at least ten (10) working days prior to the commencement of that stage.

HOLD POINT

Process Held:	Commencement of Work not previously addressed by CEMS and CEMP documents and authorised by earlier Hold Point release.
Submission Details:	At least 10 working days prior to the proposed commencement of the stage of Work Under the Contract nominated in the submission by you, submit the CEMP and associated Sub-Plans and/or EWMS, as well as the CEMS documents listed in Clause 3.1.
Release of Hold Point:	The Nominated Authority will consider the documents prior to authorising the release of the Hold Point. The Nominated Authority may request additional information for inclusion in the CEMP before authorising the release of the Hold Point.

The lead time for submission of CEMP in Hold Point may be increased to 15 working days where the CEMP has to be forwarded to a statutory authority for approval.

Where submission of the CEMP to a statutory authority is nominated in Annexure G36/A or required by the Principal, submit to the Principal an additional copy of the CEMP at each stage, including any proposal for staged submission, for forwarding to each of the nominated statutory authority. The staging of CEMP submissions must comply with the requirements of the nominated statutory authority.

The CEMP submissions at each stage must contain sufficient information and details to enable the nominated statutory authority to understand the proposed environmental protection measures. Delay to acceptance of the CEMP by a nominated statutory authority due to inadequate details being provided in the CEMP will be deemed to be a delay within the control of the Contractor.

Detail here any specific requirements for submission of documents identified from the EIS, REF, Submissions Report or planning consent/approval.

3.2 PLANNING

3.2.1 Environmental Risk Assessment Workshop

The environmental impacts of the proposed construction activities have been identified and assessed in the Environment Assessment documents listed in Annexure G36/A3.

If nominated in Annexure G36/A, and prior to commencement of any work on Site, carry out an environmental risk assessment workshop to identify all the environmental constraints associated with the Work Under the Contract and address the environmental risks associated with the constraints and activities you propose to undertake.

Use the environmental risk assessment workshop to develop risk mitigation and management strategies to eliminate or reduce the risk exposure. These risk mitigation strategies must be consistent with the environmental safeguards and management measures listed in the Environment Assessment documents listed in Annexure G36/A3. Incorporate these risk mitigation strategies into your CEMP.

Use the workshop to raise general awareness of good environmental management practices among your staff and subcontractors working on the Site and to develop ideas and actions to improve environmental practices.

Participants must include your site management staff, your Environmental Site Representative (refer Clause 3.3) and any other personnel including subcontractors who will be performing the Work Under the Contract. Provide the Principal at least ten (10) days prior to the workshop with an agenda and any supporting information to allow for representatives of the Principal to also attend the workshop.

List here any specific requirements or additional objectives for the environmental risk assessment workshop such as expedition of the production and submission of the CEMP, development of ESCP (refer Specification TfNSW D&C G38), etc.

Review the environmental risk assessment regularly to ensure it remains relevant for the duration of the Work Under the Contract.

3.2.2 Regulatory Requirements and Compliance

The CEMP must identify your obligations under environmental legislation that are relevant to the Work Under the Contract, including those listed in Annexure G36/M.

The following approvals, licences and permits will be obtained by the Principal:

List here any approvals, licences and permits obtained by the Principal, or insert NIL.

Ascertain from the appropriate authorities what other approvals, licences and permits are required for the Work Under the Contract.

If you are required to hold an Environment Protection Licence (EPL) for the Work Under the Contract and the Principal has been issued with an EPL prior to award of the Contract, you must not commence work on site until the EPL has been transferred to your name.

Obtain each necessary approval, licence and permit not obtained by the Principal prior to the commencement of any work which relates to that approval, licence, notification or permit. Include copies of such approvals, licences and permits in the CEMP.

Include in your CEMS a compliance tracking program and keep the program up to date.

HOLD POINT

Process Held:	Commencement of any activity requiring an approval, licence and/or permit from an appropriate authority.
Submission Details:	At least five (5) working days prior to the activity, provide to the Nominated Authority evidence of receipt of the approval, licence and/or permit from the relevant authority.
Release of Hold Point:	The Nominated Authority will consider the submitted documents prior to authorising the release of the Hold Point.

3.2.3 Environmental Objectives and Targets

Include in the CEMP environmental objectives and targets for the Work Under the Contract which must be consistent with TfNSW Environment Policy Statement.

The environmental objectives and targets must be measurable where practicable, are realistic and relevant to the Work Under the Contract, and include a commitment to continuous improvement of your CEMS.

When establishing environmental objectives and targets, take into account the following:

- (a) the environmental outcomes for the project as described in the Environment Assessment documents listed in Annexure G36/A3;
- (b) the results of the environmental risk assessment workshop;
- (c) any applicable legal and other requirements;
- (d) any technological, operational or other constraints or limitations.

3.2.4 Environmental Work Method Statement

In addition to those specified elsewhere in Specifications TfNSW D&C G36, D&C G38 and/or D&C G40, prepare EWMS and implement them as part of the Work Under the Contract for the following activities:

List here any EWMS required that are not already nominated in TfNSW D&C G36, D&C G38 and/or D&C G40. Include any specific requirements.

The EWMS must include at least the following elements:

- (a) Description of the work activity, including any plant and equipment to be used;
- (b) Outline of the sequence of tasks for the activity, including interfaces with other construction activities;
- (c) Identification of any environmental and/or socially sensitive areas, sites or places;
- (d) Identification of potential environmental risks/impacts due to the work activity;
- (e) Mitigation measures to reduce the identified environmental risk, including assigned responsibilities to site management personnel;
- (f) Process for assessing the performance of the implemented mitigation measures.

Develop the EWMS in consultation with the relevant site management personnel to ensure that all issues are addressed, methods and activities are practical and all personnel are aware of their commitments and responsibilities. Review the EWMS periodically to ensure its effectiveness and proper implementation and incorporate any improvements or changes identified into subsequent revisions.

3.3 RESOURCES, RESPONSIBILITIES AND AUTHORITY

Provide sufficient resources, including site personnel, for the effective implementation of the CEMP for the duration of the Work Under the Contract.

The CEMP must indicate the names, responsibilities and authority of your site management personnel who have primary responsibility for developing, implementing and maintaining the CEMS and the CEMP for the Work Under the Contract, and rectifying any environmental nonconformities identified by you or the Principal.

Nominate in the CEMP a full-time Environmental Site Representative (ESR) who will be the authorised contact person for communications with the Principal and the EPA on all environmental matters.

The ESR must have tertiary qualification in Environmental Science, Environmental Engineering or equivalent, and a minimum of 5 years experience in environmental management on road construction or other equivalent works.

Where your designated Environmental Management Representative will be based mainly off-site, detail in the CEMP the relationship between the Environmental Management Representative and the ESR.

The ESR's responsibilities and authority include the following:

- (a) advising on environmental matters specified in this Specification;
- (b) liaison with the Principal and with all relevant authorities on environmental matters;
- (c) maintaining a register of all environmental management documents for the Contract;
- (d) ensuring that the CEMP is established, implemented and maintained in compliance with this Specification, including all Sub-Plans, procedures and supplementary EWMS, and upgrades to these documents (as needed) to remain current with the progress of the Works;
- (e) overall responsibility for the establishment, management, monitoring and maintenance of erosion and sediment controls within the Site;
- (f) carrying out regular inspections and auditing of the works to ensure that environmental safeguards are being followed;
- (g) identifying where the implemented environmental measures are not meeting the targets set, and identifying areas where improvement can be achieved;
- (h) preparing monthly reports outlining the works that have been undertaken and the achievements that have been met, as well as identifying those areas where improvements were made;
- (i) facilitating environmental induction and toolbox talks for all site personnel;
- (j) specific authority to stop work on any activity where the ESR deems it necessary to prevent environmental nonconformities;
- (k) notification to the relevant parties of any environmental incidents.

The CEMP must include details of the role, qualifications and responsibilities of the ESR and any critical site activities that require the presence of the ESR.

Detail here any specific requirements for resources, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.4 SELECTION AND MANAGEMENT OF SUBCONTRACTORS

When complying with the purchasing requirements of TfNSW D&C Q6, include environmental management requirements in the planning, selection and management of subcontractors.

Include a requirement to comply with the CEMP in all contractual arrangements with your subcontractors.

For subcontracted work, include in the CEMP the procedures that you will implement for ensuring subcontractor compliance, including details of:

- (a) the duties of each subcontractor for planning, implementing and monitoring environmental protection measures and for keeping environmental records;
- (b) the duties you will retain for environmental protection of subcontracted work;
- (c) how environmental protection measures on subcontracted work interact with adjacent work areas, as applicable;
- (d) your surveillance program to monitor the effectiveness of each subcontractor's environmental protection measures together with the relevant project documentation.

Detail here any specific requirements for control of subcontractors, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.5 COMPETENCE, TRAINING AND AWARENESS

Provide to all your staff and subcontractor personnel working on the Site with environmental training to achieve a level of competence and awareness appropriate to their assigned activities before they commence their assigned activities. Do not permit anyone who has not undergone the appropriate environmental training to work on the Site.

The CEMP must include a site-specific environmental induction and training plan that describes the minimum level of training, experience and/or qualifications required for staff and subcontractors working on the Site, the names of the persons to be trained, the proposed frequency of training and the procedures for training.

Environmental induction training must cover all elements of the CEMP and must include, as a minimum, the following:

- (a) purpose and objectives of the CEMP;
- (b) requirements of due diligence and duty of care;
- (c) conditions of environmental licences, permits and approvals;
- (d) potential environmental emergencies on Site and the emergency response procedures;
- (e) reporting and notification requirements for pollution and other environmental incidents;

- (f) high-risk activities and associated environmental safeguards, e.g. earthworks, vegetation clearing, night works, operation and maintenance of concrete washouts, and washing, refuelling and maintenance of plant and equipment;
- (g) working in or near environmentally sensitive areas.

Establish and maintain a register of environmental training carried out, including dates, names of persons trained and trainer details.

Detail here any specific training requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.6 WORKING HOURS

In the context of this clause, normal working hours are from Monday to Friday between 7.00 am to 6.00 pm and Saturday between 8.00 am to 1.00 pm inclusive, but excluding public holidays.

The CEMP must include a procedure for notifying the Principal, all relevant Authorities and the community, in advance of any proposal to work outside of these working hours. Such changes in working hours must comply with all licences, permits, approvals, consents, notification, statutory requirements, etc and have been appropriately justified and assessed.

Any approval by the Principal to work outside of normal working hours is conditional on you liaising with the community (refer to Clause 3.7) and complying with the requirements of Clause 4.6.

Work outside of normal working hours is permitted without prior approval by the Principal in the following circumstances:

- (a) delivery of materials outside of normal working hours, where delivery at such times is required by the Police or other authorities for reasons of safety or otherwise; or
- (b) work during an emergency, where such work is necessary to avoid the loss of lives, property and/or prevent environmental harm.

List here any additional restrictions on working hours such as from the EIS, REF, Submissions Report or planning consent/approval.

3.7 COMMUNICATION

Describe in the CEMP the processes for external and internal communication in relation to the environmental aspects of the Work Under the Contract.

Make all staff and subcontractors working on the Site aware of these external and internal communications procedures and are properly trained in their application.

3.7.1 Liaison with EPA

The CEMP must identify at least two persons (together with their contact telephone numbers) who will be available to be contacted by the EPA on a 24 hour basis and who have authority to take immediate action to shut down any activity, or to effect any pollution control measure, as directed by an authorised officer of the EPA.

Immediately notify the Principal of any visit to the Site by the EPA. Prepare a report for each occasion when the Site is visited by the EPA, notifying the Principal of the purpose and outcome of the EPA visit, and of all actions taken by you in response to the EPA visit. Submit this report to the Principal within one working day of the EPA site visit.

Detail here any specific requirements for liaison with EPA, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.7.2 Community Liaison and/or Notification

3.7.2.1 New or Changed Construction Activities

Notify local residents about any new or changed construction activities which will affect access to their properties or otherwise disrupt the residents' use of their premises, at least 5 working days before commencing work affecting residents.

Such notification must state the nature of the work, why it is necessary, the expected duration, details of any changes to the traffic arrangements or property access and the name and contact telephone number of your representative who can respond to any resident concerns.

Address any concerns raised by residents in accordance with the complaints procedure as required under Clause 3.7.3, or in accordance with any licence or approval held by you.

Detail here any specific requirements for liaison with the community, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.7.2.2 Extended Working Hours - No Environment Protection Licence

Delete this clause if the construction activities are to be regulated by an Environment Protection Licence.

Following approval from the Principal on each instance to extend working hours, inform affected residents by letter of the location, nature, scope and duration of the proposed work outside normal working hours, not less than 5 working days and not more than 10 working days, before commencing such work.

Include the name and contact telephone number of your representative so that residents can contact him over any concerns about extended working hours and any other information required by any licence or approval held by you.

Refer to Practice Note vii of TfNSW publication "Environmental Noise Management Manual" when preparing the letter and notifying the affected residents.

3.7.2.3 Extended Working Hours - Environment Protection Licence Held by Contractor

Delete this clause if the construction activities are not to be regulated by an Environment Protection Licence held by the Contractor.

Inform the Principal, and the residents of the proposed work outside normal working hours in accordance with the Environment Protection Licence held by you.

3.7.2.4 Extended Working Hours - Environment Protection Licence Held by the Principal

Delete this clause if the construction activities are not to be regulated by an Environment Protection Licence held by the Principal.

When proposing to undertake work outside the hours approved under an Environment Protection Licence held by the Principal, provide to the Principal the following information in writing at least 15 working days before commencing the work, for the Principal to seek approval from EPA:

- (a) the reason that the work is required to be undertaken outside the hours specified in Clause 3.6;
- (b) a diagram that clearly identifies the locations of the proposed works in relation to nearby cross streets and local landmarks;
- (c) details of any relevant time restrictions and special conditions that apply to the proposed works;
- (d) the locations, nature, scope and duration of the proposed works;
- (e) the expected noise impact of the works on noise sensitive receivers;
- (f) how complaints may be made and additional information obtained.

Refer to EPA publication “Interim Construction Noise Guideline” and Practice Note vii of TfNSW publication “Environmental Noise Management Manual” in addressing the above requirements.

3.7.3 Complaints Management

Within one working day of receiving a complaint about any environmental issue, including any pollution incidents, arising from the Work Under the Contract, submit a written report to the Principal detailing the complaint and the action taken to remedy the problem. A final report together with your proposed measures to prevent the recurrence of such incidents must be submitted to the Principal within 5 working days.

Keep a register of all complaints, which must include the following details:

- (a) date and time of complaint;
- (b) method by which the complaint was made (telephone, letter, meeting, etc);
- (c) name, address, contact telephone number of complainant (if no such details were provided, a note to that effect);
- (d) nature of complaint;
- (e) action taken in response including follow up contact with the complainant.;
- (f) any monitoring to confirm that the complaint has been satisfactorily resolved;
- (g) if no action was taken, the reasons why no action was taken by you.

Detail here any specific requirements for responding to complaints, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.8 EMERGENCY PLANNING

The CEMP must include details of:

- (a) your key emergency response personnel, their respective responsibilities and contact details including all-hours contact telephone numbers;
- (b) emergency services (e.g. ambulance, fire brigade, spill clean-up services);
- (c) your communication strategy, both internal and external (refer to Clause 3.7), during emergencies;
- (d) any identified potential environmental emergencies that may occur on Site, and the response procedures for these emergencies;
- (e) frequency of tests of the emergency response procedures.

Induct all staff and subcontractors working on the Site about the potential environmental emergencies, and provide training in implementing the relevant environmental safeguards and risk mitigation measures.

Detail here any specific requirements for emergency planning, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.9 CONTRACTOR'S MONITORING, INSPECTION AND AUDITING

Include in the CEMP procedure(s) to monitor and measure, on a regular basis, your environmental management performance and to evaluate compliance with this Specification. The procedures must contain the scope, methodology and responsibilities for its implementation.

Undertake regular site environmental inspections to assess the adequacy and effectiveness of your environmental controls. The site environmental inspections must cover the following:

- (a) high risk activities and processes;
- (b) work in environmentally sensitive areas;
- (c) site preparedness for adverse weather conditions, including adequacy of environmental controls and availability of emergency equipment.

The Principal will undertake periodic inspections of the Site. Where these inspections identify environmental nonconformities, you must address them within the time specified by the Principal.

Detail here any specific environmental performance requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.

Include in the CEMP a risk-based auditing program to verify that the Work Under the Contract meets the requirements of this Specification. The program must specify the type of audits to be conducted, their scope and their frequency.

Conduct all your internal and external environmental audits for the Work Under the Contract in accordance with AS/NZS ISO 19011.

List here any additional requirements for Contractor auditing where TfNSW is the Environment Protection Licence holder for the Works, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.10 ENVIRONMENTAL NONCONFORMITIES

If you fail to meet your environmental obligations under the Contract, including:

- (a) failure by you or your subcontractors to conform to any requirements of this Specification, your CEMS and CEMP; or
- (b) failure by you to act promptly when you, the Principal, or any statutory authority having jurisdiction over the Work Under the Contract, observe that the implemented environmental controls are not effective; or
- (c) failure by you to provide safeguards against a Category 1 incident as detailed in the TfNSW “Environmental Incident Classification and Reporting Procedure”,

a Hold Point may apply.

HOLD POINT

Process Held:	Any activity that causes or has the potential to cause harm to the environment due to your failure to meet your environmental obligations under the Contract.
Submission Details:	Verification that the failure has been rectified, and details of the measures implemented to prevent recurrence.
Release of Hold Point:	The Nominated Authority will consider the submitted documents and may inspect the relevant work prior to authorising the release of the Hold Point. The Nominated Authority may request additional information in respect of the submitted documents.

3.11 RECORDS OF ENVIRONMENTAL ACTIVITIES

Maintain, as part of the project records in accordance with TfNSW D&C Q6 Annexure Q/E, legible environmental records of all environmental activities associated with Work Under the Contract to demonstrate compliance with the CEMS and CEMP. The records must include:

- (a) site environmental inspection reports;
- (b) environmental monitoring data and reports;
- (c) internal and external audit reports;
- (d) reports of environmental incidents, environmental complaints, associated actions taken, and follow-up actions;
- (e) minutes of management review meetings;
- (f) induction and training records.

You must hold these records for at least five years after the Construction Completion Date, and must make these records available to the Principal and authorised EPA officers upon request.

Detail here any specific record keeping requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.

3.12 MANAGEMENT REVIEW

Develop a documented process to periodically review the effectiveness and proper implementation of the CEMP. The management review process must identify opportunities for continual improvement of your environmental management processes and practices, and ensure that the CEMS and CEMP remain relevant to the Work Under the Contract.

The management reviews must be undertaken at least quarterly and must include the Principal's participation. The management reviews must comprise as a minimum the following:

- (a) identification of areas of opportunity for improved environmental performance;
- (b) analysis of the causes of nonconformities and deficiencies, including those identified in environment inspections and audits;
- (c) verification of the effectiveness of corrective and preventative actions;
- (d) highlighting any changes in procedures resulting from process improvement.

4 OPERATIONAL CONTROL

4.1 SOIL AND WATER MANAGEMENT

Comply with the requirements of Specification TfNSW D&C G38 for soil and water management.

4.2 CONTAMINATED LAND

4.2.1 Areas of Known Contamination

Areas of known contamination within the Site are shown in the Environmental Assessment documents listed in Annexure G36/A3.

List here other relevant documents relating to the known contamination, such as:

- *preliminary desktop investigation reports;*
- *site investigation reports;*
- *notifications to NSW EPA or Council under s60 of the Contaminated Land Management Act 1997 (NSW);*
- *remediation validation reports and/or site audit statements prepared.*

Where a Contaminated Land Management Plan and/or Remediation Action Plan has been prepared, include the documents as an attachment.

4.2.2 Contaminated Land Management Sub-Plan

Include in your CEMP a Contaminated Land Management Sub-Plan, which must comply with the *Contaminated Land Management Act 1997 (NSW)*, TfNSW publication "Guideline for the

Management of Contamination”, TfNSW “Environmental Incident Classification and Reporting Procedure”, and EPA guidelines on contaminated land management.

The Contaminated Land Management Sub-Plan must provide for dealing with:

- (a) areas of known contamination (if applicable);
- (b) unexpected contamination finds;
- (c) any land contamination caused by you.

4.2.3 Unexpected Contamination Find

Promptly notify the Principal of any suspected or potential contamination exposed during construction activities, and cease all work activities within the vicinity of actual or suspected contaminated land.

The Principal may at its discretion choose to take over the investigation and management of an unexpected contamination find, and directly appoint an EPA accredited contaminated site auditor.

4.2.4 Remediation Action Plan

Where the contamination is known or an unexpected contamination find has been identified, a Remediation Action Plan may be provided by the Principal.

If a Remedial Action Plan is not provided by the Principal, prepare a Remediation Action Plan for remediating the known areas of contamination or an unexpected contamination find, and areas of potential contamination in their immediate vicinity.

The Remediation Action Plan must be prepared in accordance with EPA guidelines on contaminated land management, and must include the following:

- (a) testing requirements for any contaminated material prior to its disposal off site;
- (b) validation plan, which must include the area in the immediate vicinity of (both below and adjacent to) the known contamination;
- (c) implications of the validation results on the waste classification for material that may be excavated in the vicinity of the known contamination.

HOLD POINT

(Where the Remedial Action Plan is to be prepared by the Contractor)

Process Held: Activities within the vicinity of actual or suspected contaminated land.

Submission Details: At least 5 working days prior, submit your Remediation Action Plan to be prepared by you, and relevant procedures.

Release of Hold Point: The Nominated Authority will consider the submitted documents prior to authorising the release of the Hold Point. The Nominated Authority may request additional information in respect of the submitted documents.

Carry out remediation of the contaminated material, or its removal and disposal, in accordance with the Remediation Action Plan. Any changes to the Plan must be agreed to by the Principal.

4.2.5 Surface Runoff

Implement relevant control measures to divert any surface runoff away from the contaminated land, and capture and treat any surface runoff contaminated by exposure to the contaminated land.

4.3 SPILL PREVENTION AND RESPONSE

Plan and execute the Work Under the Contract so as to minimise the possibility of pollution of the Site and adjoining areas by chemicals, dangerous goods and other potential contaminants.

Comply with the requirements in the following:

- relevant legislation and Australian Standards;
- EPA “Bunding and Spill Management Guidelines” contained within EPA “Environmental Protection Manual for Authorised Officers”;
- TfNSW “Code of Practice for Water Management”.

Store chemicals, fuel and lubricants in suitably located and banded areas to minimise the impact of any spillage or contamination on the Site and adjoining areas. Do not locate these storage areas within 50 m of any aquatic habitat, flood prone areas, or on slopes steeper than 1:10.

Do not refuel or maintain plant and equipment, mix cutting oil with bitumen, or carry out any other activity which may result in spillage of a chemical, fuel or lubricant at any location which drains directly to waters or environmentally sensitive areas, without the appropriate temporary bunding being provided. Do not leave refuelling operations unattended.

As part of the CEMP, prepare a procedure(s) for the following activities, as a minimum, to minimise the possibility of pollution of the Site:

- (a) refuelling or maintenance and cleaning of plant and equipment including concrete agitators, bitumen spray bars and asphalt pavers;
- (b) on-site batching of concrete and asphalt;
- (c) mixing of bitumen with cutting oil and additives;
- (d) application of liquid membranes, including paint and thermoplastic, resin, emulsion, precoat agent and curing compound;
- (e) bulk fuel or chemical deliveries;
- (f) removal and disposal of excess chemicals and water used for washing down of equipment;
- (g) pumping out of oil and grease collection pits;
- (h) decanting operations such as for fuel, chemicals and bitumen.

Include in the procedure(s) the following, as a minimum:

- (i) details of the management of the banded areas including monitoring of the banded areas, drainage requirements and measures to ensure that bund capacities are maintained;
- (ii) details of the management associated with the removal and transportation of chemical drums from banded areas;
- (iii) routine maintenance requirements of machinery, pumps and other equipment to prevent and/or minimise leaks;

- (iv) installation of controls for the capture and filtering of all chemicals that may runoff in storm events, for example wax and hydrocarbon curing compounds, bitumen tack coat and saw cutting material.

Keep adequate quantities of suitable material to counteract spillage readily available. Clean up all chemical spills immediately. If spills result in an environmental incident, report the incident in accordance with Clause 4.14.

Prepare and implement a Spill Response Procedure as part of the CEMP to minimise the impact of spills including details on the requirements for managing, cleaning up and reporting.

4.4 AIR QUALITY

4.4.1 General

Prepare and implement an Air Quality Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to minimise the impact of dust, offensive odour, and other air pollutants on the surrounding environment, including adjacent properties and sensitive places.

Comply with the requirements of the *POEO Act* and any conditions of licences, notifications, approvals or permits in relation to maximum air pollutant levels (refer to Clause 3.2.2).

Plan and carry out all your construction activities to avoid where practicable, or minimise, the generation of dust and vehicle emissions. Include in the Air Quality Management Sub-Plan or mitigation strategies the procedures for effective dust control, including dust monitoring and reporting procedures.

Detail here any specific environmental management requirements for air quality, from the REF, EIS, Submissions Report, planning consent/approval, EPA licence or other relevant sources.

Where air quality monitoring is required, it must comply with the EPA publication “Approved Methods for Sampling and Analysis of Air Pollutants in NSW”. Monitoring data must include reporting of insoluble solids in accordance with the EPA publication “Approved Methods for the Modelling and Assessment of Air Pollutants in NSW”.

4.4.2 Air Emissions Performance Requirements of Mobile Non-road Diesel Plant and Equipment

Report on the conformity, or otherwise, of mobile non-road diesel plant and equipment used for the Work Under the Contract with the relevant United States Environmental Protection Agency, European Union (EU) standards or approved equivalent emission standards.

Once a year, submit to the Project Verifier such reports at the following dates:

- (a) before 31 July, for the reporting period ending 30 June for the previous 12 months
- (b) at Actual Completion Date, for the final reporting period.

Prepare the report in accordance with the GREP “Clean Air data management tool”. The types of diesel plant and equipment that are to be included, or excluded, from the report are given in this document, which is available at: <http://www.rms.nsw.gov.au/documents/about/environment/grep-clean-air-data-management-tool.xlsm>.

4.5 FIRE SAFETY AND BURNING OFF

Comply with the requirements of the Rural Fires Act 1997 (NSW), and the Local Government Act 1993 (NSW) and be guided by the NSW Rural Fire Service publication “Equipment and Machinery Use in Bush Fire Prone Areas”, which is available at:

http://www.smartersafety.com.au/media/0240_SafetyAlert-Equipment_and_machinery_use_in_bushfire_prone_areas.pdf.

Provide fire fighting equipment as required for the safety of persons and property.

All items of plant used during proclaimed high fire danger periods that could discharge sparks must be fitted with spark arresters. Do not undertake cutting, welding, grinding or other activities likely to generate fires in the open on days when a total fire ban is proclaimed.

When there is a risk of fire being caused by work such as welding, thermal or oxygen cutting, heating or other fire producing or spark producing operations or when burning off is proposed, provide training to all personnel in fire prevention, fire safety and basic fire fighting skills. Provide all personnel and vehicles involved in such activities with fire fighting equipment.

Detail here any specific requirements to minimise the risk of fires, such as from the EIS, REF, Submissions Report or planning consent/approval.

Annexure G36/A indicates whether the Principal will allow disposal of cleared and grubbed vegetation by burning off, subject to the requirements of the *Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW)*.

Where burning off has been assessed, approved and planned, obtain a fire permit from the relevant Statutory Authorities and comply with the requirements of the Statutory Regulations and be guided by the EPA guideline “Regulation of Open Burning in NSW”.

On receipt of a fire permit, notify the Principal and occupiers of adjoining properties of the proposed burning off operation at least 24 hours before carrying out the burning off. Control the burning off operation so that:

- (a) vegetation outside the limits of clearing is not damaged;
- (b) fences, buildings or other property are not damaged;
- (c) smoke does not cause a traffic hazard, or nuisance nor contravene air quality requirements.

Detail here any specific requirements for burning off, such as from the EIS, REF, Submissions Report or planning consent/approval.

4.6 NOISE CONTROL

Detail here any specific environmental management requirements for noise, from the EIS, REF, Submissions Report, planning consent/approval, EPA licence or other relevant sources.

Prepare and implement a Noise Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to minimise the impact of noise from your operations on adjacent properties. The Noise Management Sub-Plan or mitigation strategies must include proposed environmental control measures for all significant noise generating activities.

Refer to the requirements of the EPA publication “Interim Construction Noise Guidelines” and TfNSW publication “Environmental Noise Management Manual”, and in particular Practice Note vi, when considering the environmental control measures and practices to be included in the Noise Management Plan.

Where Works are proposed to be undertaken outside of normal working hours, comply with the requirements of Clause 3.7.2.

All construction plant and equipment used on Site must be, in addition to other requirements:

- (a) fitted with properly maintained noise suppression devices in accordance with the manufacturer’s specifications;
- (b) maintained in an efficient condition;
- (c) operated in a proper and efficient manner.

4.7 GROUND VIBRATION AND AIR BLAST

Implement all measures to prevent damage to adjacent public utilities, structures and buildings resulting from construction vibration and air blast.

Comply with the requirements of Specification TfNSW D&C R44 for vibration and airblast from blasting, unless overridden by other more stringent requirements set out in this Specification.

For any blasting activities, comply with the requirements of the ANZECC publication “Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration - September 1990”. Where the amenity guidelines are likely to be exceeded, manage the impacts in consultation with, and in accordance with, the requirements stipulated by EPA.

The measurement process for determining verification of compliance with the ANZECC criteria will be in accordance with AS 2187.2 Explosives - Storage, Transport and Use, Appendix J - Ground Vibration and Airblast (Informative).

Meet the requirements of EPA “Environmental Noise Management Assessing Vibration: A Technical Guideline”. Where the requirements are likely to be exceeded, manage the impacts in consultation with, and in accordance with, the requirements stipulated by EPA.

To avoid structural damage, carry out construction activities in accordance with the requirements of BS 7385.

Detail here any specific environmental management requirements for ground vibration and air blast, from the EIS, REF, Submissions Report, planning consent/approval, EPA licence or other relevant sources. Alternatively, insert such requirements in Specification TfNSW D&C R44 and insert a cross reference in TfNSW D&C G36.

Where there is a risk that vibration or air blast activities may cause damage to nearby structures and buildings or if these are located within the distance from the construction activity specified in Annexure G36/E, undertake a building condition inspection and prepare a Building Condition Inspection Report for every property or structure likely to be affected.

The Building Condition Inspection Reports must contain photographs of the inspected properties and include details of the inspectors’ qualification and expertise, together with a list of any identified

defects, where relevant. The reports must be submitted to the owner of each property and to the Principal before the commencement of any activities as outlined in the Hold Point below.

Prepare, as part of the CEMP, a Vibration and Air Blast Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, that describes the environmental controls to be implemented during construction to minimise the impact of vibration and air blast on adjacent properties and residents.

The Vibration and Air Blast Management Sub-Plan or mitigation strategies must detail how construction vibration and air blast will be managed for various plant items working adjacent to buildings. Keep records as evidence of compliance with these construction vibration and air blast restrictions.

Where blasting is not required for the Work Under the Contract, vibration mitigation and management measures may be incorporated into a combined Noise and Vibration Management Sub-Plan.

HOLD POINT

Process Held:	Commencement of blasting, pile driving, excavation by hammering or ripping, dynamic compaction or demolition operations or any other activities which may cause damage through vibration or air blast.
Submission Details:	At least 10 working days prior, submit to the Nominated Authority a copy of the Building Condition Inspection Reports and Vibration and Air Blast Management Sub-Plan or the combined Noise and Vibration Management Sub-Plan (where blasting is not required).
Release of Hold Point:	The Nominated Authority will consider the submitted documents prior to authorising the release of the Hold Point. The Nominated Authority may request additional information in respect of the proposal and/or submitted documents.

You are liable for any accident or damage to any property, person, or thing resulting from vibration and air blast from construction activity.

4.8 BIODIVERSITY

Prepare and implement a Flora and Fauna Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to provide effective environmental controls to protect all native flora, fauna, and fish from the impact of your construction activities.

The Flora and Fauna Management Sub-Plan or mitigation strategies must include, as a minimum, the following:

- (a) Provisions for compliance with statutory requirements applicable to flora, fauna and fish management, in *National Parks and Wildlife Act 1974 (NSW)*, *Biodiversity Conservation Act 2016 (NSW)*, *Environmental Planning and Assessment Act 1979 (NSW)*, *Environment Protection and Biodiversity Conservation Act 1999 (Cth)*, *Fisheries Management Act 1994 (NSW)* and *Biosecurity Act 2015 (NSW)*.
- (b) Fauna and flora management strategies for pre-construction, construction and post-construction activities including environmental control measures for pre-clearing process.
- (c) Fauna rescue and release procedure.

Handling of injured fauna must be carried out by licensed fauna handler such as fauna ecologist or wildlife carer. If native fauna are captured during vegetation clearing, they must be released into a suitable nearby location that has been identified as such by an ecologist. Keep records of fauna captured and relocated.

Report any injury or death of threatened species to the Principal. The fauna rescue and release procedure must include management measures for aquatic fauna and fish.

- (d) Procedure for controlling the introduction and spreading of weeds, diseases and pests (termed “biosecurity matter” under the *Biosecurity Act 2015 (NSW)*) caused by the Work Under the Contract, including hygiene protocols and the arrangements for monitoring.
- (e) Proposed strategies for re-use of coarse woody debris and bushrock.
- (f) Procedure for dealing with unexpected threatened species finds that may be discovered by you when undertaking Physical Work on Site. The procedure must include, as a minimum, the following:
 - (i) stop work arrangements in the immediate area of the threatened species;
 - (ii) notification and communication protocol;
 - (iii) consultation with the specialists to assess the significance of the find; and
 - (iv) a list of approvals, licences or permits that may need to be obtained before the works can recommence.

Prepare and include an EWMS, for clearing and grubbing that meets the requirements of Specification TfNSW D&C G40 and TfNSW publication “TfNSW Biodiversity Guidelines: Protecting and managing biodiversity on TfNSW projects”, in the Flora and Fauna Management Sub-Plan or CEMP.

Refer to the TfNSW Biodiversity Guidelines when preparing the Flora and Fauna Management Sub-Plan.

Detail here any specific flora and fauna management requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.

Preserve existing trees, plants, and other vegetation that are to remain within or adjacent to the Site and use every precaution necessary to prevent damage or injury thereto. Identify and protect areas of vegetation to be retained showing them as exclusion zones in accordance with the TfNSW Biodiversity Guidelines.

Detail here any specific requirements for preservation of vegetation, such as from the EIS, REF, Submissions Report or planning consent/approval. Alternatively, insert such requirements in Specification TfNSW D&C G40 and insert a cross reference in TfNSW D&C G36.

4.9 ABORIGINAL HERITAGE

Detail here any specific Aboriginal heritage requirements and safeguards, such as from the EIS, REF, Submissions Report, planning consent/approval or Office of Environment and Heritage approval.

A Heritage Management Sub-Plan combining both Aboriginal and Non-Aboriginal heritage requirements may be used.

Example:

Protect the Aboriginal artefact scatter (Site Name HB-24) located on the banks of Shark River approximately 50 m upstream of the bridge site from construction related activities by erecting a temporary pedestrian safety fence around a 10 m buffer zone from the recorded site perimeter.

The fence type and construction must be in accordance with Specification TfNSW D&C R201.

Prepare an Aboriginal Heritage Management Sub-Plan as part of the CEMP or include mitigation strategies within the CEMP to manage any areas of the Site where known Aboriginal objects, places and/or culturally sensitive areas have been identified on Site.

The Aboriginal Heritage Management Sub-Plan or mitigation strategies must also include a procedure for the management of unexpected potential Aboriginal objects discovered by you during construction. The management of unexpected potential Aboriginal objects must be in accordance with the TfNSW publication “Unexpected Heritage Items”.

The procedure for unexpected finds must include the following steps:

- (a) cease work in the immediate area of the identified potential Aboriginal object immediately;
- (b) notify the Principal immediately;
- (c) provide access to the Site to any heritage specialist required to assess the finds;
- (d) provide temporary exclusion (pedestrian) fencing;
- (e) implement additional safeguards as required.

Provide for all personnel working on the Site training on their responsibilities pertaining to the Aboriginal Heritage provisions of the *National Parks and Wildlife Act 1974 (NSW)*. Make the personnel working on Site aware of all Aboriginal archaeological sites and areas of cultural sensitivity identified in the Cultural Heritage Assessment Report or the Environment Assessment documents listed in Annexure G36/A3 that must be preserved.

4.10 NON-ABORIGINAL HERITAGE

Detail here any specific requirements for non-Aboriginal heritage requirements and safeguards, such as from the EIS, REF, Submissions Report or planning consent/approval.

A Heritage Management Sub-Plan combining both Aboriginal and Non-Aboriginal heritage requirements may be used.

Example:

Protect the heritage well (Site Name BS-25) located on the south east corner of the Smith's homestead approximately 20 m from the current road alignment by erecting a temporary pedestrian safety fence around a 10 m buffer zone from the physical site permitter.

The fence type and construction must be in accordance with Specification TfNSW D&C R201.

Example:

Where vibration impacts to heritage structures are likely, implement vibration monitoring of the heritage structures.

Prepare a Non-Aboriginal Heritage Management Plan as part of the CEMP or include mitigation strategies within the CEMP to manage any areas of the Site where any known heritage items/s and/or archaeological sites have been identified.

The Non-Aboriginal Heritage Management Sub-Plan or mitigation strategies must also include a procedure for the management of unexpected potential archaeological relics discovered by you during construction. The management of unexpected potential archaeological relics must be in accordance with the TfNSW publication "Unexpected Heritage Items". The procedure for unexpected finds must include the steps (a) to (e) listed in Clause 4.9.

Provide for all personnel working on the Site training on their responsibilities under the *Heritage Act 1977 (NSW)*. Make the personnel aware of all non-Aboriginal heritage sites/areas, including cultural plantings, and areas of archaeological potential, which are identified in the Environment Assessment documents listed in Annexure G36/A3.

4.11 WASTE MANAGEMENT AND RESOURCE RECOVERY

4.11.1 Waste Management Sub-Plan

Prepare a Waste Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to manage and minimise the generation of waste and encourage reuse of materials. Be guided by the following publications when preparing the Waste Management Sub-Plan or mitigation strategies:

- NSW Government Resource Efficiency Policy (GREP);
- EPA Waste Classification Guidelines , available at:
<https://www.epa.nsw.gov.au/~media/EPA/Corporate%20Site/resources/wasteregulation/140796-classify-waste.ashx>;
- EPA Resource Recovery orders and exemptions, available at:
<https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/resource-recovery-framework/current-orders-and-exemption>;

- TfNSW Environmental Sustainability Strategy 2019-2023, available at: <https://www.rms.nsw.gov.au/documents/about/environment/environmental-sustainability-strategy.pdf>;
- TfNSW Technical Guide “Management of road construction and maintenance wastes”, available at: <https://www.rms.nsw.gov.au/documents/about/environment/waste-management-guide.pdf>;
- TfNSW Technical Direction ETD 2015/020 “Legal offsite disposal of Roads and Maritime Services waste”, available at: <http://www.rms.nsw.gov.au/documents/about/environment/rms-environment-offsite-waste-disposal.pdf>;
- TfNSW Environment Fact Sheets.

Use the concept of the waste hierarchy to set priorities for the efficient use of resources, consistent with the objectives of the *Waste Avoidance and Resource Recovery Act 2001 (NSW)*. Further details of the waste hierarchy may be obtained from:

<http://www.epa.nsw.gov.au/wastestrategy/waste-hierarchy.htm>.

The Waste Management Sub-Plan or mitigation strategies must:

- (a) identify the waste streams that will be generated during the Contract
- (b) provide details, for each of the identified waste streams, of the following:
 - (i) the waste classification (refer to EPA’s “Waste Classification Guidelines” and TfNSW Environment Fact Sheets);
 - (ii) how and where the waste is to be reused, recycled, stockpiled or disposed of;
 - (iii) the receptacles that will be used for storing identified waste materials prior to reuse, recycling, stockpiling or disposal;
 - (iv) how, and by whom, will the waste be transported between generation, storage and point of reuse, recycling, stockpiling or disposal;
 - (v) sampling and testing requirements (refer to TfNSW Environment Fact Sheet “Waste Sampling”);
 - (vi) licensing requirements under the *POEO Act* and/or relevant NSW Resource Recovery Orders and Exemptions;
 - (vii) procedures for verifying licences and permits for handling, transportation and disposal of waste;
- (c) provide controls for minimising consumption of fuel, oil and other consumables, on-site electricity and water required for construction;
- (d) include methods for monitoring the implementation of the Waste Management Sub-Plan or mitigation strategies;
- (e) identify the need or otherwise for “s.143 Notices” (see Clause 4.11.4) or any other additional approval, licence and/or permit from an appropriate authority or the Principal;
- (f) comply with the requirements of the *POEO Act* for any non-licensed as well as licensed waste activities that involve the storage, transport, treatment and/or disposal of waste.

<p><i>Detail here any specific waste management requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.</i></p>

4.11.2 Waste Management Register

Maintain a Waste Management Register until the Construction Completion Date, to record the type, amount and location of waste reused, recycled, stockpiled and disposed of. The Waste Management Register must include the following details:

- (a) type of waste and its classification (according to the *POEO Act* and Waste Classification Guidelines);
- (b) quantities of waste, measured in tonnes;
- (c) how and where the waste was reused, recycled, stockpiled or disposed of;
- (d) date when the waste was reused, recycled, stockpiled or disposed of;
- (e) name and waste transport licence (if applicable) of the transporter used.

4.11.3 Waste Avoidance and Resource Recovery Reporting

Once a year, submit to the Principal a Waste Avoidance and Resource Recovery Report containing information relating to wastes generated or recycled in accordance with Annexure G36/F, at the following dates:

- (a) within one month from 1 July of the current calendar year, for the previous 12 months of the contract period, or part thereof if the contract commenced after 1 July of the previous calendar year;
- (b) at Actual Completion Date, for the final reporting period.

4.11.4 Offsite Waste Disposal

Comply with Section 143 of the *POEO Act* when transporting or depositing of waste.

Prior to transporting wastes generated under the Contract to any location outside the Site for reuse, recycling, stockpiling or disposal (termed “waste site”), except when transporting to a licenced waste disposal facility, submit to Principal the following documents:

- (a) A completed and signed copy of an “approved notice” as defined in section 143(3A) of the *POEO Act* (termed “s.143 Notice”) received from owner and/or occupier of the “waste site”.

A proforma for this “s.143 Notice” is available from the EPA website at:

<https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wasteregulation/160095-notices143-form.docx>).

- (b) A copy of the letter, using the template in ETD 2015/020, sent to the owner and/or occupier receiving the waste.
- (c) Evidence that the waste classification in accordance with the EPA Waste Classification Guideline is consistent with that stated in the “s.143 Notice”, which may be either:
 - (i) virgin excavated natural material (VENM) certificate (template available at: <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/waste/130693-venm-certificate.doc?la=en&hash=270F10BAA489FD49EB53CE088A6A49409A45218A>), or
 - (ii) test results, survey or other assessment details as required by EPA Waste Classification Guideline or in accordance with a relevant NSW Resource Recovery order and exemption.

- (d) Evidence of legal right to receive the described waste, which may be any of the following:
 - (i) development or planning approval; or
 - (ii) determined REF; or
 - (iii) other relevant statutory approval; or
 - (iv) written correspondence from the Local Council or alternate planning authority clearly stating that the activity is exempt development or permitted without consent (under a Local or Regional Environment Plan or State Environmental Planning Policy), to accept the waste material as classified.

- (e) The submitted information under item (d) above must identify the approval or regulatory clauses that define:
 - (i) how the waste can be received;
 - (ii) any volume limits (including EPA licence or Resource Recovery order/exemption constraints);
 - (iii) permitted waste classifications;
 - (iv) time limitation and constraints (as stated in EPA licence or Resource Recovery order/exemption or planning approvals).

- (f) Written confirmation from the “waste site” of the following:
 - (i) waste delivery arrangements and/or relevant traffic management plan;
 - (ii) “waste site” will display the “s.143 Notice” at the entrance to the property or a copy of the “s.143 Notice” will be supplied to each delivery vehicle.

- (g) Proposed methodology to track the cumulative total volume of each class of waste and/or material being transferred to each individual “waste site”, to ensure that volumes will be managed to meet the requirements stated in the “s.143 Notice”.

Detail here any known or proposed stockpile or disposal sites for which a “s.143 Notice” will be required.

HOLD POINT

Process Held:	Transport of waste generated under the Contract to the “waste site”.
Submission Details:	Completed and signed original copy of “approved notice” and supporting documents, as listed under items (a) to (g) in Clause 4.11.4.
Release of Hold Point:	The Nominated Authority will consider the submitted documents and may request additional information, prior to authorising the release of the Hold Point. .

When transferring waste under a “s.143 Notice”, implement the methodology stated under item (g) above and maintain a record of the cumulative total volume of waste and materials being transferred. Make this record to the Principal upon request.

4.12 USE OF PESTICIDES

Use of pesticides must be in accordance with the *Pesticides Act 1999*, other relevant legislation, label directions and any relevant industry codes of practice.

Complete a Records Sheet within 24 hours of applying the pesticide and submit a copy to the Principal. For guidance when preparing pesticide application records, you may use the "Sample Pesticides Application Records Sheet" shown in Annexure G36/G.

You are exempt from completing the Records Sheet, when both of the following are satisfied:

- (a) The pesticide is, or is part of a product that is widely available to the general public at retail outlets.
- (b) The pesticide is only applied by hand or by using hand-held equipment;
- (c) If applied outdoors on any single occasion, in quantities of no more than 5 litres/5 kilograms of concentrated product or 20 litres/20 kilograms of the ready-to-use product; or if applied indoors, in quantities of no more than 1 litre/1 kilogram of concentrated product or 5 litres/5 kilograms of the ready-to-use product.

All personnel managing and using pesticides must receive appropriate training and hold appropriate licence prior to commencing work. Only pesticides registered for use near water may be used near water.

Public notification of pesticide use must be in accordance with Annexure G36/H. Implement the following measures whenever pesticides are to be used adjacent to, or across the road from, a "sensitive place" (refer to Clause 1.3 for definition):

- Use of mechanical means of pest control (such as mowing or slashing) where feasible; or
- Use of hand-held application of pesticides where mechanical means of pest control are not feasible.

Avoid applying pesticides:

- (i) on hot days when plants are stressed;
- (ii) after the seed has set;
- (iii) within 24 hours of rain or when rain is imminent;
- (iv) when winds will cause drift of pesticides into non-target areas.

Detail here any specific requirements for chemical storage, handling, transporting and pollution control procedures.

List any other specific requirements from EIS, REF, Submissions Report or planning consent/approval.

4.13 WORK IN ENVIRONMENTALLY SENSITIVE AREAS

The Principal has identified the following environmentally sensitive areas:

List here any environmentally sensitive areas or sensitive places identified in EIS, REF, Submissions Report or planning consent/approval

Environmentally sensitive areas may include Aboriginal and non-Aboriginal heritage sites (taking into account privacy implications), records of threatened species or populations, threatened ecological communities, retained threatened species habitat (e.g. hollow-bearing trees), waters, mangroves, National Parks, Nature Reserves, potential or actual acid sulphate soil areas, contaminated sites or a “sensitive place” as defined in Clause 1.3.

Clearly show all identified environmentally sensitive areas and sensitive places on Sensitive Area Maps, submitted as part of the CEMP. Review and update regularly the Sensitive Area Maps to include environmentally sensitive areas identified during the Work Under the Contract. Make the Sensitive Area Maps available to all personnel working on the Site.

Prepare and include in the CEMP an EWMS for working in or near the environmentally sensitive areas. Include in the EWMS environmental protection measures that are effective for minimising the risk of impacting the environmentally sensitive areas. Review these measures regularly to ensure that they are effective.

At least 5 working days prior to commencing Physical Work on Site in or near an environmentally sensitive area, prepare an EWMS which includes the details of the environmental protection measures to be implemented at that location. Clearly delineate the environmentally sensitive area and signpost the locations and boundaries.

HOLD POINT

Process Held:	Working in or near the environmentally sensitive areas.
Submission:	At least 5 working days prior, provide to the Nominated Authority a copy of the EWMS for working in or near the environmentally sensitive areas and written notice that the environmentally sensitive areas are clearly delineated with locations and boundaries signposted.
Release of Hold Point:	The Nominated Authority will consider the submitted documents prior to authorising the release of the Hold Point.

As part of the environmental induction (refer Clause 3.5) to your staff and subcontractors working on the Site, provide an understanding of the risks associated with working in or near environmentally sensitive areas, and training on implementing the relevant environmental protection measures.

Clearly delineate and signpost the locations and boundaries of all environmentally sensitive areas on Site.

4.14 ENVIRONMENTAL INCIDENT NOTIFICATION AND REPORTING

If required by an EPL, prepare and include in the CEMP an environmental incident reporting and investigation procedure, including Pollution Incident Response Management Plan, as required by Part 5.7 of the *Protection of the Environment Operations Act 1997 (NSW) (POEO Act)*.

Manage and report environmental incidents, including “pollution incidents”, in accordance with the TfNSW “Environmental Incident Classification and Reporting Procedure” and TfNSW “Environmental Incident Report”.

Notify the Principal verbally immediately and in writing within 24 hours, of any pollution incidents which have been reported to the EPA under Part 5.7 of the *POEO Act*.

Report all other environmental incidents to the Principal verbally immediately and in writing within 24 hours of the incident coming to your attention. Notify the Principal when any environmental incidents have been reported to the relevant authorities as required under the relevant NSW environmental legislation.

The Principal may request additional information in relation to any environmental incident. You must provide the Principal with all information requested within the agreed timeframe but no later than 3 working days.

4.15 SITE FACILITIES

4.15.1 General

Locate and manage your site facilities (refer to Scope of Works and Technical Criteria) to minimise impacts on the environment and the community.

Detail here any specific requirements for site facilities, e.g. proximity to waters, access requirements, etc.

List any other specific requirements from EIS, REF, Submissions Report or planning consent/approval.

4.15.2 Pre-construction Land Condition Assessment

Prior to taking possession of any area of land nominated by the Principal as available for use by you for locating your site facilities, including areas for construction materials storage and stockpiling, arrange for a pre-construction land condition assessment of each area you intend to occupy.

The purpose of the pre-construction land condition assessment is to identify any existing wastes or stored materials on the land prior to the area being occupied by you. The pre-construction land condition assessment must be undertaken by an independent environmental consultant approved by the Principal, with experience in site environmental inspections and construction waste management.

Where the Principal has approved the use of other areas of the Principal's land, additional to those nominated, carry out the pre-construction land condition assessment of each area. Obtain the necessary statutory and environmental planning approvals for the intended use of the land.

Submit to the Principal a report of the pre-construction land condition assessment for each area of land, prior to the Principal granting approval for you to take possession of the area(s). The report must be in the format detailed in the draft TfNSW publication "Management of Wastes on Transport for NSW Land". (A copy may be obtained from the TfNSW Senior Environmental Sustainability Specialist, tel: 02 8588 5752.)

HOLD POINT

Process Held:	Taking possession of any land nominated or authorised by the Principal for use for the Contractor’s site facilities.
Submission:	Pre-construction land condition assessment report for each area which you intend to use for the Contractor’s site facilities, and evidence of any necessary statutory and environmental approvals.
Release of Hold Point:	The Nominated Authority will consider the submitted report, and may inspect the site or request additional information in respect of the submitted report, prior to authorising the release of the Hold Point.

4.15.3 Post-construction Land Condition Assessment

When the areas of the Principal’s land used for the Contractor’s site facilities are no longer required, and after restoration of the areas in accordance with Clause 4.16, arrange for a post-construction land condition assessment for each area that has been used.

The purpose of the post-construction land condition assessment is to verify that that no unauthorised project wastes remain on the land to be returned to the Principal. The land condition assessment must be undertaken by an independent environmental consultant approved by the Principal.

Submit to the Principal a report of the post-construction land condition assessment for each area of land used, prior to the Principal accepting those areas of land. The report must be in the format detailed in the draft TfNSW publication “Management of Wastes on Transport for NSW Land”.

Where the post-construction land condition assessment report identifies unauthorised wastes attributable to your activities left behind on the areas of land, carry out any further work required in accordance with the recommendations of the report and Clause 4.16.

4.16 RESTORATION OF SITE

Prior to Construction Completion, restore areas disturbed by you (such as areas for site compounds, material storage, access and haul roads and the provision of TfNSW Site Facilities) to a condition similar to that existing before disturbance.

Restoration includes spill clean up and soil remediation, where applicable, ripping, topsoiling of the area, weed control and seeding, planting, watering and maintenance. Refer to Specifications TfNSW D&C R178 and TfNSW D&C R179 as applicable.

Detail here any specific requirements, such as from the EIS, REF, Submissions Report or planning consent/approval, for site restoration.

5 THE PRINCIPAL’S SURVEILLANCE AND AUDITS

The Principal may conduct regular surveillance and inspections of the Site at any time. The Principal may authorise environmental specialists as agents of the Principal to enter the Site for the purposes of surveillance or inspection and to attend site meetings to discuss environmental aspects of the Work Under the Contract.

If surveillance, inspection or audit indicates that the environmental controls are not in place or are not properly maintained as required by the CEMP, the Principal may conduct a CEMP compliance audit at 24 hours' notice to you; otherwise the Principal will give you at least 5 days' notice that a CEMP compliance audit is to be conducted and will advise you on the scope of this audit.

Surveillance and inspections of Site by the Principal will be in accordance with TfNSW "Guidance Note: Environmental Inspection Report".

Provide necessary resources, including site personnel and facilities at the Site to accommodate the audit team nominated by the Principal.

Respond to the issues raised during these inspections in writing within 7 working days and address the issues within agreed timeframes. Follow TfNSW "Guidance Note: Environmental Inspection Reporting" when preparing and closing out environmental inspection actions.

Detail here any specific requirements, such as from the EIS, REF, Submissions Report or planning consent/approval.

At least 10 working days prior to Construction Completion, the Principal may carry out an audit to verify that all environmental obligations listed in this Specification have been met by you.

ANNEXURE G36/A – SUPPLEMENTARY PROJECT INFORMATION

NOTES TO TENDER DOCUMENTER: (Delete this boxed text after customising Annexure G36/A)

Where “Yes / No” options are shown below, delete whichever is not applicable.

A1 GENERAL

Clause	Details	
3.1	Submission of the CEMP to the Principal is required for forwarding to: (a) Department of Planning and Infrastructure (b) Environment Protection Authority (c) <i>[insert others as applicable]</i>	Yes / No Yes / No <i>[Yes]</i>
3.2.1	Environmental Risk Assessment Workshop is required	Yes / No
3.7.1	Notification to the EPA Regional Manager of at least two persons and their contact telephone numbers, who will be available to be contacted by the EPA on a 24 hour basis, is required	Yes / No
4.5	Disposal of cleared and grubbed vegetation by burning off is conditionally allowed by the Principal	Yes / No

A2 ENVIRONMENTAL MANAGEMENT SUB-PLANS

Clause	Details	Required
4.1	Soil and water management sub-plans	refer D&C G38
4.2.2	Contaminated Land Management Sub-Plan	Yes / No
4.4	Air Quality Management Sub-Plan	Yes / No
4.6	Noise Management Sub-Plan	Yes / No ⁽¹⁾
4.7	Vibration and Air Blast Management Sub-Plan	Yes / No ⁽¹⁾
4.8	Flora and Fauna Management Sub-Plan	Yes / No
4.9	Aboriginal Heritage Management Sub-Plan	Yes / No ⁽²⁾
4.10	Non-Aboriginal Heritage Management Sub-Plan	Yes / No ⁽²⁾
4.11	Waste Management Sub-Plan	Yes / No

Notes:

- ⁽¹⁾ May be combined together into Noise and Vibration Management Sub-Plan, if no blasting.
⁽²⁾ May be combined together into Heritage Management Sub-Plan.

A3 ENVIRONMENT ASSESSMENT DOCUMENTS

The following documents are FOR INFORMATION ONLY, and do not form part of the Contract:

List here the Environment Assessment documents, such as the Environment Impact Statement (EIS), Review of Environmental Factors (REF), Submissions Report, Conditions of Approval, etc.

ANNEXURE G36/B – (NOT USED)

ANNEXURE G36/C – SCHEDULES OF HOLD POINTS AND IDENTIFIED RECORDS

Refer to Clause 1.2.3.

C1 SCHEDULE OF HOLD POINTS

Clause	Description
3.1	Submission of CEMP and selected CEMS documents
3.2.2	Evidence of approvals, licences and permits obtained
3.10	Verification that environmental nonconformities has been rectified
4.2	Submission of Remediation Action Plan for contaminated land
4.7	Building Condition Inspection Reports and Vibration and Air Blast Management Sub-Plan
4.11	Copy of “s.143 Notice”
4.13	Working in or near environmentally sensitive areas
4.15.2	Submission of pre-construction land condition assessment report for each area you intend to occupy for your site facilities

C2 SCHEDULE OF IDENTIFIED RECORDS

The records listed below are Identified Records for the purposes of TfNSW D&C Q6 Annexure Q/E.

Clause	Description of Identified Record
3.2.2	Approvals, licences and permits
3.7.3	Reports on complaints about any environmental issue and actions
3.8	Records of emergency responses
3.9	Records of environmental management performance monitoring and measurement
3.9	Environmental audit reports
3.10	Records of corrective and preventative measures to address nonconformities of environmental obligations
3.11	CEMS and CEMP compliance records
3.12	Records of review of effectiveness and proper implementation of CEMP
4.3	Records of spill prevention measures and responses
4.7	Building Condition Inspection Reports
4.11	Waste Management Register
4.11	“s.143 Notices” for transporting and depositing of waste
4.12	Pesticide Records Sheets
4.14	Environmental incident and investigation reports
4.15.2	Pre-construction land condition assessment reports

Clause	Description of Identified Record
4.15.3	Post-construction land condition assessment reports

ANNEXURE G36/D – PLANNING DOCUMENTS

The CEMP and its references must, as a minimum, include the following – refer to the relevant Clause in the Specification for complete details of requirements:

Clause	Summary of Required Planning Documents or Reference
3.1	CEMP for Work Under the Contract, including Environmental Policy and Sub-Plans
3.2.2	Compliance tracking program
3.2.3	Environmental objectives and targets
3.2.4	Environmental Work Method Statements
3.3	Names, responsibilities and authority of site management personnel, including ESR, with responsibility for implementing CEMP. Where applicable, the relationship between Environmental Management Representative and ESR.
3.4	Procedures to ensure subcontractor compliance
3.5	Environmental induction and training plan
3.6	Procedure for notifying the Principal and all relevant Authorities in advance of any proposed extension to working hours
3.7	Details of processes for external and internal communication in relation to environmental aspects of work
3.8	Emergency planning and response procedures
3.9	Procedure(s) to monitor and measure environmental management performance and to evaluate compliance
3.9	Environmental monitoring and auditing program
4.1	Soil and water management sub-plans (refer TfNSW D&C G38)
4.2	Contaminated Land Management Sub-Plan and Remediation Action Plan
4.3	Procedure(s) for spill prevention and response
4.3	Procedures for controlling and removing chemical, fuel and lubricant spillage on the Site and adjoining areas
4.4	Air Quality Management Sub-Plan and procedures for effective dust control, including dust monitoring and reporting procedures
4.6	Noise Management Sub-Plan
4.7	Vibration and Air Blast Management Sub-Plan
4.8	Flora and Fauna Management Sub-Plan and EWMS for clearing and grubbing
4.9	Aboriginal Heritage Management Sub-Plan and procedure for the management of unexpected potential archaeological relics
4.10	Non-Aboriginal Heritage Management Sub-Plan and procedure for the management of unexpected potential archaeological relics

Clause	Summary of Required Planning Documents or Reference
4.11	Waste Management Sub-Plan and Waste Management Register
4.13	Sensitive Areas Maps and EWMS for working in or near environmentally sensitive areas
4.14	Environmental incident reporting and investigation procedure
	Any other documents or information required to be included in the CEMP

ANNEXURE G36/E – DISTANCE FROM CONSTRUCTION ACTIVITY FOR BUILDING CONDITION INSPECTION

Refer to Clause 4.7.

Carry out a Building Condition Inspection for each public utility, structure and building within the distance from the appropriate activity listed below; however, where the risk of damage to an item is assessed to be very low, the requirement for a Building Condition Inspection may be waived with the Principal's agreement.

Activity	Distance
Blasting Operations	<i>(e.g. 500 metres)</i>
Pile Driving	<i>(e.g. 200 metres)</i>
Excavation by hammering or ripping	<i>(e.g. 100 metres)</i>
Vibrating Compaction > 7 tonne plant	<i>(e.g. 50 metres)</i>
Vibrating Compaction < 7 tonne plant	<i>(e.g. 25 metres)</i>
Demolition of Structures	<i>(e.g. 50 metres)</i>

NOTES TO TENDER DOCUMENTER: Delete this boxed text after drafting TfNSW D&C G36

The documenter must ascertain from the EIS, REF, Submissions Report or planning consent/approval if any structures are potentially susceptible to damage from construction vibration or air blast and amend the distances in the table for actual site circumstances.

ANNEXURE G36/F – WASTE AVOIDANCE AND RESOURCE RECOVERY REPORTING

Refer to Clause 4.11.

F1 ANNUAL WASTE AVOIDANCE AND RESOURCE RECOVERY REPORT

Submit the Waste Avoidance and Resource Recovery report by 31 July for the preceding financial year and by the Actual Completion Date.

F1.1 Definitions of Waste and Purchasing Materials

The following definitions can be used to assist in completing the Waste Avoidance and Resource Recovery Report.

Descriptions of vegetation, construction and demolition materials are sufficiently broad to encompass the range of activities undertaken by TfNSW contractors. If the materials used or the wastes generated are not described exactly below, EITHER list it under the category that it fits into best and briefly describe it in the comments section, OR else list it as an “Other” category with a description.

DO NOT DOUBLE COUNT MATERIALS by including them in more than one reporting category. For example, if reporting on total tonnes of concrete used in the Works, do not also separately report the tonnes of aggregate and sand contained in the concrete.

Material	Description
Aggregates	Rock or other hard materials such as concrete, crushed stone or bricks, between 4.25 mm and 100 mm particle size.
Asphalt	Dense continuously graded mixture of coarse and fine aggregates, mineral filler and bitumen. May contain additives. Do not recycle or reuse coal tar asphalts in accordance with TfNSW Environment Technical Direction ETD 2015/21 “Coal tar asphalt handling and disposal”, available at: http://www.rms.nsw.gov.au/documents/about/environment/rms-environment-coal-tar-asphalt.pdf .
Building and demolition materials	Unsegregated material (other than material containing asbestos waste) resulting from construction, replacement, repair or alteration of infrastructure but excluding excavated soil.
Concrete	Mixture of cement, sand (natural and/or manufactured) and aggregates. May include additives or substitutes such as fly ash.
Fill	Material excavated from either on-site or off-site.
Glass	Sheet glass used for doors, windows, partitioning etc.
Non-ferrous metal	Metal building products and materials other than steel or other ferrous metals e.g. aluminium, brass, copper etc.
Steel	Steel building products and materials e.g. reinforcing steel, sheet roofing, structural columns and beams etc.
Timber	Wood materials used for formwork or other construction purposes.
Vegetation	Vegetation such as leaves, grass clippings, branches and logs. Includes

Material	Description
	materials that have been processed e.g. sawn, chipped, mulched or composted. Does not include putrescible waste such as food scraps.
Virgin excavated natural material (VENM)	As defined in Section 50 of the <i>POEO Act</i> . VENM is a waste that has been pre-classified as general solid waste (non-putrescible).
Other materials	Waste stream not described exactly in this table, including site office waste.

WASTE AVOIDANCE AND RESOURCE RECOVERY REPORT

Contract No:

The Principal:

Contract Description:

Reporting Period:

Report Contact *:

** Name and contact details of person completing this report*

There are two sections in this Waste Avoidance and Resource Recovery Report. Confirm the completion of each section of the Waste Avoidance and Resource Recovery Report by signing below.

REPORT SECTION	INSTRUCTIONS	SIGNATURE CONFIRMING COMPLETION
Part A – Waste and Recycling Data	Table 1 is used to enter data on the amount of material landfilled and reused/recycled in the course of completing Work Under the Contract.	
Part B – Project Initiatives and Barriers	Table 2 is used to provide information on the initiatives taken to reduce waste, recycle resources and purchase recycled content materials in the course of completing Work Under the Contract.	

PART A – WASTE AND RECYCLING DATA

Enter data on the amount of material **LANDFILLED** and **REUSED/RECYCLED** by you in the course of completing Work Under the Contract in Table 1. This includes materials either transported to an off-site disposal facility for landfilling, reuse or recycling or reused/recycled on-site. DO NOT include the quantities of materials purchased for use in the Works.

TABLE 1: WASTE AND RECYCLING DATA							
Material Generated	Total quantity landfilled ⁽¹⁾	Unit	Total quantity reused/recycled ⁽²⁾	Unit	Total quantity generated ⁽³⁾	Unit	Comments
Aggregates		tonnes		tonnes		tonnes	
Asphalt		tonnes		tonnes		tonnes	
Building and demolition materials (mixed)		tonnes		tonnes		tonnes	
Concrete		tonnes		tonnes		tonnes	
Fill		tonnes		tonnes		tonnes	
Glass		tonnes		tonnes		tonnes	
Non-ferrous metals		tonnes		tonnes		tonnes	
Steel		tonnes		tonnes		tonnes	
Timber		tonnes		tonnes		tonnes	
Vegetation		tonnes		tonnes		tonnes	
VENM		tonnes		tonnes		tonnes	
Other materials:		tonnes		tonnes		tonnes	

Notes:

- (1) Enter the quantity of material that is disposed of to an off-site landfill facility.
- (2) Enter the quantity of material that is reused on-site or taken off-site for reuse/recycling.
- (3) Enter the total quantity of material generated in the course of undertaking Work Under the Contract. This must equal total landfilled (column 1) + total recycled (column 2).

PART B – PROJECT INITIATIVES AND BARRIERS

Provide details of any initiatives taken to reduce waste and recover resources. Also identify and provide details on any barriers that were encountered when undertaking the initiative, or that prevented undertaking a considered initiative.

Note: “Initiatives” are actions taken that are not standard industry practice. “Barriers” are things that restrain or obstruct the undertaking of an initiative and may include, for example, cost, technical or logistical constraints.

1	Design, construction and work practice initiatives undertaken to reduce waste generation:	
2	Initiatives taken to recycle or reuse waste materials::	
3	Barriers or obstacles to recycling or reusing waste materials:	
4	Initiatives taken to purchase materials containing recycled content:	
5	Barriers or obstacles to purchasing materials containing recycled content:	

ANNEXURE G36/G – SAMPLE PESTICIDES APPLICATION RECORDS SHEET

Refer to Clause 4.12.

Information to be Recorded	Brief Description	Enter Data Here
1. Date and time	Start Date and Time: Finish Date and Time:	
2. Who applied the pesticide	Full operator name: Operator contact address: Operator contact phone:	
3. Who owns/occupies the land	Full owner/occupier's name: Owner/occupier's contact address: Owner/occupier's contact phone:	
4. Boundaries of treated area and order of treatment	List treated areas and order of treatment, preferably with reference to a map: List order of treatment:	
5. Problem treated	Identify the pest or problem treated (e.g. controlling of spot weed infestation):	
6. Product used	Record either the full name, or a product code if a list of full product names of pesticides you use is kept at the front of your logbook:	
7. Equipment used	Describe the equipment used (e.g. boom-spray, hand-held backpack sprayer etc):	
8. Quantity applied and dilution	Total amount of pesticide product mix used: Write down whether the mix was concentrated product or a diluted mixture (note down rate of dilution):	
9. Area covered by application	Area of application (in square metres or hectares):	
10 Wind speed and direction	Estimate of wind speed and direction (only if the pesticide is applied through the air): Write down any changes in weather during application:	
11 Other weather details	Record any weather details such as temperature, humidity and/or rainfall where the pesticide product label requires you to assess these:	

ANNEXURE G36/H – PUBLIC NOTIFICATION OF PESTICIDE USE

H1 PESTICIDE USES REQUIRING PUBLIC NOTIFICATION

Pesticide uses in the following public places require notification, unless notification exemptions apply (refer to Annexure G36/H3):

Public places [#] where pesticides will be applied on behalf of TfNSW	Minimum Notification Methods
Urban and rural roadsides, including: <ul style="list-style-type: none"> • Median strips • Road shoulders • Kerb and guttering • Roundabouts • Traffic islands • Roadside cycleways/footpaths • Traffic management devices • Stockpile sites Freeways and controlled access roads	Signs on vehicle concurrent with spraying activity. Internet-based notification required as per Annexure G36/H2 below.
Road construction sites	Signs on vehicle concurrent with spraying activity.
Roadside rest areas, including facilities such as: <ul style="list-style-type: none"> • Picnic/BBQ areas • Toilets • Playgrounds Weigh stations and heavy vehicle inspection stations Vacant lands owned by TfNSW, including pesticide applications around built property (excluding lands that are leased for private occupation and without public access). Motor registries, including: <ul style="list-style-type: none"> • Buildings and surrounds • Carparks • Lawn/landscaping. Administration sites, including regional and district offices. Depots Rider/driver training schools Public places over which persons or organisations hold an existing lease on TfNSW land. Ferry wharves	Signs on vehicle concurrent with spraying activity. Portable signs will be erected at locations where most likely to be seen immediately prior to use and remain until operation is completed, unless label requires a longer period. Reasonable efforts must be made to replace signs removed or vandalised.
Bridges, vehicular ferries and associated infrastructure.	Portable signs will be erected at locations where most likely to be seen immediately prior to use and remain until operation is completed, unless label requires a longer period. Reasonable efforts must be made to replace signs removed or vandalised.

Notes:

- (a) Pesticide uses on land where TfNSW shares maintenance responsibilities with others is also captured by the above notification requirements; e.g. rail crossings, electricity easements or travelling stock reserves that overlap with land under TfNSW maintenance control.
- (b) Pesticide uses are also captured by the above notification requirements if:
 - (i) the pesticides are applied on land that is not under TfNSW control or ownership; and
 - (ii) the land is immediately adjacent to land that is under TfNSW control or ownership; and

- (iii) there are no physical boundaries (such as fences) between the two pieces of land; and
 - (iv) the application of pesticides on the land not under TfNSW control or ownership is incidental to pesticide application activities being undertaken on the land owned or controlled by TfNSW.
- e.g. roadside pesticide applications where TfNSW and councils may own/control adjacent areas of land without any physical boundaries such as fences.

Signs on vehicle and portable signs must:

- (a) alert the public that pesticide spraying activities are being undertaken;
- (b) include a phone number (at least A3 size, i.e. 300 mm x 420 mm) for the public to contact an officer responsible for the pesticide activity.

The following information must be either be shown on the signs or can be obtained by contacting the phone number listed on the signs:

- (i) full product name of the pesticide as it is listed on the label (e.g. “Roundup Biactive”);
- (ii) purpose of the application (e.g. “Control of roadside weeds”);
- (iii) proposed date or date range of the pesticide application;
- (iv) places of pesticide use;
- (v) any warnings regarding re-entry to the place of application specified on the product label or the Australian Pesticides and Veterinary Medicines Authority (APVMA) permit for use.

H2 INTERNET-BASED PUBLIC NOTIFICATION BY LOCAL COUNCILS OR THE CONTRACTOR

Where:

- (a) a local council or you will use pesticides under the Contract;
- (b) the local council has or you have an Internet site; and
- (c) TfNSW does not control the time and place of the pesticide use;

the local council or you will, before use of the pesticide, display the following information on its Internet site:

- (i) the full product name of the pesticide as it is listed on the label (e.g. “Roundup Biactive”);
- (ii) the purpose of the application (e.g. “Weed control”);
- (iii) the proposed date or date range of the pesticide application;
- (iv) the places of pesticide use;
- (v) a contact number for the public to seek more detailed information. All reasonable requests for information must be answered within a timely manner;
- (vi) any warnings regarding re-entry to the place of application specified on the product label or the APVMA permit for use.

Dates and locations published on the Internet site may be general to accommodate delays caused by inappropriate weather conditions and other unplanned circumstances.

H3 EXEMPTIONS FROM PUBLIC NOTIFICATION

During emergency pesticide applications, only portable signs may be displayed on site. Internet notification and vehicle signs are not mandatory in these situations.

Pesticide uses are exempt from all notification requirements in the following cases:

- (a) The use of pesticides that are readily available to the general public at retail outlets and used in a manner and in quantities that do not require formal record keeping under the *Pesticides Regulation 2017 (NSW)*; such as in the following cases:
 - (i) e.g. small quantities of glyphosate and metsulfuron herbicides applied by a hand-held applicator, or by cut-and-paint or stem injection techniques;
 - (ii) e.g. minor control of indoor and outdoor pests using baits or hand-held aerosols.
- (b) Pesticide uses in public places that have been closed temporarily to the public where the closure is unrelated to the pesticide use;
- (c) Pesticide uses in remote areas where there is little likelihood of the pesticides being encountered by the public; e.g. in areas where there is no vehicular access and low public visitation.

ANNEXURES G36/I TO G36/L – (NOT USED)

ANNEXURE G36/M – REFERENCED DOCUMENTS AND LEGISLATION

M1 REFERENCES

Refer to Clause 1.2.4.

TfNSW Specifications

TfNSW D&C G38	Soil and Water Management
TfNSW D&C G40	Clearing and Grubbing
TfNSW D&C Q6	Quality Management System (Type 6)
TfNSW D&C R44	Earthworks
TfNSW D&C R178	Vegetation
TfNSW D&C R179	Landscape Planting
TfNSW D&C R201	Fencing

TfNSW Publications

Biodiversity Guidelines: Protecting and managing biodiversity on RTA projects
Code of Practice for Water Management
Environment Policy Statement
Environmental Procedure: Management of Wastes on Transport for NSW Land
Environmental Incident Classification and Reporting Procedure
Environmental Noise Management Manual
Environmental Sustainability Strategy 2019-2023
Guidance Note: Environmental Inspection Reporting
Guideline for the Management of Contamination
Standard Management Procedure: Unexpected Heritage Items
Technical Guide: Management of road construction and maintenance wastes

TfNSW Environment Technical Direction

ETD 2015/020	Legal offsite disposal of Roads and Maritime Services waste
ETD 2015/021	Coal tar asphalt handling and disposal

TfNSW Environment Fact Sheets

EFS-702	Excavated Natural Material (ENM)
EFS-703	Excavated Public Road Materials (EPRM)
EFS-704	Recovered Aggregates
EFS-705	Asbestos Waste

EFS-706	Waste Sampling
EFS-707	Reclaimed Asphalt Pavement (RAP)
EFS-709	Re-use of Waste Off-Site

Australian Standards

AS 2187.2	Explosives – Storage, Transport and Use
AS/NZS ISO 14001	Environmental management systems – Requirements with guidance for use
AS/NZS ISO 19011	Guidelines for auditing management systems

British Standards

BS 7385	Evaluation and measurement for vibration in buildings
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NSW Government Publications

Approved Methods for Sampling and Analysis of Air Pollutants in NSW
Approved Methods for the Modelling and Assessment of Air Pollutants in NSW
Bunding and Spill Management Guidelines
Environmental Management System Guidelines
Environmental Noise Management Assessing Vibration: A Technical Guideline
Environmental Protection Manual for Authorised Officers
EPA Guidance on the Resource Recovery Order and Exemption for Mulch
EPA guidelines on contaminated land management (multiple documents)
EPA Resource Recovery Orders and Exemptions
EPA Waste Classification Guidelines
Equipment and Machinery Use in Bush Fire Prone Areas
Government Resource Efficiency Policy (GREP)
Greenhouse Gas Assessment Workbook for Road Projects
Guideline for the Preparation of Environmental Management Plans
Interim Construction Noise Guideline
Regulation of Open Burning in NSW

ANZECC Publication

Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration
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M2 LEGISLATION

Refer to Clauses 1.2.4 and 3.2.2.

Environmental Legislation

Biodiversity Conservation Act 2016 (NSW)

Biosecurity Act 2015 (NSW)

Contaminated Land Management Act 1997 (NSW)

Environmental Planning and Assessment Act 1979 (NSW) (and instruments made under it)

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Fisheries Management Act 1994 (NSW)

Heritage Act 1977 (NSW)

Local Government Act 1993 (NSW)

National Parks and Wildlife Act 1974 (NSW)

Pesticides Act 1999 (NSW)

Pesticides Regulation 2017 (NSW)

Protection of the Environment Administration Act 1991 (NSW)

Protection of the Environment Operations Act 1997 (NSW)

Protection of the Environment Operations (Clean Air) Regulation 2010 (NSW)

Protection of the Environment Operations Amendment (Asbestos Waste) Act 2018 (NSW)

Waste Avoidance and Resource Recovery Act 2001 (NSW)

Other Legislation

Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)

Roads Act 1993 (NSW)

Rural Fires Act 1997 (NSW)