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Construction Environmental Management Plan Template

Tamworth Organic Recycling Facility

Prepared for
Tamworth Regional Council

Client representative
Megan Mather




Date
2 July 2020

Rev00



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Prepared by — Eleanor Parry		Date — 2 July 2020
Reviewed by — Jessica Berry		Date — 2 July 2020
Authorised by — Jessica Berry		Date — 2 July 2020

Revision History

Rev No.	Description	Prepared by	Reviewed by	Authorised by	Date
01	Draft	T Allen	J Berry	J Berry	17/06/2020
02	Draft in response to comments from Council	E Parry	A Bishop	J Berry	29/06/2020
03	Final	E Parry	J Berry	J Berry	02/07/2020

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Purpose of this Template

This document is a template that can be used by Tamworth Regional Council (TRC) and/or the successful Construction Contractor to guide the development of a Construction Environmental Management Plan (CEMP) for the construction of the proposed Organics Recycling Facility.

All guidance text provided in italics should be removed or developed during preparation of the Final CEMP).

The CEMP would be prepared in accordance with the following:

- *Development Application (PPSNTH-11 – Tamworth Regional Council – DA2020-0138) and all supporting documentation including the Environmental Impact Statement*
- *Detailed Design drawings*
- *Peer Reviews*
- *Conditions of Consent issued for DA2020-0138*
- *General Terms of Approval (Date/Reference) from NSW EPA; and*
- *Contractual obligations.*

This template includes guidance on:

- *Recommended Table of Contents and Headings*
- *Guidance on content for each section (presented in italics; and)*
- *Indicative mitigation measures for identified environmental impacts.*

1. Introduction

1.1 Background

Provide a background on the approval and commencement of construction of the Organics Recycling Facility.

1.2 Purpose of the CEMP

The purpose of the CEMP is to provide a structured approach to the management of environmental issues during construction of the Project. Implementing this CEMP will ensure that the Project meets regulatory and policy requirements, including Tamworth Regional Council (TRC) requirements and the Conditions of Consent, in a systematic manner. In particular, this CEMP:

- *Describes the Project in detail, including activities to be undertaken and relative timing*
- *Provides specific mitigation measures and controls that can be applied on site to avoid or minimise negative environmental impacts*
- *Provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation*
- *Describes the environmental management related roles and responsibilities of personnel*
- *States objectives and targets for issues that are important to the environmental performance of the Project; and*
- *Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.*

1.3 CEMP Context

Outline of how the CEMP fits within the construction contractor's EMS and a list of environmental studies and approval documentation.

This section will include reference to the construction contractors Environmental Policy.

1.4 Sub-plans

This CEMP should be read in conjunction with the following sub-plans:

- *Traffic Management Plan*
- *Waste Management Plan*
- *Soil and Water Management Plan (including Erosion and Sediment Control Plan)*
- *Bird Monitoring Plan*
- *Noise Management Plan; and*
- *Complaints Management Plan.*

2. Project Description

Provide a description of the Project including at a minimum:

- *Location – a description of the site location and a plan indicating the location of the proposed activities*
- *Construction Activities – a description of the proposed construction activities including staging and expected timeframes; and*
- *Location of site facilities and work compounds*

2.1 Plant and equipment

List plant and equipment required for construction.

2.2 Working hours

Details working hours including details of any out of hours works.

All works will be undertaken during standard construction hours unless approval has been sought otherwise:

- *7am to 6pm Monday to Friday;*
- *8am to 1pm Saturday if required; and*
- *No works on Sundays or public holidays.*

3. Environmental Management

3.1 Environmental framework

Provide a clear description of environmental management framework for the project including relevant documents and governing processes. Identify how the CEMP interacts with the sub-plans

3.1.1 Objectives

Tamworth Regional Council is committed to conducting business in an environmentally aware and responsible manner. Tamworth Regional Council seeks the co-operation of key stakeholders and project partners in ensuring that organisational practices are conducted with the least environmental impact.

Outline of the objectives for the environmental management during construction which would include:

- *Compliance with NSW Legislation*
- *Compliance with Conditions of Consent and all applicable approvals; and*
- *Implementation of all reasonable and feasible measures to avoid and/or minimise material harm to the environment.*

3.2 Roles and Responsibilities

Nominate the roles and responsibilities for implementing the CEMP and associated management measures.

Tamworth Regional Council as the proponent of the Project has ultimate responsibility and accountability to ensure the Project is designed, constructed, operated and decommissioned in compliance with the Development Consent, Environmental Protection License and other relevant legislative requirements.

TRC will engage a contractor(s) to design and construct the Project. This contractor(s) will be primarily responsible for managing compliance and environmental measures during the construction phase of the Project.

3.3 Approval and Licensing Requirements

Outline the relevant requirements of:

- *Commonwealth and State legislation*
- *Conditions of Consent*
- *Environment Protection Licence; and*
- *Other permits, approvals and licences.*

This may include:

Licence/Approval	Legislation	Requirement
Part 4 Development Consent	<i>Environmental Planning And Assessment Act 1979</i>	Development consent for the Project
Section 138 permit	<i>Roads Act 1993</i>	For carrying out road upgrades for the Project
Permits under Section 68	<i>Local Government Act 1993</i>	For operation of a system of sewage management
Construction and Occupation Certificates	<i>Environmental Planning and Assessment Act 1979</i>	For carrying out building works and occupation of a building
Approval	<i>Water Management Act 2000</i>	For a new or upgraded groundwater bore

3.4 Reporting

Outline of the environmental reporting requirements of the project during construction.

Environmental Reporting during the construction phase of the project would include at a minimum:

- *Compliance with Conditions of Consent and all applicable approvals; and*
- *Compliance with General Terms of Approval (Date/Reference) from NSW EPA.*

3.5 Document Control and Record Management

Outline of how the CEMP and associated documents and records will be controlled and managed.

4. Consultation and notification

Describe the communication pathways and protocols during construction.

4.1 Community engagement

Outline of the consultation and notification requirements of the project in accordance with the development application and Conditions of consent. This would include notification to stakeholders and the community prior to the following:

- *Construction commencing*
- *Activities with increased impact on amenity (as required)*
- *Change in traffic conditions; and*
- *Out of hours work (if approved).*

The following community and stakeholders would be notified at a minimum:

- *Residents and businesses within 2km (or another justified buffer); and*
- *Local bus companies.*

Consultation will continue throughout the construction of the Project with relevant stakeholders and agencies. Where relevant, the outcomes of this consultation will be documented in subsequent revisions of the CEMP.

4.2 Agency engagement

Identify all government agencies which will be informed of commencement of construction

- *Environment Protection Authority*
- *NSW Environmental Trust; and*
- *Rural Fire Services.*

4.3 Complaints handling procedure

Outline of the environmental complaints handling procedure which ensures that the complaints are acknowledged and addressed in a timely manner.

Describe how complaints would be received including communication pathways set up the Project such as phone number and email and how these would be communicated to the surrounding community and stakeholders.

A complaints register would be maintained during construction of the project.

4.4 Internal notification

Outline the communication pathways and requirements between the contractor and TRC including Council's Water & Waste, Regional Services, Planning & Compliance and Communications/Media sections and Executive Management Team updates.

5. Environmental Risk Assessment

This section would identify all potential construction stage environmental impacts in the form of a risk assessment.

At a minimum, risks arising from the carrying out of construction activities and associated with the following environmental aspects, as identified in the EIS, should be considered:

- *Air Quality and Odour – including dust emissions*
- *Noise and Vibration*
- *Traffic and Transport including interaction between construction and existing traffic*
- *Biodiversity (including the preservation and protection of flora and fauna and management of Pest and Weeds)*
- *Aboriginal Cultural Heritage and Non-Aboriginal Heritage including Unexpected Finds*
- *Soils and Geology including contamination*
- *Surface water, Hydrology and stormwater management*
- *Groundwater*
- *Leachate and wastewater management*
- *Waste management*
- *Visual amenity*
- *Bushfire*
- *Hazard and Risk (incl. bird numbers and biosecurity)*
- *Socio-Economic; and*
- *Cumulative Impact.*

6. Environmental procedures and controls

This section would identify the management measures which would be implemented during the construction of the development to mitigate against the environmental impacts identified in the risk assessment.

At a minimum, it is expected this section would include the mitigation measures identified in the EIS as identified below.

It would also include requirements from the Conditions of Consent and further management activities and controls required to address elements associated with the detailed design and construction methodology.

Reference to associated management plans would be made where relevant.

Ref	Mitigation measures
Air quality and odour	
A1	Activities shall be assessed during adverse weather conditions and modified as required to reduce dust generation (e.g. cease activity where reasonable levels of dust cannot be maintained).
A2	Engines to be switched off when not in use for any prolonged period
A3	Vehicles and plant will be fitted with pollution reduction devices wherever possible.
A4	Maintain and service vehicles according to manufacturer's specifications.
A5	Haul roads / transport routes to be sited away from sensitive receivers where possible.
A6	Minimise area of exposed surfaces.
A7	Water suppression on exposed areas and stockpiles.
A8	Minimise amount of stockpiled material.
A9	Locate stockpiles away from sensitive receivers.
A10	Apply barriers, covering or temporary rehabilitation.
A11	Progressive staging of construction activities.
A12	Rehabilitation of completed sections as soon as practicable.
A13	Keep ancillary vehicles off exposed areas.
A14	Reduce drop heights from loading and handling equipment.
A15	Watering of haul roads (fixed or mobile) when required.
A16	Sealed haul roads to be cleaned regularly.
A17	Restrict vehicle traffic to designated routes that can be managed by regular watering.
A18	Impose speed limits.
A19	Wheel wash, grids or coarse aggregate near exit points to minimise dirt track out.
A20	Street cleaning to remove dirt tracked onto sealed roads.
A21	Covering vehicle loads when transporting material off- site.
Noise and vibration	

Ref	Mitigation measures
N1	<p>Prepare and implement a Construction Environmental Management Plan to manage potential noise impacts including:</p> <ul style="list-style-type: none"> • Description of responsibilities regarding the management of noise emissions from the Site • Any relevant conditions / requirements of consent / approval • Methodologies adopted to monitor noise emissions from the Site against relevant criteria; and • A mechanism for assessing noise monitoring results against the relevant noise criteria.
N2	Implement boundary fences / retaining walls as early as possible during construction to maximise their attenuation benefits to surrounding receivers.
N3	Toolbox and induction of personnel prior to shift to discuss noise control measures that maybe implemented to reduce noise emissions to the community.
N4	Where possible use mobile screens or construction hording to act as barriers between construction works and receivers.
N5	All plant should be shut down when not in use. Plant to be parked / started at farthest point from relevant assessment locations when practicable.
N6	Operating plant in a conservative manner (no over-revving).
N7	Signage is to be placed at the front entrance advising truck drivers of their requirement to minimise noise both on and off-site.
N8	Selection of the quietest suitable machinery available for each activity.
N9	Avoidance of noisy plant / machinery working simultaneously where practicable.
N10	Minimisation of metallic impact noise.
N11	All plant are to utilise a broadband reverse alarm in lieu of the traditional hi frequency type reverse alarm.
N12	Undertake letter box drops to notify receivers of potential works.
Traffic and transport	
T1	The ancillary road works (signage and access road) should be completed prior to the construction of the Proposal.
T2	Traffic management plans for construction shall be developed in accordance with Roads and Maritime Guidelines and the Australian Standard AS1742.3.
Biodiversity	
B1	<p>During construction all staff and contractors should:</p> <ul style="list-style-type: none"> • Operate only within the approved disturbance limits • Avoid disturbing any native vegetation adjacent to the subject Site by clearly delineating vegetation to be retained; and • If disturbance is required beyond the pre-determined extent a Site inspection shall be undertaken by a qualified ecologist to determine if any threatened flora or fauna or threatened species habitat may be impacted and to undertake appropriate additional impact assessments.
B2	Prepare and implement a Construction Environmental Management Plan which includes:

Ref	Mitigation measures
	<ul style="list-style-type: none"> • Strict erosion and sediment control measures in areas where disturbance is taking place, particularly around drainage lines • Weed management; and • Appropriate environmental controls to manage biodiversity during construction.
B3	To mitigate the impacts of fauna habitat removal, any clearing of habitat trees should be undertaken in the presence of a suitably qualified and trained ecologist to facilitate relocation of any fauna.
Aboriginal Cultural Heritage	
AH1	A Chance Finds Protocol which addresses unexpected aboriginal heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
AH2	If suspected Aboriginal objects, such as stone artefacts are located during future works, works must cease in the affected area and an archaeologist called in to assess the finds. If the finds are found to be Aboriginal objects, the OEH must be notified under section 89A of the NPW Act. Appropriate management and avoidance or approvals under a section 90 AHIP should then be sought if Aboriginal objects are to be moved or harmed.
AH3	In the extremely unlikely event that human remains are found, works should immediately cease, and the NSW Police should be contacted. If the remains are suspected to be Aboriginal, the OEH may also be contacted at this time to assist in determining appropriate management.
AH4	A Site visit with representatives of the TLALC should be conducted following Site preparation (i.e. removal of cover crop) and prior to significant ground disturbance.
Non-Aboriginal Heritage	
H1	A Chance Finds Protocol which addresses unexpected non-Aboriginal heritage finds will be included in the Construction Environmental Management Plan to be completed by the construction contractor.
H2	If an item (or suspected item) of heritage is discovered during construction, all work in the area of the find will cease immediately and the Chance Finds Protocol implemented including notifying an officer from the Heritage branch of OEH immediately and seeking advice for management of the object.
Soils and Geology	
S1	<p>Prepare and implement a Soil and Water Management Plan for construction, which includes appropriate erosion and sediment controls in accordance with Managing urban stormwater: soils and construction, Vol. 1 and 2 (Landcom, 2004). At a minimum, the erosion and sediment plan should address:</p> <ul style="list-style-type: none"> • Measures to minimise soil disturbance • Management of stormwater, including diversion of clean stormwater around disturbance areas and collection of dirty runoff into appropriate sediment traps • Management of stockpiles • Temporary erosion controls to be employed in high erosion hazard areas such as stormwater drains and steep batters • Specific measures to stabilise surfaces conveying concentrated water flows, to control erosion • Installation of appropriately designed and sized sediment controls downslope of disturbed areas to prevent sediment-laden runoff • Sediment basin requirements • Measures to control dust generation • Progressive stabilisation and rehabilitation of disturbed areas following completion of construction; and

Ref	Mitigation measures
	<ul style="list-style-type: none"> Regular inspection and maintenance of erosion and sediment control measures.
S2	Ensure that any imported fill free from contamination and weed seeds or propagules.
S3	Prepare and implement a Spill Prevention and Response Procedure to address accidental spills and leaks from machinery and vehicles.
S4	<p>Incorporate sediment, stormwater, leachate and dust control measures into the design of the facility including:</p> <ul style="list-style-type: none"> Appropriate stormwater management infrastructure Stabilising soil surfaces disturbed by construction, through landscaping or sealing Appropriate sealing of all areas generating, conveying or storing leachate waters, to prevent contamination of underlying soils and groundwater; and Hardstand pavements for trafficable areas of the Site

Surface Water Hydrology and Storm Water Management

SW1	An Erosion and Sediment Control Plan will be developed as part of the construction environmental management plan for the Proposal in line with <i>Managing Urban Stormwater: Soils and Construction</i> (Landcom 2004; the “Blue Book”).
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Groundwater

GW1	The Construction Environmental Management Plan will include measures to avoid interception of groundwater during excavation of the Proposal.
GW2	The Construction Environmental Management Plan will include a procedure that outlines the steps required if groundwater is unexpectedly encountered during construction.

Leachate and Wastewater Management

WW1	The Construction Environmental Management Plan will include measures for managing sewage wastes during construction (e.g. Portaloo).
WW2	Water Balance to be reviewed by the operator prior to operation based on any changes to inputs and water sources that occur during detailed design.

Waste management

W1	<p>A Waste Management Plan (WMP) will be prepared as part of the CEMP to manage any construction waste. The plan will identify:</p> <ul style="list-style-type: none"> Types and volumes of waste likely to be generated The procedure for assessing, classifying and storing waste in accordance with the EPA’s Waste Classification Guidelines (EPA, 2014) Storage and treatment of waste (including stockpiles) Methods of transport and disposal of wastes (including waste that possesses hazardous characteristics) to ensure that any waste leaving the site is transported and disposed of lawfully and does not pose a risk to human health or the environment Opportunities for reducing waste, re-using materials and increasing recycling Requirements for compliance with the Waste Avoidance and Resource Recovery Act 2001 The Resource Recovery Orders and Exemptions requirements applicable to the waste on-Site; and
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Ref	Mitigation measures
	<ul style="list-style-type: none"> Monitoring, record keeping and reporting e.g. waste tracking data demonstrating the lawful disposal of contaminated products, waste or residues generated at the facility.
W2	Waste management strategies and mitigation measures will be communicated to all employees and contractors during Site induction, prior to commencing works at the Site.
W3	Waste oil, hydraulic and other hazardous materials will be stored in secure containers and kept in a bunded and covered area. Hazardous wastes will be transported to a facility that is appropriately licensed to receive and recycle or treat hazardous wastes. Hazardous wastes will be tracked through transport to their final destination and the EPA notified of these waste movements.
W4	A schedule will be created with the temporary amenity hire contractor to remove sewage.
W5	All records demonstrating lawful disposal of waste are required to be kept for at least six years.
W6	Any waste dispatched from the premises is sent to a facility that can legally accept the waste with adequate notice of large loads advised to the facility ahead of receipt.
Bushfire	
BF1	Bushfire risks and management measures will be communicated to all workers on staff and incorporated in the CEMP
Hazard and risk	
HR1	Review and adapt safety precautions into the design of the facility.
Socio Economic Considerations	
SE1	Any construction related complaints received during the project will be recorded and attended to promptly in accordance with the contractor complaints management procedure and register.
SE2	Roads and Maritime Services, relevant agencies, as well as businesses and residences within 2km of the proposed facility will be notified in writing at least 24 hours prior to the start of the construction works. This would be conducted by the contractor.
Cumulative Impacts	
CI1	The CEMP would be updated as required to incorporate potential cumulative impacts from surrounding development activities as they become known. This would include a process to review and update mitigation measures as new work begins or if complaints are received.
CI2	The CEMP would address any additional construction and heavy vehicle traffic causing congestion and additional traffic management during construction causing additional congestion and delays.

6.1 Environmental Control Plan

A plan or map indicating the location of key environmental features and management activities and controls may be included. At a minimum this map should identify:

- Sensitive environmental areas and No-Go Zones*
- Access and egress*

- *Site Compound including the location of first aid kit, spill kit and site office*
- *Stockpile and material laydown locations; and*
- *Environmental Management Measures such as No Go Zone fencing and the layout of erosion and sediment controls.*

7. Training, Awareness and Competence

This section will outline training and induction requirements and will be developed by the contractor.

7.1 Environmental Site Induction

All personnel, including subcontractors, are required to attend a compulsory site induction that includes an environmental component prior to commencing works on site. The environmental component will include an overview of:

- *Relevant details of the CEMP including purpose and objectives*
- *Key environmental issues, i.e. protection of sensitive areas, dust and noise management*
- *Conditions of environmental licenses, permits and approvals*
- *Specific environmental management requirements and responsibilities*
- *Mitigation measures for the control of environmental issues*
- *Critical environmental protection procedures including personal protective equipment,*
- *Incident response and reporting requirements*
- *Information relating to the location of environmental constraints; and*
- *The location of the EMPs during works.*

A record of all inductions will be maintained and kept on site.

7.2 Tool Box Talks

Toolbox talks will be used to raise awareness and educate personnel on construction related environmental issues. Toolbox talks will be held regularly to address any specific issues or learnings relevant to the works being undertaken. Toolbox talks will include details of environmental matters for relevant personnel.

- *Toolbox talks will be tailored to specific environmental issues such as:*
- *Erosion and sedimentation control*
- *Hours of work*
- *Emergency and spill response*
- *Aboriginal and non-Aboriginal heritage*
- *Threatened species, endangered ecological communities, clearing controls and vegetation protection*
- *Weed management*
- *Noise*
- *Housekeeping and waste*
- *Concrete washout*
- *Dewatering*
- *Project and clearing limits*
- *Works in waterways; and*
- *Dust control.*

A record of all attendance will be maintained and kept on site.

7.3 Daily Pre-start Meetings

Daily pre-start meetings will be held during construction. The meetings will inform personnel of the day's/ shift's activities, safe work practices, environmental measures, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

7.4 Training records

Records of the training, experience and qualifications of each personnel undertaking works on site will be maintained.

8. Monitoring and Review

8.1 Site inspections

Outline of the environmental inspections proposed including

- *Preparation of any checklists*
- *Record requirements; and*
- *corrective actions or opportunities of improvements procedure.*

8.2 Environmental audits

Outline of the environmental audits that will be undertaken as specified in the Conditions of Consent. Example of independent audit requirements below

8.3 Non-Conformance and Corrective Action

Outline of the procedures for managing non-conformance with CEMP and associated plans.

8.4 Environmental Monitoring Program

Outline of a monitoring program to ensure effective compliance with environmental controls, reporting and incident management requirements.

The monitoring may include and assess:

- *A weekly site environmental inspection*
- *Review of weekly checklists*
- *Close out of actions arising from previous inspections*
- *Compliance with the CEMP monitoring requirements*
- *Checks for any repeat issues; and*
- *Any new initiatives in environmental management.*

8.5 Environmental Checklists and Reports

Environmental schedules may be included such as:

- *Site Inspection checklist*
- *Non-compliance and corrective Action Report*
- *Complaints Report*
- *Environmental Incident Report; and*
- *Bird Management Reporting.*

8.6 CEMP Review

Outline of the frequency and format of CEMP review.

At a minimum the CEMP would be reviewed following receiving a complaint, any incident and/or near miss.

9. Incident Management

9.1 Environmental Incidents

Outline of the environmental incident management procedure including:

- *Immediate response*
- *Relevant plans such as a spill response procedure*
- *Notification process; and*
- *Investigation and remediation protocol.*

9.2 Environmental Incidents Register

Outline of how environmental incidents and corrective actions will be recorded.

9.3 Incident reporting

Outline of reporting requirement in accordance with Conditions of Consent and relevant legislation

9.1 Emergency Contacts and Response

Nominate contact person(s) for emergencies and outline an environmental incident/emergency response procedure.

Construction Environmental Management Plan Template

Tamworth Organic Recycling Facility

Contact

Jessica Berry – Principal Environmental Consultant
0438 598 793
jberry@pittsh.com.au

**Pitt & Sherry
(Operations) Pty Ltd**
ABN 67 140 184 309

Phone 1300 748 874
info@pittsh.com.au
pittsh.com.au

Located nationally —

Melbourne
Sydney
Brisbane
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