LAKE CATHIE PUBLIC SCHOOL UPGRADE
Construction Waste Management Plan

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Author: D. Proud
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Prepared By:
A W EDWARDS PTY LIMITED
131 Sailors Bay Road
NORTHBRIDGE NSW 2360
T 9958 1474 F 9958 2779
www.awedwards.com.au
Lake Cathie Public School Upgrade

Construction Waste Management Plan

Project No. 628
Project Name Lake Cathie Public School Upgrade
Client NSW Schools Infrastructure
Project Location Lake Cathie Public School
1240 Ocean Drive
Planning Instrument State Significant Development (SSD 9491)
AWE
Project Manager Craig McIlveen
Phone No. 0403 611 161
Timing of the Works January 2020 to July 2021

Revision Register:

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<th>AUTHOR</th>
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INTRODUCTION

OBJECTIVES

This Construction Waste Management Plan outlines how A W Edwards Pty Limited will manage the waste management on the Lake Cathie Public School Upgrade.

A W Edwards is committed to ensuring appropriate methods of waste minimisation, recycling and disposal and spoil management.

The objective of the Construction Waste Management Plan is to:

- Ensure that waste generation is avoided as a priority;
- Ensure that environmentally sensitive work practices are followed within waste minimisation programs;
- Ensure that, wherever practicable, waste materials are recycled/re-used;
- Ensure that the disposal of all liquid and non-liquid wastes is in accordance with the EPA regulations;
- Ensure that spoil from sites is managed appropriately to minimise environmental and health risks;
- Ensure that the air quality surrounding sites is appropriately managed;
- Ensure that all spoil is disposed of to prevent contamination of any lands.
- Ensure that biomedical, infectious or toxic wastes & storage of any chemicals/hazardous materials are correctly managed.

Regulating bodies for the environmental aspects of this project are:

- NSW Environmental Protection Authority (EPA);
- Port Macquarie Hastings Council
2 SCOPE

This Management Plan has been developed as part of the Lake Cathie Public School Environment Management Plan. The relationship between environmental management documentation can be summarised in the flow chart below:

The scope of this Management Plan is to provide Project information regarding waste management, reuse and spoil management for the Lake Cathie School Upgrade Project.

Further information may be required at site, detailing specific site requirements and mitigation measures.

3 STATUTORY REQUIREMENTS

Documents and references relevant to the implementation of the Construction Waste Management Plan include:

- Relevant Contract;
- LCPSU-AWE-EMP-001 –Environmental Management Plan (and appendices);
- A W Edwards Lake Cathie Public School Upgrade construction Documentation;

4 RISK ASSESSMENT

The risk assessment process, as detailed in the Section 3 of the Environmental Management Plan, has been applied to the Project, in order to determine the sources and risks associated with waste and spoil production issues. Details of this risk assessment, including mitigation measures, have been included in Risk Management section of the Environmental Management Plan. Specific risks associated with each site are included in the Environmental Management Plan, Environmental Control Plan(s) and associated Environmental Activities Register.

The risk assessment process will be reviewed for this aspect at the following times:

- Through internal and external site audits, and including comments from personnel and subcontractors on site;
5 MANAGEMENT AND MITIGATION

WASTE IDENTIFICATION, MINIMISATION AND DISPOSAL

All construction areas shall identify waste streams, minimisation and shall dispose of non-recyclable waste materials in the following ways:

- Hazardous materials surveys completed. Refer to Douglas Partners Site assessment report and Asbestos Register.
- Materials to be removed prior to demolition
- Registers and waste disposal requirements as per SafeWork NSW, NSW EPA requirements for removal, storage, transport and disposal.
- General site wastes – use one bin system and sort in contractor’s yard to produce quantities of material for recycling, reuse, disposal etc.
- Empty drums are to be taken off-site for disposal.
- Empty drums shall be crushed prior to recycling/disposal.
- Do not overfill skip bins. Provide plenty for use. Cover where potential for windblown litter.

6 RECYCLING STRATEGY

GOAL

In line with the NSW Waste and Resource Recovery Strategy 2014 – 21 (NSW EPA 2014) A W Edwards have a goal to achieve a minimum of 80 per cent of construction and demolition waste (by weight) is diverted from landfill, and either recycled or reused.

STRATEGY

- All construction areas shall adhere to a recycling strategy where practicable in the following ways:
  a. Where reasonably practicable, through project planning, actions will be taken to reduce the amount of waste generated, eg, package considerations, and good housekeeping and material storage practices (Avoid and Reduce Waste)
  b. Items to be considered for inclusion, but are not limited to:
     - Spoil;
     - Concrete;
     - Timber;
     - Metal/glass;
c. Ascertain whether materials can be re-used on-site and provide a designated area for storing such materials (Reuse Waste);
d. If material cannot be re-used on-site establish a collection service for the recyclable materials (Recycle Waste);
e. Erect signs within the construction areas to encourage employees to reduce, re-use, and recycle.

Specific strategies for the above-identified materials may include but are not limited to:

- **Spoil** – where possible; any contaminated spoil will be disposed of as waste material. A suitable location for clean spoil will be sought, and haulage organised.
- **Concrete** – Waste concrete shall be disposed of at an appropriately licensed facility where separation and recycling can take place. Surplus concrete and concrete washings shall be transported to an appropriate recycling facility.
- **Any weed waste generated during works shall be disposed of to landfill.**
- **Timber** – The following procedures shall occur regarding timber wastes:
  - Pallets and other packaging shall be returned to the supplier for reuse where possible;
- **Metal/Glass** - The following procedures shall occur regarding metal and glass wastes:
  - Drums and other metallic packaging shall be returned to the supplier for reuse where possible;
  - Reinforcing steel shall be sold to scrap metal merchants for recycling;

### GENERAL SPOIL MANAGEMENT

Spoil shall be stockpiled on site only where haulage cannot be arranged. Stockpiles will undergo management as detailed in the Environmental Activity Register, including minimising the size and slope gradient, and wetting if required.

Haulage of spoil shall occur within the following hours, and the rate shall not exceed the maximum truck movements per hour, unless otherwise agreed with the Principal’s Representative:

<table>
<thead>
<tr>
<th>Days</th>
<th>Hours of Haulage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday to Friday</td>
<td>07:00 - 18:00</td>
</tr>
<tr>
<td>Saturday</td>
<td>07:00 - 18:00</td>
</tr>
<tr>
<td>Sunday and Public Holidays</td>
<td>No work allowed</td>
</tr>
</tbody>
</table>

Spoil shall be reused where possible. Re-use shall not be limited to the site where the spoil has been extracted, provided the use of material is appropriate and does not contravene any laws.

Prior to disposal from site, spoil shall be classified, as per the NSW EPA Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-liquid Wastes, 1999. Spoil will then be disposed appropriately, dependent on the classification. Details of the waste classification shall be passed on to any party reusing the spoil material.

### EXCAVATIONS

Prior to excavation, a Traffic Management Plan will be prepared and incorporated into the site project management plans. The Traffic Management Plan will include consideration for (as a minimum):
Volume and rates of spoil to be removed from the site;
Stockpile requirements, including the maximum duration;
Proposed haulage hours;
Spoil disposal locations and proposed haulage routes;
Maximisation of use and recycling;
Measures to minimise dust, sedimentation and noise;
Measures to minimise impacts on threatened species, populations, ecological communities or their habitats; &
Procedures for managing contaminated materials.

This Plan will be prepared by an approved traffic management consultant in consultation with A W Edwards and submitted to the Principal’s Representative for approval.

8 MONITORING AND REPORTING

DUST CONTROL MEASURES

MONITORING

Dust monitoring shall occur as per the provisions of the Environmental Management Plan. Specific spoil management for each site shall be included in the dust provisions of each site project plan.

DUST SUPPRESSION

These methods shall be detailed in the Environmental Activity Register. Mitigation methods may include, but are not limited to:

Dust Generation: Particulate Emissions (General)

- Install shade cloth on perimeter fencing;
- Vehicle corridors will be clearly identified and restricted to control vehicle access onsite;
- Limit vehicle speed onsite to 10km/hr;
- Fixed and mobile (water tanker) water sprays where required;
- Reduce work activities /stop work during moderate to high wind velocity periods;
- Maintain equipment. Smokey plant to be stopped until repair works completed;
- Turn off vehicle engines whilst not in use (no long periods of idling)

Dust Generation (Demolition)

- Breakers and crushing equipment to be fitted with dust filtration equipment or water sprays to control dust emissions.

Dust Generation (Construction)

- Minimise areas of site disturbed and stage works where possible;
Dust suppression strategies to be used, i.e. water sprays, soil binders, hydro-mulching, controlled speed onsite, road base & shaker grids;
Stockpiled topsoils and rubble will be restricted to 4m high. Stabilise if insitu for >4-6 months;
On-site drilling or coring operations will be undertaken by equipment fitted with air filtration equipment.

9 TRAINING

A W Edwards Site Management shall be trained to ensure that they meet the requirements of this procedure. Other personnel shall be trained from time to time to ensure that the requirements of this procedure are met.

10 MONITORING

In order to ensure that the recycling goal is met at all sites the following will be monitored:
- The amount of waste disposed of will be recorded;
- The amount of disposed waste that has been recycled or reused will be recorded;
- The percentage of waste recycled or reused will be determined in order to ensure that it complies with the recycling goal.

Where required, in order to ensure that there is no wastage of energy used on site, the following should be monitored:
- Energy consumption figures will be recorded/monitored;
- Spikes or overuse shall be identified, and the potential source identified;
- Specific monitoring of individual pieces of equipment or processes shall be considered if areas of high usage cannot be accurately determined.

11 RECORDS

Records for this Management Plan, as under the EMP, shall be maintained in accordance with detailed procedures in the A W Edwards Management System.

All documents requiring sign-off shall be forwarded to the Principal’s Representative prior to the sign-off being required.

Particular documents required to be maintained in this Management Plan include, but are not limited to:

- Disposal receipts for all waste;
- Monthly waste and recycling reports provided by skip bin company engaged by A W Edwards for the project
- Correspondence with the Principal’s Representative and other interested parties regarding waste management control;
- Records of any complaints.

Appendix A of this report provides the record keeping document for the construction phase of the project.
12 AUDITING

Auditing of this management plan and associated procedures shall be conducted in accordance with Section 4.20 of the Environmental Management Plan (LCPSU-AWE-EMP-001).

13 NON-COMPLIANCE AND COMPLAINTS

The protocol for the handling, recording and reporting of soil and water related complaints will be in accordance with the A W Edwards Environmental Management Plan.

Should it be found that the recycling goal is not met reactive measures will be taken to modify demolition/construction operations and meet the goal. These measures shall include the following:

- An assessment shall be made of sources of waste production during the monitoring period that are likely to be contributing to the higher than acceptable levels
- Controls and/or operational modifications shall be determined that will decrease the levels of waste production from those specific sources, and lean towards recyclable materials. Should the activity have ceased once sampling results are obtained, measures shall be put in place to ensure that similar results are not obtained from the same process at different sites.
- Monitoring results following the reactive measures shall be checked to ensure that actions taken have reduced waste production. Should results still be above the acceptable limits an assessment shall be made as to the appropriateness of the process. If the process cannot be avoided, and further modifications cannot be implemented, the Principal’s Representative shall be consulted to determine the most appropriate course of action.

14 SUBCONTRACTOR MANAGEMENT

Subcontractor management shall be conducted as per the relevant requirements of the A W Edwards Procedures Manual Safety & Environment to ensure that the requirements of this procedure extend to subcontractor works.

Subcontractors will be audited at periodic intervals to ensure their compliance with A W Edwards’ requirements. Auditing shall be random and based on the length of time subcontractors are situated on site. Audits may also be the result of non-compliance of the subcontractor to A W Edwards’ requirements.
APPENDIX A – WASTE MANAGEMENT RECORD
## APPENDIX B – FORECAST WASTE

<table>
<thead>
<tr>
<th>Scope of CSR commitment</th>
<th>Indicator</th>
<th>Numerator</th>
<th>Unit (Quantity)</th>
<th>Evidence/Supporting Text</th>
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<tr>
<td>Circular Economy</td>
<td>% of non-hazardous waste removed (not landfilled)</td>
<td></td>
<td>2</td>
<td>Non-hazardous waste included non-hazardous waste management at the site of manufacture, waste management as to be considered material waste management any waste not considered waste. Waste management rates apply to wastes m3 to T</td>
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### Waste Source / Agency Name

- Non-Hazardous - Inert
  - Concrete, masonry, steel, wood, glass, etc. and excavated soil: 60
  - Total: 60

- Non-Hazardous - Non Inert
  - Metals (Steel, Aluminum, Copper, etc.): 30
  - Total: 30

- Non-Hazardous - Non Inert
  - Mixed construction and/or demolition waste: 80
  - Total: 80

- Non-Hazardous - Non Inert
  - Mixed site facilities/agency waste: 60
  - Total: 60

- Non-Hazardous - Non Inert
  - Gypsum / Plasterboard: 110
  - Total: 110

- Non-Hazardous - Non Inert
  - Paper: 5
  - Total: 5

- Non-Hazardous - Non Inert
  - Plastics: 60
  - Total: 60

- Non-Hazardous - Non Inert
  - Polystyrene: 11
  - Total: 11

- Non-Hazardous - Non Inert
  - Total: 551

### Total quantity of non-hazardous waste recovered (no landfilled):

- Recovered waste: energy recovery, material recovery, re-employment, re-use, recycling
- Inert materials reused onsite are not to be considered waste
- Inert materials sent to a quarry are to be considered recovered
- Specific conversion rates apply to wastes m3 to T

### Total quantity of non-hazardous waste collected:

- Inert materials reused onsite are not to be considered waste
- Specific conversion rates apply to wastes m3 to T

### Notes:

- Quantity
- Test
- Preproject waste breakup value (%)
APPENDIX C – Geotechnical Report
APPENDIX D – Asbestos Register