

## WASTE MANAGEMENT PLAN

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Sandhills Stormwater Management System - Cowper Street, Byron Bay NSW

Job Number: ENV216010

**For:**

Planit Consulting Pty Ltd

**By:**

ENV Solutions

**Date:**

14/12/2023

ENV Services

313 River Street, Ballina NSW  
2478

T: 1300 861 325

E: [admin@envsolutions.com.au](mailto:admin@envsolutions.com.au)

[www.envsolutions.com.au](http://www.envsolutions.com.au)

## Document control

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Prepared By:	Timothy Bischof	30/01/2023	<i>TCB</i>
Reviewed By:	Matt Greer	31/01/2023	<i>Matt Greer</i>

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## SCOPE OF ENGAGEMENT AND LIMITATIONS

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# Contents

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<b>Glossary/ Abbreviations</b> .....	<b>2</b>
<b>SEAR 1587 Compliance Table</b> .....	<b>3</b>
<b>1 Introduction</b> .....	<b>4</b>
1.1 Context .....	4
1.2 Background and Project Description .....	4
<b>2 Purpose and objectives</b> .....	<b>5</b>
2.1 Purpose.....	5
2.2 Objectives .....	5
<b>3 Environmental requirements</b> .....	<b>7</b>
3.1 Legislation, Guidelines and Standards .....	7
<b>4 Construction Waste</b> .....	<b>8</b>
4.1 Construction Waste Types .....	8
4.2 Waste Handling Procedures .....	9
<b>5 SEAR’s Compliance</b> .....	<b>10</b>
5.1 WARR Implementation.....	10
<b>6 Ongoing Waste</b> .....	<b>11</b>
6.1 Ongoing Waste Types .....	11
6.2 Waste Generation Rates and Storage - Ongoing.....	11
<b>7 Ongoing Management – Operational</b> .....	<b>12</b>
7.1 Education .....	12
7.2 Signage .....	12
<b>8 Review</b> .....	<b>14</b>
<b>Appendix A: Waste Signage Examples</b> .....	<b>15</b>
<b>Appendix B: Waste Tracking Document Example</b> .....	<b>16</b>

## Glossary/ Abbreviations

Abbreviations/Term	Expanded text
EPA	New South Wales Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
Liquid Waste	Non-hazardous liquid waste generated by commercial premises that is supposed to be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste)
Mobile Garbage Bin (MGB)	A waste container generally constructed of plastic with wheels with a typical capacity in litres of 120, 240, 360, 660, 1000 or 1100
WMP	Waste Management Plan
Resource	Resource covers energy, fuel, oil, water, and other materials used for construction of the project
SEAR	Secretary's Environmental Assessments Requirements
Side loading collection vehicles	Side collecting vehicle suitable for collecting mobile bins up to 360 litres. Typical length of 9.64m and a height of 3.4m
WARR Act	<i>Waste Avoidance and Resource Recovery Act 2001</i>
WRAPP	Waste Reduction and Purchasing Policy

## SEAR 1587 Compliance Table

Condition Requirements	Document reference
Details of waste handling including, transport, identification, receipt, stockpiling and quality control including off-site reuse and disposal.	Page 9
The measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-21</i> .	Page 10

# 1 Introduction

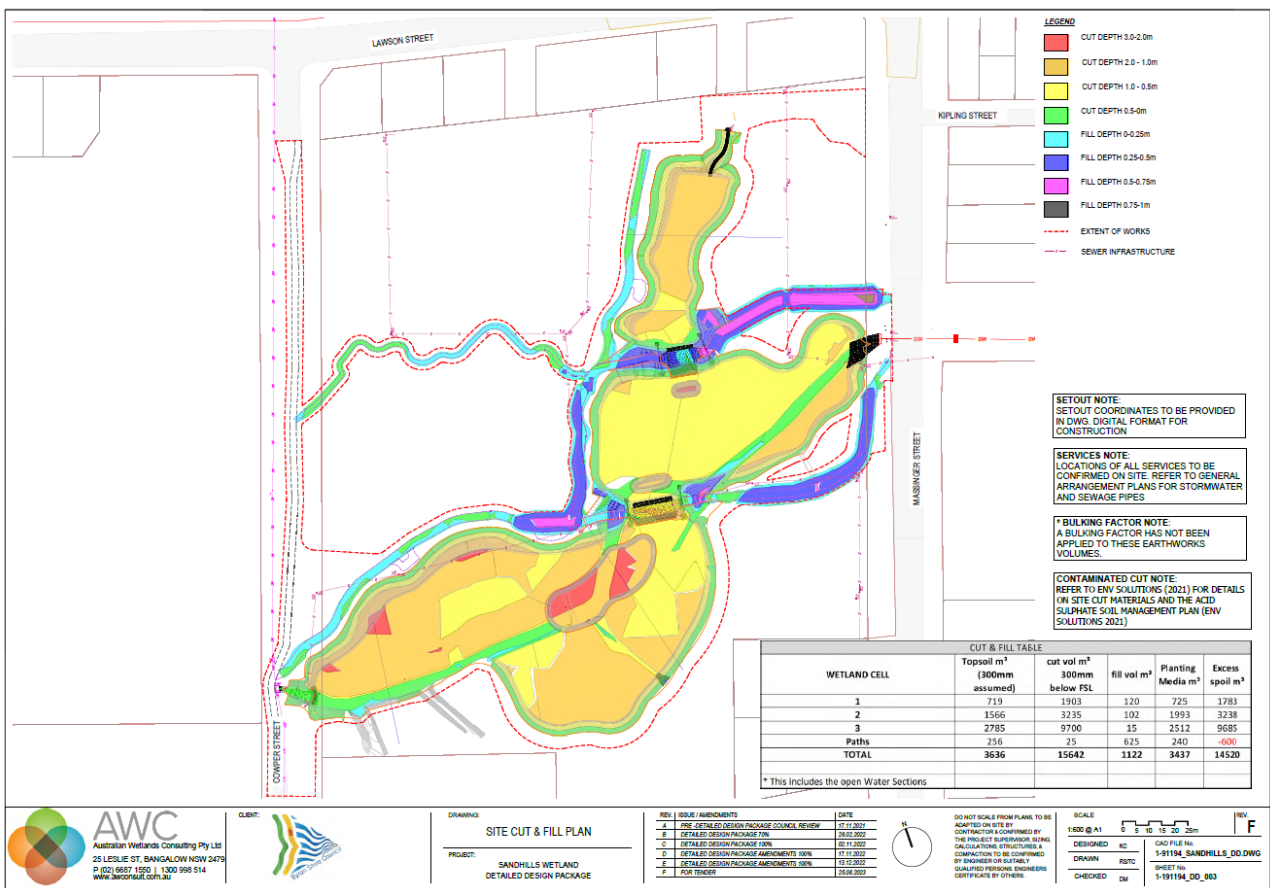
## 1.1 Context

ENV Services Pty Ltd (ENV) have been engaged by Planit Consulting (the Client) to prepare a Waste Management Plan (WMP) for the proposed Sandhills Stormwater Management System located at Cowper Street, Byron Bay, NSW. This WMP will support an Environmental Impact Statement (EIS) as part of a Development Approval to the Planning Secretary’s Environmental Assessments Requirements (SEAR).

## 1.2 Background and Project Description

Byron Shire Council is proposing to rejuvenate a naturally timbered, Crown owned allotment to a recreational wetland area with walking tracks, three wetland cells with trafficable spillways and extensive landscaping known as the Sandhill’s Stormwater Management System. The project will provide a social benefit to the community by providing a large nature reserve within one (1) kilometre of the CBD as well as acknowledging the sites Aboriginal and Cultural importance. Further, this project has been designed to provide flood mitigation and improve stormwater treatment and water storage for the area. Figure 1 illustrates the current Site Cut and Fill plan for the Sandhills Stormwater Management System.

**Figure 1 – Sandhill’s Stormwater Management System Site Cut and Fill Plan**



## 2 Purpose and objectives

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### 2.1 Purpose

The purpose of this Waste Management Plan (WMP) is to satisfy the requirements set out by the Planning Secretary's Environmental Assessment Requirements (SEARs) to support an Environmental Impact Statement (EIS) as part of a Development Approval for the Sandhills Stormwater Management System located at Lot 383, DP728202, Byron Bay, NSW. This WMP will:

- Detail the waste handling including transport, identification, receipt, stockpiling, and quality control including off-site reuse and disposal;
- Detail the measures that would be implemented to ensure that the proposed development is consistent with the aims, objectives and guidelines in the NSW Waste Avoidance and Resource Recovery Strategy 2014-21;
- Detail the type and quantity of waste to be generated during the demolition and construction of the development; and
- Minimise adverse health, environmental and safety impacts associated with the handling and disposal of waste and recycled material.

### 2.2 Objectives

This WMP has been written in accordance with the aims, objectives and guidelines of the NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21. The overarching objectives and targets of the WARR Strategy are;

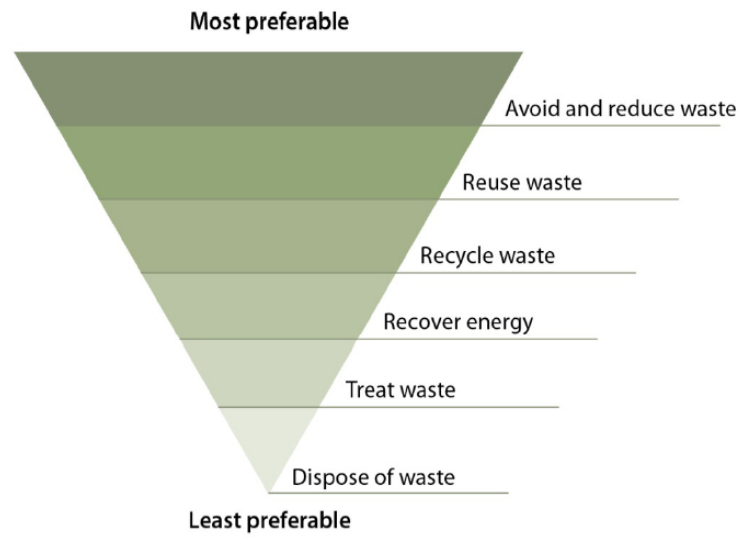
- Avoid and reduce waste generation;
- Increase recycling;
- Divert more waste from landfill;
- Manage problem waste better;
- Reduce litter and;
- Reduce illegal dumping;

The primary goal of the WARR is to improve environmental and community well-being throughout NSW. Reducing the environmental impact of waste, using resources efficiently, and keeping materials circulating in the productive economy can also help to create jobs and grow the NSW economy.

To achieve these objectives, the WARR Strategy implements the waste hierarchy that preferences the approaches to waste management to achieve efficient resource use. Figure 2 illustrates the waste hierarchy.

## Figure 2 - The WARR Waste Hierarchy

This WMP is designed to ensure the Sandhill's Stormwater Management System follows the waste hierarchy to reduce the impact to the environment and the Byron Bay Community within the construction phase of the project.





## 3 Environmental requirements

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### 3.1 Legislation, Guidelines and Standards

The main guidelines, specifications, and policy documents relevant to this plan include:

- Waste Classification Guideline (Department of Environment, Climate Change and Water, 2009);
- NSW Waste Avoidance and Resource Recovery Strategy (2014-2021);
- Waste Avoidance and Resource Recovery Act 2001;
- Contaminated Land Management Act 1997;
- Environmentally Hazardous Chemicals Act 1985;
- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (Waste) Regulation 2014;
- Byron Shire Council Development Control Plan;
- NSW Environment Protection Authority Better Practice Guide for Waste Management and Recycling in Commercial and Industrial Facilities 2012; and
- Construction and Demolition Waste Guide – Recycling and Reuse Across the Supply Chain Department of Sustainability, Environment, Water population and Communities 2011.

## 4 Construction Waste

The Construction of the Sandhill's Stormwater Management System is expected to generate multiple waste types of varying quantities. This section of the report details the types of waste, waste handling procedures including transport, identification, receipt, stockpiling, quality control, as well as offsite reuse and disposal.

### 4.1 Construction Waste Types

The development of the Sandhill's Stormwater Management System comprises the removal of vegetation and soil and the construction of wetland cells, spillways, boardwalks and other public recreation structures. Table 1 details the anticipated waste types to be generated through the construction phase of the development, along with the estimated quantities and management procedures required to manage the waste to promote efficient resource recovery.

**Table 1 - Construction Waste**

Waste Type	Estimated Volume (m <sup>3</sup> ) or Weight (t)	Method of onsite reuse, contractor recycling and/or disposal depot
Excavated material (soil)	19,278 m <sup>3</sup>	Excavated soil is to be managed in accordance with the Acid Sulfate Soil Management Plan (ASSMP). Soil is to be reused as much as practically possible to meet the WARR objectives to divert waste from landfill, with treated and validated material to be reused on site and excess material is to be stockpiled for beneficial reuse offsite. Soil designated for onsite reuse is to be limed at the rate prescribed in the ASSMP. All material to be reused offsite is subject to a site-specific exemption sought from the NSW EPA. If soil is unsuitable for reuse, soil may be disposed offsite untreated to a suitably licenced facility (eg Eco Earth at Jacobs Well, QLD) pending successful soil disposal permits and cross border consignments. Stockpiled soil is to be managed in accordance with the Blue Book – Volume 1, Managing Urban Stormwater, Soils and Construction.
Organic material	<10,000 m <sup>3</sup>	Trees and large organics are to be mulched onsite and used for landscaping purposes. All other organic material (including weeds and excess organic material) not suitable for mulching is to be separated into an organics skip bin or trucks and collected by a waste contractor to be composted at the Myocum Resource Recovery Centre. The waste bin will be collected as necessary. There is also the potential for organic material to be mulched and applied to other council projects.
Timber (boardwalk cut offs & pallets)	<10 m <sup>3</sup>	Off cuts are to be reused within the development as much as possible. Unusable offcuts are to be placed into a skip bin for recycling by a waste contractor. The waste bin will be collected as necessary
Steel/Metal	<10 m <sup>3</sup>	Off cuts are to be reused within the development as much as possible. Unusable offcuts are to be placed into a skip bin for recycling by a waste contractor. The waste bin will be collected as necessary.
General Site Waste	<10 m <sup>3</sup>	General site waste generated by workers is to be placed in a general waste skip bin and collected by a waste contractor. The waste bin will be collected as necessary and disposed at the Myocum Resource Recovery Centre.

## 4.2 Waste Handling Procedures

All waste types will require the following waste handling procedures.

- A waste management register is to be created detailing the quantity of each material/waste type that is to be reused onsite, beneficially reused offsite or disposed. Details of each waste type, quantities and management stream (i.e. refuse, disposal, beneficial reuse) is to be recorded throughout the development.
- Where material is removed offsite the dates and locations of the reused/disposed materials, as well as the quantities of each waste type is to be collected with corresponding truck receipts. Truck receipts and an onsite waste management register is to be reconciled to ensure the material has been managed in accordance with the Waste Management Plan and provide accurate waste tracking. Every stockpile or waste product is to be assigned a unique waste identification number with trucking receipts to be recorded against the unique identification number for waste tracking purposes. An example of a waste tracking document is presented in Appendix B.
- A specific exemption is required to reuse treated acid sulfate soils off site. All movement of treated acid sulfate soils is to be managed in accordance with the site-specific exemption and the Acid Sulfate Soil Management Plan.
- Bulk skip bins are to be provided for all waste streams produced onsite. Skip bins are to be collected by a private contractor as required for disposal or recycling. All bulk skip bins are to be signed to accurately identify the waste stream.
- The location of skip bins and material laydown areas is expected to change throughout the development depending on the stage and area of work. All skip bins and laydown areas are to be placed in suitable areas with all-weather truck access. All putrescible waste is to be contained in sealed waste skip bins to ensure no runoff contamination into the local environment.
- Material is to be transported to the allocated waste management location or similar facility.
- Trucks are required to be tarped to ensure material is secured and within the trucks.
- Where wet soil is transported, trucks are to be lined to prevent water from leaking from the truck.
- The waste collection area is to remain clean to reduce dust wheel marks from trucks.
- All stockpiles are to be managed in accordance with the Blue Book – Volume 1, Managing Urban Stormwater, Soils and Construction and the site-specific Erosion and Sediment Control Plans.

## 5 SEAR's Compliance

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### 5.1 WARR Implementation

The Sandhills Sandhill's Stormwater Management System will be undertaken in accordance with the WARR by beneficially reusing the majority of waste generated from the site. All acid sulfate soil is to be treated and reused onsite where fill is required. Soil that cannot be utilised on site is to be reused offsite by obtaining site specific exemptions from the EPA. Organics waste is to be mulched and reused onsite. Excess mulch that cannot be utilised on site is to be transported to the Myocum Resource Recovery Centre. There is potential for the organics waste to be mulched onsite and reused on other Byron Shire Council projects and gardens to reduce waste from entering the Myocum Resource Recovery Centre.

All timber and steel offcuts are to be reused throughout the project as much as possible. Offcuts in excess of the project requirements are to be placed in separate skip bins for recycling by a waste contractor. Only the general site waste is to be disposed to an offsite landfill facility, the vast majority of the generated waste material will be reused or recycled. The waste management register will document the amount of material that is reused, recycled or disposed, providing a measurement of success consistent with the WARR.

## 6 Ongoing Waste

### 6.1 Ongoing Waste Types

The NSW EPA Waste Classification Guidelines (NSW EPA, 2014a) groups wastes that pose similar risks to the environment and human health, as defined in the Protection of the Environment Operations Act 1997. Table 2 illustrates the expected waste streams to be generated through the construction phase of the project and the corresponding EPA classifications.

**Table 2 - Potential Waste Types and Classifications**

Waste Type	Waste Stream	EPA Classification	Waste Management
Food Organics	Organics	General solid waste (putrescible)	General Waste bins. Collected by council waste service and disposed in landfill.
Metals (Steel, aluminium, stainless)	Recycling	General solid waste (non-putrescible)	Comingled recycling bins. Collected by council waste trucks and recycled at Byron Shire Councils waste facility.
Hard Plastics (recyclable)			
Glass (jars, bottles, containers)			
Paper (excluding toilet paper, tissues, paper towels)			
Carboard (excluding waxed and soiled cardboard)			
Non-recyclable plastics (dirty & contaminated plastic)	General		General Waste bins. Collected by council waste service and disposed in landfill.
Soft Plastic (bread bags, bubble wrap, plastic wrappers, plastic bags)			
General Refuse			

### 6.2 Waste Generation Rates and Storage - Ongoing

Byron Shire Council is responsible for determining the number of bins required for the construction phase of the project and their most suitable locations. Bin storage requirements are to be monitored by Byron Shire Council and adjusted as required.

## 7 Ongoing Management – Operational

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### 7.1 Education

Byron Shire Council is responsible for creating and implementing the waste management education process within the community.

Educational material encouraging the correct separation of general and recycling waste will be provided within the wetland to ensure the correct disposal of waste materials and minimise the possibility of cross contamination in the waste and recycling bins.

### 7.2 Signage

Signage will be provided in all waste storage, disposal and collection areas demonstrating the correct of use the waste management system, including what materials are to be accepted in each bin.

Signage should include:

- Clear and correctly labelled general waste and recycling waste bins;
- Instructions for separating and disposing of waste items;
- Locations of, and directions to, the waste storage areas with directional signs, arrows, or lines;
- The identification of all hazards or potential dangers associated with the waste facilities; and
- Emergency contact information should there be issues with the waste systems or services.

**Table 3 below outlines the roles and responsibilities for the activities to be performed during the construction phase of the development in accordance with this WMP.**

**Table 3 - Roles and Responsibilities**

Responsibility	Activity	Monitoring
Construction Contractor/Site Forman	<ul style="list-style-type: none"> <li>• Ensure all relevant contractors are inducted and educated into the WMP.</li> <li>• Ensure the correct separation of waste streams.</li> <li>• Undertake procurement of operational materials required in this WMP.</li> <li>• Ensure compliance with environmental legislation, project conditions and environmental management plans.</li> <li>• Complete routine inspections to ensure compliance.</li> <li>• Erect and maintain waste signage, colour coding of bins.</li> <li>• Securing waste storage areas.</li> <li>• Promote and enable compliance of the WMP waste collectors, contractors and the community.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor workers and waste collectors for compliance to the WMP.</li> <li>• Ensure bins are free from contamination and are segregated properly.</li> <li>• Monitor waste levels obtain further bins depending on requirements.</li> <li>• Calculate the types and amount of waste generated.</li> </ul>
Waste Collectors	<ul style="list-style-type: none"> <li>• Act in accordance with the WMP.</li> <li>• Ensure proper transfer of waste within the wetland.</li> <li>• Ensure bins are transferred to nominated waste storage pads.</li> <li>• Ensure areas around waste storage are clean.</li> <li>• Ensure no waste is to be left in the public way.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor and report contamination/improper separation through monitoring/bin inspections.</li> </ul>
Community (upon completion)	<ul style="list-style-type: none"> <li>• Follow the WMP.</li> <li>• Disposal of waste materials in correct bins.</li> <li>• Notify Council administration when bins are overfull or require cleaning.</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure co-mingled bins are free from contamination and are segregated properly.</li> </ul>

## 8 Review

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The site foreman will undertake regular reviews of the Waste Management Plan including:

- On Site Signage;
- Data on reuse, recycling and disposal Rates;
- On Site Waste Management; and
- Waste storage demands and community consultation.



## Appendix A: Waste Signage Examples



(Sourced via Business Recycling)

## Appendix B: Waste Tracking Document Example

Date	Waste ID No.	Waste Details	Waste Management	Quantity	Location of generation	Reuse/disposal location	Treated (if ASS)	ASS Exemption or Council Approval Sought	Mulched (if vegetation)	Notes	Receipts attached
30/01/2023	SW-1	Acid Sulphate Soil	Reused offsite	200t	Wetland Cell 1	Harvest Estate, Ewingsdale Road, Byron Bay	Yes	Yes	N/A	10 truck and dog loads.	Yes
31/01/2023	SW-2	Organics	Reuse on site	100t	Wetland Cell 2	Myocum Waste Facility	N/A	N/A	Yes	Reused for gardens at Wetland Cell 2.	N/A
31/01/2023	SW-3	General Waste	Disposal offsite	5m3	Site Office	Myocum Waste Facility	N/A	N/A	N/A	Picked up by Richmond Waste.	Yes