

# Belmont Desalination Plant

## Native Vegetation Management Plan - Brine Pipeline

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## Revisions and Distribution

### Revisions

Draft issues of this document are identified as Revision A, B, C, etc. Upon initial issue (generally Contract Award) this will be changed to a sequential number commencing at Revision 0. Revision numbers will continue at Revision 1, 2, etc.

Rev	Date	Prepared By [Name]	[Signature]	Reviewed By [Name]	[Signature]	Approved By [Name]	[Signature]	Remarks
A	23/09/2024	S. Grunsell	SG	Amber Grant	AG	Jason Nisbet	JN	Submission to HWC and ER

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## Glossary/ Abbreviations

Abbreviations	Expanded text
Assessment Documentation	<p>Hunter Water Corporation Belmont Desalination Plant Environmental Impact Statement, prepared by GHD dated 2019</p> <p>Hunter Water Corporation Belmont Desalination Plant Amendment Report and Submissions Report prepared by GHD dated 2020</p> <p>Hunter Water Corporation Belmont Desalination Plant Modification Report Environmental Impact Statement prepared by Jacobs dated 2024</p> <p>Hunter Water Corporation Belmont Desalination Plant Modification Report – Submissions Report prepared by Jacobs dated 2024</p>
CoA	Conditions of Approval
CEMP	Construction Environment Management Plan
DPHI	Department of Planning, Housing and Infrastructure
EIS	Environmental Impact Statement
ER	Environmental Representative
HWC	Hunter Water Corporation
LMP	Landscape Management Plan
NVMP	Native Vegetation Management Plan
REMM	Revised Environmental Management Measures
WWTW	Waste Water Treatment Works

## 1. Introduction

### 1.1. Context

This Native Vegetation Management Plan (NVMP or Plan) is an appendix of the Construction Environmental Management Plan (CEMP) for the Belmont Desalination Plant Project (The Project). This Plan has been prepared for the Project, to address the requirements of the Revised Environmental Management Measures (REMMs).

### 1.2. Scope of the Plan

The scope of this Plan is to outline the replacement planting required to compensate for the removal of native vegetation along the proposed brine pipeline route. The plan includes vegetation types and densities as well as locations of planting and other biodiversity improvement works such as weed management.

### 1.3. Approval, review and modification

This NVMP will be reviewed by the HWC Environmental Manager (or delegate) and the ER to confirm it is consistent with, and incorporates, all relevant requirements.

The Plan will be implemented for the duration of construction and for any longer period set out in this plan. This NVMP will be reviewed if there are any changes to construction techniques with the potential to affect revegetation or compensatory planting associated with the brine discharge pipeline which connects into the existing outfall of the adjacent Belmont WWTW, in consultation with HWC.

Any amendments to the NVMP will be documented in subsequent revisions of this Plan. A copy of the updated Plan and changes will be distributed to all relevant stakeholders. Site personnel with responsibilities relevant to vegetation monitoring will be informed of any amendments and training provided, where required.

## 2. Purpose and objectives

The purpose of this Plan is to describe how, where and when JH will undertake revegetation work associated with the brine discharge pipeline during construction of the Project including:

- Meet the requirements of the relevant REMMs for the Project
- Meet any relevant legal and other requirements for the Project.

The key objective of the NVMP is to ensure that impacts to native vegetation from the construction of the brine pipeline are mitigated. To aid in achieving this objective all CoA, environmental mitigation measures and licence/permit requirements relevant to native vegetation management are described, scheduled and assigned responsibility as outlined in:

- Environmental Assessment Documentation
- Infrastructure Approval CoA (SSI 8896)
- Revised Environmental Mitigation Measures

### 3. Environmental Requirements

#### 3.1. Revised Environmental Management Measures

The REMMs relevant to this NVMP and their applicability to each stage of the Project are listed in Table 3-1. A cross reference is also included to indicate where the condition is addressed in this Plan or other project management documents.

Table 3-1: REMMs relevant to the preparation of this NVMP

ID	Native Vegetation Management Plan REMM	JH Action / Document Reference
TFB19	Hunter Water would prepare a Native Vegetation Management Plan prior to works starting. The plan would outline the replacement planting required to compensate for the removal of native vegetation along the proposed pipeline route. The plan would include vegetation types and densities as well as locations of planting or other biodiversity improvement works (such as weed management).	Section 4

### 4. Proposed Revegetation

#### 4.1. Management Approach

As part of the Landscape Management Plan (LMP) required under CoA C21, JH will engage a suitably qualified bush regenerator with demonstrated experience in native revegetation in coastal areas. The bush regenerator must undertake progressive rehabilitation of the disturbance footprint (including laydown and compound areas) to maximise potential for re-establishment of native vegetation and to minimise the potential for long-term weed issues post-construction.

The management of native vegetation and revegetation associated with the brine pipeline will align with the LMP to ensure consistency in revegetation efforts across the site. The area identified for planting associated with the brine pipeline has been selected to augment the dune restoration strategy described in the LMP. The planting area selected for the NVMP is shown on Figure 1 with the location of the dune restoration under the LMP shown on Figure 2.

#### 4.2. Existing Beach Dune Restoration

A dune restoration strategy has been developed for the area immediately seaward of the proposed Belmont Desalination Plant by GHD. In light of the recent and ongoing dune restoration activities undertaken by HWC and the Belmont Wetlands State Park Trust, further dune restoration activities associated with the development of the Belmont Desalination Plant will be undertaken to supplement the existing and ongoing activities led by HWC. The area selected for replanting associated this plan will further support the revegetation activities planned for the site.

#### 4.3. Proposed Planting

The proposed species list for the revegetation program will coincide with the HWC Dune Restoration Strategy incorporating the following species:

- Coastal Banksia (*Banksia integrifolia*)
- Coastal Tea Tree (*Leptospermum laevigatum*)
- White Correa (*Correa alba*)
- Mat Grass (*Lomandra longifolia*)
- Beach Spinifex (*Spinifex sericeus*)

Coastal Wattle (*Acacia sophorae*) – note that this species is not proposed as part of the planting schedule but is expected to self-seed as per establishment within the existing areas of dune restoration.

### 4.3.1. Planting Densities

Planting densities for the NVMP are presented in Table 4-1.

Table 4-1: Planting Densities for the NVMP

Plant Species	Planting Density
<b>Grass / Sedge</b>	
Spiny-headed Mat-rush ( <i>Lomandra longifolia</i> )	5 – 6 plants per 1m <sup>2</sup>
Beach Spinifex ( <i>Spinifex sericeus</i> )	
<b>Shrubs</b>	
White Correa ( <i>Correa alba</i> )	Batters: 1 plant per 2 m <sup>2</sup> Level ground: 1 plant per 5 m <sup>2</sup>
Coastal Banksia ( <i>Banksia integrifolia</i> )	
Coastal Tea Tree ( <i>Leptospermum laevigatum</i> )	



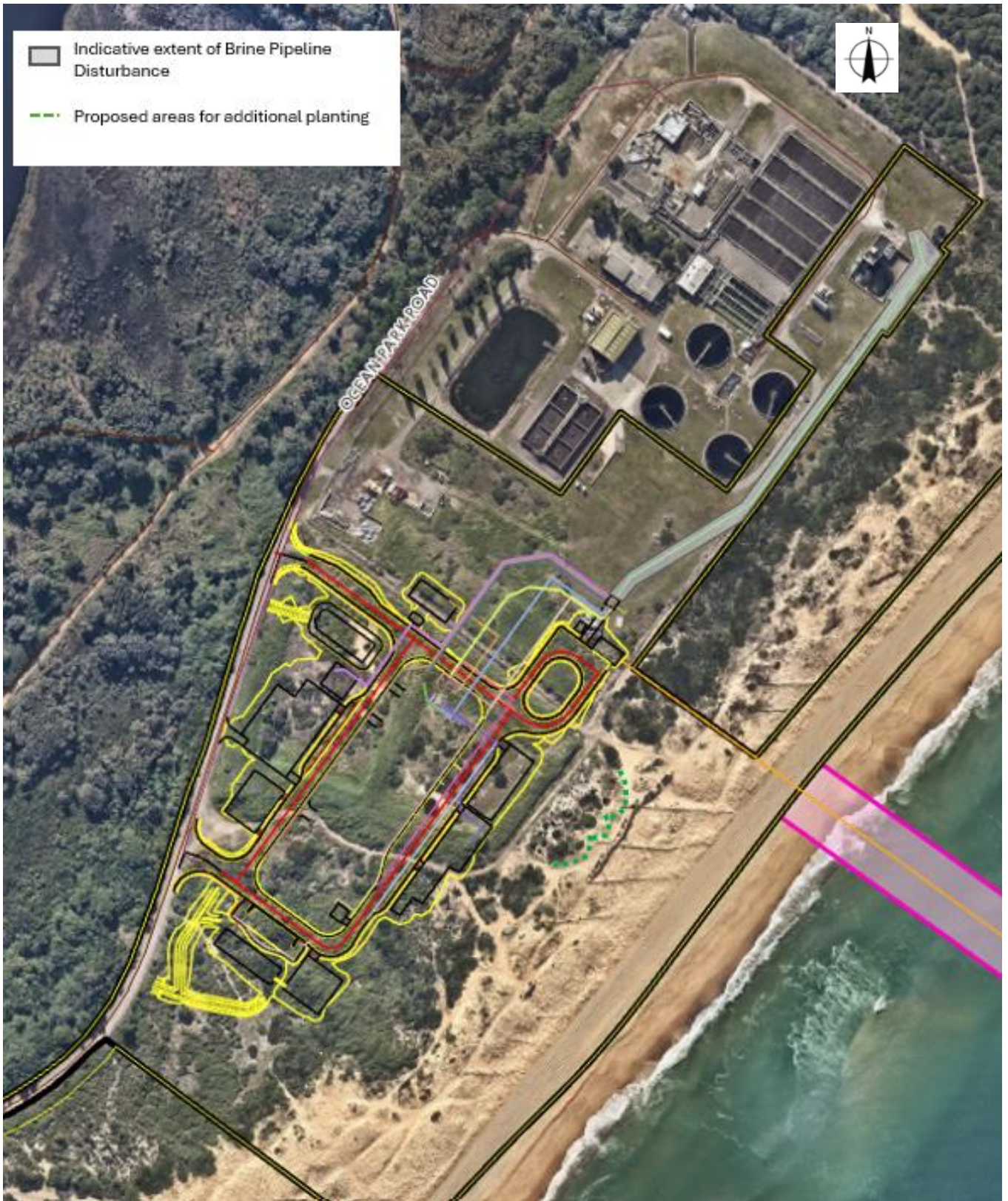


Figure 1 – Proposed Brine Pipeline NVMP planting area





Figure 2 - Dune restoration strategy proposed planting area

## 5. Monitoring

### 5.1. Responsibilities

Site personnel or sub-consultants with suitable experience and qualifications will undertake the monitoring outlined in the NVMP. An overview of aspects and responsibilities is provided in Table 5-1.

Table 5-1: Responsibilities

Aspect	Responsibility
Implementation of Native Vegetation Management Plan	<ul style="list-style-type: none"> <li>Project Environment Manager or delegate</li> </ul>
Monitoring of revegetation / restoration and landscaping	<ul style="list-style-type: none"> <li>Project Environment Manager or delegate</li> <li>Site foreman</li> </ul>

### 5.2. Monitoring

JH will undertake monitoring activities for revegetated areas for the duration of the contracted period.

#### 5.2.1. Dune restoration and planting areas

Following completion of planting activities all new plants shall be watered at least once a week (approximately 5L/m<sup>2</sup>). Where planting is required to be undertaken during summer months, watering will occur every 2-3 days for the first month. Any plant species which die during the first month shall be replaced with equivalent species and maintained for a further four weeks.

Ongoing weed control treatment using herbicide is ongoing by HWC. Where Bitou Bush is observed within 2 m of any planting works proposed under the dune restoration strategy, Bitou Bush shall be removed and disposed of appropriately.

#### 5.2.2. Planting areas

Visual inspection of planting areas will be undertaken to assess plant survival rate or dieback rates, weed incursion and any predation. Actions from the inspections will be managed by an action tracking register.

## 6. Review and Improvement

### 6.1. Continuous Improvement

Continuous improvement of this Plan will be achieved by the ongoing evaluation of environmental management performance against environmental policies, objectives, and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances and deficiencies.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and deficiencies.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in procedures resulting from process improvement.
- Make comparisons with objectives and targets.

The Project Environment Manager (or delegate) is responsible for ensuring stage-specific environmental risks are identified and included in the Project risk register and appropriate mitigation measures implemented throughout the construction, as part of the continuous improvement process. The process for ongoing risk identification and management during construction is outlined in the CEMP.

### 6.2. NVMP Updates and Amendments

The processes described in the CEMP may result in the need to update or revise this Plan. This will occur only as needed throughout the duration of construction.

Only the Project Environment Manager (or delegate) has the authority to approve changes to the requirements of this Plan. Minor amendments to the Plan may be approved by the ER in accordance with the CEMP. Amendments not considered minor by the ER need to be approved by the Planning Secretary.

A copy of the updated Plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure.