Swan Valley Irrigation Scheme

Farm Water Access Plan: FWAP-SW-054
for
Schouten Passage Merino Co.

Tasmanian Irrigation

Farm Water Access Plan (Farm WAP) prepared by:

Green Horizon
CONSULTING

Document History

Preparation Step	Activity	Author(s) (Qualified ecological experts)	Date
2	Desktop assessment	Amy Madsen (Tasmanian Irrigation)	19/02/2026
3	Field survey, mapping and risk assessment – **Water**	Fiona Rockliffe (Green Horizon Consulting)	19/03/2026
	Field survey, mapping and risk assessment – **Soil**	Fiona Rockliffe (Green Horizon Consulting)	19/03/2026
	Field survey, mapping and risk assessment – **Biodiversity**	Fiona Rockliffe (Green Horizon Consulting)	19/03/2026
4	Quality control	Amy Madsen (Tasmanian Irrigation)	22/05/2026

Prequalified Consultancy (Lead Consultant) Verification:

I, Fiona Rockliffe *of* Green Horizon Consulting

declare that this Farm Water Access Plan has been prepared according to the standards outlined in the Farm Water Access Plan Framework (as amended from time to time) and complies with all relevant compliance obligations.

Signed: Fiona Rockliffe Date: 15/04/2026

Property Owner Verification:

I, John Wilson *of* Schouten Passage Merino Co.

have reviewed the Farm Water Access Plan and declare it is correct to the best of my knowledge. I understand and acknowledge my contractual obligations to Tasmanian Irrigation under this Farm Water Access Plan.

Signed: John Wilson Date: 17/07/2026

Irrigator Verification:

I, John Wilson *of* Schouten Passage Merino Co.

have reviewed the Farm Water Access Plan and declare it is correct to the best of my knowledge. I understand and acknowledge my contractual obligations to Tasmanian Irrigation under this Farm Water Access Plan.

Signed: John Wilson Date: 17/07/2026

Note: *If the property owner and the irrigator are the same person, please sign both sections. If they are different individuals, each party must sign the relevant section.*

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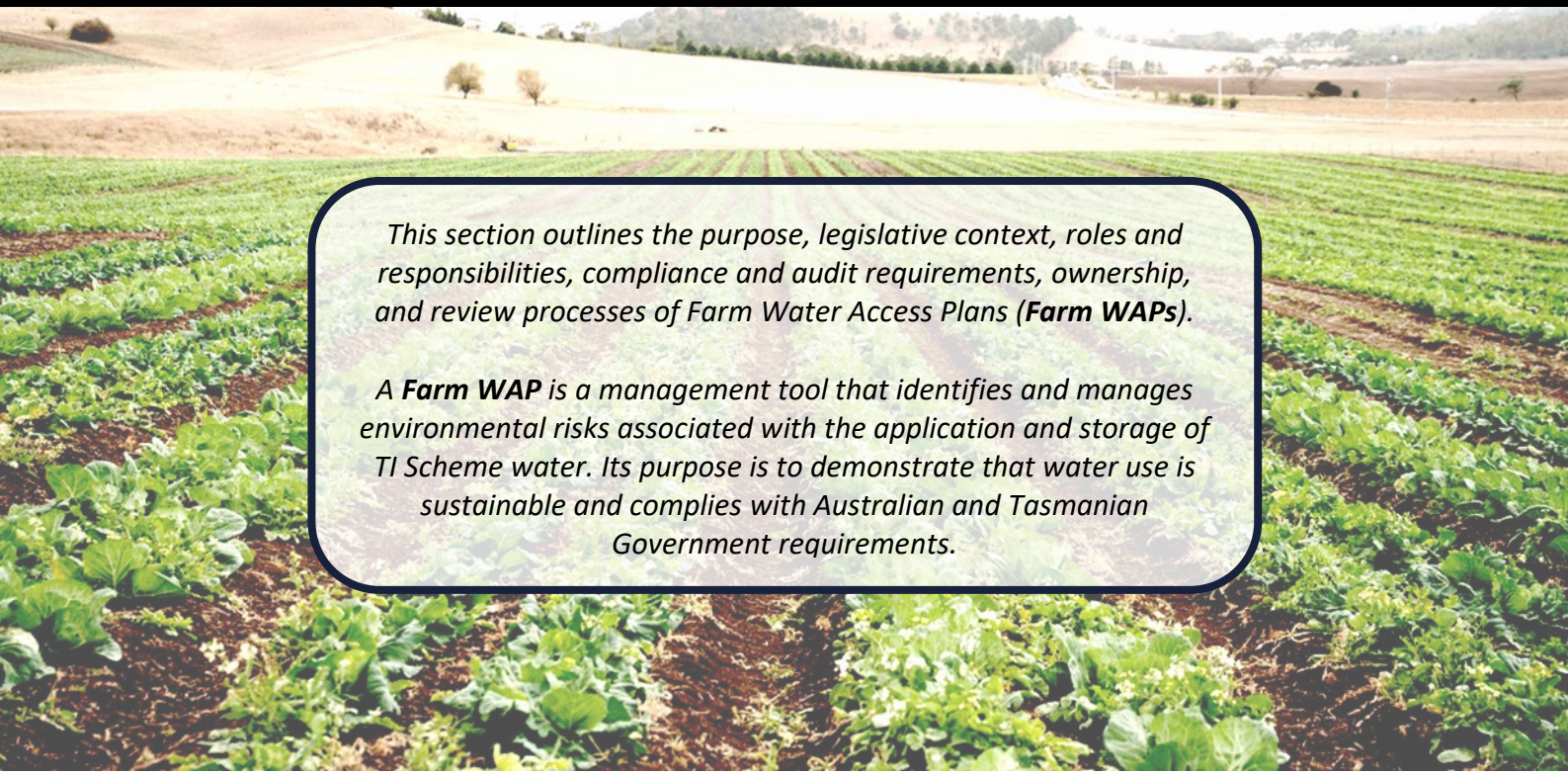
1. Introduction



*This section outlines the purpose, legislative context, roles and responsibilities, compliance and audit requirements, ownership, and review processes of Farm Water Access Plans (**Farm WAPs**).*

*A **Farm WAP** is a management tool that identifies and manages environmental risks associated with the application and storage of TI Scheme water. Its purpose is to demonstrate that water use is sustainable and complies with Australian and Tasmanian Government requirements.*

1. Introduction

1.1 Purpose

The purpose of this Farm Water Access Plan (**Farm WAP**) is to identify the areas of the property where Tasmanian Irrigation (TI) scheme water will be applied and stored, both now and into the future, and to manage any potential risks associated with its use.

1.2 Regulatory Context

Farm WAPs must be prepared in accordance with Tasmanian Irrigation's **Farm Water Access Plan Framework** (TI, 2026), as amended from time to time, and must operate alongside, rather than replace, environmental legislation.

TI's Farm WAP program is required under a set of legislative instruments and regulatory approvals that collectively underpin its environmental compliance obligations, including:

***Environment Protection and Biodiversity Conservation Act 1999* (Cth)**

Farm WAPs are a condition of approval under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) for most Tasmanian Irrigation schemes. They are designed to manage risks to Matters of National Environmental Significance (**MNES**), including threatened species, ecological communities, and Ramsar wetlands. EPBC Act referral decisions often require:

- Verified Farm WAPs before TI scheme water application.
- Audits of Farm WAPs.
- Monitoring programs for aquatic habitats and water quality.
- Avoidance of significant impacts on MNES.

***Water Management Act 1999* (Tas)**

Tasmanian Irrigation is a declared water entity under this Act. This allows TI to establish irrigation districts.

***Irrigation Clauses Act 1973* (Tas)**

This Act provides the legal basis for Tasmanian Irrigation to regulate the use of scheme water through by-laws for each irrigation district. These by-laws:

- Mandate Farm WAPs for properties receiving TI scheme water.
- Empower Tasmanian Irrigation to cease water supply for non-compliance.

Other Relevant Legislation

Farm WAPs must also consider obligations under:

- *Agricultural and Veterinary Chemicals (Control of Use) Act 1995*
- *Biosecurity Act 2019*
- *Forest Practices Act 1985*
- *Environmental Management and Pollution Control Act 1994*
- *State Policy on Water Quality Management 1997*
- *Threatened Species Protection Act 1995* (Tas)

These instruments collectively ensure that irrigation operations are environmentally sustainable and legally compliant, and that Tasmania's natural values are protected.

1.3 Ownership

This Farm WAP is a controlled and confidential document. Although it relates to the landholder's property, the Farm WAP is attached to the land rather than to any individual owner, occupier or irrigator. It remains in effect if the land is sold, transferred or leased.

Tasmanian Irrigation will retain a copy of this Farm WAP on its records. The document may be provided to, or inspected by, the Tasmanian Government or the Australian Government upon request by the relevant Minister or authorised delegate.

Where the property is sold or leased, the outgoing landholder is responsible for providing a complete and current copy of the Farm WAP to the incoming owner or lessee. The incoming owner or lessee must, as soon as practicable, notify Tasmanian Irrigation's Farm WAP Team of the change in tenure and arrange for the property details in Table 1 to be updated to ensure continued compliance and accurate record-keeping.

1.4 Roles and Responsibilities

The Farm WAP program involves Tasmanian Irrigation, environmental specialists and the landholder. Each has a clear role.

Tasmanian Irrigation (TI)

TI is responsible for running and overseeing the Farm WAP Program. TI will:

- Obtain all approvals required to operate irrigation schemes and supply water.
- Manage and oversee the Farm WAP Program.
- Review and formally approve all Farm WAPs and any updates.
- Ensure Farm WAPs meet legal requirements, including Commonwealth and State approval conditions.
- Appoint and manage suitably qualified consultants when specialist work is needed.
- Check the quality of consultant work and require corrections if not met.
- Audit properties to confirm Farm WAP requirements are being followed.
- Use qualified ecological experts to assess water, soil and biodiversity where required.
- Report environmental incidents to regulators when required by law.

TI approves Farm WAPs. Consultants cannot approve a Farm WAP or authorise the use of scheme water.

Qualified ecological experts

Qualified ecological experts may be TI staff or approved external consultants. They provide specialist environmental advice and technical sign-off. They will:

- Carry out environmental assessments in line with the Farm WAP Framework and relevant approval conditions.
- Identify threatened species, ecological communities and Matters of National Environmental Significance (MNES) within or near the irrigation area.
- Assess environmental risks linked to irrigation activities.
- Determine what must be avoided, managed or monitored to reduce risk.
- Set required management actions to protect environmental values.
- Clearly document findings, assumptions and any limits of the assessment.

They are professionally responsible for ensuring their environmental advice is accurate and fit for purpose.

Prequalified consultants

Prequalified consultants prepare Farm WAPs and undertake fieldwork. They will:

- Follow the Farm WAP Framework, modules, relevant legislation and approval conditions.
- Prepare property-specific Farm WAPs where permitted.
- Carry out on-farm inspections and assessments required to prepare the Farm WAP.
- Use suitably qualified ecological experts and support personnel.
- Provide required documentation and safety information to TI before starting fieldwork.
- Keep proper records and provide them to TI if requested.
- Submit updated mapping information to relevant databases where required.
- Undertake quality checks and correct any deficiencies.
- Immediately notify TI of any actual or suspected reportable environmental incident.

Consultants cannot approve Farm WAPs and cannot authorise the use of TI scheme water.

Landholders and irrigators

The Farm WAP applies to the land and must be followed by the landholder. The landholder will:

- Have an approved Farm WAP in place before using TI scheme water.
- Follow all required management actions and conditions in the approved Farm WAP.
- Only store and apply TI scheme water within the approved **TI irrigation area**.
- Keep records, including monitoring results and evidence that required actions have been completed.
- Manage irrigation activities to minimise environmental risks.
- Notify TI of any environmental incidents, land use changes or other circumstances that may affect Farm WAP compliance.
- Allow reasonable access for TI compliance audits and inspections.

In simple terms:

- TI governs and approves the program.
- Environmental experts assess the risks and set requirements.
- Consultants prepare the documents.
- The landholder implements and maintains compliance on the ground.

1.5 Compliance and Auditing

This Farm WAP is subject to review by ISO 19011 accredited auditors under the Tasmanian Irrigation Farm WAP Audit Program.

Audits are undertaken to confirm that irrigation activities on the property are consistent with the approved Farm WAP and that required management actions are being implemented as specified.

Audits are a quality assurance process designed to verify that identified environmental risks remain appropriately managed. The process is generally low-impact and focuses on confirming that key compliance requirements and record-keeping obligations are being met.

1.5.1 What TI checks during an audit

During an audit, key operational and risk management components of this Farm WAP may be reviewed, including:

- Table 1. Property Details
- Table 3. On-Farm Water Storages
- Table 4. Non-TI Water Resources
- Table 5. Required Water Resource Management Actions
- Table 6. Land Capability Summary
- Table 7. Cropping Frequency Requirements
- Table 8. Soil Action Plan
- Table 9. Required Soil Management Actions
- Table 10. Soil improvements since original Farm WAP
- Table 11. Biodiversity Summary
- Table 12. Required Biodiversity Management Actions
- Table 13. Biodiversity improvements since original Farm WAP

These matters are reviewed to confirm that irrigation activities remain consistent with the approved Farm WAP and that identified environmental risks continue to be appropriately managed.

The audit process includes verification that:

- Irrigation remains within the approved **TI irrigation areas**.
- TI scheme water is stored only in approved storage facilities.
- Cropping and land use are consistent with the assessed land capability.
- Required soil and biodiversity management actions have been implemented as specified.

Typically, records will be reviewed, and relevant areas of the property will be inspected to confirm compliance with this Farm WAP.

1.5.2 Common and Avoidable Non-Conformances

The following matters are commonly identified during audits. Not all apply to every property.

- Irrigation occurring outside the approved **TI irrigation area**.
- Storage of TI scheme water in dams, tanks or bores not listed in this Farm WAP.
- Cropping more frequently than permitted, including successive root crops without required rest periods.
- Cropping on land assessed as unsuitable in the land capability summary.
- Failure to complete required soil testing, including electrical conductivity testing for salinity where specified.
- Use of an outdated or unconfirmed Farm WAP following a change in landholder.
- Clearing of native vegetation without required statutory approval.

Where a non-conformance is identified, corrective action will be required within a specified timeframe. Ongoing non-compliance may affect the ability to use TI scheme water.

Audits confirm that environmental risks identified in this Farm WAP remain appropriately managed and that required management actions are being implemented.

Further information on audit objectives, scope, criteria, timing, methodology, roles and responsibilities, reporting, and follow-up is in the Farm WAP Audit Plan, available from TI.

1.6 Review

The irrigator must ensure this Farm WAP remains accurate and up to date. In addition, key sections are reviewed during compliance audits to confirm that irrigation practices and land use on the property remain consistent with the approved document.

An amendment may be required where:

- The approved **TI irrigation area** changes.
- New water storages are constructed or used for TI scheme water.
- Land use or cropping practices change.
- Environmental conditions materially affect identified risks.
- An audit identifies a matter requiring correction.

Reminder: If your circumstances change, contact Tasmanian Irrigation or submit a Farm WAP amendment form via the TI website. Keep your Farm WAP up to date to maintain compliance.

The Farm WAP may also require updating where environmental legislation, approval conditions or scheme requirements change.

Where there is uncertainty about whether a change requires an amendment, clarification should be sought before proceeding. TI scheme water must not be applied outside the areas and conditions approved in this Farm WAP.

2. Property Overview

This section outlines property details relevant to TI scheme water access, distinguishing baseline information from changes made since this Farm WAP was first implemented.

2. Property Overview

This section records the key property details relevant to this Farm Water Access Plan (Farm WAP), including baseline information at the time of initial preparation and any subsequent changes.

The Property Details (Table 1) may be updated where necessary, including in response to an irrigator's request, an audit review, or a verified change in circumstances. However, the **Baseline Details** recorded at the time this Farm WAP was first prepared must not be altered. These baseline details represent the property's original status and serve as the reference point for compliance assessment.

Any subsequent changes must be notified to TI for updating. These will then be recorded in the "**Updates**" column to ensure a transparent, auditable record of changes over time.

Table 1. Property Details (subject to audit)

	Baseline Details	Updates
Date:	17/01/2026	
Farm WAP ID:	FWAP-SW-054	
Previous (superseded) Farm WAP ID(s):	Not applicable	
Farm WAP assessment type:	Standard	
Customer number(s)/ OneWater debtor number(s):	Customer number: 156724 OneWater debtor number: 450987	
Property outlet number(s):	PO-008	
TI Customer name:	Schouten Passage Merino Co.	
Property owner name:	John Wilson	
Irrigator name(s):	John Wilson	
TI base water entitlement volume (ML):	200 ML	
TI current water entitlement volume (ML):	200 ML	

	Baseline Details		Updates	
Property name:	Schouten Passage Merino Co.			
	Property Address	**PID**	**Property Address**	**PID**
Main Property Address & PID	280 Banwell Rd, Little Swanport TAS 7190	1496263		
Property lease arrangements: *(if applicable)*	Not applicable			
Irrigation Scheme(s):	Swan Valley Irrigation Scheme			
Has the property previously been irrigated?	Yes			
Current irrigation area (ha): *(if applicable)*	30			
Current land use:	Dryland improved and unimproved pasture, irrigated pasture, brassica fodder cropping (including turnips and forage rape) under both irrigated and dryland conditions, and occasional contract potato production.			
Reason(s) for purchasing TI scheme water *Consider water use categories, e.g. cropping, livestock drinking, washdown, effluent, garden watering*	• Expand irrigated area and overall production capacity • Convert some dryland areas to irrigated agriculture • Reduce exposure to rainfall variability and climate risk • Improve seasonal reliability and production certainty • Enhance feed security and reduce reliance on supplementary feeding during drought conditions • Enable reticulated stock water supply via trough systems • Increase underlying land value and farm asset productivity • Supplement existing on-farm water storage (dam top-up)			
TI water irrigated direct form outlet or stored on farm: *(if applicable)*	TI water will predominantly be stored in Dam 2, although Dams 2 and 3 are connected via valves. Not enough pressure to irrigate TI water directly.			
Livestock type:	Predominantly merino sheep (ewes, wethers, rams and lambs), some Suffolk/merino crossbreds (rams and lambs) and angus cattle.			

	Baseline Details	Updates
Livestock numbers:	30 cows with calves and 7,500 sheep plus lambs and rams.	
Irrigation infrastructure type: *(if applicable)*	One fixed centre pivot.	
Total property area (ha):	2,060	
TI irrigation area (ha): *Areas where TI water may be applied or stored* *This area does **NOT** need to include stock water troughs and water infrastructure such as internal pipelines and pump stations.*	153.4	

3. Water Resources

This section sets out the regulatory, operational and best practice requirements for managing Tasmanian Irrigation scheme water on farm. It outlines approved and prohibited uses, water quality and salinity considerations, dam and storage authorisation, river connection and metering obligations, groundwater and non-scheme water licensing requirements, irrigation record-keeping, risk management actions, and compliance with the Water Management Act 1999.

3. Water Resources and Management

Water underpins farming in Tasmania. It supports production, livelihoods, and communities. How it is used today directly affects availability tomorrow.

Water is a shared resource. Everyone in a catchment depends on it, especially in dry years. Using water wisely, planning ahead, and avoiding waste help ensure there is enough for all users when conditions are tough.

Tasmania is well-positioned in terms of water access. That advantage only holds if water is used fairly and within the rules.

Tasmanian Irrigation schemes are built to deliver high water reliability. To maintain this level of surety, everyone must comply. Non-compliant use puts pressure on the system and reduces fairness for those doing the right thing.

If you observe inappropriate or unauthorised water use

- Refer state-licensed water matters to NRE Tas Water via water.enquiries@nre.tas.gov.au or 1300 368 550.
- Report Tasmanian Irrigation scheme or water supply issues to your Tasmanian Irrigation Scheme Operator contact.

Doing the right thing protects your farm, your neighbours, and the future of irrigation in Tasmania.

3.1 Farm WAP Water Management Requirements

This Farm WAP applies only to the approved **TI irrigation area**, the **use** of TI scheme water, and **storages** receiving TI scheme water.

Areas irrigated exclusively with non-TI water are outside the scope of this Farm WAP.

3.1.1 Approved TI Irrigation Area

An Irrigation Right authorises the delivery, storage and use of TI scheme water only within the approved **TI irrigation area**, for the approved uses in accordance with the requirements of a Farm WAP for the property.

3.1.2 Approved uses of TI Scheme Water

TI scheme water is **untreated** irrigation water and must only be used for authorised agricultural, firefighting, emergency, and non-household purposes (Table 2).

Tasmanian Irrigation is not a drinking water supplier. **TI scheme water is not potable and must not be consumed** or used for domestic purposes. Alternative water sources must be used for drinking and household activities, such as bathing, showering, and laundry. The Tasmanian Department of Health provides guidance on treating water from alternative sources, including rainwater tanks.

Table 2. Approved uses of TI scheme water

Water Use Category	Examples	Approved use of TI scheme water
Agriculture: cropping	Root and surface crops, pasture, horticulture	✓
Agriculture: livestock	Stock water	✓
Agriculture: washdown	Dairy washdown	✓
Firefighting		✓
Emergency (non-fire)	Stock water during drought conditions	✓
Residential: non-household	Garden watering	✓
Domestic: non-potable	Toilet flushing, laundry, showering, and bathing	×
Domestic: potable	Drinking	×

3.1.3 Storing TI Scheme Water

TI scheme water may only be stored in dams authorised under the *Water Management Act 1999*. Authorisation must be granted through a valid permit, licence or allocation.

On Farm WAP maps, authorised dams are marked as '**Approved for TI water storage**', while unauthorised dams are marked as '**Not approved for TI water storage**'. These labels serve only for information (Table 3). They do not obligate irrigators to store TI water in these dams, but they do show which storages are approved for that purpose.

Where TI scheme water is proposed to be stored in a new or modified dam:

- The dam must be located within the TI irrigation area.
- Any required external approvals must be obtained before storing TI scheme water.
- TI must be notified where storage arrangements change and may require amendment of this Farm WAP.

TI scheme water must not be stored in unapproved or non-compliant storages.

3.1.4 Water Quality Considerations

The condition, quality, fitness for purpose, or the absence of contamination in any TI scheme water is not guaranteed by Tasmanian Irrigation.

Irrigation water quality can influence soil condition, crop productivity, drainage behaviour, and downstream environmental values. Where elevated salinity or nutrient concentrations are detected, there is an increased risk of soil salinisation, nutrient leaching, and off-site environmental impacts if not appropriately managed.

Salinity in irrigation water can come from saline groundwater or salts mobilised from soils. While livestock may tolerate higher salinity levels, crops are often more sensitive and using poor-quality or high-salinity water can increase the risk of salt accumulation in the soil profile.

Tasmanian Irrigation implements a scheme-level Water Quality Monitoring Program to assess trends and compliance against relevant environmental approval conditions and guideline values. Where monitoring identifies emerging risks or adverse trends relevant to a scheme or catchment, Farm WAP management actions may be reviewed or updated to ensure ongoing alignment between property-scale irrigation practices and scheme-level water quality performance.

3.1.5 River Connections and Metering Requirements

TI Irrigation Right holders may take scheme water from a watercourse at an approved connection point under the scheme's watercourse authority.

Water may only be taken in accordance with:

- an Irrigation Right,
- a Zoned Flow Delivery Right, or
- another agreement with Tasmanian Irrigation.

Tasmanian Irrigation-approved water meters must be installed at all offtake points before any water is taken under this authority, in accordance with the Connection Agreement. TI scheme water must not be taken from the watercourse unless the meter installation has been approved by Tasmanian Irrigation.

If an approved water meter becomes damaged or inoperative, Tasmanian Irrigation may require the meter to be repaired or replaced at the landholder's expense. The landholder must notify Tasmanian Irrigation as soon as they become aware of any damage, deterioration, or potential damage.

3.1.6 Mixing TI scheme water and Non-TI water

Where TI scheme water is mixed with water from other sources (including direct takes, groundwater, recycled water, or stored non-TI water), the **irrigated area remains subject to this approved Farm WAP** (Table 4).

Mixing water sources does not alter the requirement that:

- TI scheme water may only be applied within the approved **TI irrigation area**.
- All areas receiving any TI scheme water must comply with the management actions and conditions in this Farm WAP.
- Irrigation records must clearly distinguish, where practicable, the volumes of TI and non-TI water applied.

Where TI and non-TI water are supplied at the same connection point or delivered through shared infrastructure, sufficient records must be maintained to support reconciliation of:

- Water ordered
- Water taken
- Water applied

The landholder remains responsible for ensuring that any non-TI water used in combination with TI scheme water is lawfully taken and used in accordance with relevant Tasmanian water legislation.

3.1.7 Irrigation Accountability and Record Keeping

Maintaining accurate irrigation records is essential for demonstrating lawful and efficient water use.

The irrigator must maintain irrigation application records for all areas receiving TI Scheme Water. Records must include, at a minimum:

- Crop type
- Date and time of irrigation
- Paddock or location
- Area irrigated (ha)
- Depth of water applied (mm) or total volume applied (ML)

Is it best practice to use recognised templates, such as the NRE Tas "Making the Most of Your Water" factsheets or Appendix 4 – Example Irrigation Application Record Keeping Template.

Where direct output data is not available, application depth may be estimated using rain gauges and converted to volume using:

Irrigation Area (ha) × Application Rate (mm) ÷ 100 = Total Volume (ML)

Irrigation records may be requested at any time by Tasmanian Irrigation staff for compliance review or audit purposes.

3.2 Water Resource Supporting Context

3.2.1 Non-TI water sources

A TI Irrigation Right authorises the delivery and use of **TI scheme water only**. It does not authorise the taking of water from other water sources.

Water taken from natural sources such as rivers, streams, creeks, lakes or groundwater bores may require a water licence and allocation under Tasmanian water legislation.

Where non-TI water is used on the property, the landholder is responsible for ensuring that any required licences are held and that water use complies with relevant legislation.

Areas irrigated exclusively with non-TI water, and which receive no TI scheme water, are not subject to the requirements of this Farm WAP.

If irrigation areas are expanded to include TI scheme water, or if water sources change, the relevant areas must be included in an approved Farm WAP before irrigation with TI scheme water occurs.

3.2.2 Effluent and Wastewater Management

On-farm activities such as dairy operations, vegetable washing, livestock yards and processing sheds may generate wastewater or effluent. If not properly managed, these discharges can affect soil, surface water and groundwater quality. Effluent and wastewater must be managed so that no off-site or environmental harm occurs.

Where wastewater or effluent is generated in connection with TI scheme water use, it must be collected, stored, reused and disposed of in accordance with relevant legislation and recognised industry guidelines, such as the Dairy Effluent Management Guidelines (TDIA, 2025) or EPA Tasmania requirements. This includes the reuse of effluent on paddocks, such as dairy effluent irrigation.

Effluent and wastewater systems must be designed and operated to:

- Prevent discharge beyond the property boundary.
- Protect rivers, drains, dams and groundwater.
- Minimise risks from runoff, leakage, overflows and extreme weather events.

3.3 Additional Permits and Approvals

External regulatory approvals (e.g. water licences, dam works permits) may be required and are typically administered by the Department of Natural Resources and Environment Tasmania (NRE Tas).

3.3.1 Water Licence Holders

Where water is taken under a water licence issued by NRE Tas, the licence holder must maintain records demonstrating the quantity of water taken, in accordance with licence conditions.

3.3.2 Dam Works and Approvals

The construction, enlargement, modification, or decommissioning of a dam is regulated under the *Water Management Act 1999* (Tas) and administered by the Department of Natural Resources and Environment Tasmania (NRE Tas).

A **Dam Works Permit** authorises the physical construction or modification of a dam. It does not authorise the taking, storage or use of water. Separate approvals, such as a water licence or allocation, may be required depending on how the dam is used and whether it intercepts natural flows.

Dam works that commonly require a permit include:

- Constructing a new dam
- Enlarging or deepening an existing dam
- Modifying spillways or embankments
- Decommissioning a dam

A Dam Works Permit is generally not required where all the following apply:

- The dam is not located on a defined watercourse
- Storage capacity is less than 1 megalitre
- There is no public or private infrastructure within 100 metres downstream

Temporary structures removed within a short period, such as temporary flood levees, may also be exempt.

Off-stream dams (often referred to as “turkey’s nest” dams) that collect only TI scheme water, rainfall, or surface runoff from the property do not require a separate water licence provided they do not intercept a defined watercourse, wetland, river or stream.

Existing dams constructed prior to 1999 may not have a Dam Works Permit. Regardless of permit status, the landholder remains responsible for ensuring that dams are structurally sound, properly maintained, and do not pose a risk to downstream land, infrastructure, or environmental values.

Prior to undertaking any dam works, confirmation should be obtained from NRE Tas regarding required approvals. Undertaking dam works without required approvals may result in regulatory non-compliance.

3.3.3 Groundwater Licensing and Bore Construction Permits

NRE Tas regulates groundwater extraction, bore construction, and aquifer protection under the *Water Management Act 1999*. Where irrigation activities may influence groundwater recharge, water table levels, salinity or groundwater-dependent ecosystems, these risks are assessed under the Soil, Water and Biodiversity Modules of this Farm WAP. Compliance with groundwater licensing and bore construction requirements remains the responsibility of the landholder and is not subject to Farm WAP audit unless directly linked to risks arising from the use of TI scheme water.

3.4 Water Resources Summary

3.4.1 On-Farm Water Storages

All **current and planned** storages receiving TI scheme water must be listed in Table 3.

Table 3. On-Farm Water Storages (subject to audit)

Storage type	Off-stream or in-stream	Dam Permit ID	Estimated/Permit Capacity (ML)	Approved for TI water storage	Known elevated salinity and/or nutrient levels	Water uses
Dam 1	In-stream	9767	20 (10 ML licence capacity)	Yes	Unknown	Stock drinking
Dam 2	In-stream	9914	141	Yes	Unknown	Irrigation and stock drinking
Dam 3	In-stream	9766	30 (19 ML licence capacity)	Yes	Unknown	Irrigation and stock drinking
Waterhole 1	In-stream	N/A	< 1	No	Unknown	Irrigation and stock drinking
Waterhole 2	In-stream	N/A	~ 1	No	Unknown	Stock drinking
Waterhole 3	In-stream	N/A	~ 1	No	Unknown	Stock drinking
Waterhole 4	In-stream	N/A	~ 1	No	Unknown	Stock drinking
Waterhole 5	Off-stream	N/A	~ 3	No	Unknown	Stock drinking
Waterhole 6	Off-stream	N/A	~ 1	No	Unknown	Stock drinking
Proposed Dam 1	In-stream	N/A – Not built yet	Aiming for ~ 15	No	Unknown	Irrigation and stock drinking

3.4.2 Non-TI Water Resources

Table 4. Non-TI Water Resources (subject to audit)

<table>
<tr><th colspan="8">Section 1: Direct Takes</th></tr>
<tr><th>Direct Take Source (river, creek, channel or tributary)</th><th>Water Licence Number</th><th>Allocation ID</th><th>Take Period (allocation start and end date)</th><th>Direct Take Reliability (surety level)</th><th>Period Amount (ML)</th><th>Known elevated salinity and/or nutrient levels</th><th>Specific Water Uses</th><th>Details (if applicable)</th></tr>
<tr><td rowspan="2">Seabyrne Creek</td><td rowspan="2">500667</td><td>17811</td><td rowspan="2">01/05-30/11</td><td>6</td><td>46.6</td><td rowspan="2">Unknown</td><td rowspan="2">Irrigation and Stock drinking</td><td rowspan="5">Seabyrne Creek water licences, totalling 171.1 ML, are solely for refilling Dams 1–3</td></tr>
<tr><td>17810</td><td>5</td><td>124.5</td></tr>
<tr><th colspan="8">Section 2: Bore (Groundwater)</th></tr>
<tr><th>Bore (feature ID)</th><th colspan="2">Location</th><th>Known elevated salinity and/or nutrient levels</th><th colspan="4">Specific Water Uses</th></tr>
<tr><td>16805</td><td colspan="2">Title Reference: 133753/1, below main house near Banwell Beach access point. Outside TI irrigation area. Easting: 582817 and Northing: 5308903</td><td rowspan="2">Quality is variable and salinity is often moderate to high which restricts irrigation use. Low rainfall/high evaporation and close proximity to the coast.</td><td colspan="4" rowspan="2">Stock drinking & machinery washdown</td></tr>
<tr><td>No feature ID (Drilled pre–Water Management Act 1999)</td><td colspan="2">Title Reference: 133753/1, across flats upstream of the wetland/marsh area. Outside TI irrigation area</td></tr>
<tr><th colspan="8">Section 3: Other Source (Reuse, Municipal, Effluent)</th></tr>
<tr><th>Other Source</th><th colspan="3">Details</th><th>Period Amount (ML)</th><th>Known elevated salinity and/or nutrient levels</th><th colspan="2">Specific Water Uses</th></tr>
<tr><td>X 2 tanks</td><td colspan="3">Rainfall – shed runoff fed</td><td>0.2</td><td>Unknown</td><td colspan="2">Garden and domestic (non-potable and potable)</td></tr>
</table>

3.5 Required Water Resource Management Actions

Table 5. Required Water Resource Management Actions (subject to audit)

Risk	Required Management Action	Responsible Person	Timing
Non-compliance with the *Water Management Act 1999*, including licence suspension, cancellation, demerit points, allocation reduction, or future ineligibility.	Only store TI Scheme water in dams approved for TI Scheme water storage (Dams 1-3). If planning to store TI Scheme water in a dam marked as "Not approved for TI water storage", obtain a Dam permit through NRE Tas prior to storage to ensure compliance with the *Water Management Act 1999*.	Irrigator/ property owner	Ongoing
Use of untreated water for domestic (potable and non-potable) purposes poses health risks.	Use TI water exclusively for agricultural, emergency and non-household (garden watering) purposes within the authorised **TI irrigation area**. **TI water must not be used for domestic purposes (potable or non-potable).** TI accepts no responsibility for any illness, loss, or damage arising from inappropriate or unauthorised use.	Irrigator/ property owner	Ongoing
Construction of unapproved dams resulting in regulatory non-compliance under the *Water Management Act 1999*.	Prior to constructing your new planned dam, confirm planning requirements and obtain a Dam Works Permit from NRE Tas. If water is to be collected or pumped from a natural source, excluding TI Scheme water, which is already licensed under your irrigation right, ensure appropriate water licences and allocations are also in place.	Irrigator/ property owner	Before constructing your new dam
Inability to verify irrigation volumes applied against metered/billed figures, limited visibility of where TI water has been applied across the property, and absence of historical records to inform future crop yield growth, phased development planning, and forward water budgeting.	Maintain irrigation records in a format and system that suits your farm operations. Records may include the date, time, paddock, crop type, irrigated area, irrigation method, and depth or volume applied. Records can be kept in a simple spreadsheet, notebook, a farm management system, or another method that is practical and meaningful for your business. Refer to *Appendix 4* for an example if you do not already have a preferred record-keeping approach.	Irrigator/ property owner	Every irrigation event

3.6 Recommended Best Practice Irrigation Management (not subject to audit)

Good irrigation involves providing plants with the right amount of water at the right time without wastage. The core of effective irrigation management is developing a water budget, also called the irrigation requirement. This compares the crop water demand with available water, enabling irrigation decisions based on crop needs and current climate conditions rather than fixed calendar schedules.

These recommended best practice actions are **not mandatory** and are not subject to audit unless they are separately identified as Required Management Actions in your Farm WAP. They are provided to support efficient irrigation and good on-farm water management.

Please use the checklist below as a practical working tool. You do not need to complete every item. Only tick those that are relevant and that you actively apply. The checklist is intended to support continuous improvement rather than compliance assessment.

3.6.1 How the system is designed and controlled

- ☐ Match water flow rates and run times to the irrigation system design so water is applied at the intended depth.
- ☐ Use appropriate droplet size and operating pressure to improve application efficiency, particularly during crop establishment.
- ☐ Apply water in shorter, more frequent pulses when establishing new crops or pastures to better match system capacity and crop uptake.
- ☐ Ensure irrigation scheduling aligns with pump capacity, mainline limits, and scheme delivery constraints, particularly during peak demand periods.

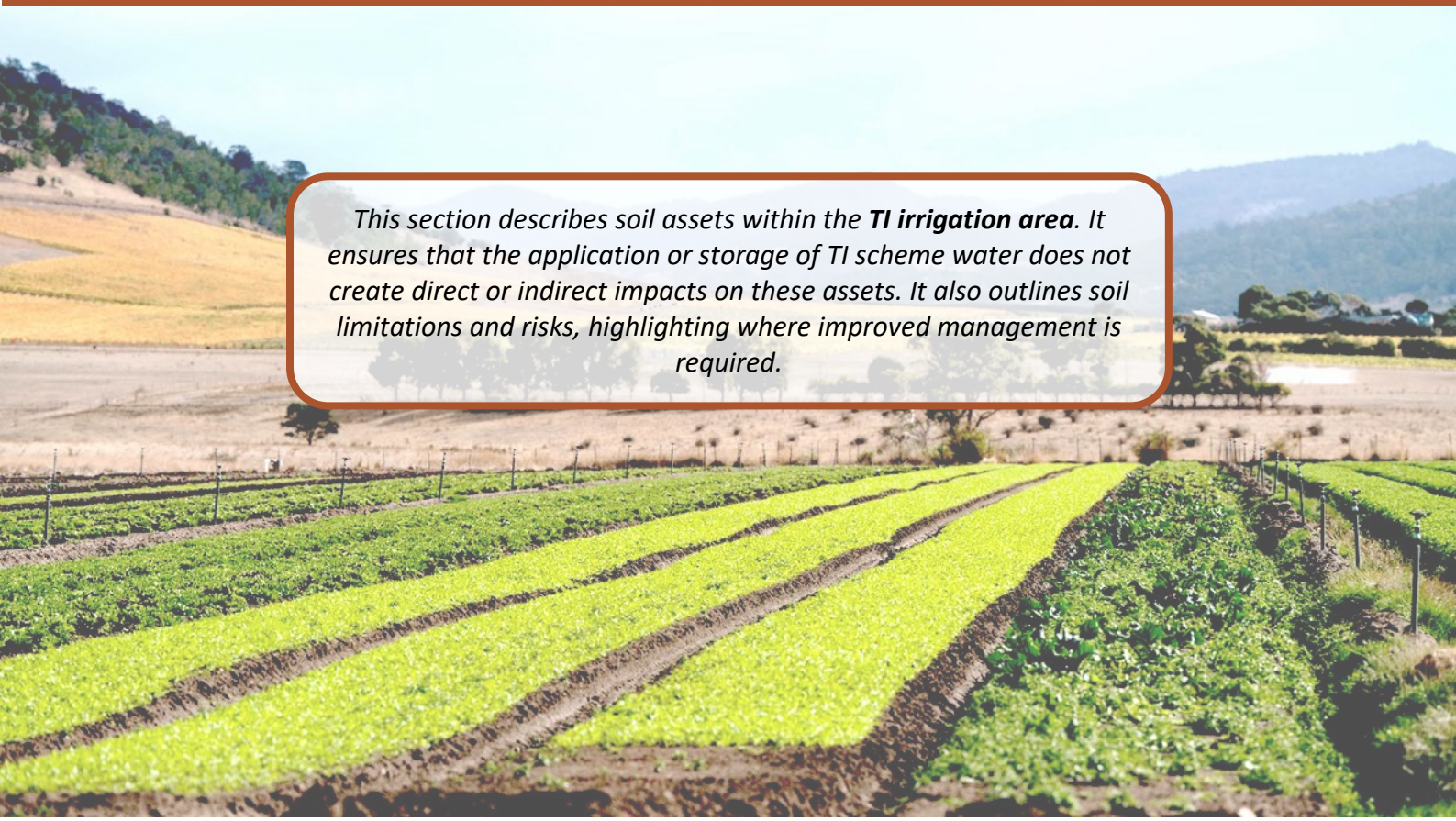
3.6.2 How irrigation is planned and adjusted

- ☐ Apply only what the crop needs. Different crops, pasture, and growth stages require different application depths and frequencies.
- ☐ Based irrigation decisions on crop demand and climate conditions, including evaporation, wind, and temperature, not just calendar schedules.
- ☐ Adjust scheduling after effective rainfall to avoid unnecessary watering and over-application.
- ☐ Use tools such as soil moisture probes or tensiometers, where available, to support irrigation timing decisions.
- ☐ Water during the coolest part of the day and when winds are low to reduce evaporation and drift losses.

3.6.3 How to check what is working

- ☐ Measure what water is applied using flow meters, pump run hours, or telemetry rather than relying solely on assumed design rates.
- ☐ Regularly check irrigation system performance using simple tools such as catch cans, pressure checks or visual inspections to confirm uniform application.
- ☐ Check paddocks after irrigation to confirm water has reached the intended area and depth and adjust future irrigation if needed.
- ☐ Ensure irrigation systems have functioning shut-off valves, alarms or monitoring to detect leaks, breaks, or abnormal operation early.
- ☐ Dig holes during and after irrigation to check how deep water is reaching and whether irrigation timing and application depth are achieving the intended wetting pattern.

4. Soil Resources



*This section describes soil assets within the **TI irrigation area**. It ensures that the application or storage of TI scheme water does not create direct or indirect impacts on these assets. It also outlines soil limitations and risks, highlighting where improved management is required.*

4. Soil Resources and Management

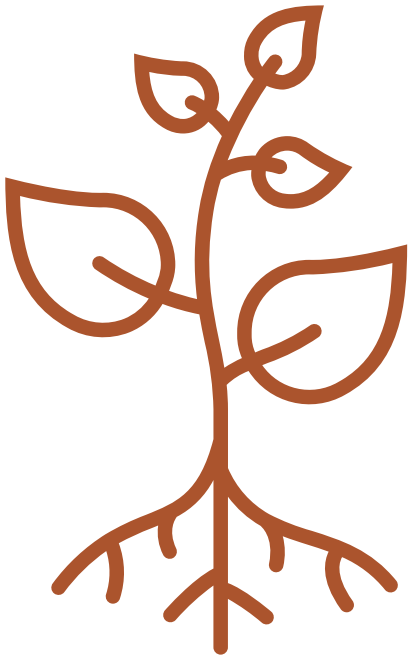
4.1 Survey Options and Scope

The level of detail provided will depend on whether a **standard** or **premium** survey has been undertaken. A standard survey focuses on identifying higher-risk areas, whereas a premium survey includes a comprehensive assessment of all soils within the **TI irrigation area**.

Standard Survey: A standard survey is required if the desktop assessment identifies potential risks or limitations to cropping or irrigation. This type of survey will focus on areas within the **TI irrigation area** where conditions fall outside desired ranges.

Desktop assessments may include:

- Soil vulnerability – wind erosion hazard
- Soil vulnerability – waterlogging hazard
- Soil vulnerability – sodicity hazard
- Soil vulnerability – hillslope erosivity hazard
- Soil vulnerability – salinity hazard
- Soil drainage
- Soil coarse fragments
- Land capability (class 4 and above)
- Acid sulfate soils
- Land Systems of Tasmania



For this type of Farm WAP survey, land capability subclass and limitation information will only be recorded for high-risk areas within the **TI irrigation area**.

Premium Survey: All soils within the **TI irrigation area** will be surveyed, providing a complete soil asset profile.

Note: If all desktop assessment conditions fall inside the desired ranges and the irrigator does not request a premium survey, then no soil survey will be conducted. In these cases, the Soil Resources and Management section of the Farm WAP will be limited to a very broad, general description only.

4.2 Land Capability Overview

Land capability across the property was ground-truthed at no greater than 1:10,000.

Within the TI irrigation area (153.4 ha), 123.6 ha is suitable for all land use types. A further 4.2 ha of Class 5r soils is suitable for all land uses **except irrigated root and surface cropping**. The remaining 24.7 ha, comprising Class 5k, 5w and 6e soils, is suitable for pasture only; however, retention in a natural state is recommended.

Table 6. Land Capability Summary (subject to audit)

Land Capability Class	Area (ha)	Soil Description (soil type and profile)	Rock type	Slope (%)	Risks/Limitations to cropping and irrigation use	Cropping Suitability Rating	Suitable Land Use Types	Management Observations & land classification justification
4a	123.6	Kandosols (Sandy to loamy surface soils)	Jurassic dolerite with sedimentary overlays	0-10	Aeolian Erosion – Soils are formed and shaped by wind processes and are prone to erosion under strong wind conditions. These soils are sandy, with low cohesion and weak structural aggregation, making them highly susceptible to soil loss if left exposed.	**Moderate** – Soils hold moderate limitations. Require conservation practices and good management, with regular short-term pasture breaks.	All land use types	Soil structure appears stable, with no evidence of over-cropping or overgrazing. One section fallowed getting prepared for sowing.
5k	0.7	Sodosols (Strong texture contrast soils – Sandy/ loamy topsoil over sodic clay subsoil)			Conductivity – Soils are at risk from salinity.	**Unsuitable** – Soils are not suitable for cropping or irrigation.	Pasture although suggest leaving under natural state	Area fenced off and planted with salt tolerant species, some plant yellowing, surface water ponding and surface salt accumulation observed.
5r	4.2	Kandosols (Sandy to loamy surface soils)			Rockiness - Limitation caused by boulders and outcrops of bedrock material greater than 600mm in size.	**Low** – Soils hold severe limitations. Only suited to occasional cropping, require major conservation	All land use types except Irrigated Root and Surface Cropping	Large sections of exposed rocky outcrops.

Land Capability Class	Area (ha)	Soil Description (soil type and profile)	Rock type	Slope (%)	Risks/Limitations to cropping and irrigation use	Cropping Suitability Rating	Suitable Land Use Types	Management Observations & land classification justification
						treatments and careful management.		
5w	20.3	Sodosols (Strong texture contrast soils – Sandy/ loamy topsoil over sodic clay subsoil)	Jurassic dolerite with sedimentary overlays	0-10	Combined wetness limitation (flooding and drainage) - Limitations arise from both surface water accumulation and subsurface soil saturation; excess water persists due to a combination of landscape position and soil profile characteristics.	**Unsuitable** – Soils are not suitable for cropping or irrigation.	Pasture although suggest leaving under natural state	This area is largely a watercourse (makes up Seabyrne Creek)
6e	3.8	Kurosols (texture-contrast soils; loamy topsoil over dense clay subsoil; Strongly acidic		20-25	Combined erosion limitation (aeolian, water, and mass movement/soil creep) - Limitations arise from the combined effects of wind, water, and gravity-driven processes, meaning soil stability is compromised by multiple erosion mechanisms acting concurrently/sequentially.			Steeply sloping land with evidence of contour cultivation and sheep tracks, which assist in diverting water across the slope. No areas of bare or fallow soil were observed.

Table 7. Cropping Frequency Requirements (subject to audit)

Land use type (dryland and irrigated)	Examples	Frequency Description
Improved pastures	Perennial ryegrass, white clover, red clover, lucerne, cocksfoot, phalaris, tall fescue, pasture mixes, permanent grazing paddocks	Can typically be maintained for **4–10+ years** before renewal, depending on species mix, grazing pressure, irrigation, and soil condition. Productivity is typically higher on heavier Tasmanian soils such as Ferrosols and Dermosols, and lower on lighter or duplex soils. Renewal should be guided by productivity decline, soil structure condition, and weed ingress rather than fixed years alone.
Forage systems (grazed in-situ)	Forage oats, forage barley, ryecorn, sorghum, millet, brassica mixes, turnips, rape, kale, chicory, plantain, annual ryegrass	Forage systems involve vegetation grazed directly by livestock in situ and can typically be maintained for extended periods where grazing pressure, irrigation, soil fertility, and species composition are well managed. **Perennial forage** may persist for **5–10+ years** before renewal, while **annual forage** crops are typically suitable for short rotational phases of **1–3 years** before returning to pasture or other restorative phases. Rotational grazing, maintaining adequate groundcover, and avoiding overgrazing are critical to protecting soil structure, organic matter, and long-term productivity.
Fodder Production (cut-and-carry systems)	Silage maize, cereal silage, hay paddocks, baled pasture silage, lucerne hay, vetch hay, oat hay, barley hay, pit silage, wrapped silage bales, fodder beet harvested for transport, grain harvested for feed, straw production	Fodder systems involve crops harvested and removed from the paddock for feeding elsewhere. Because these systems export higher levels of biomass and nutrients, they typically place greater pressure on soil fertility and structure than grazed forage systems. **Annual fodder** crops are typically best limited **to 2–3 consecutive years** before a restorative phase is introduced. **Perennial fodder** crops may persist for **5+ years** with appropriate nutrient replacement, irrigation management, and maintenance of soil organic matter. Longer-term productivity depends on minimising compaction, maintaining groundcover outside harvest periods, and actively managing soil fertility and organic carbon.
Surface Cropping	**Dry harvest crops:** Milling wheat, malting barley, canola, poppies, lupins, pyrethrum, hemp, quinoa.	Typically, suitable for **2–3 consecutive** years on most soils. When taken through to maturity, these crops leave stubble and root residues that contribute organic matter and support soil structure and biological activity. Nutrient removal is largely confined to harvested grain or dry biomass, allowing soils to tolerate longer cropping sequences. After this period, a restorative phase is recommended to prevent cumulative declines in soil structure, organic matter, and nutrient balance. Restorative phases may include pasture, legumes, green manures, cover crops, or perennial fodder crops. Higher disturbance crops, such as potatoes and other vegetables, are best introduced only where soil structure, organic matter, and nutrient status are demonstrably sound.

	Wet harvest crops: broccoli, cauliflower, lettuce, peas, beans	Typically, limited to **1–2 consecutive** years before a restorative phase is required. Wet harvest systems often remove a large proportion of above-ground biomass before significant residue and root material can return to the soil. These systems place higher stress on soil fertility and structure due to more frequent machinery traffic, cultivation, and nutrient export. As a result, shorter cropping sequences and more frequent restorative phases are required to rebuild organic matter, stabilise soil structure, and reduce risks such as erosion, disease carryover, and weed pressure.
Root Cropping	Potatoes, carrots, onions, garlic, beetroot, swedes, parsnips, radish, sweet potatoes	Typically, involve high levels of soil disturbance during harvest and are best grown **no more than once every 4–7 years in the same paddock**. Longer intervals are typically required on heavier soils, poorly drained sites, or where soil-borne disease pressure is elevated. Between root crops, rotations should include pasture, cereals, legumes, or cover crops to restore soil structure, rebuild organic matter, and minimise disease accumulation.
Horticulture	Apples, cherries, pears, berries, strawberries, raspberries, blueberries, vineyards, olives, hops, greenhouse crops, nursery production	Many horticultural systems **remain in place long-term**, meaning conventional crop rotation is often limited or not applicable. However, rotational groundcovers, cover crops, inter-row vegetation, and organic matter management remain important to manage compaction, improve soil structure, maintain fertility, and support soil biodiversity, particularly under repeated machinery traffic and irrigation.
Forestry	Radiata pine plantations, blue gum plantations, mixed farm forestry, shelterbelts, agroforestry systems, native timber plantations	Forestry systems represent long-term land uses with rotation lengths typically exceeding 10 years. These systems are not expected to conform to standard agricultural crop rotation frequencies due to their distinct silvicultural management objectives.

Note: *Cropping frequencies may vary due to seasonal conditions, market forces, climatic variability, disease pressure, water availability, and operational constraints. Audit assessment should consider whether reasonable soil management practices have been implemented to maintain soil health and groundcover over time.*

4.3 Required Soil Management Actions

This section identifies soil limitations and risks within your **TI irrigation area** and highlights whether management actions are required to address them (Table 8).

Table 8. Soil Action Plan (subject to audit)

Soil Risk/Limitation	Details (i.e. Location, Soil Type)	Management Action Required
Significant geomorphic issues	There are no known significant geomorphic issues.	No
Soil structure (compaction, organic matter and soil biology)	All soils within the TI irrigation area are susceptible to structural degradation if not appropriately managed, primarily due to the predominance of sandy soil types. These soils, characterised by low clay content and weak aggregation, are inherently prone to compaction, organic matter decline, and reduced biological activity, as they have limited capacity to retain moisture, nutrients, and carbon and are vulnerable to structural collapse under pressure. In contrast, the loam-dominant soils within the TI irrigation area exhibit greater resilience, with improved structure, higher water and nutrient holding capacity, and stronger biological function, making them less susceptible to degradation under similar management conditions.	Yes
Erosion (wind and water)	Class 4a soils (123.6 ha) are susceptible to aeolian erosion due to their sandy texture and weak aggregation, which makes them vulnerable to detachment and transport by wind. Class 6e soils (3.8 ha) are also susceptible to erosion from the combined effects of wind, water, and gravity-driven processes, primarily due to their steep slope gradients, which increase the risk of runoff, soil displacement, and mass movement/soil creep.	Yes
Drainage and waterlogging	Class 5w soils (20.3 ha) are subject to wetness limitations arising from both surface water accumulation and subsurface saturation, as the area largely comprises the Seabyrne Creek watercourse, resulting in prolonged waterlogging during wet winter periods and subsequent drying in summer, which can lead to soil cracking (where sufficient clay is present).	Yes
Sodicity	Class 5w soils (20.3 ha), located within a low-lying watercourse environment, are subject to prolonged waterlogging and poor drainage, conditions which promote the accumulation of sodium over time and increase the risk of soil dispersion when wet, with alluvial systems typically exhibiting variable clay content and localised zones of sodium enrichment.	Yes
Salinity	Class 5k soils (0.7 ha) are subject to salinity due to their position within a low-lying watercourse environment, where water movement is slow and drainage is restricted, allowing dissolved salts transported from upslope areas to accumulate over time rather than being leached, with periodic waterlogging further concentrating salts near the surface through evaporation during drying periods.	Yes

Acid sulfate soils (ASS)	There are no known Acid sulfate soil (ASS) issues.	No
Nutrient management	Current nutrient management practices present no risk/limitation, as fertilisers are applied conservatively and strategically, typically on a three-year cycle for pasture, with no evidence of intensive application. Within the pivot area, nutrient inputs are tailored to crop type and soil test results, with pasture and fodder crops generally fertilised at sowing only, while higher-demand crops such as potatoes are managed through staged applications guided by agronomic advice and regular crop monitoring. Fertiliser use is well governed through contractor and on-farm record keeping, and applications are undertaken under suitable conditions to minimise loss. In addition, the exclusion of higher-risk soil classes (5k, 5w, and 6e) from irrigation, combined with soil-based nutrient management, ensures that the risk of nutrient runoff or leaching remains low, and the proposed activity is not expected to adversely affect water quality.	Yes
Irrigation Development	No risk/ limitation as only 30 hectares of the 127.8 hectares identified as suitable for irrigation have historically been irrigated, indicating substantial capacity remains. Importantly, 24.8 hectares of unsuitable land, including Class 5k, 5w, and 6e soils, are explicitly excluded from development due to recognised constraints such as erosion risk, wetness, and salinity, ensuring that irrigation with TI water is confined to appropriate areas. The proposed allocation of 200 ML is modest relative to the total area, equating to approximately 1.56 ML/ha if fully applied, and in practice will be further moderated through on-farm dam storage and supplementary non-TI water sources. Irrigation is managed conservatively using a combination of informed visual assessment, practical field techniques such as soil ribbon testing, and indicative data from tools like Farming Forecaster, with no evidence of runoff or drainage observed, and with soil characteristics well understood and incorporated into decision-making.	Yes

Note: *If the management action required column contains a 'Yes', you are responsible for completing the relevant required soil management actions in Table 9.*

Table 9. Required Soil Management Actions (subject to audit)

Soil Limitation/Risk Addressed	Location	Required Management Actions	Responsible Person	Timing
Soil structure (compaction, organic matter and soil biology)	Across entire TI irrigation area	Control irrigation application rates to match soil infiltration capacity.	Irrigator/ property owner	Ongoing
		Avoiding traffic and grazing when soils are wet.		
		Where practical maintain consistent ground cover.		
		Consider increasing organic matter inputs to support aggregation, moisture retention, and biological activity.		
Erosion (wind and water)	Class 6e soils	**Irrigation and cropping are not permitted** due to their steepness and high erosion risk; these soils should remain as pasture or as their natural state.		
	Class 4a soils	Where practical maintain continuous and dense ground cover to prevent soil detachment.		
		Avoid over-irrigation that can lead to surface sealing or loss of structure.		
		Apply water at low and controlled rates to prevent disturbance of the soil surface.		
		Minimise cultivation or disturbance that would leave soils bare and vulnerable.		
		Consider increasing organic matter through pasture management or amendments to help improve aggregation and resistance to erosion		
		Consider planting shelter such as windbreaks to further reduce wind velocity across exposed areas and limit aeolian transport.		
Drainage and waterlogging	Class 5w soils	**Irrigation and cropping are not permitted** due to their low-lying landscape position; these soils should remain as pasture or as their natural state.		
Sodicity	Class 5w soils	**Irrigation and cropping are not permitted** due to their low-lying landscape position; these soils should remain as pasture or as their natural state.		
Salinity	Class 5k soils	**Irrigation and cropping are not permitted** due to their low-lying landscape position; these soils should remain as their natural state (fenced).		
Nutrient management	Across entire TI irrigation area	Continue current management practices by applying fertilisers judiciously across renovated pasture areas, typically on a three-year cycle. Ensure fertiliser application aligns with crop type and growth stage and is informed by soil test results.		
		Where appropriate, seek advice from a qualified agronomist to guide input requirements, supported by regular crop inspections to optimise nutrient use and maintain crop health.		
		Maintain accurate on farm records of all fertiliser applications.		
		Apply fertilisers under suitable conditions to minimise nutrient loss and reduce environmental risk.		

Soil Limitation/Risk Addressed	Location	Required Management Actions	Responsible Person	Timing
Irrigation Development	Class 5k, Class 5w and Class 6e soils	**Irrigation and cropping are not permitted;** these soils should remain as pasture or as their natural state.	Irrigator/ property owner	Ongoing
	Across entire TI irrigation area	Maintain proactive irrigation scheduling informed by observed soil and crop conditions, while considering the adoption of on-farm soil moisture monitoring technologies or the continued use of nearby dryland soil moisture probes (e.g. via Farming Forecaster). Continue to apply practical field-based soil moisture assessment techniques, such as the soil ribbon test using a spade, to support decision-making.		

4.4 Photographs (Soil limitation/risk areas)

Evidence of the sandy soils found across the TI irrigation area.

Evidence of wind erosion across class 4a soils.

	
Section of mass movement/ soil creep in class 6e soil class areas.	Class 5w soil area comprising a defined watercourse (Seabyrne Creek), extending across Dams 1–3.
	
Existing 30-hectare irrigation area exhibiting consistent ground cover, with a section of exposed soil across approximately one-third of the rear pivot area, currently under preparation for sowing.	Evidence of a potato crop present within a section of the existing 30-hectare irrigation area, characterised by Class 4a Kandosol soils with sandy to loamy surface textures.

	
Saline Class 5k area adjacent to Dam 3, with visible surface salt accumulation and signs of plant wilting.	Representative section of Class 5r soil, characterised by areas of exposed rocky outcrops.

4.5 Soil improvements since Farm WAP implementation

Table 10 is to be **completed by the auditor** following a Farm WAP audit. It documents management activities undertaken since the original Farm WAP was prepared to address identified soil limitations or risks.

Table 10. Soil improvements since original Farm WAP preparation (subject to audit)

Management activities implemented since Farm WAP preparation (include photographs)

4.6 Recommended Best Practice Soil Management (not subject to audit)

Good soil stewardship is about establishing and sustaining the conditions that allow roots to develop, water to infiltrate, and nutrients to cycle efficiently. This begins with understanding soil limitations and potential through soil testing, structural assessment, and paddock history, then aligning management practices to protect and progressively enhance these foundations over time. Sound soil condition and fertility underpin sustainable agriculture. **Caring for our soils today ensures they remain productive for future generations and continue to support reliable yields.**

These recommended best practice actions are **not mandatory** and are not subject to audit unless they are separately identified as Required Management Actions in your Farm WAP. They are provided to support efficient irrigation and good on-farm water management.

Please use the checklist below as a practical working tool. You do not need to complete every item. Only tick those that are relevant and that you actively apply. The checklist is intended to support continuous improvement rather than compliance assessment.

4.6.1 How soil results guide irrigation decisions

- ☐ Undertake regular soil testing and trend results over time.
- ☐ Base nutrient application on soil test results and realistic yield targets.
- ☐ Avoid fertiliser applications prior to heavy rainfall.
- ☐ Consider split applications to reduce nutrient losses.
- ☐ Follow the TasFarmers Voluntary Code of Practice for Nutrient Management and associated guidelines.

4.6.2 How soil condition is improved through organic matter and biology

- ☐ Build and protect soil organic matter (SOM): Retain stubble, use composts or manures, and prioritise practices that increase groundcover and carbon inputs.
- ☐ Support mycorrhizal associations and soil biological activity.
- ☐ Minimise unnecessary chemical disturbance.

4.6.3 How soil is protected by plants and roots

- ☐ Maintain continuous groundcover through pasture management or cover crops.
- ☐ Keep living roots in the soil for longer using diverse rotations or multi-species pastures.
- ☐ Use species mixes with varied rooting depths to support aggregate stability and nutrient cycling.

4.6.4 How soil structure is maintained and improved

- ☐ Avoid traffic on wet soils.
- ☐ Use controlled traffic where feasible.
- ☐ Match tyre pressures to conditions.
- ☐ Confirm compaction before undertaking deep ripping.
- ☐ Use minimum tillage practices where feasible to preserve soil aggregates.

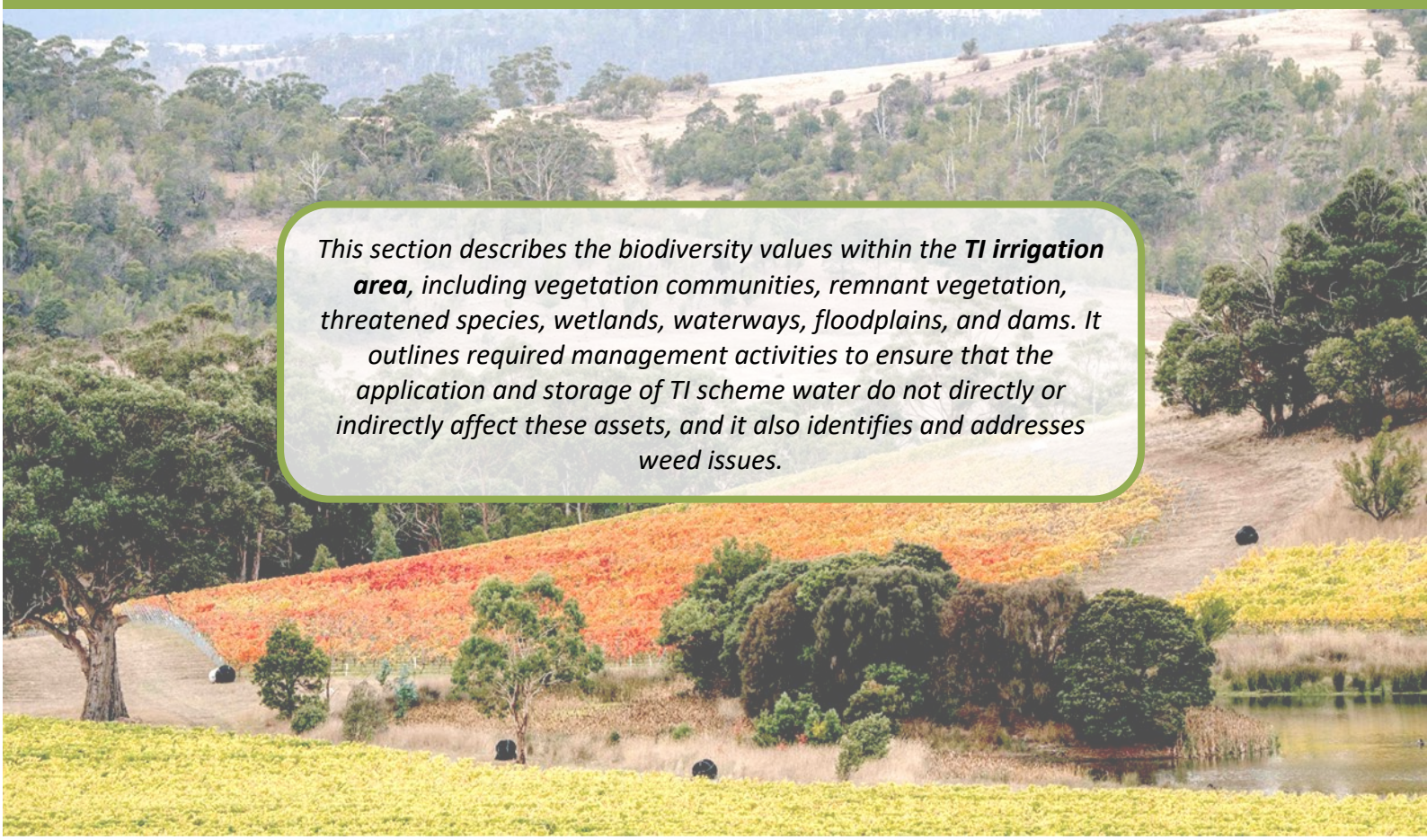
4.6.5 How erosion is prevented and controlled

- [ ] Match land use to land capability.
- [ ] Consider contour cultivation where appropriate.
- [ ] Stabilise high-traffic areas.
- [ ] Protect waterways with vegetated buffers.
- [ ] Manage slopes consistent with soil type and rainfall risk.

4.6.6 How drainage and waterlogging are managed

- [ ] Maintain existing drainage infrastructure.
- [ ] Consider targeted drainage where justified.
- [ ] Use raised beds, spoon drains or suitable pasture species in prone areas.
- [ ] Monitor paddocks for signs of prolonged saturation.

5. Biodiversity Resources



*This section describes the biodiversity values within the **TI irrigation area**, including vegetation communities, remnant vegetation, threatened species, wetlands, waterways, floodplains, and dams. It outlines required management activities to ensure that the application and storage of TI scheme water do not directly or indirectly affect these assets, and it also identifies and addresses weed issues.*

5. Biodiversity Resources and Management

5.1 Survey Options and Scope

The level of detail provided will vary depending on whether a **standard** or **premium** survey has been selected.

Standard Survey: A standard survey is required when the desktop assessment identifies vegetation, wetlands, waterways, floodplains, dams, potential threatened plants and animals, or weeds within the **TI irrigation area**. Databases used to determine MNES requirements include the Natural Values Atlas (NVA), TASVEG, hydrology datasets and the Conservation of Freshwater Ecosystem Values (CFEV).

Premium Survey: All land within the **TI irrigation area** will be surveyed, providing a complete biodiversity asset profile.

Note: If the desktop assessment confirms that no vegetation, wetlands, waterways, floodplains, dams, potential threatened plants and animals, or weeds are present within the **TI irrigation area**, and the irrigator has not requested a premium survey, then a biodiversity survey will not be undertaken. In such cases, the Biodiversity Resources and Management section of the Farm WAP will contain only a broad, general description.

5.2 Biodiversity Overview

Prequalified consultants must ensure that all biodiversity assessments and management actions in this Farm WAP reflect the specific approval conditions that apply to the relevant irrigation scheme under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This includes any **prescriptive requirements** for listed native species or ecological communities, such as Lowland Native Grasslands of Tasmania (LNGT), threatened frogs (e.g. green and gold frog), threatened crayfish (e.g. giant freshwater crayfish) and any other Matters of National Environmental Significance.

Table 11-16 summarises the biodiversity assets identified in your **TI irrigation area**, including their locations and conditions. It outlines the direct and indirect risks associated with these assets and specifies whether management actions are required.

Table 11. Biodiversity Summary (subject to audit)

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Threatened Vegetation/Ecological Communities								
Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on sandstone (DAS)	See biodiversity map - South-western corner of the TI irrigation area (comprises three sections). All sections are located within or adjacent to Title Reference: 236710/1	Threatened	Not Listed	Existing TasVeg 5.0 record	Field verified on 19/03/2026	27.6 hectares – Good condition vegetation, dominated by black peppermint trees with some messmate stringybark and white gum present. Dense understorey comprising shrubs (silver banksia and common heath), along with grasses and herbs (spiny-headed mat-rush and kangaroo grass).	**Direct risks** include clearing, cultivation, infrastructure development and physical disturbance from machinery or stock, which can cause permanent loss or fragmentation of vegetation. **Indirect risks** arise from ongoing land management activities such as fertiliser and chemical drift, nutrient enrichment, altered water flows from irrigation, weed invasion and sustained grazing pressure. Over time, these indirect impacts can degrade vegetation condition, reduce native species diversity and limit natural regeneration.	Yes
Blue gum (*Eucalyptus globulus*) dry forest/woodland (DGL)	See biodiversity map - Within 50m of the southern section of the TI irrigation area. Corner of Title References: 236710/1 and 133753/1	Threatened	Not Listed	Existing TasVeg 5.0 record	N/A	0.06 hectares – Not formally field-verified as outside the TI irrigation area.		Yes
Oyster bay pine (*Callitris rhomboidea*) forest (NCR)	See biodiversity map - Within 50m of the southern section of the TI irrigation area. Border of Title References: 236710/1 and 133753/1	Threatened	Not Listed	Existing TasVeg 5.0 record	N/A	2.8 hectares – Not formally field-verified as outside the TI irrigation area.	**Direct risks** include clearing, cultivation, infrastructure development and physical disturbance from machinery or stock, which can cause permanent loss or fragmentation of vegetation.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
White gum (*Eucalyptus viminalis*) wet forest (WVI)	See biodiversity map - Within the southern section of the TI irrigation area, inside Title Reference: 236710/1	Threatened	Critically Endangered	Not an existing TasVeg 5.0 record	Identified during field survey on 19/03/2026	2.9 hectares – Good condition forest with some messmate stringybark and Tasmanian blue gum present. Tall, moderately dense to closed canopy with a well-developed understorey comprising shrubs (dogwood and musk daisybush), and a lush ground layer of grasses, ferns, and herbs (bracken fern, spiny-headed mat-rush and common tussock grass).	**Indirect risks** arise from ongoing land management activities such as fertiliser and chemical drift, nutrient enrichment, altered water flows from irrigation, weed invasion and sustained grazing pressure. Over time, these indirect impacts can degrade vegetation condition, reduce native species diversity and limit natural regeneration.	Yes
Non-threatened/listed Vegetation Communities (>1ha)								
Coastal saltmarsh (undifferentiated) (AUS)	See biodiversity map - Both sections are situated within 50m of the eastern side of TI irrigation area. Inside Title References: 121415/5 and 133753/1	Not Listed	Not Listed	Existing TasVeg 5.0 record	N/A	0.24 hectares – Not formally field-verified as outside the TI irrigation area.	**Direct risks** include clearing, fragmentation, cultivation and infrastructure development, which can reduce size and continuity.	Yes
Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on dolerite (DAD)	See biodiversity map - Within 50m of the southern section of the TI irrigation area. Inside Title Reference: 236710/1.	Not Listed	Not Listed	Existing TasVeg 5.0 record	N/A	0.3 hectares – Not formally field-verified as outside the TI irrigation area.		Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
White peppermint (*Eucalyptus pulchella*) dry forest/woodland (DPU)	See biodiversity map - Northern and mid-section of the TI irrigation area and comprises four sections. Inside Title References: 121415/5 and 133753/1.	Not Listed	Not Listed	Existing TasVeg 5.0 record	Field verified on 19/03/2026	17 hectares – Good condition white peppermint dominant forest and woodland with occasional black peppermint and manna gum present. Open woodland, forest structure with a sparse to moderately dense understorey comprising shrubs (silver banksia and common heath), and a ground layer of grasses and herbs including (spiny-headed mat-rush and kangaroo grass).	**Indirect risks** arise from adjacent land use activities such as fertiliser and chemical drift, increased nutrient inputs, altered water flows from irrigation, weed invasion and grazing pressure. Over time, these indirect impacts can lead to a gradual decline in vegetation condition, increased edge effects and a loss of habitat value, including the potential loss of future habitat for threatened species. **Direct risks** include clearing, fragmentation, cultivation and infrastructure development, which can reduce size and continuity. **Indirect risks** arise from adjacent land use activities such as fertiliser and chemical drift, increased nutrient inputs, altered water flows from irrigation, weed invasion and grazing pressure. Over time, these indirect impacts can lead to a gradual decline in vegetation condition, increased edge effects and a loss of habitat value, including the potential loss of future habitat for threatened species.	Yes
Bracken (*Pteridium esculentum*) fernland (FPF)	See biodiversity map - Southern section of the TI irrigation area and comprises five sections. All sections are located within or adjacent to Title Reference: 236710/1	Not Listed	Not Listed	Existing TasVeg 5.0 record	Field verified on 19/03/2026	19.5 hectares – Poor to moderate condition bracken fern (some dying and scattered areas of gorse), forming a dense continuous ground layer with occasional emergent shrubs (silver wattle and common cassinia). Lacking a developed tree canopy and contains only scattered regenerating eucalypts. The thick bracken cover suppresses other species.		Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Remnant Vegetation (<1ha)								
Eucalyptus viminalis (White gum) trees	See biodiversity map - Western boundary of the TI irrigation area (North Block), located within Title Reference 133753/1.	Not Listed	Not Listed	Not an existing TasVeg 5.0 record	Field verified on 19/03/2026	Moderate to poor condition native vegetation comprising a tussock grass understorey with scattered prickly box and occasional wetter-associated species. The site contains low-density tree cover, approximately 10 individuals, dispersed along a minor drainage depression or ephemeral watercourse. Weed presence is evident, including scattered gorse and hawthorn. The area is unfenced and shows signs of grazing pressure and localised dieback.	**Direct risks** include clearing, physical disturbance from machinery or stock, and incremental loss through cultivation or infrastructure works, which can quickly eliminate small vegetation patches. **Indirect risks** arise from surrounding land use activities such as fertiliser and chemical drift, nutrient enrichment, altered water flows from irrigation, weed invasion and grazing pressure. Due to their small size and isolation, these remnants are particularly vulnerable to edge effects, reduced regeneration and rapid decline in condition.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
State and Federal Threatened/listed animal species								
Swift parrot (*Lathamus discolor*)	See biodiversity map - Easting: 581212, Northing: 5309083	Endangered	Critically Endangered	NVA Record – Observation date: 25/10/2024	N/A	N/A	**Direct risks** include the removal or disturbance of mature eucalypt trees used for foraging and nesting, particularly blue gum and white gum species. **Indirect risks** arise from habitat fragmentation, reduced availability of flowering resources due to vegetation decline, chemical drift, and increased predation pressure associated with simplified agricultural landscapes. These pressures can reduce foraging success, disrupt breeding activity and contribute to long-term population decline.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Wedge-tailed eagle (*Aquila audax fleayi*)	See biodiversity map - Easting: 580909, Northing: 5309195	Endangered	Endangered	NVA Record – Observation date: 15/04/2012	N/A	N/A	**Direct risks** include removal or disturbance of large nesting trees, particularly mature eucalypts, and disturbance from farm machinery/ operations during the breeding season, which may lead to nest abandonment. Additional threats include collision with agricultural infrastructure and powerlines, and secondary poisoning from pest control programs. **Indirect risks** include habitat fragmentation and modification from agricultural intensification, reducing nesting and foraging habitat. Changes in land use and grazing pressure may alter prey availability and reduce hunting efficiency, while landscape simplification further impacts foraging success. Exposure to agricultural chemicals may lead to bioaccumulation through prey, and increased human presence may reduce breeding success and long-term territory stability.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Masked Owl (*Tyto novaehollandiae castanops*)	See biodiversity map - Easting: 580457, Northing: 5309236	Endangered	Vulnerable	NVA Record – Observation date: 20/01/2007	N/A	N/A	**Direct risks** include removal or disturbance of hollow-bearing nesting and roosting trees, particularly mature eucalypts, through land clearing. Disturbance during the breeding season, such as noise, may lead to nest abandonment. Additional threats include vehicle strike and secondary poisoning from pest control programs via ingestion of contaminated prey. **Indirect risks** include habitat fragmentation and reduced hollow recruitment over time, limiting nesting site availability. Land-use change and pesticide use may reduce prey populations and foraging success, while increased edge effects and human presence can elevate competition and predation. These pressures may reduce breeding success, constrain territory viability, and contribute to long-term population decline.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
White-bellied Sea-Eagle (*Haliaeetus leucogaster*)	See biodiversity map - Easting: 582459, Northing: 5310284	Vulnerable	Not listed	N/A`	Observed during field survey 19/03/2026	N/A	**Direct risks** include removal or disturbance of large nesting trees, particularly mature eucalypts near coastal waterways. Disturbance from farm activity during the breeding season may lead to nest abandonment or reduced breeding success. Additional threats include collision with powerlines associated with agricultural infrastructure. **Indirect risks** include degradation of aquatic and riparian habitats from agricultural activities, reducing availability of prey such as fish, waterbirds, and carrion. Declines in water quality from sedimentation, nutrient runoff, and farm-related pollution may further impact food resources. Bioaccumulation of toxins, including pesticides and heavy metals, may affect health and reproductive success.	Yes
State and Federal Threatened/listed plant species								
Tailed spider-orchid *(Caladenia caudata)*	See biodiversity map - Easting: 581912, Northing: 5309921	Vulnerable	Vulnerable	NVA Record – Observation date: 9/11/2016	Also observed during field survey 19/03/2026	Moderate condition, with some weed presence and disturbance. Small population (two individuals sighted).		Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Rosy spider-orchid *(Caladenia pallida)*	See biodiversity map - Easting: 581651, Northing: 5309558	Vulnerable	Critically Endangered	N/A	Observed during field survey 19/03/2026	Poor condition habitat, degraded and dominated by exotic species. Isolated individual sighted.	**Direct risks** include removal or disturbance of native vegetation through agricultural clearing. Soil disturbance from machinery, stock, and cultivation may damage plants and their soil conditions, while changes to hydrology from irrigation or drainage may affect species reliant on specific moisture regimes. Additional threats include herbicide use and accidental spraying. **Indirect risks** include habitat fragmentation and degradation, reducing connectivity and resilience. Changes in land use and grazing pressure may alter vegetation structure and limit regeneration, while modified fire regimes may disrupt lifecycle processes, particularly for orchids. Soil disturbance and chemical use may also impact symbiotic relationships such as mycorrhizal fungi. These pressures may reduce population viability and contribute to long-term decline.	Yes
Slender curved riceflower (*Pimelea curviflora* var. *gracilis)*	See biodiversity map - Easting: 581108, Northing: 5309321	Rare	Not listed	NVA Record – Observation date: 7/03/2019	Also observed during field survey 19/03/2026	Good habitat condition with low disturbance. Small cluster (8 individuals) sighted.		Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Wetlands, Waterways, Floodplains and Dams (Ramsar, Conservation of Freshwater Ecosystem Values (CFEV))								
Seabyrne Creek (makes up Dams 1-3 and Waterholes 1-4)	See soil and biodiversity maps - Southern border of the TI irrigation area	N/A	N/A	CFEV: Moderate Conservation Management Priority (CMP). Lower to lowest Integrated Conservation Value (ICV).	Field verified on 19/03/2026	Dams and waterholes are unfenced, and sections of the banks exhibit erosion. Native aquatic and riparian vegetation is present in areas and provides some filtration of nutrients and sediment, including *Juncus* spp. (rushes), sedges (*Carex* spp.), *Baumea* spp. (twig rush), and *Schoenoplectus* spp. (club rush).	**Direct risks** include physical disturbance from stock access, machinery crossings, earthworks and infrastructure development, which can damage banks, beds and aquatic habitat. **Indirect risks** arise from nutrient and sediment runoff, fertiliser and chemical drift, altered hydrology from irrigation and drainage, weed and pest species invasion, and changes to natural flow regimes. Over time, these pressures can degrade water quality, reduce habitat condition for aquatic and semi-aquatic species, and compromise the ecological values.	Yes

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Minor Tributary (includes Waterhole 6)	See soil and biodiversity maps - Eastern side of TI irrigation area (northern block)	N/A	N/A	CFEV: Lower to Lowest Conservation Management Priority (CMP). Lower to lowest Integrated Conservation Value (ICV).	Field verified on 19/03/2026	Waterhole 6 is fenced, with no livestock access. The associated tributary upstream and downstream is unfenced and comprises a shallow depression in the landscape, flowing only following heavy rainfall.	No **direct risks** are identified, as Waterhole 6 is fenced and protected from livestock access. **Indirect risks** include nutrient and sediment runoff, fertiliser and chemical drift, altered hydrology from irrigation and drainage, weed and pest invasion, and modification of natural flow regimes. Over time, these pressures may degrade water quality, reduce habitat condition for aquatic and semi-aquatic species, and compromise ecological values.	No

Name (common & scientific)	Location	State Listing	Federal Listing	Public Database Record	Qualified Ecological Expert Observation	Size (ha) & Condition	Identified risk(s)	Management Action Required
Weeds – particularly Weeds of National Significance (WoNS) & Declared Weeds								
Serrated tussock (*Nassella trichotoma*)	See biodiversity map - Western side of TI irrigation area (northern block) (Easting: 582496, Northing: 5310385)	Declared Weed and Weed of National Significance (WoNS)	N/A	N/A	Observed during field survey 19/03/2026	15 tussocks sighted, look to be starting to spread	**Direct risks** include competition with native vegetation for space, light, nutrients and water, which can lead to the displacement of native species and reduced biodiversity. **Indirect risks** arise from the spread of weeds through soil disturbance, irrigation water, stock movement and machinery, increasing management costs and further degrading habitat condition. Over time, weed invasion can alter ecosystem structure and function, reduce pasture and land productivity, and undermine the effectiveness of biodiversity management actions.	Yes
Gorse (*Ulex europaeus*)	See biodiversity map - Three main cluster scattered across the TI irrigation area (Easting: 581881, Northing: 530981; Easting: 580753, Northing: 5309389; Easting: 580806, Northing: 5309362)	Declared Weed and Weed of National Significance (WoNS)	N/A	N/A	Observed during field survey 19/03/2026	Each location had roughly 3-10 plants, some plants had recently been sprayed.		

5.3 Required Biodiversity Management Actions

Table 12. Required Biodiversity Management Actions (subject to audit)

Biodiversity Asset	Required Management Actions (including any monitoring requirements)	Responsible Person	Timeframe
Federally listed native vegetation communities			
Tasmanian white gum wet forest (WVI)	Clearing vegetation that is protected/listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) in Tasmania requires prior approval. Where harvesting is proposed, the activity must be formally referred to the *Department of Climate Change, Energy, the Environment and Water* (DCCEEW) for assessment. Undertaking clearing without approval constitutes a significant non-compliance and may result in substantial penalties, including fines, legal proceedings, and obligations for environmental rehabilitation. A referral enables determination of whether a comprehensive environmental impact assessment is required. Referrals can be lodged directly via the EPBC Act portal or prepared with guidance from an officer of the Forest Practices Authority.	Landholder/ irrigator	Ongoing
State listed native vegetation communities			
• Black peppermint dry forest/woodland on sandstone (DAS) • Blue gum dry forest/woodland (DGL) • Oyster bay pine forest (NCR)	Clearing state-listed native vegetation in Tasmania requires compliance with the *Forest Practices Act 1985* and approval from the Forest Practices Authority, with a certified Forest Practices Plan required where clearing exceeds 1 hectare or 100 tonnes and, even below these thresholds, threatened vegetation typically still requires assessment and approval, including verification of vegetation through TASVEG and potential referral under the *Environment Protection and Biodiversity Conservation Act 1999* if nationally significant values are impacted, and clearing must not proceed until all regulatory approvals and conditions are satisfied.	Landholder/ irrigator	Ongoing
Non-threatened/listed native vegetation communities (>1 ha)			
• Coastal saltmarsh (undifferentiated) (AUS) • Black peppermint dry forest/woodland on dolerite (DAD) • White peppermint dry forest/woodland (DPU) • Bracken fernland (FPF)	Retain and manage to maintain or improve condition. Avoid clearing, conversion or fragmentation of the vegetation community unless all relevant statutory approvals have been obtained. Manage livestock access to prevent overgrazing, trampling and soil compaction, particularly in areas adjacent to irrigation. If you plan to undertake harvesting activities, use the 'Check Before You Chop' tool on Forest Practices Authority's website to determine if a Forest Practices Plan is required. The first step will direct you to contact your local council for advice.	Landholder/ irrigator	Ongoing

Biodiversity Asset	Required Management Actions (including any monitoring requirements)	Responsible Person	Timeframe
Remnant native vegetation (<1 ha)			
White gum trees	Retain remnant vegetation and avoid further clearing. Reduce grazing pressure through fencing or managed stock access. Control invasive weeds where they threaten the remnant vegetation condition. If you plan to undertake harvesting activities, use the 'Check Before You Chop' tool on Forest Practices Authority's website to determine if a Forest Practices Plan is required. The first step will direct you to contact your local council for advice.	Landholder/ irrigator	Ongoing
State and federally listed animal species			
Swift parrot	• Keep native trees and bush on your property wherever possible • Pay special attention to blue gum and black gum trees, as they provide important food (flowers) during breeding season. Avoid clearing or damaging these areas • Keep patches of native vegetation connected so wildlife can move easily across your property • Retain large, older trees, especially those with hollows, as they are used for nesting. Avoid disturbing these areas during the breeding season (September - January) • Fence off native vegetation where practical to protect it from stock • Do not collect firewood from blue and black gum areas, especially fallen timber and habitat trees • Avoid breaking up (fragmenting) remaining bushland into smaller patches	Landholder/ irrigator	Ongoing
Wedge-tailed eagle	• Retain native forest and woodland, especially large, mature trees used for nesting • Avoid clearing habitat and protect known or potential nest trees • Minimise disturbance during breeding season (July – January), keep well away from nests • Maintain connected habitat and vegetation corridors to support movement and breeding • Reduce risks from infrastructure, including powerlines and nearby operations • Prevent harm or disturbance from human activity • Maintain a healthy landscape to support prey species	Landholder/ irrigator	Ongoing
Masked owl	• Retain native forest and woodland, especially old trees with hollows • Avoid clearing nesting, roosting, and foraging habitat • Keep a mix of bush and farmland to support feeding • Protect mature and paddock trees with hollows • Minimise disturbance around potential nesting areas • Avoid rodenticides that can cause secondary poisoning • Maintain prey availability and reduce habitat fragmentation	Landholder/ irrigator	Ongoing

Biodiversity Asset	Required Management Actions (including any monitoring requirements)	Responsible Person	Timeframe
White-bellied Sea-Eagle	• Retain coastal, riparian, and wetland habitats, including large nesting trees near water • Avoid clearing habitat, especially around waterways and nesting sites • Minimise disturbance during breeding season, May to October, keep well away from nests • Maintain vegetation along waterways to support movement and feeding • Protect water quality to sustain fish and other prey • Avoid fragmenting shoreline and riparian vegetation • Reduce risks from infrastructure, including powerlines • Keep disturbance low in key habitat areas	Landholder/ irrigator	Ongoing
State and federally listed plant species			
Tailed spider-orchid	• Retain native heathland and grassy woodland where the orchid occurs • Avoid clearing or disturbing these areas • Minimise soil disturbance, keep conditions stable • Use low intensity fire carefully, where appropriate, to support regeneration • Manage grazing, avoid grazing and trampling during growth and flowering • Do not use fertilisers or herbicides near known sites • Maintain habitat condition and avoid fragmentation • Protect sites even when plants are not visible	Landholder/ irrigator	Ongoing
Rosy spider-orchid	• Retain native vegetation in open forest and woodland • Avoid clearing or disturbing habitat • Minimise soil disturbance and changes to drainage • Do not use fertilisers or chemicals near known sites • Manage grazing, avoid trampling and damage to plants • Use fire carefully, avoid inappropriate burning • Reduce habitat fragmentation • Protect sites even when plants are not visible	Landholder/ irrigator	Ongoing

Biodiversity Asset	Required Management Actions (including any monitoring requirements)	Responsible Person	Timeframe
Slender curved riceflower	• Retain native forest, woodland, and grassland habitat • Avoid clearing or disturbing these areas • Minimise soil disturbance and changes to ground conditions • Control weeds to reduce competition • Manage grazing, avoid trampling and plant damage • Use disturbance carefully, avoid frequent or intense disturbance • Maintain habitat connectivity, avoid fragmentation • Protect sites even when plants are not visible	Landholder/ irrigator	Ongoing
Weeds – particularly Weeds of National Significance (WoNS) and State Declared Weeds			
• Serrated tussock • Gorse	• Follow best practice control methods • Clean down machinery and vehicles between paddocks • Treat infestations early, prioritise new and small patches • Control weeds in riparian areas and replant with native vegetation • Monitor paddocks annually to track spread and effectiveness • Use an integrated approach, combine spraying, grazing, and follow-up control	Landholder/ irrigator	Ongoing
Wetlands, Waterways, Floodplains or Dams with natural values			
Seabyrne Creek (makes up Dams 1-3 and Waterholes 1-4)	• Use nutrient budgets and irrigation practices to reduce runoff into dams and waterways • Apply chemicals in line with the *Code of Practice for Ground Spraying* and *Guidelines for Safe and Effective Herbicide Use Near Waterways*, avoid spray drift into water • Maintain a vegetated buffer along dams and creek lines, no synthetic fertiliser/chemical use in this area • Retain and improve riparian vegetation for bank stability and water quality • Leave logs and woody debris in place to support habitat • Control weeds using targeted methods and replant with native species • Limit stock access, fence where practical and use off-stream watering points • Manage pests carefully to avoid impacts on native species • Avoid disturbing banks or changing natural water flow • Check waterways regularly for erosion, weeds, or other issues	Landholder/ irrigator	Ongoing

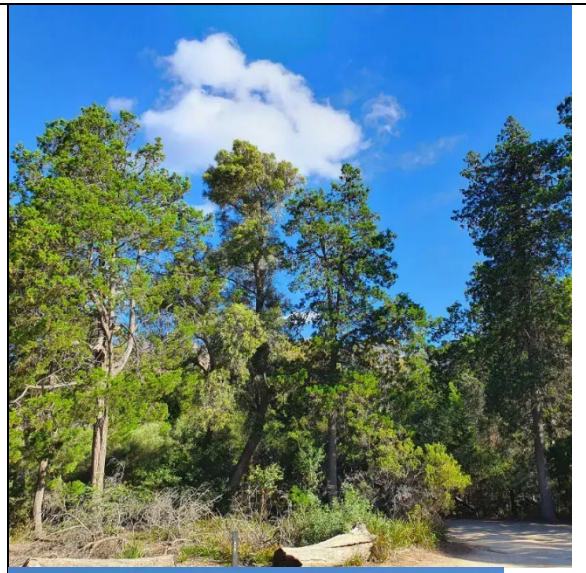
Reminder: Code of Practice for Ground Spraying

- Use only registered products and follow the label (or permit)
- Wear required protective gear, no eating or smoking when handling
- Store safely in original containers, dry and ventilated, away from kids/animals
- Prevent spray drift, keep away from schools, homes, beehives and waterways
- Keep records of all spraying (date, crop, product, rates, weather). See **Appendix 5 – Example Spray Application Record Keeping Template**
- Calibrate and maintain spray equipment, rinse and dispose of containers properly
- Notify neighbours within 100 m before spraying
- Report major spills to 000
- Observe withholding periods before selling or processing produce

Reminder: Guidelines for Safe and Effective Herbicide Use Near Waterways

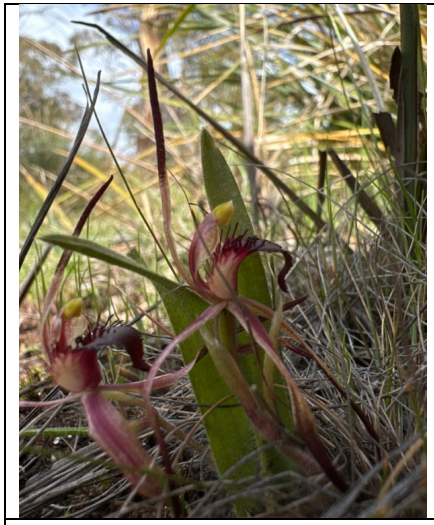
- Always assess the site: identify the waterbody type, weed species, native plants, and any erosion or habitat values.
- Favour non-chemical options first: slashing, grazing, mulching, biological controls. Use herbicides only when necessary.
- If spraying, only use herbicides registered for aquatic use (e.g. Roundup Bioactive®, Weedmaster Duo®).
- Avoid spraying near water when rain is forecast or in windy conditions. Use low pressure and flat fan nozzles to reduce drift.
- Never add surfactants to glyphosate when used in aquatic environments.
- Staged removal is best: restore riparian areas with native plants to stabilise banks, shade waterways, and discourage weeds.
- Protect native species by marking them before spraying.
- Only trained/licensed contractors should spray near waterways.
- Dispose safely: never pour leftover chemicals or wash water into drains, creeks, or stormwater. Use authorised waste collection.
- Monitor and follow up: record actions, evaluate success, and repeat control to tackle long-lived seed banks.

5.4 Photographs (biodiversity assets and identified risks)

 	 	 
Black peppermint dry forest and woodland on sandstone vegetation community, with an understorey featuring bracken fern and silver banksia.	Blue gum dry forest and woodland vegetation community, photographed from the fence line. This area was not formally field verified as it lies outside the TI irrigation area.	Oyster bay pine forest vegetation community, photographed from the fence line. This area was not formally field verified as it lies outside the TI irrigation area.

		
White gum trees dispersed along a minor drainage depression, showing tussock understory.	White peppermint dry forest and woodland community featuring a spiny-headed mat-rush dominated understorey.	Black peppermint dry forest/woodland on dolerite vegetation community, photographed from the fence line. This area was not formally field verified as it lies outside the TI irrigation area.
		
Coastal saltmarsh (undifferentiated), photographed from the fence line. This area was not formally field verified as it lies outside the TI irrigation area.	Austral bracken fernland vegetation community, showing variable condition with areas of healthy growth alongside sections exhibiting dieback.	White gum wet forest community featuring a spiny-headed mat-rush and common tussock grass dominated understorey.

		
Swift parrot shown for **reference only**. The species was not observed during the field survey, the vegetation on the property provides suitable habitat.	Wedge-tailed eagle shown for **reference only**. The species was not observed during the field survey, the vegetation on the property provides suitable habitat.	Masked Owl shown for **reference only**. The species was not observed during the field survey, the vegetation on the property provides suitable habitat.
		
White-bellied Sea-Eagle shown for **reference only.**	White-bellied sea eagle observed during the field survey within the northern section of the TI irrigation area, perched in a mature white peppermint tree.	

		
Two tailed spider-orchids observed during the field survey within the northern section of the TI irrigation area.	Rosy spider-orchid observed during the field survey within the central section of the TI irrigation area.	Eight slender curved rice flowers observed during the field survey within the central section of the TI irrigation area.
		
Dam 1 (makes up a portion of Seabyrne Creek), some bank erosion from sheep trampling is visible.	Minor Tributary (including Waterhole 6) in the northern section of the TI irrigation area.	

		
Cluster (approx. 15 plants) of serrated tussocks observed during the field survey within the northern section of the TI irrigation area.	A section of Gorse in amongst Bracken fern vegetation area.	Evidence of recent gorse spraying amongst the Bracken fern vegetation area.

5.5 Biodiversity improvements since original Farm WAP preparation (subject to audit)

Table 13 is to be completed by the auditor following a Farm WAP audit. It documents management activities undertaken since the original Farm WAP was prepared that enhance or improve the extent or condition of recorded biodiversity assets within the **TI irrigation area**.

Table 13. Biodiversity improvements since original Farm WAP

Management actions implemented since Farm WAP was prepared (include photos)

5.6 Recommended Best Practice Biodiversity Management (not subject to audit)

Good biodiversity stewardship is about maintaining and enhancing the natural systems that support productive farming, including healthy soils, resilient waterways, pollinators, and native vegetation. This begins with understanding the ecological values and limitations of the farm landscape, such as remnant vegetation, habitat connectivity, soil biology, and water flows, then aligning day-to-day management practices to protect and progressively strengthen these assets over time. Sound biodiversity management underpins long-term farm resilience, reducing risk, supporting ecosystem services, and improving productivity outcomes. **Caring for biodiversity today helps ensure farms remain viable for future generations while continuing to produce reliable yields within a changing climate.**

These recommended best practice actions are **not mandatory** and are not subject to audit unless they are separately identified as Required Management Actions in your Farm WAP. They are provided to support efficient irrigation and good on-farm water management.

Please use the checklist below as a practical working tool. You do not need to complete every item. Only tick those that are relevant and that you actively apply. The checklist is intended to support continuous improvement rather than compliance assessment.

5.6.1 Native vegetation protection

- ☐ Retain existing remnant native vegetation, including bush, grasslands, paddock trees, and shelterbelts.
- ☐ Avoid unnecessary clearing of native vegetation.
- ☐ Preserve fallen timber, rocky outcrops, and hollow-bearing trees.
- ☐ Maintain habitat features that provide shelter, breeding sites, and ecological stability.

5.6.2 Habitat connectivity

- ☐ Maintain or establish habitat corridors such as riparian strips, shelterbelts, and fenceline vegetation.
- ☐ Strengthen connectivity between remnant patches within the property and across neighbouring land.
- ☐ Encourage diverse vegetation structure to support wildlife movement and resilience.

5.6.3 Riparian and waterway protection

- ☐ Fence waterways where practicable to limit stock access.

- [ ] Maintain or enhance vegetated buffers along streams and wetlands.
- [ ] Minimise erosion, sedimentation and nutrient runoff into waterways.
- [ ] Protect aquatic and riparian habitat from degradation.

5.6.4 Grazing and land management

- [ ] Adjust stocking rates and grazing timing to protect groundcover and habitat structure.
- [ ] Allow adequate recovery periods to prevent overgrazing.
- [ ] Avoid grazing sensitive ecological areas during vulnerable seasons.

5.6.5 Pest plant and animal management

- [ ] Target priority weeds and feral species using integrated, risk-based approaches.
- [ ] Minimise off-target impacts during pest control activities.
- [ ] Focus on protecting high-value ecological areas from invasive species pressure.

5.6.6 Chemical use and nutrient management

- [ ] Apply herbicides, insecticides and fertilisers only where necessary.
- [ ] Use targeted application methods to protect beneficial insects, soil biota and aquatic life.
- [ ] Follow the TasFarmers Voluntary Code of Practice for Nutrient Management and associated guidelines.

5.6.7 Ecological restoration and regeneration

- [ ] Rehabilitate degraded areas where feasible using locally appropriate native species.
- [ ] Support natural regeneration where conditions allow.
- [ ] Use revegetation to stabilise soils, improve water quality, and rebuild habitat over time.

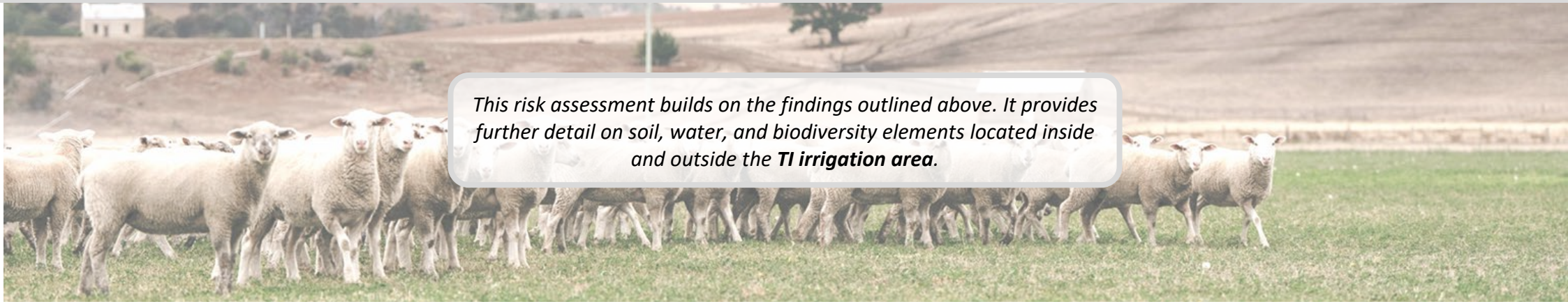
5.6.8 Pollinator and beneficial species

- [ ] Maintain flowering plants and structurally diverse vegetation.
- [ ] Provide shelter and habitat to support pollination and natural pest control services.

5.6.9 Fire management

- [ ] Use fire strategically and sparingly where appropriate.
- [ ] Recognise the ecological role of fire in certain systems.
- [ ] Avoid damage to sensitive habitats or threatened ecological communities.

Appendix 1
Farm WAP Risk Assessments



*This risk assessment builds on the findings outlined above. It provides further detail on soil, water, and biodiversity elements located inside and outside the **TI irrigation area**.*

6. Appendix 1 – Farm WAP Risk Assessments

6.1 Water Quality Risk Assessment

1. Salinity	Result	Details
1.1 Is the existing (non-TI) irrigation water within the **TI irrigation area** known to be saline?	Unsure (no data available)	Irrigation water is currently sourced from Dams 1 and 2. These dams have not been tested, therefore salinity levels are unknown. Given their proximity to the coastline, it is likely the water is slightly saline, however no visible impacts of saline irrigation have been observed in the irrigated areas. Bore water is used solely for stock drinking purposes and is not suitable for irrigation due to high salinity levels.
1.2. Are permitted/licenced dams known to be saline?	N/A	As above.
1.3 Will the proposed irrigation activity increase the risk of salinity within the **TI irrigation area**?	No	No, the proposed irrigation activity is not expected to increase salinity risk, as lower-salinity TI water will be mixed with on-farm dam water and soil moisture will be carefully managed to prevent over-irrigation.

2. Effluent and Wastewater Management	Result	Details
2.1 Is effluent or wastewater produced or contained on the property?	No	No, there is no formal effluent or wastewater produced or stored on the property, however minor waste from the shearing shed and stockyards is managed by collecting manure for garden reuse and directing washdown water to a settling drain where solids are removed and dumped in the bush.
2.1 Is effluent or wastewater produced or contained within the **TI irrigation area**?	No	See above. Shearing shed and stockyards are located within the TI irrigation area.
2.2 Is effluent or wastewater applied directly to paddocks within the **TI irrigation area**?	No	See above.
2.3 Is there an effluent or wastewater management plan in place?	N/A	

6.2 Soil Risk Assessment

1. Significant Geomorphological Features	Result	Details
1.1 Are there any significant geomorphological features on the property, i.e. karst, deflation basins, lunettes?	No	No significant geomorphological features were identified during the site survey conducted on 19/03/2026.
1.2 Do these significant geomorphological features exist within the **TI irrigation area**?	N/A	
1.3 Is a geomorphological field survey required?	No	Site survey already conducted on 19/03/2026, no additional survey required apart from Farm WAP audit site visit (timing TBC).
1.4 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on these geomorphological features?	N/A	

2. Soil structure (compaction, organic matter and soil biology)	Result	Details
2.1 Is there evidence of soil compaction or soil structure degradation due to loss of organic matter and soil life within the **TI irrigation area**?	Yes	All soils within the TI irrigation area are susceptible to structural degradation if not appropriately managed, primarily due to the predominance of sandy soil types. These soils, characterised by low clay content and weak aggregation, are inherently prone to compaction, organic matter decline, and reduced biological activity, as they have limited capacity to retain moisture, nutrients, and carbon and are vulnerable to structural collapse under pressure. In contrast, the loam-dominant soils within the TI irrigation area exhibit greater resilience, with improved structure, higher water and nutrient holding capacity, and stronger biological function, making them less susceptible to degradation under similar management conditions.
2.2 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on soil structure?	Yes	Following the introduction of irrigation, soil structure can be maintained by carefully controlling application rates to match infiltration capacity, avoiding traffic and grazing when soils are wet, maintaining consistent ground cover, and increasing organic matter inputs to support aggregation, moisture retention, and biological activity.

3. Erosion (wind and water)	Result	Details
3.1 Are there soils potentially susceptible to erosion (wind and water) within or adjacent to the **TI irrigation area**?	Yes	Class 4a soils (123.6 ha) are susceptible to aeolian erosion due to their sandy texture and weak aggregation, which makes them vulnerable to detachment and transport by wind. Class 6e soils (3.8 ha) are also susceptible to erosion from the combined effects of wind, water, and gravity-driven processes, primarily due to their steep slope gradients, which increase the risk of runoff, soil displacement, and mass movement.
3.2 Will the proposed irrigation activity within **TI irrigation area** have a direct or indirect impact on these soils?	Yes	Irrigation and cropping are not permitted on Class 6e soils (3.8 ha) due to their steepness and high erosion risk; these soils should remain as pasture or as their natural state. The impacts on Class 4a soils can be effectively minimised through careful management that reduces wind exposure and maintains soil stability. This includes maintaining continuous and dense ground cover to prevent soil detachment, avoiding over-irrigation that can lead to surface sealing or loss of structure, applying water at low and controlled rates to prevent disturbance of the soil surface, and minimising cultivation or disturbance that would leave soils bare and vulnerable. In addition, increasing organic matter through pasture management or amendments will help improve aggregation and resistance to erosion, while strategic shelter such as windbreaks can further reduce wind velocity across exposed areas and limit aeolian transport.

4. Drainage and Waterlogging	Result	Details
4.1 Are there soils with drainage or waterlogging issues within or adjacent to the **TI irrigation area**?	Yes	Class 5w soils (20.3 ha) are subject to wetness limitations arising from both surface water accumulation and subsurface saturation, as the area largely comprises the Seabyrne Creek watercourse, resulting in prolonged waterlogging during wet winter periods and subsequent drying in summer, which can lead to soil cracking (where sufficient clay is present).
4.2 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on these soils?	Yes	Irrigation and cropping are not permitted on Class 5w soils (20.3 ha) due to their low-lying landscape position; these soils should remain as pasture or as their natural state.

5. Sodicity	Result	Details
5.1 Are soils likely to be sodic within the **TI irrigation area**?	Yes	Class 5w soils (20.3 ha), located within a low-lying watercourse environment, are subject to prolonged waterlogging and poor drainage, conditions which promote the accumulation of sodium over time and increase the risk of soil dispersion when wet, with alluvial systems typically exhibiting variable clay content and localised zones of sodium enrichment.

5.2 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on these soils?	Yes	Irrigation and cropping are not permitted on Class 5w soils (20.3 ha) due to their low-lying landscape position; these soils should remain as pasture or as their natural state.

6. Salinity	**Result**	**Details**
6.1 Is there evidence of salinity occurring within the **TI irrigation area**?	Yes	Class 5k soils (0.7 ha) are subject to salinity due to their position within a low-lying watercourse environment, where water movement is slow and drainage is restricted, allowing dissolved salts transported from upslope areas to accumulate over time rather than being leached, with periodic waterlogging further concentrating salts near the surface through evaporation during drying periods.
6.2 Will the proposed irrigation activity within **TI irrigation area** have a direct or indirect impact on these soils?	Yes	Irrigation and cropping are not permitted on Class 5k soils (0.7 ha) due to their low-lying landscape position; these soils should remain as their natural state (fenced).

7. Acid Sulfate Soils (ASS)	**Result**	**Details**
7.1 Are acid sulfate soils likely to occur within the **TI irrigation area**?	No	No acid sulfate soils were identified during the site survey conducted on 19/03/2026.
7.2 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on these soils?	N/A	

8. Nutrient Management	**Result**	**Details**
8.1 Are fertilisers used within the **TI irrigation area** in ways to minimise nutrient leaching or runoff?	Yes	Fertilisers are applied sparingly across renovated pasture areas, typically on a three-year cycle using products such as diammonium phosphate (DAP) and potash, with no evidence of intensive or routine application. Within the current pivot-irrigated area (30 ha), fertiliser use varies depending on crop type and soil test results, with pasture and fodder crops generally receiving nutrients at sowing only, while potato crops are fertilised more intensively through a base application at planting followed by additional applications throughout the growing season to meet higher nutrient demands, particularly for nitrogen, phosphorus, and potassium. For potato production, an agronomist provides expert advice on input requirements, supported by regular crop inspections to optimise nutrient application and ensure crop health. Records of fertiliser applications are maintained by contractors and supported by on-farm record keeping, with applications undertaken under suitable conditions to minimise nutrient loss and environmental risk.
8.2 Will the proposed irrigation activity within the **TI irrigation area** have a direct or indirect impact on nutrient runoff or leaching?	No	The proposed irrigation activity is not expected to result in any significant direct or indirect impact on nutrient runoff or leaching, provided that current land management practices are maintained. Fertiliser use across the irrigation area is already controlled and guided by soil testing and crop requirements, which minimises the risk of excess nutrient application and subsequent losses. Importantly, no cropping or irrigation is proposed on higher-risk soil classes, including Class 5k, 5w, and 6e soils, which are more prone to erosion, waterlogging, or other limitations that increase runoff potential. The exclusion of these areas from irrigation significantly reduces the likelihood of nutrient mobilisation and transport to receiving environments, including on-farm dams and the Seabyrne Creek watercourse. In combination with existing practices such as appropriate timing of fertiliser application and avoidance of irrigation under unsuitable conditions, the risk of nutrient movement beyond the root zone remains low, and therefore the proposed activity is not anticipated to adversely affect water quality.

9. Irrigation development	Result	Details
9.1 Are there undeveloped areas within the **TI irrigation area** that have not been previously irrigated?	Yes	Of the 127.8 hectares suitable for irrigation and cropping across the TI irrigation area only 30 hectares have been irrigated in the past.
9.2 According to the land capability, are any of the undeveloped areas **NOT** recommended for irrigation?	Yes	According to the land capability assessment, there are areas within the undeveloped land that are not recommended for irrigation or cropping. Specifically, Class 5k soils (0.7 ha), Class 5w soils (20.3 ha), and Class 6e soils (3.8 ha) are considered unsuitable due to their inherent limitations, including erosion risk, wetness, and salinity. In total, this represents 24.8 hectares of land that should be excluded from irrigation and cropping development to ensure sustainable land use and to minimise environmental risks associated with soil degradation and runoff.
9.3 Is the amount of water purchased from TI considered excessive in relation to land capability?	No	An allocation of 200 ML is not considered excessive for irrigating 127.8 hectares. If the full volume were applied to irrigation, this would equate to approximately 1.56 ML/ha. However, not all this water will be used directly for irrigation, as a portion will be allocated to on-farm dam storage, and additional irrigation demand may also be supplemented by existing non-TI water sources.
9.4 Is irrigation scheduling in place for the **TI irrigation area**?	Yes	Irrigation is managed effectively through informed visual assessment, with decisions guided by observed soil and crop conditions. While no on-farm soil moisture monitoring technology is currently utilised, nearby dryland soil moisture probes (e.g. via Farming Forecaster) provide a useful indication of when soils are beginning to dry and irrigation should commence. This is complemented by practical field methods such as the soil ribbon test using a spade to assess moisture conditions. Irrigation is applied conservatively, with no observed runoff or drainage into adjacent paddocks. Soil properties are well understood and regularly considered in irrigation decision-making, supporting efficient water use and minimising the risk of off-site impacts.

6.3 Biodiversity Risk Assessment

1. Listed Threatened Vegetation Communities (State and/or Federal)	Result	Risk Level H – High L – Low N – Negligible	Details
1.1 Are there any listed threatened vegetation communities on the property?	Yes		Three state-listed threatened vegetation communities occur within, or in close proximity to, the TI irrigation area on the property. These include Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on sandstone (DAS), Blue gum (*Eucalyptus globulus*) dry forest/woodland (DGL), and Oyster Bay pine (*Callitris rhomboidea*) forest (NCR). In addition, one federally-listed threatened vegetation community is present within the TI irrigation area, being White gum (*Eucalyptus viminalis*) wet forest (WVI). It is likely that additional threatened vegetation communities occur elsewhere on the property; however, the Farm WAP assessment was limited to the TI irrigation area and 50 metressurrounding this footprint.
1.2 Do any listed threatened native vegetation communities exist within the **TI irrigation area**?	Yes		Three occurrences of Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on sandstone (DAS) are present. One occurrence lies entirely within the TI irrigation area, one occurs entirely outside but within 50 metres, and a third straddles the boundary of the TI irrigation area. The White gum (*Eucalyptus viminalis*) wet forest (WVI) vegetation community is located within the TI irrigation area.

1.3 Is a survey required to verify the threatened native vegetation community or potential habitat for threatened species?	Yes		All state and federal-listed threatened vegetation communities inside the TI irrigation area were surveyed/ field verified on 19/03/2026. No additional survey is required.
1.4 Will the proposed irrigation activity clear or directly disturb the threatened native vegetation community?	Yes	Low	The likelihood is low, as there are currently no plans to clear this vegetation, although its location within the TI irrigation area indicates potential for future clearing. Any proposed clearing of state-listed threatened vegetation would require compliance with the Forest Practices Act 1985 and approval from the Forest Practices Authority, including a certified Forest Practices Plan where clearing exceeds 1 hectare or 100 tonnes, and assessment may still be required below these thresholds. If federally protected vegetation is planned to be impacted, approval under the Environment Protection and Biodiversity Conservation Act 1999 is required, including referral to the Department of Climate Change, Energy, the Environment and Water. Currently, the vegetation is being rotationally grazed and appears stable; however, if stocking intensity increases, fencing these areas should be considered to avoid degradation.
1.5 Is there potential for indirect significant impacts from the proposed irrigation activity on the threatened native vegetation community?	Yes	Low	Indirect risks may arise from fertiliser and chemical drift, nutrient enrichment, altered hydrology due to irrigation, weed invasion, and sustained grazing pressure, which over time can degrade vegetation condition, reduce native species diversity, and limit natural regeneration. These risks can be mitigated through best-practice management, including minimising nutrient and chemical inputs via agronomically informed nutrient budgets, monitoring soil moisture to inform efficient irrigation scheduling and reduce runoff, ensuring agricultural chemicals are applied in accordance with the *Code of Practice for Ground Spraying*, implementing targeted weed control through mechanical or spot spraying methods, and considering fencing to restrict stock access where grazing pressure increases.

2. Non-threatened Vegetation Communities (>1ha)	**Result**	**Risk Level**	**Details**
2.1 Are there any non-threatened vegetation communities on the property?	Yes		Four non-threatened vegetation communities occur within, or in close proximity to, the TI irrigation area on the property. These include Coastal saltmarsh (undifferentiated) (AUS), Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on dolerite (DAD), White peppermint (*Eucalyptus pulchella*) dry forest/woodland (DPU) and Bracken (*Pteridium esculentum*) fernland (FPF). It is highly likely that additional non-threatened vegetation communities occur elsewhere on the property; however, the Farm WAP assessment was limited to the TI irrigation area and50 metres surrounding this footprint.
2.2 Do any non-threatened native vegetation communities exist within the **TI irrigation area**?	Yes		Two occurrences of Coastal saltmarsh (undifferentiated) (AUS) are present, both of which occur entirely outside but within50-metres of the TI irrigation area. The Black peppermint (*Eucalyptus amygdalina*) dry forest/woodland on dolerite (DAD) community is also located outside but within 50-metres of the TI irrigation area. Four occurrences of White peppermint (*Eucalyptus pulchella*) dry forest/woodland (DPU) are present, all of which are straddling the boundary of the TI irrigation area. Five occurrences of Bracken (*Pteridium esculentum*) fernland (FPF) exist, four of which occur inside the TI irrigation area, and one which straddles the TI irrigation area.

2.3 Are any of the non-threatened native vegetation communities likely to provide potential habitat for threatened species?	Yes		Non-threatened native vegetation communities are likely to provide potential habitat for threatened species. Within the TI irrigation area, a range of threatened fauna species are known to occur, including the Swift Parrot, Wedge-tailed Eagle, Masked Owl, and White-bellied Sea Eagle. Threatened flora species such as the Tailed Spider-orchid, Rosy Spider-orchid, and Slender Curved Riceflower are also known in the TI irrigation area. In addition, species such as the spotted-tailed quoll and Tasmanian devil are likely to utilise the property, with anecdotal sightings reported by the landholder, although not confirmed during the survey or through formal records. The non-threatened vegetation provides important habitat functions such as foraging, nesting, and movement corridors, supporting both common and threatened species, as evidenced by the presence of native fauna including pademelons observed during the site survey.
2.4 Is a survey required to verify the potential presence of threatened species within the non-threatened native vegetation?	Yes		The TI irrigation area was surveyed/ field verified on 19/03/2026 to determine the presence of threatened species. No additional survey is required.
2.5 Will the proposed irrigation activity clear or directly disturb the non-threatened native vegetation community?	Yes	Low	The likelihood of clearing or direct disturbance is low, as there are currently no plans to impact the non-threatened native vegetation communities, although their location within the TI irrigation area indicates potential for future pressure. The vegetation should be retained and actively managed to maintain or improve its condition, with clearing, conversion or fragmentation avoided unless all relevant statutory approvals have been obtained. Livestock access should be managed to prevent overgrazing, trampling and soil compaction, particularly in areas adjacent to irrigation infrastructure. If harvesting activities are proposed, the farmer should utilise the “Check Before You Chop” tool provided on Forest Practices Authority’s website to determine whether a Forest Practices Plan is required, with initial guidance typically provided through the local council.
2.6 Is there potential for indirect impacts from the proposed irrigation activity on the habitat for threatened species within the non-threatened native vegetation community?	Yes	Low	Indirect risks may arise from adjacent land use activities such as fertiliser and chemical drift, increased nutrient inputs, altered hydrology from irrigation, weed invasion, and grazing pressure, which over time can reduce vegetation condition, increase edge effects, and diminish habitat value, including the loss of future habitat for threatened species. These risks can be mitigated through best-practice management, including minimising nutrient and chemical inputs via agronomically informed nutrient budgets, monitoring soil moisture to inform efficient irrigation scheduling and reduce runoff, ensuring agricultural chemicals are applied in accordance with the *Code of Practice for Ground Spraying*, implementing targeted weed control through mechanical or spot spraying methods, and considering fencing to restrict stock access where grazing pressure increases.

3. Remnant Vegetation (<1ha)	**Result**	**Risk Level**	**Details**
3.1 Is there remnant native vegetation within the **TI irrigation area**?	Yes		Scattered white gum trees occur along the western boundary of the TI irrigation area - North Block (Title Reference 133753/1), forming a low-density remnant community associated with a minor drainage depression. The vegetation is in moderate to poor condition, characterised by a tussock grass understorey with scattered prickly box and occasional moisture-associated species, with approximately 10 trees present. Weed species, including gorse and hawthorn, are evident, and the area is unfenced, showing signs of grazing pressure and localised dieback.

3.2 Is the remnant vegetation likely to provide potential habitat for threatened species?	Yes		Unlikely to provide significant habitat for threatened species due to its low density and limited structural complexity, with only a small number of trees present. However, it may still serve a minor ecological function as a refuge or linkage to larger surrounding vegetation areas, and its proximity to a waterhole and occasional flow within the drainage line suggests it could be intermittently used as a water source by fauna. Additionally, the presence of nearby threatened flora, including the Tailed Spider-orchid, indicates some localised habitat value despite the overall low suitability.
3.3 Is a survey required to verify the presence of threatened species in the remnant vegetation?	Yes		The TI irrigation area was surveyed/ field verified on 19/03/2026 to determine the presence of remnant vegetation and threatened species. No additional survey is required.
3.4 Will the proposed irrigation activity clear or directly disturb the remnant native vegetation?	Yes	Low	The risk of clearing or direct disturbance to the remnant native vegetation is low, as it is located on the boundary of the TI irrigation area within a low-lying drainage line that is not well suited to irrigation or cropping, with an existing 30 hectare centre pivot operating adjacent to, but not within, the vegetation area. The farmer is encouraged to retain this remnant vegetation and avoid further clearing, reduce grazing pressure through possible fencing or managed stock access, and control invasive weeds where they threaten vegetation condition. If harvesting activities are proposed, the "Check Before You Chop" tool provided on Forest Practices Authority's website should be used to determine whether a Forest Practices Plan is required, with initial guidance available through the local council.
3.5 Is there potential for indirect impacts from the proposed irrigation activity on the habitat for threatened species within the remnant vegetation?	Yes	Low	Indirect risks may arise from surrounding land use activities such as fertiliser and chemical drift, nutrient enrichment, altered hydrology from irrigation, weed invasion, and grazing pressure. Given the small size and isolated nature of the remnant, it is particularly vulnerable to edge effects, reduced regeneration, and a rapid decline in condition, which can diminish its habitat value for threatened species. These risks can be mitigated through best-practice management, including minimising nutrient and chemical inputs via agronomically informed nutrient budgets, monitoring soil moisture to inform efficient irrigation scheduling and reduce runoff, ensuring agricultural chemicals are applied in accordance with the *Code of Practice for Ground Spraying*, implementing targeted weed control through mechanical or spot spraying methods, and considering fencing to restrict stock access where grazing pressure increases.

4. State Listed Threatened Species	**Result**	**Risk Level**	**Details**
4.1 Are state-listed threatened species known to exist within the **TI irrigation area**?	Yes		State-listed threatened species are present within the TI irrigation area, supported by both NVA records and field survey observations. Confirmed species include the Swift Parrot (endangered, NVA 25/10/2024), Wedge-tailed Eagle (endangered, NVA 15/04/2012), Masked Owl (endangered, NVA 20/01/2007), and White-bellied Sea Eagle (vulnerable, observed 19/03/2026). Threatened flora includes the Tailed Spider Orchid (vulnerable, NVA 9/11/2016 and observed 19/03/2026), Rosy Spider Orchid (vulnerable, observed 19/03/2026), and Slender Curved Riceflower (rare, NVA 7/03/2019 and observed 19/03/2026). Additionally, the Spotted-tailed Quoll and Tasmanian Devil are likely to occur based on anecdotal landholder reports, though not formally recorded or observed during the survey.
4.2 Does potential habitat for state-listed threatened species exist within the **TI irrigation area**?	Yes		All vegetation within and adjacent to the TI irrigation area, including both threatened and non-threatened native vegetation, as well as remnant vegetation, provides potential habitat for state-listed threatened species. While detailed surveys were generally limited to inside and within 50 metres of the TI irrigation area, vegetation beyond this boundary is also likely to contribute to habitat availability and ecological connectivity. Vegetation is essential for fauna as it provides food, shelter, and breeding habitat. Remnant vegetation is particularly important, offering refuge and movement corridors in modified landscapes, which supports species survival and biodiversity.

4.3 Is a survey required to verify the presence of threatened species?	Yes		The TI irrigation area was surveyed/ field verified on 19/03/2026 to determine the presence of threatened species. No additional survey is required.
4.4 Will the proposed irrigation activity directly disturb State-listed threatened species?	Yes	Low	There are no current plans to clear native vegetation within the TI irrigation area, and it is recommended that all existing vegetation be retained wherever possible. By avoiding vegetation clearing, the risk of disturbing habitat for threatened species is significantly reduced. If any vegetation clearing or harvesting activities are proposed in the future, they must comply with the *Forest Practices Act 1985*. This legislation requires approval from the Forest Practices Authority through a certified Forest Practices Plan, which includes an assessment of threatened species and habitats and the implementation of appropriate mitigation measures. This regulatory framework ensures that any potential impacts are properly assessed and managed, providing protection for State-listed threatened species.
4.5 Is there potential for indirect impacts from the proposed irrigation activity on the State-listed threatened species?	Yes	Low	As there are no current plans to clear native vegetation within the TI irrigation area and a clear recommendation to retain all existing vegetation, the primary pathways for indirect impacts, such as habitat modification, fragmentation, or edge effects, are significantly minimised. Furthermore, if any future vegetation clearing or harvesting activities are proposed, there would be a requirement to comply with the Forest Practices Act 1985, with oversight from the Forest Practices Authority. This process includes the preparation of a certified Forest Practices Plan, which assesses potential environmental impacts, including indirect effects on threatened species, and implements mitigation measures to avoid or reduce these risks. As such, the regulatory framework provides an additional safeguard to ensure that any indirect impacts are appropriately identified and managed.

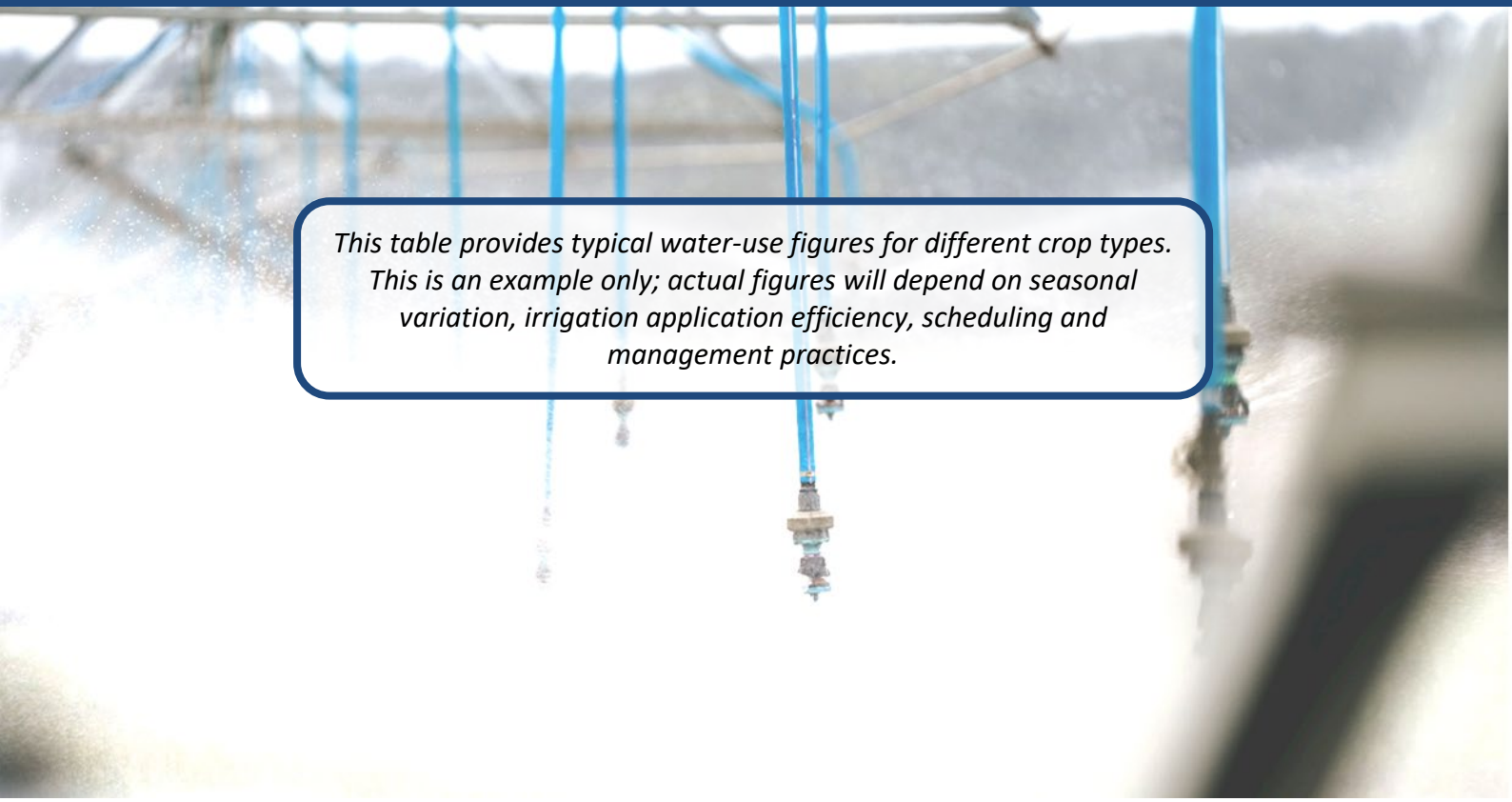
5. Federal Matters of National Environmental Significance (Threatened Species or Ecological Communities)	**Result**	**Risk Level**	**Details**
5.1 Are listed MNES known to exist within the **TI irrigation area** or within 50 m of the boundary?	Yes		**Vegetation community:** • White gum *(Eucalyptus viminalis)* wet forest (WVI) vegetation community is located within the southern section of the TI irrigation area, specifically within Title Reference 236710/1. **Threatened fauna species (EPBC-listed):** The following species have confirmed records within the TI irrigation area (based on NVA observations): • Swift Parrot, observation dated 25/10/2024 • Tasmanian Wedge-tailed Eagle, observation dated 15/04/2012 • Tasmanian Masked Owl, observation dated 20/01/2007 **Threatened flora species (EPBC-listed):** • Tailed spider-orchid •
5.2 Are any *Eucalyptus nitens* plantations established within 200 m of mapped threatened (DOV, WVI) ecological communities that are at risk of hybridisation?	No	Nil	There are no *Eucalyptus nitens* plantations established within 200 m of mapped threatened ecological communities (DOV or WVI) that would present a risk of hybridisation.

5.3 Does potential habitat for listed MNES exist within the **TI irrigation area**?	Yes		All vegetation within and adjacent to the TI irrigation area, including both threatened and non-threatened native vegetation, as well as remnant vegetation, provides potential habitat for MNES. While detailed surveys were generally limited to inside and within 50 metres of the TI irrigation area, vegetation beyond this boundary is also likely to contribute to habitat availability and ecological connectivity. Vegetation is essential for fauna as it provides food, shelter, and breeding habitat. Remnant vegetation is particularly important, offering refuge and movement corridors in modified landscapes, which supports species survival and biodiversity.
5.4 Is a survey required to verify the presence of listed MNES?	Yes		The TI irrigation area was surveyed/ field verified on 19/03/2026 to determine the presence of listed MNES. No additional survey is required.
5.5 Will the proposed irrigation activity directly disturb listed MNES?	Yes	Low	There are no current plans to clear the White gum (*Eucalyptus viminalis*) wet forest (WVI) vegetation community, nor any other native vegetation within the TI irrigation area. A clear recommendation is in place to retain all existing vegetation, thereby significantly reducing the risk of direct disturbance to Matters of National Environmental Significance (MNES). Should any future clearing or harvesting of the WVI community be proposed, it must comply with the *Environment Protection and Biodiversity Conservation Act 1999*. Any such activity would require referral to the *Department of Climate Change, Energy, the Environment and Water* for assessment. Undertaking clearing without approval constitutes a serious breach, with potential consequences including financial penalties, legal action, and rehabilitation requirements. This regulatory framework ensures that any potential impacts to MNES are formally assessed and appropriately managed prior to approval.
5.6 Is there potential for indirect impacts from the proposed irrigation activity on listed MNES?	Yes	Low	There are no current plans to clear the White gum (*Eucalyptus viminalis*) wet forest (WVI) vegetation community, or any other native vegetation within the TI irrigation area, and a clear recommendation is in place to retain all existing vegetation. This approach substantially minimises pathways for indirect impacts such as habitat modification, fragmentation, or edge effects. If any future disturbance to native vegetation or EPBC listed ecological communities were proposed, it would be subject to the *Environment Protection and Biodiversity Conservation Act 1999*, requiring referral, assessment, and approval where necessary. This regulatory process ensures that any potential indirect impacts on MNES are identified and appropriately avoided or mitigated prior to implementation.
5.7 Does the impact meet the significant impact criteria under the current MNES Significant Impact Guidelines?	No	Nil	No direct or indirect impacts on listed Matters of National Environmental Significance (MNES) are predicted, as there is no clearing of native vegetation and no identified pathways for habitat modification, fragmentation, or other ecological effects. In the absence of any impact, the thresholds for a “significant impact” are not triggered. If future activities introduce a potential for impact, they would be subject to the *Environment Protection and Biodiversity Conservation Act 1999*, ensuring that any significant impacts are formally assessed and managed prior to approval.

6. Wetlands, Waterways, Floodplains or Dams (Ramsar, CFEV Values)	Result	Risk Level	Details
6.1 Do any wetlands, waterways, floodplains or dams with CFEV Values exist within the **TI irrigation area**?	Yes		**Seabyrne Creek system (southern TI irrigation area boundary):** Includes Dams 1–3 and Waterholes 1–4. These features are largely unfenced, with some bank erosion evident. Native aquatic and riparian vegetation is present, including rushes, sedges, twig rush, and club rush, which provide partial filtration of nutrients and sediment. This system is classified as having moderate Conservation Management Priority (CMP) and lower to lowest Integrated Conservation Value (ICV). **Minor tributary (eastern side, northern block of TI irrigation area):** Includes Waterhole 6, which is fenced and protected from livestock access. The upstream and downstream tributary sections are unfenced and ephemeral, flowing only after significant rainfall. This feature is classified as having lower to lowest CMP and lower to lowest ICV.
6.2 Are any wetlands, waterways, floodplains or dams fed directly from the **TI irrigation area**?	Yes		See above.
6.3 Do any wetlands, waterways, floodplains or dams within the **TI irrigation area** provide potential habitat for threatened species?	No		While some riparian vegetation such as rushes and sedges is present, habitat values are limited and localised. There were no signs of threatened species observed, and the features are partly degraded or ephemeral in nature. Consistent with their low to moderate Conservation of Freshwater Ecosystem Values (CFEV) classifications, these areas are unlikely to support threatened species or critical habitat.
6.4 Is a survey required to verify the presence of threatened species?	Yes		The TI irrigation area was surveyed/ field verified on 19/03/2026 to determine the presence of threatened species. No additional survey is required.
6.5 Will the proposed irrigation activity **directly** impact any waterways, floodplains or dams within the **TI irrigation area**?	Yes	Low	No works or disturbances are proposed within these features, and all irrigation practices will be managed to avoid off-site impacts. This includes implementing nutrient budgeting and efficient irrigation to minimise runoff, applying chemicals in accordance with best practice guidelines to prevent spray drift into water, maintaining vegetated buffer zones where no synthetic fertilisers or chemicals are used, and retaining and improving riparian vegetation to support bank stability and water quality. Additional measures such as limiting stock access, managing weeds and pests carefully, avoiding disturbance to banks or natural flow paths, and undertaking regular monitoring will further ensure that waterway values are protected. Collectively, these controls ensure the activity does not result in any direct impact.
6.6 Will the proposed irrigation activity **indirectly** impact waterways, floodplains or dams fed directly from the **TI irrigation area**?	Yes	Low	While there is potential for indirect effects such as nutrient runoff, sediment movement or chemical drift, these risks are effectively mitigated through the implementation of best practice management measures. Irrigation will be managed using nutrient budgeting and efficient application to minimise runoff, and chemicals will be applied in accordance with relevant guidelines to prevent off-target impacts. Vegetated buffer zones will be maintained to filter any overland flow, and riparian vegetation will be retained and enhanced to support bank stability and water quality. Additional controls including limiting stock access, careful pest and weed management, avoiding disturbance to natural flow paths, and regular monitoring of waterways ensure that any potential indirect impacts are minimised. As a result, downstream waterway values are expected to be maintained.

7. Weeds (particularly Weeds of National Significance (WoNS) and State Declared Weeds)	Result	Risk Level	Details
7.1 Are there any existing weeds within the **TI irrigation area** that will impact the threatened species habitat?	Yes		There are existing weeds within the TI irrigation area that could impact threatened species habitat, although current infestations are small and localised. Around 15 serrated tussocks were identified along the boundary of white peppermint forest and woodland vegetation, where they appear to be in the early stages of spreading. In addition, small patches of gorse, typically ranging from 3 to 10 plants per location, were recorded within remnant eucalypt vegetation and bracken fernland, with some evidence of recent spraying. While these infestations are not currently at a scale likely to cause significant impact, both species are highly invasive and, if left unmanaged, could degrade habitat quality by outcompeting native vegetation and altering ecological structure. Best practice management will therefore be implemented, including early treatment of infestations, prioritisation of small and emerging patches, machinery hygiene between paddocks, targeted control in sensitive areas such as waterways, and ongoing annual monitoring. An integrated approach combining spraying, grazing, and follow up treatments will be used to minimise spread and protect threatened species habitat.
7.2 Will the proposed irrigation activity spread existing weeds across the **TI irrigation area**?	No	Nil	The proposed irrigation activity is not expected to spread existing weeds across the TI irrigation area. Current infestations of serrated tussock and gorse are small and localised, and irrigation itself will not increase their distribution. Irrigation is likely to improve overall land productivity and encourage more active management. This typically leads to better weed control, as maintaining productive pasture or cropping systems requires weeds to be managed effectively. Standard practices such as cleaning machinery between paddocks, early treatment of small infestations, and targeted control in sensitive areas will also help minimise any risk of spread.
7.3 Will the proposed irrigation activity spread weeds beyond the property boundary?	No	Nil	As above.

Appendix 2 – Crop Water Use Reference Table

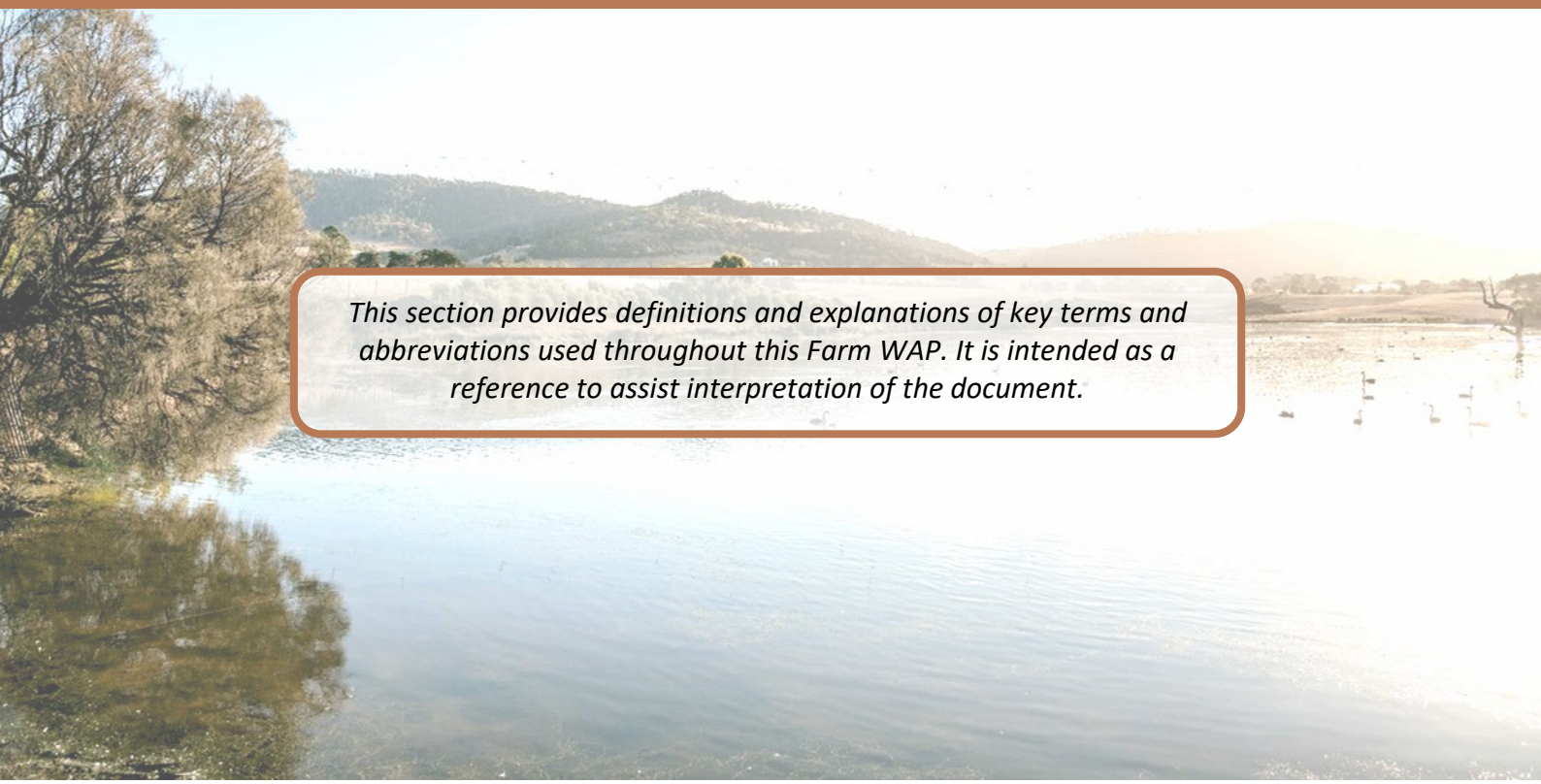


This table provides typical water-use figures for different crop types. This is an example only; actual figures will depend on seasonal variation, irrigation application efficiency, scheduling and management practices.

7. Appendix 2 – Crop Water Use Reference Table

Crop	Total depth applied (mm)	ML/ha per year
Irrigated Root Cropping		
Potatoes	600	6.0
Carrots	350	3.5
Onions	350	3.5
Irrigated Surface Cropping – Wet Harvest		
Broccoli	250	2.5
Cauliflowers (processing)	420	4.2
Peas (canning)	200	2.0
Green Beans	200	2.0
Irrigated Surface Cropping – Dry Harvest		
Brassica (seed)	250	2.5
Canola (winter)	100	1.0
Canola (summer)	200	2.0
Carrot (seed)	350	3.5
Cereals	50	0.5
Clover (seed)	200	2.0
Grass (seed)	200	2.0
Poppies	250	2.5
Pyrethrum	200	2.0
Irrigated Pasture		
Lucerne	650	6.5
Pasture (dairy / intensive)	650	6.5
Pasture (non-intensive / spring & autumn only)	150	1.5
Horticulture		
Viticulture	250	2.5
Olives	400	4.0
Avocado	500	5.0

Appendix 3 – Terms and Definitions



This section provides definitions and explanations of key terms and abbreviations used throughout this Farm WAP. It is intended as a reference to assist interpretation of the document.

8. Appendix 3 – Terms and Definitions

Key:

		Introduction
		Property section
		Water resources and management
		Soil resources and management
		Biodiversity resources and management

Icon	Term/Abbreviation	Definition
	**agricultural land use types**	Describes how land is managed and utilised for agricultural production. • **Dryland Pasture:** Rainfall-dependent pasture systems primarily managed for direct livestock grazing without supplementary irrigation. • **Irrigated Pasture:** Irrigated pasture systems managed for direct livestock grazing, with irrigation used to improve productivity and seasonal reliability. • **Dryland Forage:** Rainfall-dependent forage crops grown for direct in-paddock livestock grazing or browsing without supplementary irrigation. • **Irrigated Forage:** Irrigated forage crops grown for direct in-paddock livestock grazing or browsing to improve feed availability and productivity. • **Dryland Fodder:** Rainfall-dependent crops grown for harvest and removal from the paddock as livestock feed, including hay, silage, or grain feed. • **Irrigated Fodder:** Irrigated crops grown for harvest and removal from the paddock as livestock feed, including hay, silage, or grain feed. • **Dryland Surface Cropping:** Non-irrigated broadacre cropping for dry harvest products such as cereals, oilseeds, legumes, and poppies. • **Irrigated Surface Cropping (Dry Harvest):** Irrigated broadacre cropping for dry harvest products such as cereals, poppies, seed crops, and grain production. • **Irrigated Surface Cropping (Wet Harvest):** Irrigated cropping for wet harvest products such as peas, beans, broccoli, and other vegetable crops. • **Irrigated Root Cropping:** Irrigated production of root, tuber, or bulb crops such as potatoes, carrots, onions, and beetroot. • **Horticulture:** Irrigated or dryland production of fruit, vine, nut, nursery, or specialty horticultural crops. • **Forestry:** Land managed for commercial plantation forestry, agroforestry, shelterbelts, or managed native forest production. • **Excluded:** Land unsuitable or unavailable for agricultural production or irrigation due to environmental, physical, operational, or regulatory constraints.

Icon	Term/Abbreviation	Definition
	agronomy	The science of crops and soils, focusing on how plants grow, how soils work, and how water and nutrients are managed to make farming more productive and sustainable.
	acid sulfate soils (ASS)	Soils and sediments that contain iron sulfides, mainly pyrite. When these soils are exposed to air, the sulfides react with oxygen and water to produce sulfuric acid. This process can release toxic metals, lower soil and water quality, and harm plants, animals, and infrastructure.
	biodiversity	The variety of living things on Earth includes different plants, animals, fungi, and microorganisms, as well as the ecosystems they form and the genetic differences within each species.
	chemical	Any fertiliser, herbicide, pesticide or other chemical or proprietary compounds, including high nutrient pollutant sources such as biomass, animal manure and other organic matter.
	cropping frequency	The number of times crops are grown and harvested from the same field within a given period, usually a year. It shows how often the land is cultivated.
	cropping suitability rating	A system used to classify land based on how well its soils can support cropping. Ratings reflect the level of soil limitations and the management needed to prevent degradation: • **High** – Soils with no or only slight limitations. Suitable for a wide range of intensive cropping and grazing, with cropping possible almost continuously and only occasional pasture breaks. • **Moderate** – Soils with moderate limitations. Requires conservation practices and good management, with regular short-term pasture breaks. • **Low** – Soils with severe limitations. Only suited to occasional cropping, needing major conservation treatments and careful management. • **Very Low** – Soils with very limited cropping potential, requiring long pasture breaks of more than 8 years. • **Unsuitable** – Soils not suited to cropping at all.
	Department of Climate Change, Energy, the Environment and Water (DCCEEW)	The Australian Government department responsible for national policies and programs on climate change, energy, environment, water, and heritage. It leads work on reducing emissions, managing energy supply, protecting biodiversity, conserving natural resources, and ensuring sustainable water use.
	drainage	The process of removing excess water from soil or land, either naturally or through constructed systems like ditches, tiles, or pipes, to improve soil conditions, prevent waterlogging, and support plant growth or infrastructure use.
	ecosystem	A system that is made up of a community of animals, plants, and bacteria and its interrelated physical and chemical environment.
	electrical conductivity (EC)	A measure of how well soil or water can conduct an electrical current, which reflects the amount of dissolved salts present. It is commonly used to assess soil salinity and water quality for agriculture.
	EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
	erosion	The process or group of processes whereby solids in the natural environment are relocated by moving water, glacial ice or wind.

Icon	Term/Abbreviation	Definition
	**Farm WAP Audit**	A quality assurance process **designed to confirm that the environmental** management prescriptions outlined in a Farm WAP are being followed. The audit reviews any changes to farm operations that could pose environmental risks, as well as any new or altered environmental aspects that may be affected by irrigation activities. The process involves assessing the landholder's (or delegated irrigator's) activities to verify compliance with the **Farm WAP requirements for the property. The audit focuses on whether water use aligns with the Farm WAP, whether** land capability limitations and biodiversity are being managed, whether required monitoring has been carried out, and whether accurate records are maintained.
	**Forest Practices Authority (FPA)**	The Tasmanian Government agency responsible for managing the Tasmanian forest practices system on both public and private land, empowered by the *Forest Practices Act, 1985* (Tas).
	**Forest Practices Plan (FPP)**	A forest practices plan, prepared for certification under the *Forest Practices Act 1985*, properly identifies the clearing of all forest vegetation within the relevant site.
	**hydrology**	The scientific study of water in the environment. It examines the occurrence, distribution, movement, and properties of water on and below the Earth's surface and in the atmosphere. This includes the water cycle (precipitation, evaporation, infiltration, runoff, and groundwater flow) and the ways in which water interacts with landscapes, ecosystems, and human activities.
	**irrigated property**	A property irrigated with or proposed to be irrigated with **TI scheme water.**
	**Irrigation District**	The gazetted area of irrigated land serviced by irrigation water supplied by a specific **irrigation scheme**.
	**irrigation records**	These are documented details of water use on a property. They provide evidence of how, when, and where irrigation has been applied. They typically include: • Dates and times of irrigation events • Volume of water applied (ML or mm) • Location or system used (e.g. centre pivot, hard hose, drip line) • Crop or pasture type irrigated • Any monitoring results (e.g. soil moisture, rainfall, water quality)
	**irrigation scheduling**	The process of planning and controlling when and how much water to apply to crops to meet their water needs efficiently. It involves deciding the timing, frequency, and quantity of irrigation based on factors such as soil moisture, crop growth stage, weather conditions, and water availability.
	**irrigation scheme**	A system, often involving dams and pipelines, designed to deliver controlled water to agricultural land for irrigation to improve agricultural productivity.

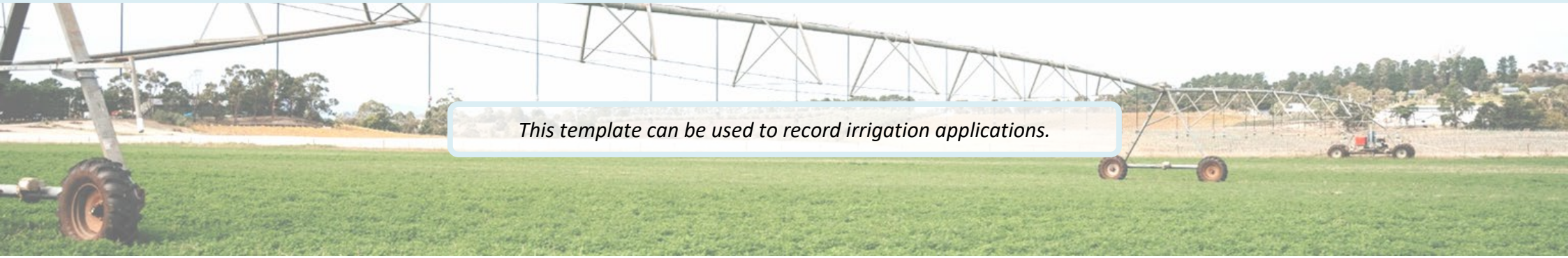
Icon	Term/Abbreviation	Definition
	**land capability**	The classification of land based on its ability to sustain a range of agricultural activities without causing long-term degradation of the land resource. The assessment ranks land into seven classes, with **Class 1** being the most versatile and productive and **Class 7** being the least suitable for agriculture. The classification considers physical and environmental limitations such as erosion risk, wetness, flooding, drainage, soil quality, rockiness, salinity, and slope. The most significant limitation determines the final class. Subclass codes may also be applied to indicate the dominant limiting factor (for example, soil, slope, salinity, or erosion), although these do not show severity and may not always be available unless the land has been surveyed in detail. The system assumes an average standard of land management and indicates that production can be sustainable if managed in line with the guidelines of the assigned class. It does not take into account economics, proximity to markets, or social and political factors, which may change over time.
	**land capability assessment**	Determines which agricultural uses are suitable for a site. It also sets sustainable cropping frequencies based on the land's physical limitations, ensuring agricultural development occurs without environmental harm.
	**ML**	Megalitre (1,000,000 litres)
	**MNES**	Matters of National Environmental Significance as defined in the EPBC Act.
	**natural values**	Ecological features of an area, including native vegetation, wildlife habitats, species (particularly threatened or endangered), waterways, wetlands, and other environmental assets that contribute to biodiversity and ecosystem health.
	**NRE Tas**	Department of Natural Resources and Environment, Tasmania.
	**NVA**	Natural Values Atlas – an authoritative and comprehensive source of information on Tasmania's natural values.
	**prequalified consultant**	Prequalified consultant means a business entity, consultancy or agency that has been approved by Tasmanian Irrigation under the Farm WAP Prequalification Framework and that employs or engages one or more qualified ecological experts who meet the competency requirements of this Framework.

Icon	Term/Abbreviation	Definition
	**qualified ecological expert**	To further consolidate and clarify the definitions in KNMIS EPBC 2012/6401, SEIS3 EPBC 2013/6843, SWIS EPBC 2010/5327, and URIS EPBC 2013/6787, a qualified ecological expert is a person who: a) holds suitable qualifications in ecology, environmental science, natural resource management, soil science, hydrology or a closely related discipline, and b) has demonstrated experience appropriate to the environmental values and risks being assessed, including biodiversity, soil limitation, water-related impacts or Matters of National Environmental Significance, and c) is competent to apply the Farm WAP Framework, including the Biodiversity Module and Environmental Risk Assessment (ERA) Framework. A qualified ecological expert may be either: a) Tasmanian Irrigation Environmental Services staff, or b) external prequalified consultant engaged by Tasmanian Irrigation.
	**remnant vegetation**	Refers to patches of native vegetation that remain in the landscape after widespread clearing or disturbance. These areas are typically composed of original, undisturbed plant communities and provide important habitat for native species, help maintain biodiversity, and often indicate the land's natural condition before development or agricultural use.
	**riparian zone**	The strip of land that lies alongside rivers, creeks, streams, or other water bodies. It includes the vegetation, soils, and ecosystems that are influenced by the presence of water. These zones play a key role in stabilising banks, filtering runoff, supporting biodiversity, and maintaining water quality.
	**risk**	Risk is measured as a combination of the magnitude of the potential consequences of an event and the likelihood that the event and its associated impact occur.
	**Salinity**	The concentration of dissolved salts in soil or water. High salinity can reduce plant growth, affect soil structure, and impact water quality, making it an important factor in land and water management.
	**scheme water**	Water supplied via a TI scheme, typically for agricultural irrigation.
	**Sodicity**	The presence of excessive sodium ions in soil relative to other cations, particularly calcium and magnesium. It can cause soil particles to disperse, leading to poor structure, reduced infiltration, surface crusting, and increased erosion risk. Sodic soils often have low productivity and require careful management to maintain plant growth and water movement.
	**soil geomorphic issue**	Refers to land or soil problems that arise from the natural shape, structure, and processes of the landscape. These can include erosion (gully, rill, or sheet erosion), landslips, soil movement, or deposition that affect how soil is distributed and how the land can be used. Such issues are closely linked to slope, soil type, and water movement across the terrain.

Icon	Term/Abbreviation	Definition
	**soil limitations**	The physical, chemical, or biological characteristics of soil that restrict its ability to support particular land uses or plant growth. These limitations affect how effectively soil can be used for agriculture, construction, forestry, or environmental management.
	**soil moisture monitoring**	The process of measuring and tracking the amount of water present in the soil, usually within the plant root zone. It is used to understand how much water is available for crops and pastures, to avoid both water stress (too little water) and waterlogging (too much water).
	**soil structure**	The way individual soil particles of sand, silt and clay are arranged into aggregates or peds and the pores between them, which together influence water and air movement, root penetration, nutrient availability, soil workability and erosion resistance.
	**TasVeg**	A comprehensive system for classifying and mapping Tasmania's vegetation communities.
	**threatened species**	Species considered threatened in Tasmania or Australia. This includes species that are rare, vulnerable or endangered in Tasmania, listed under the Tasmanian *Threatened Species Protection Act 1995* or listed as vulnerable, endangered or critically endangered under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.
	**TI base water entitlement**	A permanent water right under a Tasmanian Irrigation scheme, owned outright once purchased and held as a long-term asset linked to the irrigator's property or business.
	**TI current water entitlement**	Combines the base water entitlement plus or minus any long-term or temporary transfers. The extent of the tradability of water within an irrigation district is based on the zone nomination of delivery rights.
	**TI irrigation area**	The portion of the property designated and approved for the application and storage of TI scheme water. Following soil and biodiversity surveys, any areas deemed unsuitable will be identified as exclusion zones. This area is covered by the Farm WAP and is referred to as the 'Farm WAP area' within the old TI Farm WAP Framework and Farm WAP Audit Program, and earlier Farm WAP versions.
	**vegetation communities**	Naturally occurring groups of plant species that live together in a particular area, interacting with each other and their environment, and are typically defined by the dominant species, structure and ecological conditions that characterise that habitat.
	**water entitlements**	Are either irrigation rights or delivery rights. Irrigation rights provide an allocation of water each irrigation season. Delivery rights entitle the holder to a share of the scheme's delivery capacity within a zone during the summer and/or winter delivery periods.
	**waterlogging**	The saturation of soil with water to the point where pore spaces are filled, reducing oxygen availability for plant roots and soil organisms, which can restrict root growth, reduce crop yields and cause long-term soil degradation if persistent.
	**water quality**	The physical, chemical and biological characteristics of water, frequently used by reference to a set of standards against which compliance can be assessed.

Icon	Term/Abbreviation	Definition
	**water resources**	Surface water, groundwater, and managed supplies available for farming activities, which are used to support crop irrigation, livestock, and related agricultural processes, directly influence farm productivity and sustainability.
	**water take/use/meter records**	Records that document how much water is extracted, used, and measured from an authorised water source over a defined period. They provide evidence of compliance with water access entitlements, licence conditions, and operational limits.
	**water use efficiency**	The ratio of crop output (such as grain yield, biomass, or economic return) to the amount of water used by the crop, either through irrigation or total water consumption (rainfall plus irrigation).

Appendix 4 – Example Irrigation Application Record Keeping Template

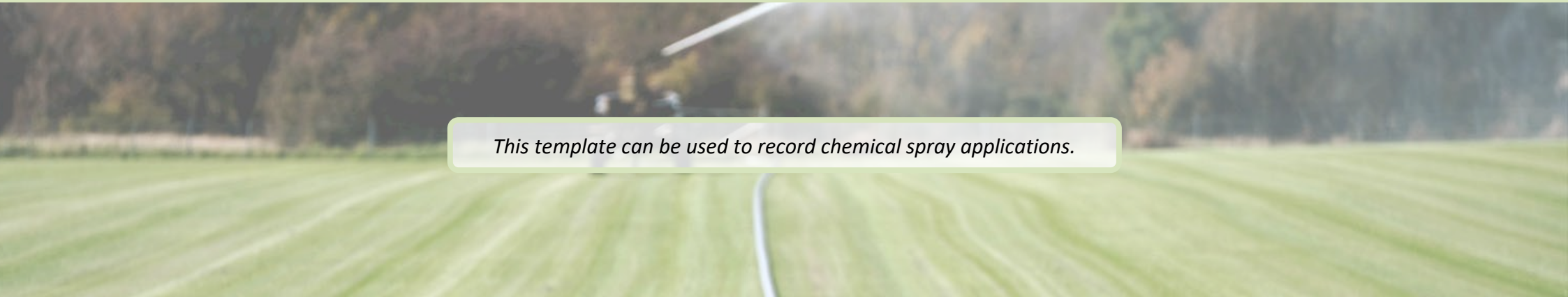


This template can be used to record irrigation applications.

9. Appendix 4 – Example Irrigation Application Record Keeping Template

Date	Irrigation Infrastructure Operator/Staff Name	Irrigation Infrastructure Type	Water Source e.g. TI, bore, river, dam, etc.	Crop Type & Paddock/Location	Irrigation Area (ha or acres)	Irrigation Start Time (24 hr time)	Irrigation End Time (24 hr time)	Duration (hrs)	System Capacity/ Application Rate (mm/day)	Pivot Speed (hr, mins or day)	Weather Conditions/ Observations	Additional Notes
5/06/2025	*Stuart Smith*	*Centre pivot*	*TI water straight from outlet*	*Potatoes – House paddock*	*30 hectares*	*1900*	*0700*	*12 hrs*	*10 mm/day*		*Name: Will Bennet (casual part-time employee)* *Number: 04 98 730 759*	*Name: James Smith (Farm manager/property owner)* *Number: 04 97 430 79*

Appendix 5 – Example Spray Application Record Keeping Template



This template can be used to record chemical spray applications.

10. Appendix 5 – Example Spray Application Record Keeping Template

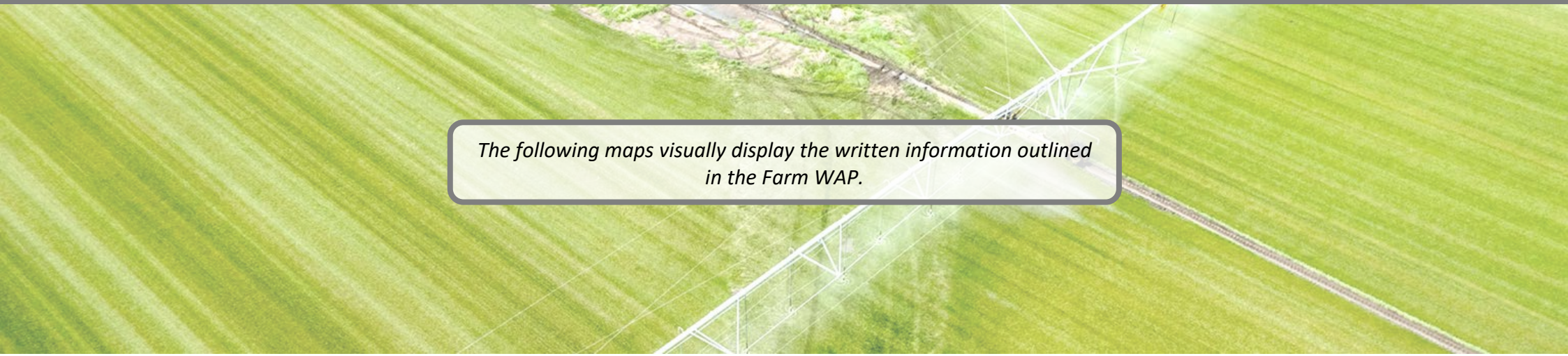
Agricultural chemical application details					Weather details (if the product is sprayed outdoors)		Contact details		Additional information (optional)
Date of use	**Product name (chemical input)**	**Application method and rate (L/ha or kg/ha) of product OR sufficient information to allow it to be calculated**	**Crop/commodity treated OR situation in which product was applied**	**Specific location at which product was applied (provide GPS coordinates if possible)**	**Wind speed (km/h)**	**Wind direction**	**Name and contact details of the applicator/operator**	**Name and contact details of the supervisor (if applicable)**	**e.g. Notes or additional comments on weather, weed cover, etc.**
4/06/2025	*Apparent Glyphosate 450 Herbicide*	*Boom Spray: 2.0-7.2 L/ha*	*Chilean needle grass in a dryland pasture setting*	*Along the fence line on either side of the gate – horse paddock*	*3*	*NE*	*Name: Will Bennet (casual part-time employee)* *Number: 04 98 730 759*	*Name: James Smith (Farm manager/property owner)* *Number: 04 97 430 79*	*Cool cloudy conditions and 20m buffer left near Wye River*

Appendix 6 – Example River Pump Meter Reading Sheet

11. Appendix 6 – Example River Pump Meter Reading Sheet

Date	Pump ID/number/name	Purpose/crop	Start Time	End Time	Start Meter (ML)	End Meter (ML)	Flow rate	Comments	Total Volume Pumped (ML)
5/06/2025	*PO number eg. RC-001* *River pump 1* *Water Meter Serial No.* 16798	*To fill dam near house* *Direct to sand flat pivot*	*0700*	*1313*	*1,251 ML*	*1,261 ML*	*60 L/s*	*Record faults, breakage anything else of relevance*	*10 ML*
Total for reporting period									

Appendix 7 – Farm WAP Map(s)



The following maps visually display the written information outlined in the Farm WAP.

12. Appendix 7 – Farm WAP Map(s)

6e
4a
Waterhole 6
Waterhole 5
6e
6e
Proposed Dam 1
6e
4a
5r
Waterhole 4
Waterhole 3
Waterhole 2
Waterhole 1
5k
Dam 3
5w
Dam 2
Seabyrne Creek
Dam 1

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Banwell Pty Ltd Soil Map (Entire Property)

Legend

- Property Boundary
- TI irrigation area
- Approved for TI water storage
- Not approved for TI water storage
- Land Capability
- Minor Stream
- Minor Tributary
- Stream
- Hydrographic Lines
- Contour 10m

Scale: 1:20,364 A3 Portrait

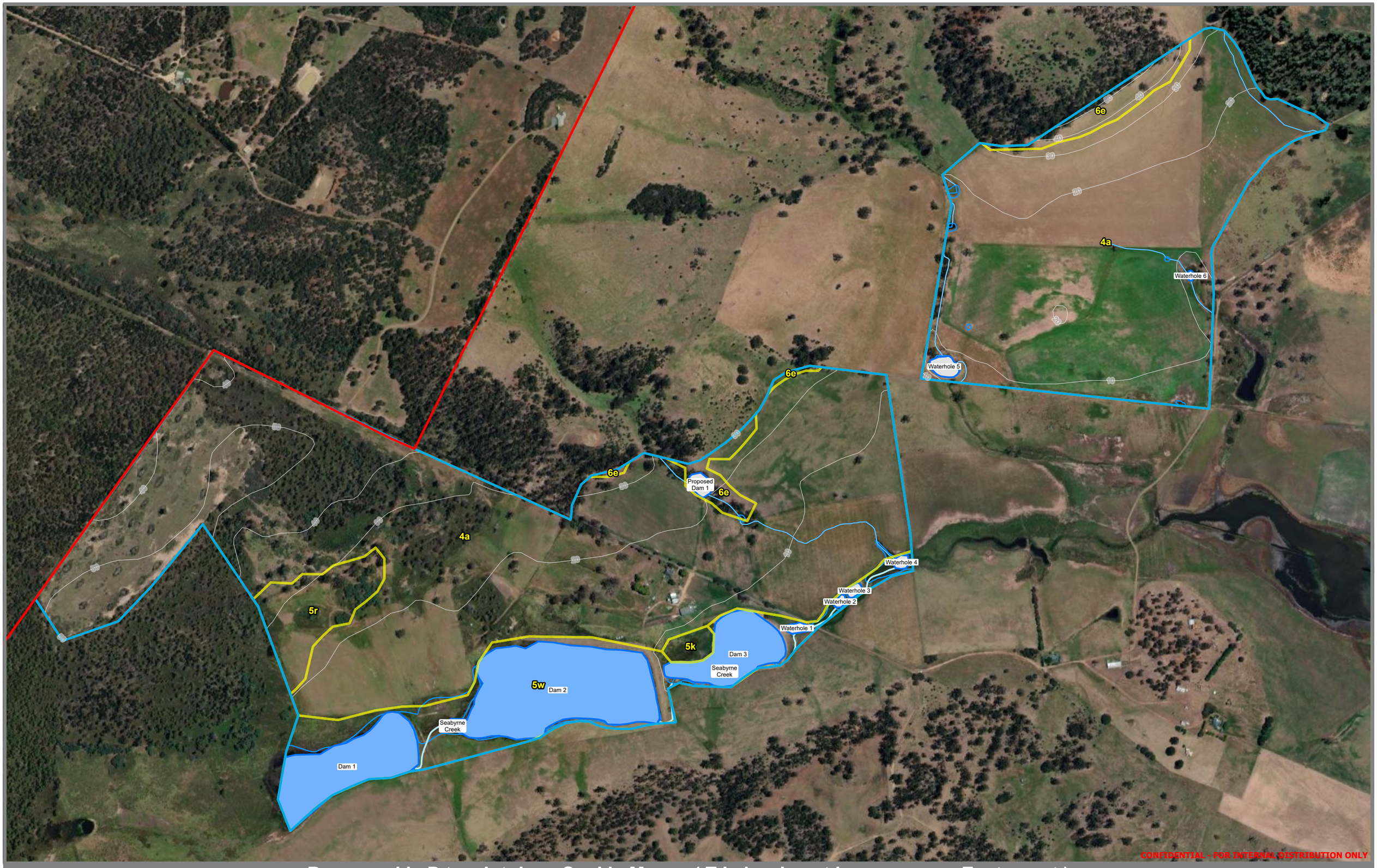
0.55 0.28 0 0.55

Kilometers

N

Date: 14/05/2026
Spatial Reference: GDA 1994 MGA Zone 55
Author: Amy Madsen

Tasmanian Irrigation



Banwell Pty Ltd - Soil Map (TI irrigation area Extract)

Legend

- Property Boundary
- TI irrigation area
- Approved for TI water storage
- Not approved for TI water storage
- Land Capability
- Hydrographic Lines
- Contour 10m
- Minor Stream
- Minor Tributary
- Stream

Date: 14/05/2026
Spatial Reference: GDA 1994 MGA Zone 55
Author: Amy Madsen
Tasmanian Irrigation

Scale: 1:7,556 A3 Landscape

0.2 0.1 0 0.2
Kilometers

N

Tasmanian Irrigation

Serrated tussock
White-bellied Sea-Eagle
(DPU) Eucalyptus pulchella forest and woodland
(AUS) Saltmarsh (undifferentiated)
Tailed spider-orchid
White gum trees
Gorse
Waterhole 6
Waterhole 5
Rosy spider-orchid
(AUS) Saltmarsh (undifferentiated)
(NCR) Callitris rhomboidea forest
(DAS) Eucalyptus amygdalina forest and woodland on sandstone
(DAS) Eucalyptus amygdalina forest and woodland on sandstone
Gorse
Gorse
(DPU) Eucalyptus pulchella forest and woodland
Proposed Dam 1
Slender curved riceflower
Masked Owl
(FPF) Pteridium esculentum fernland
Wedge-tailed eagle
Waterhole 4
Waterhole 3
Waterhole 2
swift parrot
(DAD) Eucalyptus amygdalina forest and woodland on dolerite
(FPF) Pteridium esculentum fernland
Waterhole 1
Dam 3
(FPF) Pteridium esculentum fernland
Dam 2
Seabyrne Creek
Dam 1

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Banwell Pty Ltd - Biodiversity Map (Entire Property)

Legend

- Property Boundary
- TI irrigation area
- Approved for TI water storage
- Not approved for TI water storage

NVA Data

- Threatened Animal
- Threatened Plant

Field-verified Vegetation

- State Threatened
- Federal Threatened
- Non-threatened

Qualified Ecological Expert Observation

- Threatened/listed plant species
- Threatened/listed animal species

- State Declared Weed/ Weed of National Significance (WoNS)
- Remnant Vegetation
- Minor Stream
- Minor Tributary
- Stream
- Hydrographic Lines
- Contour 10m

Scale: 1:20,364 A3 Portrait

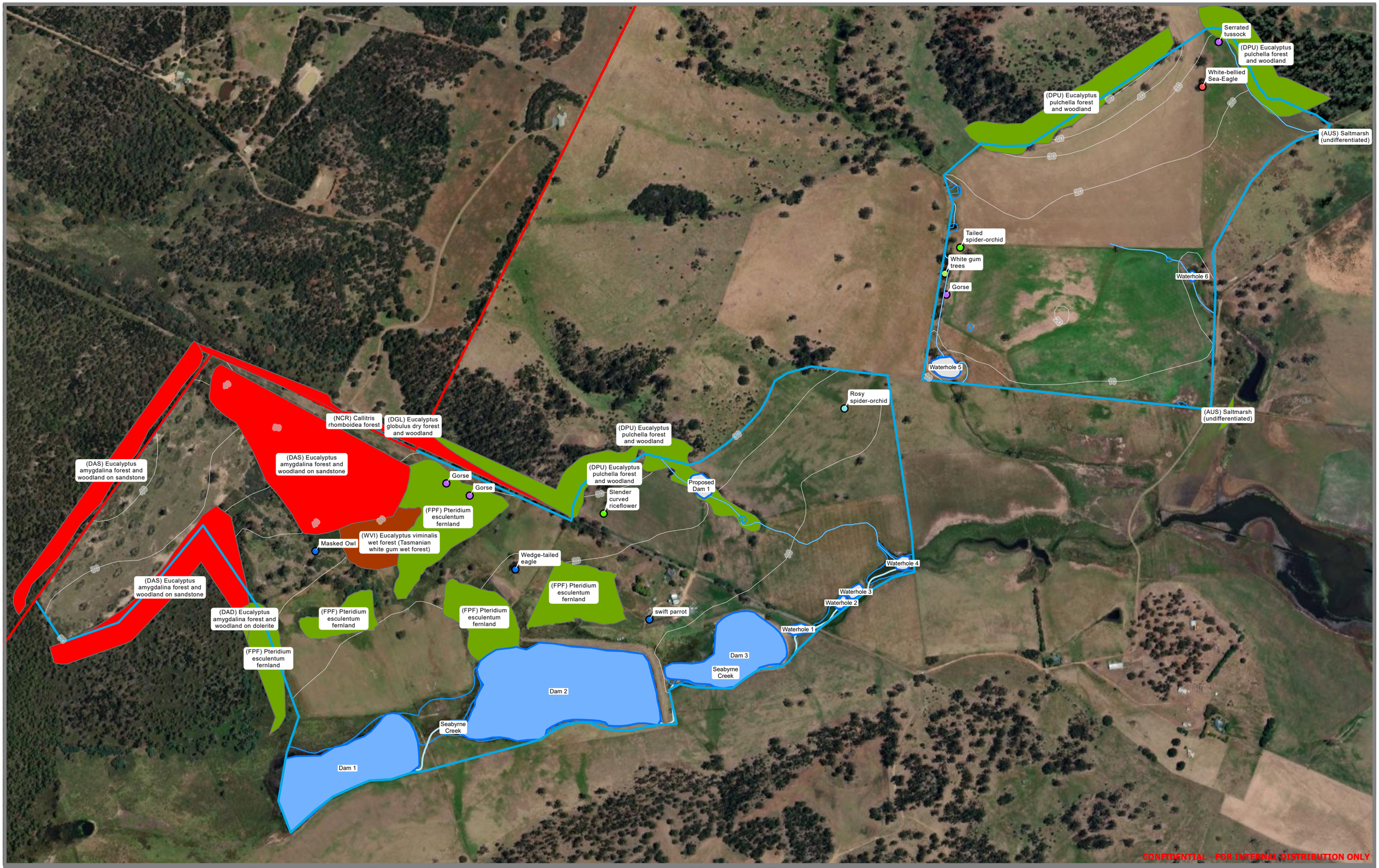
0.55 0.28 0 0.55

Kilometers

Date: 14/05/2026
Spatial Reference: GDA 1994 MGA Zone 55
Author: Amy Madsen

N

Tasmanian Irrigation



Banwell Pty Ltd - Biodiversity Map (TI irrigation area Extract)

Legend

- Property Boundary
- TI irrigation area
- Approved for TI water storage
- Not approved for TI water storage

NVA Data

- Threatened Animal
- Threatened Plant

Qualified Ecological Expert Observation

- Threatened/listed plant species
- Threatened/listed animal species
- State Declared Weed/ Weed of National Significance (WoNS)

- Remnant Vegetation

Field-verified Vegetation

- State Threatened
- Federal Threatened
- Non-threatened
- Hydrographic Lines
- Contour 10m
- Minor Stream
- Minor Tributary
- Stream

Date: 14/05/2026
Spatial Reference: GDA 1994 MGA Zone 55
Author: Amy Madsen
Tasmanian Irrigation

Scale: 1:7,556 A3 Landscape

0.2 0.1 0 0.2
Kilometers

N

Tasmanian Irrigation