

# Snowy Technical Standards

**SHL-CIV-111**

***Vegetation Management Around Civil Assets***

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## 1. Executive Summary

This standard sets out the requirements for vegetation management around civil assets across all SHL regions. Providing prescriptive vegetation management parameters will ensure that credible risks of impact to our civil assets, resulting in damage or operational loss, are appropriately managed and both public, and employee, safety is enhanced.

## 2. Scope

This standard provides prescriptive direction for buffer distances of vegetation management for the following SHL owned and operated civil assets;

- Aqueducts,
- Dams and associated structures,
- Buildings,
- Bridges,
- Penstocks.

## 3. Definitions

<b><i>Word and/or picture</i></b>	<b><i>Definition</i></b>
<b>QTRA</b>	Quantitative Tree Risk Assessment - A risk based decision making (RBDM) process that aims at reducing the risk of harm or damage associated with tree failure, whilst still maintaining the benefits of the vegetation.
<b>SED</b>	Schedule of Existing Developments - Outlines the area around SHL's assets in which we are free to perform predetermined activities associated with maintaining/ operating the asset, without the need to seek external approval.
<b>Groundcover</b>	Low-growing vegetation that includes grasses, shrubs, herbs, etc. Does not include tree or weed species.

## 4. Technical Requirements

### 4.1. General Requirements

The following general requirements apply to each of the assets outlined in more detail in the “*Detailed Requirements*” section of the standard. These general requirements must be applied in addition to the detailed management specifics presented in table 1.

#### **4.1.1. Impacts from Vegetation**

Where you think vegetation outside of the buffer distances have the potential to cause damage to an asset, contact the Environment team for advice. Note: DO NOT remove any vegetation outside of the buffer zones shown in table 1, as external approval will be required.

#### **4.1.2. Soil Erosion**

The ground surrounding each of the SHL assets covered by this standard should be inspected for any nearby soil erosion. Soil erosion has the potential to impact civil assets and can occur when vegetation ground cover is removed. During vegetation maintenance, care should be undertaken to prevent initiation of soil erosion due to over clearing. Should soil erosion be present around any of the assets, the Engineering team must be contacted for a structural assessment.

### **4.2. Detailed Requirements**

#### **4.2.1. Clearing Within Buffer Zone**

Within the buffer zone, only ground cover is permitted to grow. Any vegetation that that is not ground cover (E.g. trees, weeds.) must be removed. The ground cover must be maintained to between 50mm and 300mm in height to allow visual inspection of the civil asset and its surrounds.

If it is determined that vegetation clearing outside of the buffer distance is necessary, contact the Environment Team, as external approval will be required.

#### **4.2.2. Removing Vegetation**

All vegetation related work MUST be completed in accordance to QP25-10 "Environmental Compliance". An environmental impact assessment must be conducted prior to performing any vegetation maintenance. The assessment should identify whether flora and fauna species, and/or heritage items may be impacted by the activity. The assessment should also consider whether the activity and its location is covered by the SED relevant to the asset.

#### **4.2.3. Asset Buffers**

The following table outlines the buffer distances that must be adhered to for vegetation management around each particular SHL civil asset covered in this document:

**Table 1: Vegetation clearing buffers for the various SHL assets.**

<b>Asset</b>	<b>Component</b>	<b>Buffer Distance</b>	<b>Additional Comments</b>
Aqueducts	Intake Structures	5m	Ensure vegetation clearing around intake structures allows for clear visual assessment and prevents root jacking of the structure to occur.
	Scour Valves	2m	Ensure visibility of the outfall is maintained and any vegetation that may affect operation of scour valves is removed.
	Main Line Benches and Pipelines	5m (either side)	The buffer distance for aqueduct main lines extended 5m from the outer edge of the pipeline (buried or exposed). Remove all fallen vegetation (trees, branches, trunks etc) from a top the aqueduct bench to allow visual inspection.
	Spur Line Benches and Pipelines	5m (corridor)	The buffer distance for aqueduct spur lines is a 5m corridor measured from the centreline of the pipeline. Remove all fallen vegetation (trees, branches, trunks etc) from a top the aqueduct bench to allow visual inspection.
	Air vents	2m	Ensure that vegetation is not growing into air vent structures and visibility for inspection is maintained.
Dams	Dam Walls / Embankments	10m	Ensure vegetation is maintained to allow detailed visual inspection of the embankments. Ensure trees are removed to prevent the risk of piping.
	Outlet Works	10m	Ensure vegetation is maintained to allow detailed visual inspection of the outlet works.
	Spillways	10m	Remove any large logs or fallen trees that are blocking the spillway channel and may prevent flow through the spillway, as well as removal of vegetation that may restrict flow.
	Survey Pillars	5m	Ensure there is a 5m buffer around individual survey pillar, and clear lines of sight exist between survey pillars for regulatory surveying of dams.
	Monitoring Points	5m	Monitoring points include groundwater wells, seepage weirs. Nearby vegetation growth may affect water level readings.
Buildings	Structure	-	Refer to SED for individual buildings. SED limitations vary depending on building asset.
Bridges	Foundations	5m	Ensure vegetation is maintained to allow detailed visual inspection of the bridge abutments and foundations.

	Bridge Decks	5m	Ensure vegetation is maintained to allow detailed visual inspection of the bridge deck. Prevent vegetation growth into the bridge deck.
Penstocks	Foundations and Pipelines	10m	Ensure penstock bench is clear to allow for visual inspections of the pipeline foundations and anchor blocks.

## 5. Related Documents

- [SP25-22: Vegetation management of powerline easements for bushfire prevention.](#)
- [QP25-1: Environmental Compliance](#)
- [Schedule of Existing Developments \(SED\)](#)
- [Dwyer, J \(2016\). "Recommendations for Vegetation Maintenance around Snowy Hydro's Civil Assets". Griffith University.](#)
- [Snowy Management Plan - Environmental Management Plan \(SMP EMP\)](#)
- [Roads Maintenance Agreement \(RMA\)](#)