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Appendix 5.3 – Weed Management Plan

Weed Management Plan

Australia – Asia PowerLink Project

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DOCUMENT CONTROL RECORD

Job	EZ22088
Document ID	220183-20
Author	Sarah Ryan, Helen Dwyer

DOCUMENT HISTORY

Rev	Reviewed by	Approved by	Issued to	Date
1	Helen Dwyer	Glen Ewers	Sun Cable	19 November 2021
2	Glen Ewers	Glen Ewers	Sun Cable	19 December 2021
3	Helen Dwyer	Glen Ewers	Sun Cable	26 October 2022
4	Sun Cable	Helen Dwyer	Sun Cable	10 November 2022

This Weed Management Plan was prepared and submitted to the Northern Territory Environment Protection Authority (NT EPA) for their consideration as part of the Draft Environmental Impact Statement (EIS) for the Australia-Asia PowerLink Project. The Weed Management Plan has been reviewed by the NT EPA, the NT Department of Environment, Parks and Water Security (DEPWS), other stakeholders and the public. As a consequence, the plan has been revised to address the *Direction to Include Additional Information in the Supplement*, received from the NT EPA, and also to address comments received in submissions on the Draft EIS. Changes are highlighted in yellow throughout the document.

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1 INTRODUCTION

Sun Cable is developing the Australia-Asia PowerLink Project (AAPowerLink) ('the Project') to generate, store, transmit and deliver renewable energy. This requires establishment of the following terrestrial infrastructure:

- Large-scale Solar Precinct on Powell Creek Station in the Barkly region, approximately 70km south-west of Elliott ('the Solar Precinct'), and associated ancillary infrastructure (access roads, airstrips, accommodation villages, batch plants, borrow pits, and site offices)
- Darwin Converter Site and Cable Transition Facilities at Murrumujuk, Gunn Point ('Murrumujuk'). The Cable Transition Facilities will link the Darwin Converter Site to the Subsea Cable System, which will allow electricity to be exported to Singapore. The Subsea Cable System is outside the scope of this report, as it is located in the marine environment.
- Overhead Transmission Line ('OHTL') from Solar Precinct to the Darwin Converter Site, and associate electrodes (one electrode at each end of the OHTL, connected to the OHTL via an access track and HVDC electrode line corridor).

The key Project components and their location are shown on Figure 1, for the Solar Precinct and southern portion of the OHTL, and Figure 2, for the northern portion of the OHTL and Murrumujuk facilities.

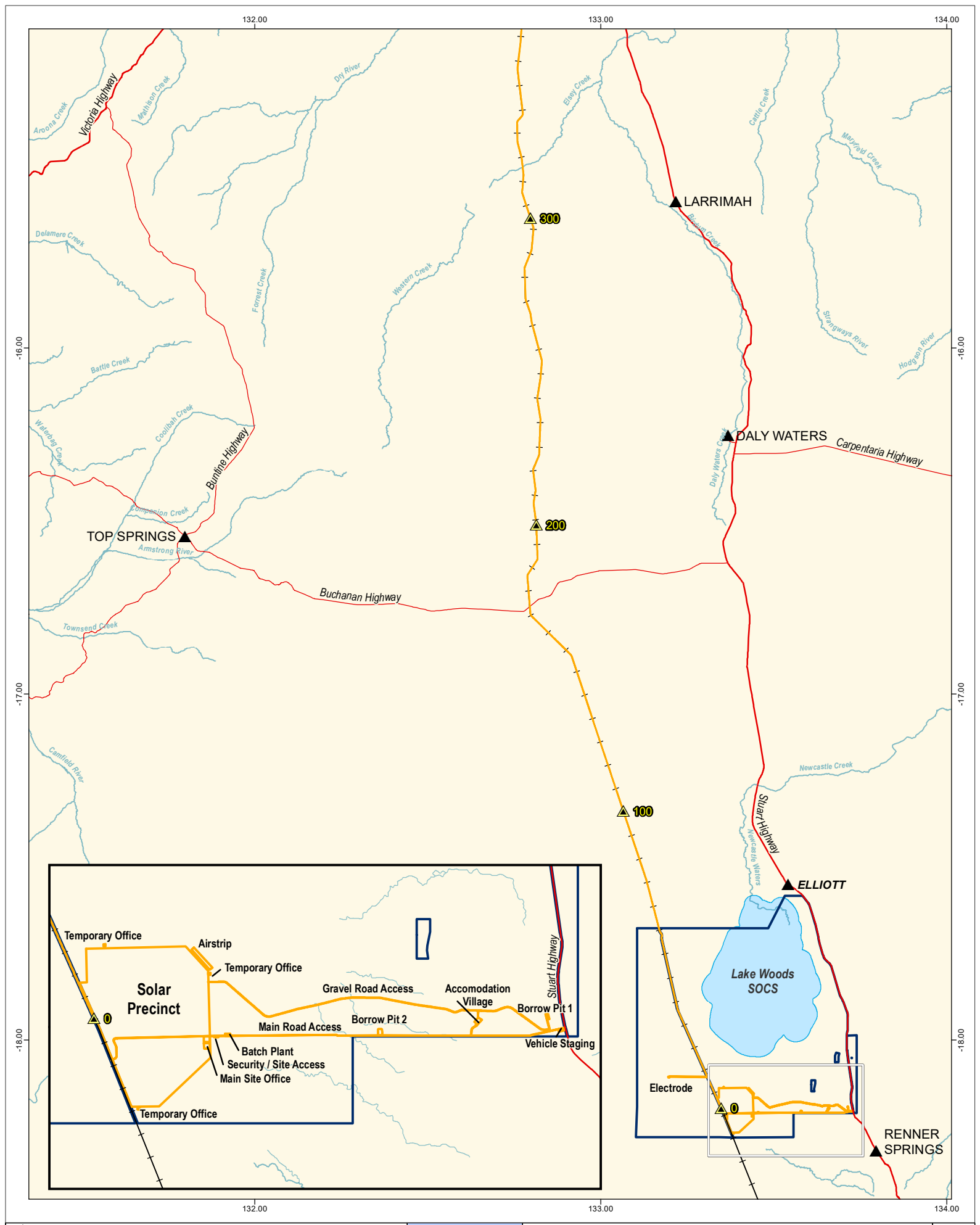
Construction and operation of the Project results in two key risks related to weeds; the introduction of new weeds to the Project footprint and surrounding region, and the movement and spread of existing weeds. Risks are highest during construction, when land clearing provides opportunity for weed proliferation, and machinery, equipment and materials are introduced to site. Linear corridors within the Northern Territory (NT) such as roads, rail corridors and pipelines have a history of weed spread and are listed as priority pathways of spread within the Regional Weed Strategies.

This Weed Management Plan (WMP) is a strategic document that provides direction and planning for managing the environmental risks associated with introduction and spread of weed species during construction and operations of the terrestrial components of the Project. Strategies and management measures provided in this report apply across all components of the Project.

The objectives of this WMP are to provide:

- Guidance on all applicable legislation, regulations and regional weed management strategies
- Regional weed record data to underpin management decisions
- A framework for determining priority areas and weed species for control
- Management measures to avoid the spread of existing weeds and the introduction of new weed species into the Project footprint
- An overview of the monitoring, reporting and incident response procedures appropriate for the management measures.

This WMP does not describe in detail the weed management programs, plans and associated procedures that will be required for construction and operations. Detailed construction and operational packages will be developed prior to construction, informed by pre-construction weed data available at the time.



Kilometre points
Town
AAPowerLink Infrastructure
Powell Creek Station
SOCS
Major Drainage
Railway
Principal road
Secondary road

Source: Sun Cable, EcOz, NTG (NR Maps)

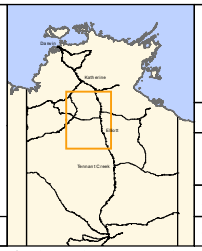


Figure 1. Map of AAPowerLink footprint and location – Solar Precinct and southern OHTL

Project: Australia-Asia PowerLink

0 10 20 30 40 Kilometers

Scale: 1:1,500,000

Coordinate System: GDA2020

A4

N

Reference: M-Files ID 198573

Date: 10/11/2022 | Figure 4-2 | Revision: A

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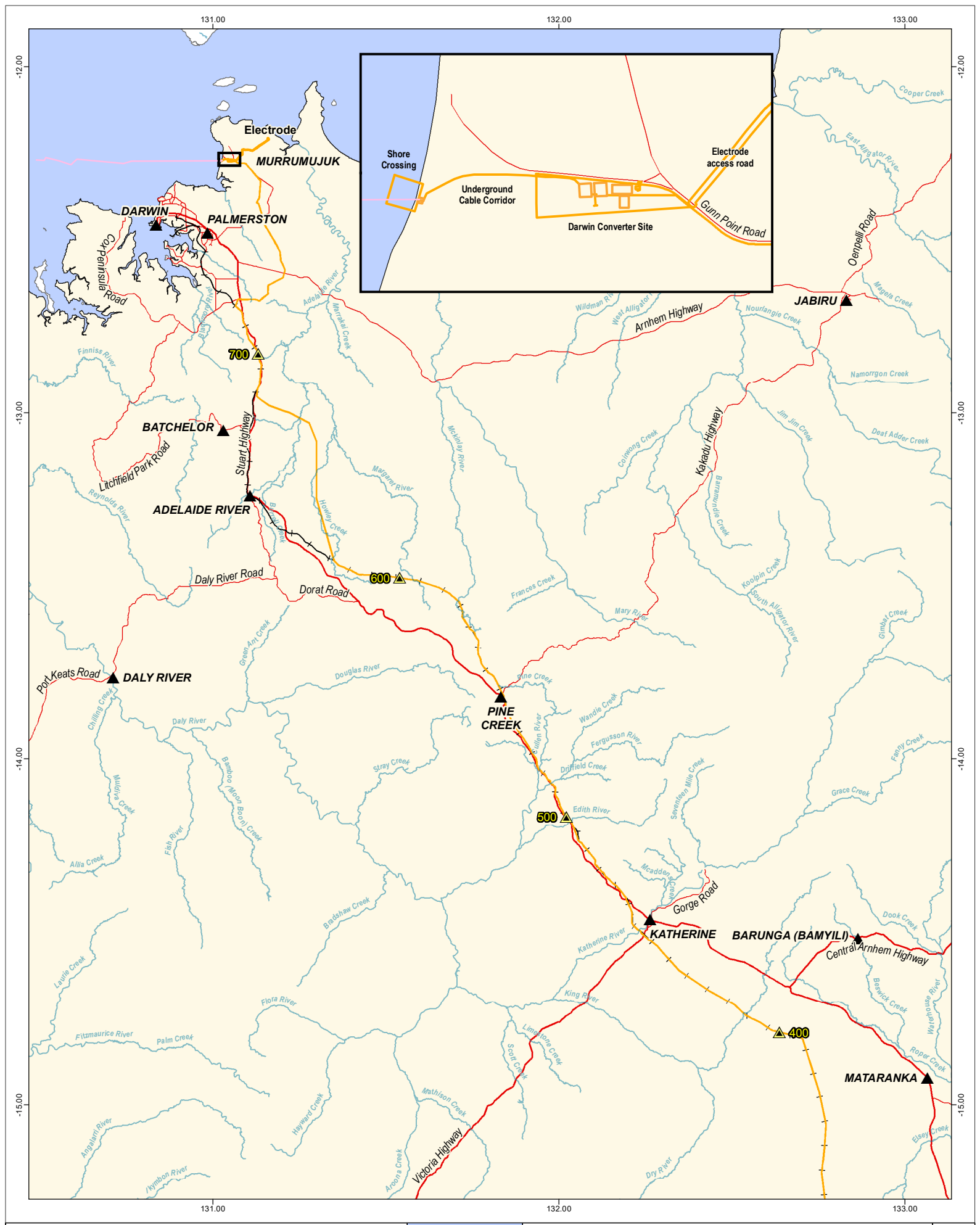

Figure 2. Map of AAPowerLink footprint and location – northern OHTL, Darwin Converter Site and Cable Transition Facilities

Project: Australia-Asia PowerLink

Reference: M Files ID 198573

Date: 10/11/2022 | Figure 4-2 | Revision: A

Scale: 1:1,500,000

Coordinate System: GDA2020 | A4

Source: Sun Cable, EcOz, NTG (NR Maps)

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2 GLOSSARY

Cable Transition Facilities	This a term used to capture underground cable corridor, land sea joint station and shore crossing site at Murrumujuk.
Control (weed control)	Restriction or techniques that inhibit a species movement, growth, or reproduction so that there is no increase in number, extent, range or density of an infestation. Can include physical (e.g. slashing, hand pulling) and chemical (e.g. spraying) methods.
Darwin Converter Site	A 124 ha site located at Murrumujuk (Gunn Point). The end of the OHTL, where power will be converted from HVDC (high voltage direct current) to HVAC (high voltage alternating current) enabling dispatch of electricity to Darwin.
Declared weed	A species declared as a weed under the NT *Weeds Management Act 2001.*
Electrodes	One electrode will be located near the Solar Precinct, and one near the Darwin Converter Site, on a 2 ha site, which will be linked to the OHTL via HVDC electrode lines and access roads sited within the HVDC Electrode Line Corridor. The electrodes will be used only during system faults to supply a grounded electrical current return path.
Eradication	Removal of all weed materials, including viable seeds, plants or vegetative matter, such that an area is 'weed free'.
Environmental weed	Introduced flora species that are not declared weeds in the NT.
Green zone **Clean zone**	Weed free, clean zone. No records of weeds in this area. Area targeted for eradication of weeds, if detected.
HVDC	High Voltage Direct Current – a form of energy transmission used for transmitting long distances along the OHTL, electrode corridors and subsea cable.
OHTL	A 783 km long Overhead Transmission Line from Powell Creek Station to Murrumujuk, Darwin which will include structures (poles or lattice towers), conductor lines and access tracks within the OHTL Corridor up to 60 m wide.
OHTL railway corridor	OHTL corridor from Powell Creek Station (Solar Precinct – KP 0) to Livingstone (KP 722), adjacent to the existing railway line.
OHTL utilities corridor	OHTL corridor from Livingstone (KP722) to Darwin Converter Site (KP788), located in an NTG corridor zoned Utilities.
Orange zone	Weed records present in areas with planned works and disturbance. Washdown required on exit of area. Area targeted for weed control to eradicate or control (such that no increase in distribution or extent of weeds) in zone.
Red zone	Existing weeds in areas with no works planned, e.g. along access roads. Entry restricted without additional controls. Area targeted for eradication and control in collaboration with key stakeholders.
RWS	Regional Weed Strategies – one for each Weed Management Region.
Solar Precinct	12,000 ha solar farm development on Powell Creek Station in the Barkly region, approximately 70km south-west of Elliott. Beginning of the OHTL and southern-most part of the Project.
Solar Precinct Ancillary Infrastructure	Includes the areas around the Solar Precinct where ancillary infrastructure will be located. This includes access roads, air strips, temporary construction accommodation, administration buildings, batch plants and borrow pits.
TAP	A Threat Abatement Plan (TAP) can be developed for a key threatening process established under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (*EPBC Act). TAPs provide for the research, management and other actions to reduce the impact of a listed key threatening process on native species and ecological communities. TAP's are developed in accordance with the requirements of Section 271 of the EPBC Act and in Regulation 7.12.

	The *Threat abatement plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses* (DSEWPC 2021) is relevant to this Weed Management Plan.
SWMP	Statutory weed management plan – NT *Weeds Management Act 2001.*
Weed hygiene station	Designated location for cleaning and inspection of vehicles, plant and equipment to prevent weed movement.
Weed Management Region	The NT Government has designated four such regions for the purpose of weed management with priorities, objectives and targets for each region in RWS.
Weed Management Zones	A term specific to this document relating to the assignment of Green, Orange or Red classifications to areas within the Project footprint.
Weed Management Branch	Weed Management Branch / Rangelands, Department of Environment, Parks and Water Security, Northern Territory Government.
WMP	Weed Management Plan – this document.
WoNS	Weed of National Significance.

3 POLICY AND LEGISLATION

Weeds which occur, or are likely to occur, within or adjacent to the AAPowerLink infrastructure have been identified by field survey (of the Solar Precinct and Ancillary Infrastructure locations, Darwin Converter Site and the northern section of the OHTL), and desktop information (a search of the Weed Management Branch database and data from the railway operator for the OHTL railway corridor). Records are presented in Section 4 below, while the policies, legislation and management plans relevant to those weeds are summarised in the following sections.

Weeds are declared and managed under various legislative instruments. Some species are governed at a national level by the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), Threat Abatement Plans (TAP) and Australian Weed Strategy 2017-2027 classification of Weeds of National Significance (WoNS). At the Territory level, some species of introduced flora are declared weeds under the NT *Weeds Management Act 2001* (Weeds Act) because of the environmental and/or economic harm they can cause. As such, landholders and occupiers have statutory obligations to manage these species. Additionally, a number of declared weeds have statutory weed management plans and these plans outline the minimum requirements for these weed species under the Weeds Act. Introduced flora species which are not declared under the Weeds Act are referred to as *environmental weeds*.

An individual species can be listed under multiple instruments and have multiple identifiers with different statutory obligations.

3.1 Key threatening processes

In 2009, the Australian Government Department of Agriculture, Water and the Environment listed 'Ecosystem degradation, habitat loss and species decline due to invasion of northern Australia by introduced Gamba Grass (*Andropogon gayanus*), Para Grass (*Urochloa mutica*), Olive Hymenachne (*Hymenachne amplexicaulis*), Mission Grass (*Cenchrus polystachios*) and Annual Mission Grass (*Cenchrus pedicellatus*)' as a 'key threatening process' under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Subsequently, in 2012, a national TAP was developed to reduce the impacts on northern Australia's biodiversity by the five listed grasses. All species, except for Para Grass, occur within the OHTL footprint and adjacent areas. Gamba Grass and Mission Grass (both Annual and Perennial) also occur in areas adjacent to the Murrumujuk footprints. There are no records for Para Grass within the Project footprint; but there are records within 30 km of the footprint, mostly north of Adelaide River. The closest current record for Para Grass is over 5.5 km away from the OHTL, near Adelaide River.

Threat abatement plans describe the research, management, and any other actions necessary to reduce the impact of a listed key threatening process on native species and ecological communities.

Two of the five species listed as key threatening processes are not declared weeds in the NT – Para Grass and Annual Mission Grass. Although they are not declared, because they are considered a Key Threatening Process under the EPBC Act, their presence in proximity to the AAPowerLink infrastructure has been assessed, and management measures will be implemented.

3.2 Weeds of National Significance

The inter-jurisdictional Environment and Invasives Committee and its weeds working group oversee the Australian Weeds Strategy (2017-2027) which provides a national framework for addressing weed issues whilst maintaining the profitability and sustainability of Australia's primary industries and the reducing the impact of weeds on the environment. The Established Pests and Diseases of National Significance (EPDNS) Framework provides a strategic, consistent, scientific, risk-based approach to managing the impacts of established pests and diseases.

Currently 32 species are nationally significant – Weeds of National Significance (WoNS). Records to 2021 show that five WoNS are known to occur within the search area – see Table 1.

3.3 Declared weeds

Under the NT Weeds Act weed species may be declared as:

- Class A – To be eradicated
- Class B – Growth and spread to be controlled
- Class C – Not to be introduced to the Territory

All Class A and Class B weeds are also considered to be Class C weeds. The list of declared weeds published by the NT Government was last updated in December 2017 (DENR 2019).

A search of the available NT Government Weed Management Branch data returned records of 19 species of declared weeds within the search area – see Table 1.

Some declared weeds have split declarations; where they are considered a Class A weed in certain locations, and a Class B weed in other locations. Four weeds with split declarations have been recorded in the search area (Gamba Grass, Rubber Bush, Bellyache Bush and Mimosa); see Table 1. In the instance where the Project footprint covers two different declaration zones, the requirements of each zone will be adhered to (see Sections 7 and 8).

3.4 Statutory weed management plans

In the NT statutory weed management plans (SWMP) detail the objectives, management requirements and management actions to be achieved for certain high priority declared weeds. Management requirements described in a SWMP are legislatively-binding and enforceable, and so must be met by landholders and occupiers.

There are 10 statutory weed management plans within the NT. Current records show six weed species with statutory management plans recorded within the search area – see Table 1.

3.5 Weed management regions

There are four weed management regions in the NT. The OHTL crosses three regions – Darwin, Katherine and Tennant Creek – see Figure 3. Each region has its own Regional Weeds Strategy (RWS) which aims to identify weed threats and provide clear priorities for management. RWS set out a strategic approach for the NT Government and key stakeholders to reduce the adverse impacts of weeds in their regions by prioritising weed management investments based on surrounding land type, land uses and weed populations.

The three RWS that currently apply to the Project are:

- Darwin Regional Weeds Strategy 2021 – 2026
- Katherine Regional Weeds Strategy 2021 – 2026
- Tennant Creek Regional Weeds Strategy 2021 – 2026.

The strategies identify regional priorities in the following three areas:

- Priority weeds
- Priority landscape area
- Priority pathways of spread.

In the RWS weed species are classified into five categories for control efforts. These categories are discussed further in Section 5.2, defined in Table 3 and categorised for each weed relevant to the Project in Table 1.

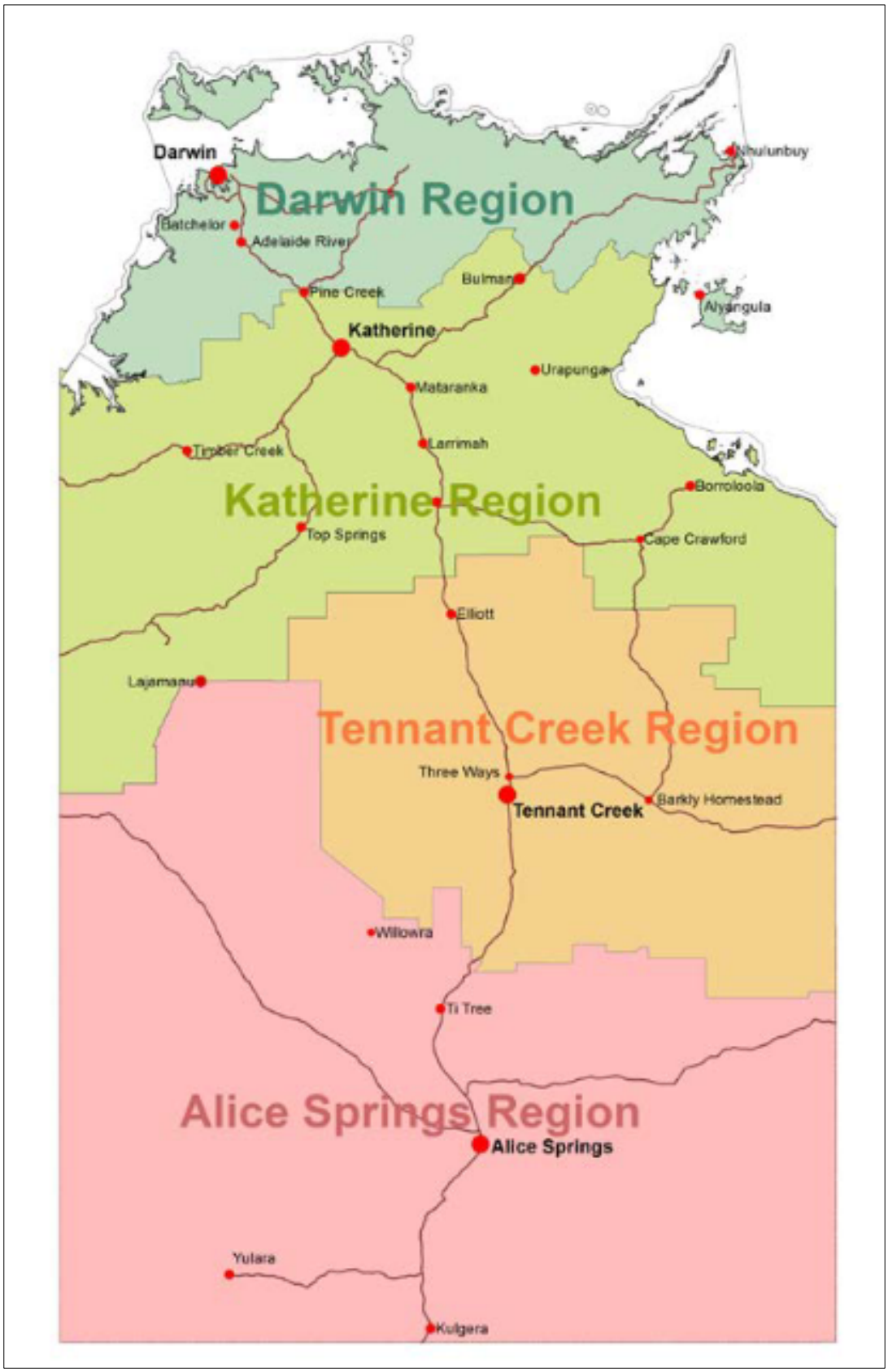


Figure 3. Map of NT weed management regions

4 WEED RECORDS

NT Government weed record databases, accessed on NR Maps (7 Oct 2021) and from the Weed Management Branch (27 Oct 2021), were searched to identify weeds which are known to occur within the Project footprint within the last 5 years (2016 – 2021). A search area comprising the Solar Precinct and Murrumujuk footprints, and a 120 m corridor centred on the railway line was used to identify weed records within the Project footprint and immediate surrounds. Additionally, ecological field surveys undertaken by EcOz Environmental Consultants noted weeds within the Darwin Converter and Cable Transition Facility site, and small sections of the OHTL corridor.

In 2021, EcOz Environmental Consultants undertook a field survey of the Solar Precinct as part of the land type mapping. There are no NT Government weed records within the Solar Precinct footprint and weed species were not detected within the Solar Precinct during the 2021 survey (EcOz 2021a). Survey efforts within the Darwin Region to inform the terrestrial ecology report for Darwin Converter Site and the OHTL utilities corridor from Murrumujuk to Livingstone identified a number of weeds; records are included in Table 1 (EcOz 2021b). Notably, the footprint for the Darwin Converter Site was relatively weed free at the time of the survey. However, weed infestations were observed within and adjacent to the Cable Transition Facilities and the existing access road in the HVDC Electrode Line Corridor. These areas have been identified as requiring weed control and weed hygiene, and the weed management priority for the Darwin Converter Site will be to keep the footprint weed free (see Section 7.3.1 and Appendix A).

A field survey has not yet been conducted along the OHTL railway corridor from Powell Creek Station to Livingstone due to access constraints. Data supplied from the Weed Management Branch includes recent survey results from rail corridor environmental manager, Centrogen (DEPWS 2021).

The desktop and field results identified 35 weed species within the 120m wide search corridor – see Table 1. Of these records, five are WoNS, 19 are declared weeds and 4 are listed as Priority 1 in an RWS. Weed records surrounding the Project footprint typically occur within linear disturbed areas (i.e. roadsides), watercourses, and around infrastructure such as fences and water points.

The three species with the most records across all three regions are Gamba Grass (*Andropogon gayanus*), Hyptis (*Hyptis suaveolens*) and Mission Grass. Perennial Mission Grass (*Cenchrus polystachios)* is a declared weed while Annual Mission Grass (*Cenchrus pedicellatus)* is not declared. However, Perennial and Annual Mission Grass, and Gamba Grass, are three of the five listed grass species identified as a key threatening process in the TAP (*Threat Abatement Plan to reduce the impacts on northern Australia's biodiversity by the five listed grasses* [DSWEPC 2012])). The largest number of records for the grasses are within the Darwin Weed Management Region – see Table 1. In the Katherine Region, Rubber Bush (*Calotropis procera*), Hyptis and Gamba Grass are the top three recorded species.

Records for the Tennant Creek Region are few (two) within the 120m wide search corridor. An expanded search for the Tennant Creek Region to within 30km of the Project footprint returned more records, the most numerous being *Parkinsonia aculeata*. These records are part of a known infestation within the Lake Woods catchment. Lake Woods is recognised as a wetland of international significance. Consolidated Pastoral Company, the pastoralists who manage and operate Powell Creek Station, are working with the NT Government to control Parkinsonia around Lake Woods and Longreach Waterhole, and this weed management work is ongoing. Weed hygiene and management and control measures will be implemented for the AAPowerLink to ensure new weeds are not introduced, and existing weeds are not spread, into Lake Woods (see Sections 7 and 8 below). This will include weed surveys along Solar Precinct access tracks, and surveys along watercourses downstream of AAPowerLink infrastructure that are within the Lake Woods catchment.

Some declared weeds are located on pastoral properties outside of the Project footprint and the search area. These include Prickly Acacia on Murranji Station and Siam Weed in the Top End. In the event that these weeds are identified within the Project footprint, they will be managed in accordance with the most appropriate

plan or guideline. Currently, that is the statutory *Weed Management Plan for Prickly Acacia 2012-2022,* and guidance from the Weed Management Branch for Siam Weed. If either weed is identified within the Project footprint or nearby, Sun Cable will contact the Weed Management Branch to inform them of the location and seek advice as to the best management practice. As with all weeds, weed hygiene practices will be implemented to minimise the risk of spreading these weeds across the Project footprint (see Section 7).

NT Government weed databases were also searched to identify records for the following environmental weeds:

- Buffel Grass, which is a fire hazard, of concern to stakeholders, and a problem weed in Central Australia. The Solar Precinct currently does not contain Buffel Grass, and there is only one record within the OHTL, however Buffel Grass occurs on Newcastle Waters Station and around Marlinja Community. The priority is to maintain the AAPowerLink footprint free of Buffel Grass through strict weed hygiene practices and weed control as required.
- Para Grass, which is generally located along watercourses and in wet, low-lying areas, north of approximately Pine Creek. Para Grass is identified in the TAP for the five grass species as a key threatening process. There are no records of Para Grass within the Project footprint or 120 m wide search area either side of the OHTL, and so the priority for this species will be to maintain the Project footprint free of Para Grass.
- Annual Mission Grass, which is widespread north of approximately Daly Waters. Annual Mission Grass is identified in the TAP for the five grass species as a key threatening process. As this weed is widespread, the management priority will be to avoid spreading the weed into new areas and controlling existing infestations.

Records for these three species, and management priorities, are presented in Table 2.

Prior to construction, which may not occur for several years, pre-construction weed surveys may be undertaken within the Project footprint to inform Construction Environmental Management Plan (CEMP) and weed management activities.

Table 1. Declared weed species relevant to the Project

Common name	Botanical name	*EPBC*	WoNS	Declared weed (Weeds Act) classification	Statutory WMP	Weed Management Region	Regional Priority Category	No. of records *(within search area)*
Gamba Grass	*Andropogon gayanus*	Y	Y	A/B (zoned)	Y	Darwin Katherine Tennant Creek	2 2 1	458 142 -
Neem	*Azadirachta indica*	-	-	B	Y	Darwin Katherine Tennant Creek	3 2 2	4 61 -
Rubber Bush	*Calotropis procera*	-	-	B (zoned)	-	Darwin Katherine	3 2	18 211
Mission Grass, Perennial	*Cenchrus polystachios*	Y	-	B	-	Darwin Katherine	2 3	33 12
Olive Hymenachne	*Hymenachne amplexicaulis*	Y	Y	B	-	Darwin Katherine	2 3	2 4
Thatch Grass	*Hyparrhenia rufa*	-	-	A	-	Darwin Katherine	3 1	- 1
Knob Weed	*Hyptis capitata*	-	-	B	-	Katherine	-	27
Bellyache Bush	*Jatropha gossypiifolia*	-	Y	A/B (zoned)	Y	Darwin Katherine Tennant Creek	2 2 1	- 1 -
Devils Claw	*Martynia annua*	-	-	A	-	Darwin Katherine	2	- 1
Hyptis	*Mesosphaerum suaveolens*	-	-	B	-	Darwin Katherine	4	11 109
Mimosa	*Mimosa pigra*	-	Y	A/B (zoned)	Y	Darwin Katherine	2 1	8 -
Parkinsonia	*Parkinsonia aculeata*	-	Y	B	-	Darwin Katherine Tennant Creek	2 3 2	- 4 -

Common name	Botanical name	*EPBC*	WoNS	Declared weed (Weeds Act) classification	Statutory WMP	Weed Management Region	Regional Priority Category	No. of records *(within search area)*
Candle Bush	*Senna alata*	-	-	B	-	Darwin Katherine	4	1 1
Sicklepod	*Senna obtusifolia*	-	-	B	-	Darwin Katherine Tennant Creek	- 4 4	3 8 -
Sida Sp	*Sida sp*	-	-	B	-	Darwin Katherine	4	10 21
Snakeweed	*Stachytarpheta spp.*	-	-	B	-	Darwin Katherine	4	2 -
Grader Grass	*Themeda quadrivalvis*	-	-	B	Y	Darwin Katherine Tennant Creek	2 2 5	4 10 -
Caltrop	*Tribulus cistoides*	-	-	B	-	Darwin Katherine Tennant Creek	- - 4	1 3 -
Chinee Apple	*Ziziphus mauritiana*	-	-	A	Y	Darwin Katherine	3 2	- 48

Table 2. Key environmental weeds within or proximate to Project

Common name	Botanical name	Status	No. of records within 120 m of OHTL centreline	Number of records within 30 km	Closest record	Management required
Buffel Grass	*Cenchrus ciliaris*	Not declared but poses a high fire hazard and can impact riparian areas and watercourses.	1	16	One record is 27 m from OHTL centreline at KP 88 (i.e. potentially within the construction corridor). Next closest record is >1 km away from OHTL.	Maintain Solar Precinct and OHTL free of Buffel Grass – see Section 7 and 8.
Para Grass	*Urochloa mutica*	Identified as key threatening process in the TAP (DSWEPC 2012)	0	38	>5.5 km from OHTL Most records north of Pine Creek	Maintain AAPowerLink footprint free of Para Grass

Common name	Botanical name	Status	No. of records within 120 m of OHTL centreline	Number of records within 30 km	Closest record	Management required
Mission Grass, Annual	*Cenchrus pedicellatus*	Identified as a key threatening process in the TAP (DSWEPC 2012)	28	1940	28 records within 120m of OHTL centreline. All records north of ~Daly Waters, majority are north of ~Katherine	Avoid the spread of Annual Mission Grass into areas of the footprint which are not currently infested

5 PRIORITISATION FRAMEWORK

Given the scale of the Project, and the length of the OHTL, there will be weed management targets for the entire Project (Darwin Converter, OHTL and Solar Precinct) as well as regional and local management targets. The weed management targets will be incorporated into future weed management procedures, plans and strategies, using the prioritisation framework discussed in this section. Prioritisation of weed species will aid works planning and control efforts through setting targeted and achievable outcomes. A species in one area may be eradicated through targeted control, however the same activities in a different area may only achieve control.

Guidance on weed priorities will come from the relevant RWS, recent survey data and consultation with the Weed Management Branch. The RWS's set out the regional priorities and can be adopted and used by Sun Cable during the construction and operations phase of the Project. Regional weed priorities are described in Section 3.5.

In addition to the weeds listed for control in the RWS, Sun Cable will develop weed management priorities at a Project- and local-level. A framework for prioritisation is modelled from the RWS and is detailed below. Categories from the RWS will be used to assign management actions – see Table 3.

Sun Cable will assign, communicate and review weed priorities and management expectations – prevention, eradication or control – to all companies, contractors and staff annually, before the appropriate season for the region.

Section 6 describes weed management priorities as of October 2022, using available data from 2016 to 2021. Prior to construction, these priorities will be reviewed and ground-truthed, incorporating any additional data available. If data from within the previous two years are not available, targeted surveys of the construction footprints may be required to inform weed prioritisation at least two years prior to construction.

5.1 Project footprint

5.1.1 Project priority weed species

Weed species may be prioritised for management actions across the Project footprint and will be determined using the following criteria:

- Threatening processes – described in threat abatement plans – including the five grasses Gamba Grass (*Andropogon gayanus*), Para Grass (*Urochloa mutica*), Olive Hymenachne (*Hymenachne amplexicaulis*), Perennial Mission Grass (*Pennisetum polystachion*) and Annual Mission Grass (*Pennisetum pedicellatum*)
- Declared weeds (class A, B and C)
- Species with Statutory Management Plans
- Weeds of National Significance (WoNS)
- 'Alert' weeds
- Environmental weeds of concern to stakeholders or infrastructure (e.g. Buffel Grass)
- Isolated / new infestations with a high likelihood of control.

A species identified as a priority by Sun Cable (using the above criteria) may be subject to the highest level of control across the entire Project footprint i.e. regardless of the region within which it occurs. For example – Sickle Pod (*Senna obtusifolia)* is a declared weed class B and listed for management activities within the Katherine and Tennant Creek RWS's. Current records show the presence of *Senna* in the Darwin and Katherine regions. *Senna* will be subject to management activities across the Project footprint and all regions, including the Darwin region where it is not currently listed within the RWS.

5.1.2 Priority landscape areas

Landscapes across the Project footprint prioritised for weed management activities will be selected based on criteria including significant biodiversity areas, areas susceptible to weed invasion (stream crossings, sensitive or significant vegetation) and areas which currently have low or no weed records.

For example, the OHTL footprint crosses 154 watercourses, all of which are to receive priority management activities because watercourses are susceptible to weed invasion. Currently, the Solar Precinct and Darwin Converter Site footprints are weed free and therefore the priority will be to maintain these areas free of weeds during construction and operations. This includes maintaining the Solar Precinct access roads and ancillary infrastructure weed free, to ensure that construction and operation of the AAPowerLink does not undermine current efforts to manage weeds, including Parkinsonia, within the Lake Woods catchment.

5.1.3 Pathways of spread

Linear corridors, such as the OHTL, are known to pose a high risk for weed spread during activities such as land clearing, slashing and grading, human access, livestock and animal movement. The introduction of weed material in machinery, vehicle and equipment is also a high risk for the entire Project footprint. Weed management measures to prevent the introduction and spread of weed seed or materials are applicable to the whole Project footprint and are detailed further in Section 7.

5.2 Regional priorities

The categories used to prioritise and describe weed management activities at a regional level – eradication or control – are detailed within the relevant RWS and summarised in Table 3. Sun Cable will adopt and implement activities – control or eradication – across the three regions in line with the RWS.

When assessing weed species within the Project footprint, the management action will be consistent with the relevant regional category. Where weeds have a split declaration (e.g. Gamba Grass (*Andropogon gayanus*) is a Category 1 – to be eradicated – within the Tennant Creek region but a Category 2 - to be controlled – within the Darwin region) then the weed will be managed in accordance with the relevant declaration for the applicable region. Additional management activities may be undertaken due to Project or local priorities.

Management categories for weeds recorded within the Project footprint are shown in Table 1. Prior to construction, current RWS are to be reviewed to ensure currency of the data.

Table 3. Categories for weed management actions

Category 1	Priority weeds for eradication
Category 2	Priority weeds for strategic control (including eradicating outliers)
Category 3	Weeds of concern – managed on a site basis to prevent further spread
Category 4	Hygiene and biosecurity weeds – prevent spread into clean areas
Category 5	‘Alert’ weeds – eradication on detection

The AAPowerLink infrastructure crosses three weed regions which each have a Regional Weed Strategy. Table 4 lists the AAPowerLink infrastructure within each RWS, and the relevant strategy for each weed region.

Table 4. Weed regions and applicable Regional Weed Strategy for AAPowerLink infrastructure

Weed region	AAPowerLink Infrastructure	Relevant RWS
Darwin	OHTL Corridor KP 545-788 Darwin Converter Site Cable Transition Facilities	Darwin Regional Weeds Strategy 2021-2026 (DEPWS 2021a)
Katherine	OHTL Corridor KP 105-545	Katherine Regional Weeds Strategy 2021-2026 (DEPWS 2021b)
Tennant Creek	Solar Precinct, access roads and ancillary infrastructure OHTL Corridor KP 0-105	Tennant Creek Regional Weeds Strategy 2021-2026 (DEPWS 2021c)

5.3 Local priorities

Additional weed species or landscape areas will have local priorities for weed management activities. Additional species can be classed as a priority for control based on a local interest, few local records, ease of control of an isolated infestation, company priorities or other reasons that may occur over time. Local priority weed species may also be targeted at a small/local scale due to neighbour/landowner requests or interest. Local priority weeds will have a high likelihood of control and may include a community or volunteer component. Local priority weeds will often be classified as Category 1 – for eradication or Category 3 – weeds of concern.

Examples include Buffel Grass, which is a priority for eradication if identified within AAPowerLink infrastructure footprints, and Parkinsonia, which is currently a priority for management in and around Lake Woods.

6 WEED MANAGEMENT PRIORITIES

Weed priorities for management and control activities for construction are summarised in Table 5 below using the available weed records and data (Section 4), the prioritisation framework (Section 5), and measures described in Section 7. Appendix A provides detailed weed occurrences and priority assessment for all components of the Project.

Table 5 provides analysis of the areas and designates control or eradication works on the weed species found within each zone. Management measures are assigned as per the requirements for declared weeds and relevant RWS, or other requirement (e.g. the TAP for the five grasses). Areas identified for eradication works are those containing Class A weeds or isolated occurrences of Class B. All other areas are prioritised for control based on species and landscape area (watercourses) priorities.

The weed management zones are shown on Figure 4 and Figure 5. The weed management zones correlate with the KP's shown below, and the figures show orange zones (where weed eradication or control is required) and green zones (weed free). The priorities within the orange zone (high, medium or low) have been established using the prioritisation framework in Section 5, but are not shown on the figures due to limitations with the scale. Table 5 and Appendix A should be referenced when reviewing the figures.

Red exclusion zones will be added to the tables and maps prior to construction commencing, to indicate areas adjacent to the construction footprint which should be avoided to avoid the spread of weeds. Additionally, the prioritisation zones will be reviewed prior to construction commencing and amended to reflect current condition of the construction footprint, and any changes to weed declaration status or categorisation.

Table 5. Weed management zone priorities for management activities

Priority	Start KP	End KP	Declared weed (Weeds Act) classification	Goal
High	88	89	-	Eradication
	93	94	B	Eradication
	128	129	B	Eradication
	134	135	B	Eradication
	173	174	A	Eradication
	189	191	A	Eradication
	233	236	B	Eradication
	280	282	B	Eradication
	297	300	B	Eradication
	393	404	A	Eradication
	416	417	B	Eradication
	441	482	A/B	Eradication
	597	598	B	Eradication
	765	776	B	Eradication
	773	774	B	Eradication
	Cable Transition Facility		B	Eradication
Medium	197	198	B	Control
	200	205	B	Control
	224	226	B	Control

Priority	Start KP	End KP	Declared weed (Weeds Act) classification	Goal
	304	305	B	Control
	307	308	B	Control
	310	314	B	Control
	317	319	B	Control
	330	331	B	Control
	406	410	B	Control
	412	414	B	Control
	419	420	B	Control
	426	436	B	Control
	484	487	B	Control
	489	493	B	Control
	508	521	B	Control
	525	526	B	Control
	529	546	B	Control
	548	549	B	Control
	552	554	B	Control
	559	564	B	Control
	569	570	B	Control
	606	608	B	Control
	612	622	B	Control
	689	725	B	Control
	729	748	B	Control
	Darwin Converter Site Electrode		B	Control
Low	213	215	B	Control
	228	231	B	Control
	264	269	B	Control
	340	344	B	Control
	346	352	B	Control
	354	360	B	Control
	423	424	B	Control
	497	498	B	Control
	557	558	B	Control
-	All green zones – survey only – maintain weed free			

7 CONSTRUCTION MANAGEMENT MEASURES

Weed management measures aim to minimise the proliferation of existing weeds, and avoid the introduction and spread of new weeds into the Project footprint and surrounding region during construction. The objective at the completion of construction is for disturbed areas to have no new infestations (less than or equal to the distribution and percentage cover) or new weed species present compared to the pre-construction condition.

Activities related to the construction of the AAPowerLink Project which require weed management and mitigation are:

- Transportation and movement of machinery, materials and personnel
- Land clearing and vegetation removal
- Earthworks, including use of fill material
- Stockpiling of cleared vegetation within the construction footprint
- Reinstatement and rehabilitation of the construction footprint

Management measures to be implemented during construction are provided below; these will be incorporated into any future weed management plans or procedures developed by Sun Cable for construction. Further statutory approval processes – such as pastoral land clearing and development applications – will address site-specific construction requirements.

7.1 Survey

Prior to construction activities, data reviews will be undertaken and in the absence of sufficient, reliable data weed surveys will be undertaken for the construction footprints. This is to ensure current, up-to-date baseline data on existing weed infestations to inform control action as well as monitoring and reporting. Any survey will be undertaken at least two years prior to construction commencing, to allow for 1-2 year of weed control measures to be implemented prior to construction.

Weed surveys will be undertaken to identify the presence, distribution (size), and density of existing weed infestations within the Project footprint. Survey data will be compatible with the NT Weeds dataset and collected in accordance with the *Weed Data Collection Manual* (WMB 2015). The *Weed Data Collection – A Field Guide for Collection Weed Data for the NT* is a useful guide for field staff and managers. The NT WeedMate App 2.0 is a free Northern Territory Government app that is suitable for weed data collection conforming to all required collection standards.

Surveys should be undertaken in conjunction with partner organisation and other key stakeholders – for instance, the annual rail corridor survey, audits undertaken by NT Government, the Gamba Army, and private land holders.

Surveys were undertaken for the Solar Precinct and Darwin Converter Site in 2021, and additional pre-construction surveys may not be required in these areas if construction occurs within two years.

At the completion of construction, a targeted survey will be undertaken to identify any new weed occurrences due to the ideal conditions created from disturbance and vegetation clearing within the construction footprint.

7.2 Introduction of new weeds

Sun Cable will implement management measures to avoid the introduction of new weeds into the Project footprint during construction – see Table 6.

Prior to transport to site, all vehicles, machinery and equipment must undergo weed hygiene inspections carried out by a trained weed hygiene inspector, and obtain a weed hygiene declaration verifying that they are free of weeds, soil or seeds. This is particularly relevant for vehicles, machinery and equipment transported

from interstate or between weed management regions. Declarations will be provided to landholders and stakeholders as requested.

Where this is not possible, the weed hygiene inspection must be undertaken immediately on arrival at the construction camp and/or work site. The company will maintain a register of all inspections for each vehicle, equipment and machine. The register will include the locations of all weed hygiene activities to inform future monitoring. A cleaning log will be kept and maintained for each vehicle, equipment and machine.

Any items that fail the inspection will be refused access to site until the item has been cleaned and passed re-inspection.

Wash down/cleaning facilities (weed hygiene stations) will be provided at a minimum of each construction camp, at the borders of weed management regions and green zones. Additional facilities will be installed at areas of known weed infestations.

Management measures to avoid the introduction of new weeds into the Project footprint during construction are summarised in Table 6.

These will be included in the Construction Environment Management Plans for each component to ensure compliance.

Table 6. Management actions to prevent the introduction of new weeds during construction

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Undertake a weed survey of construction footprint prior to construction to provide a baseline of existing weeds and inform the identification of new weeds within construction footprint.	~2 years prior to construction	Weed survey	All existing weeds within construction footprint are identified and mapped	-
Facilitate weed hygiene inspector training for employees and contractors.	At time of contractor engagement	Training logs	Staff are trained in weed hygiene and inspections	Additional training
All vehicles, equipment and machinery for the project shall be thoroughly cleaned, washed down and declared 'clean' (i.e. weed-free) in a weed hygiene declaration.	Prior to mobilisation to the construction footprint	Spot-checks on vehicles, machinery and equipment arriving at site to ensure inspections are completed correctly Environmental audits	All vehicles and machinery are subject to a weed hygiene inspection before use at site	Enforce weed hygiene inspections Incident investigations and remedial actions based on investigation
Any vehicles, equipment and machinery entering the construction footprint must be accompanied by a valid and properly authorised weed hygiene declaration, with the exception of irregular delivery vehicles on public roads.	Entry to Project footprint			
All construction materials are to be inspected for weeds, seeds and soil prior to transport to site. All materials must be stored in dedicated laydowns that are cleared of vegetation and weed free prior to stockpiling of materials.	Prior to mobilisation to the construction footprint			
Transport to construction footprint is to be via approved transport routes only (existing railway and roads, and access tracks).	Entry to Project footprint	Vehicle movement and access points	No unauthorised travel off dedicated transport routes	Incident investigations and remedial actions based on investigation
Install dedicated weed hygiene stations and clean all vehicles, machinery, equipment and materials if weeds or seeds are identified.	Prior to construction	Environmental audits	Weed hygiene facilities are installed, operational and used appropriately	Upgrade or move facilities Communications to inform workforce of location and requirement for use
Any soil or fill material that is imported must be checked for weed seeds and accompanied by a weed hygiene declaration.	Prior to mobilisation to the construction footprint	Spot checks of soil and fill material suppliers Environmental audits	No weed contaminated soil or fill is imported into the construction footprint	Incident investigation Removal of imported fill
Any plant species used to rehabilitate or on erosion control will not be a declared or environmental weed, or listed in RWS.	Rehabilitation planning phase	Environmental audits	No weeds introduced	Remove weeds and replace with non-weed species

7.3 Movement and spread of existing weeds

The movement and spread of existing weeds within the Project footprint is a potential risk from activities such as land clearing, stockpiling, and transportation and movement of personnel, materials, machinery and equipment. All machinery, vehicles, materials, equipment, water, people and animals which move through the Project footprint can be a vector for weed seeds, plants or soil that contains remnants of weeds.

Management measures to reduce the risk of spreading existing weeds throughout the Project footprint are discussed below. Table 7 describes management measures based on the weed records in Section 4.

7.3.1 Management zones

Weed zones have been mapped using the available data at the time of this report (October 2022). Management zones have been assigned for sections of the Project footprint and the locations are described by KP numbers. Across the entire Project footprint, 105 zones were identified, with a minimum zone length of 1 km. The Solar Precinct, Darwin Converter Site and 53 zones (506 km) of the OHTL are green (weed free), while 50 zones (281 km) of the OHTL are orange (contains weeds) – see Figure 4 and Figure 5. Detailed construction site plans will further identify weed management zones on a local and works scale.

Prior to construction, weed management zones will be confirmed across the construction footprint, which will stipulate the site-specific management measures for each zone. Survey and monitoring may be completed to inform weed management zones. In the absence of data, an area will be designated as orange and all hygiene and cleaning protocols will apply.

Weed zones are determined based on:

- Weed survey data – including species, size and density of infestation
- Weed records from desktop analysis
- Weed priority – as per Section 5
- Location of property boundaries, where relevant, and stakeholder input
- Likely activities within each zone and phase of construction
- Proximity to watercourses or sensitive vegetation.

The three weed zones mapped are:

- Green zones: Weed free, clean zone.

  Weed hygiene inspections for all vehicles, machinery and equipment prior to travelling into green zone. Washdown as required. Survey annually for new weed incursions.

  Target is eradication of all weeds detected.

- Orange zones: Existing weeds identified within construction or works footprint.

  Washdowns and inspection mandatory prior to exiting orange zone. Controls are required, and vehicle movements will be restricted between orange zones and green zones.

  Target is for control of, and no increase in, known distribution and density of existing weeds.

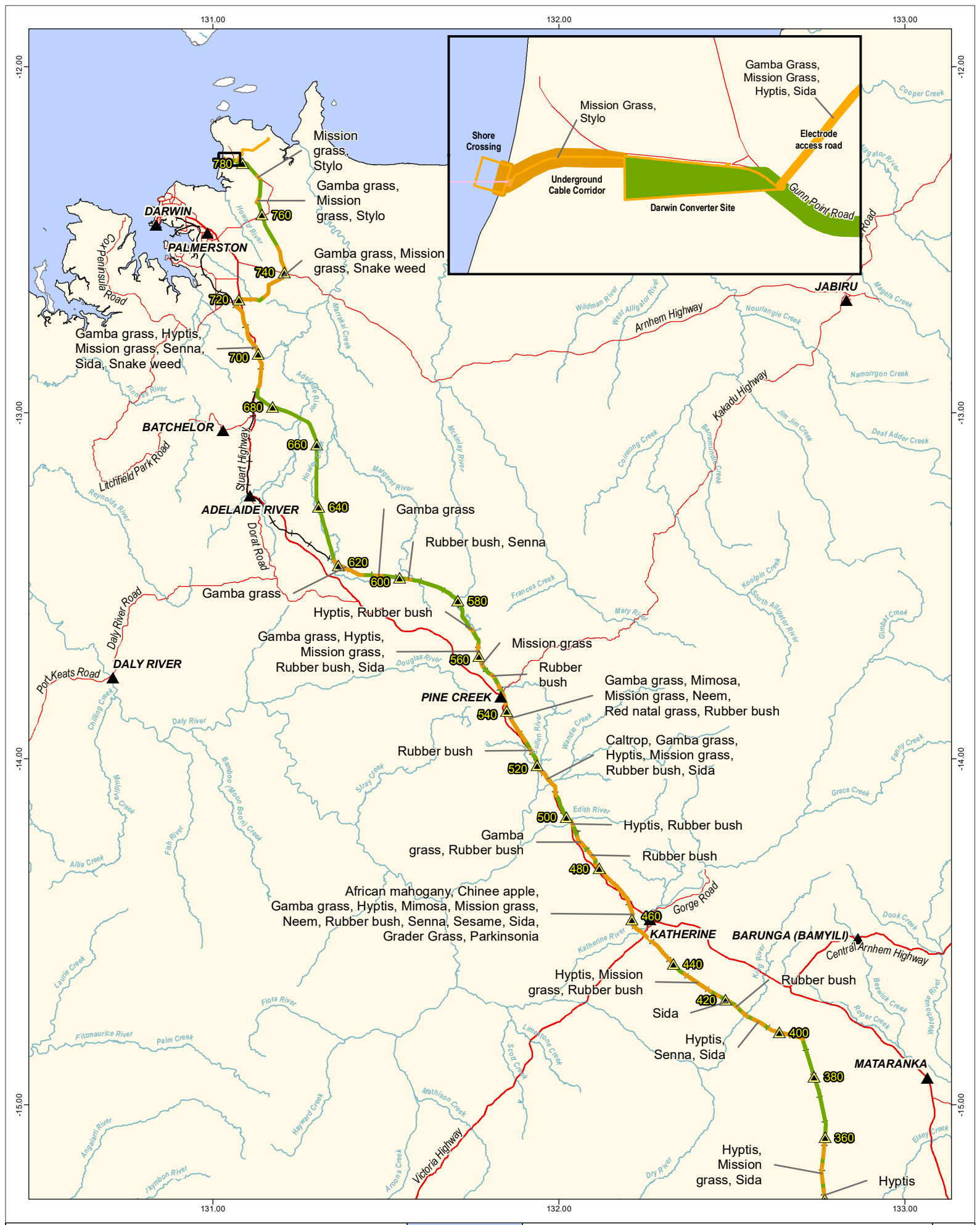
- Red zones: Exclusion zones.

  Existing weeds identified near construction or works footprint, but not within it. Area is to be avoided. Where the zone is along a road, vehicles and machinery are to avoid pulling off the road within the weed exclusion zone.

  Target is prevention of spread through control in collaboration with key stakeholders.

  These zones will be established beside construction footprints prior to construction, to inform workers of no-go zones adjacent to the works area.

The location of weed zones will inform the location of weed hygiene stations. Weed management zones and hygiene stations will be reviewed annually based on survey and occurrence of weeds.



Legend

- Town
- Kilometre points
- Major Drainage
- Railway

Roads

- Principal road
- Secondary road

Weed Management Zone

- Green Zone – weed free
- Orange Zone – weed hygiene required

Source: Sun Cable, EcOz, NTG (NR Maps)

Figure 4. Map of AAPowerLink weed management zones (north)

Project: Australia-Asia PowerLink

0 10 20 30 40 Kilometers

Scale: 1:1,500,000

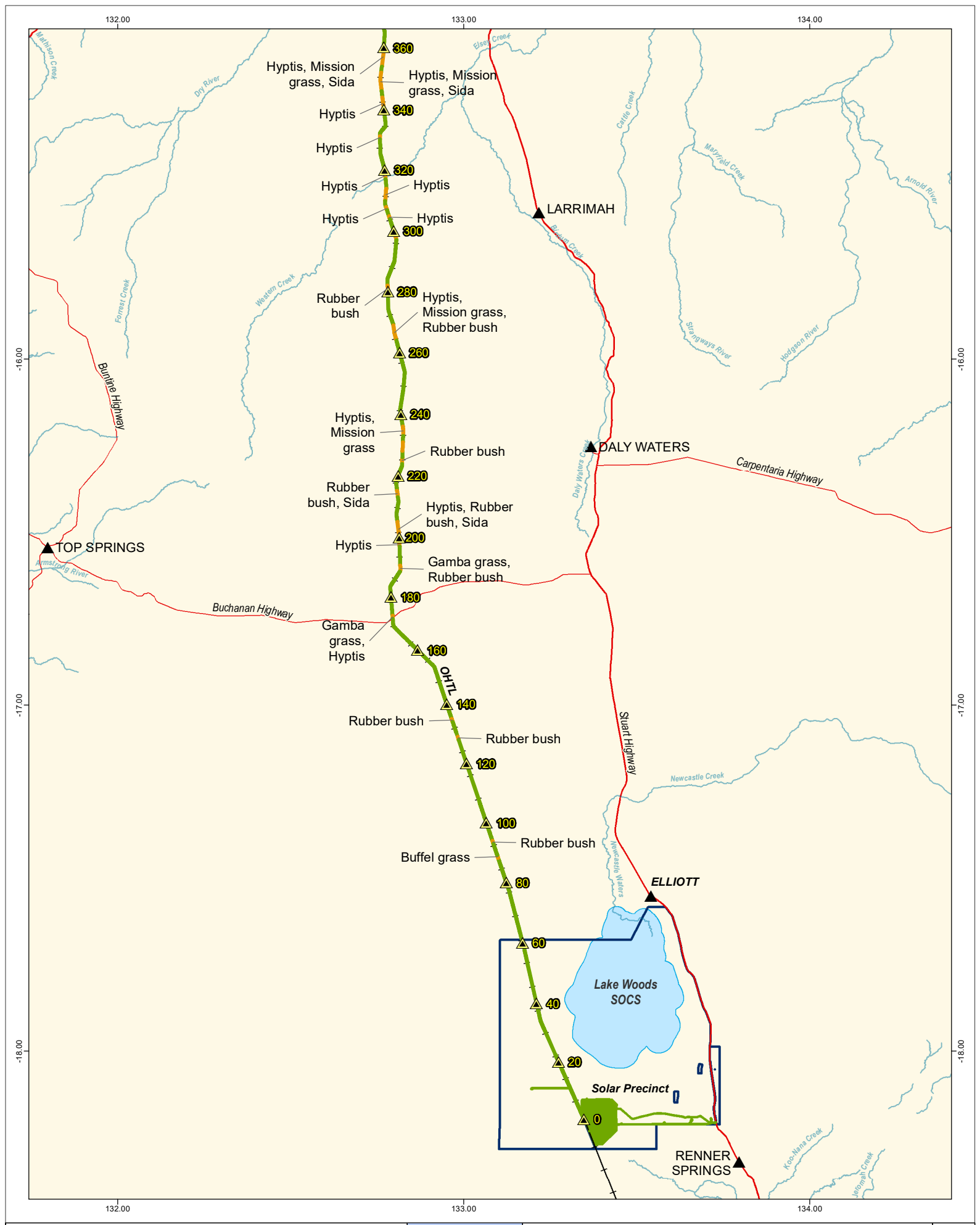
Coordinate System: GDA2020

A4

Reference: M Files ID 198573

Date: 10/11/2022 | Figure 4-2 | Revision: A

SUN CABLE AUSTRALIA-ASIA PowerLink



Legend

- Town
- Kilometre points
- Powell Creek Station
- SOCS
- Major Drainage
- Railway

Roads

- Principal road
- Secondary road

Weed Management Zone

- Green Zone – weed free
- Orange Zone – weed hygiene required

Source: Sun Cable, EcOz, NTG (NR Maps)

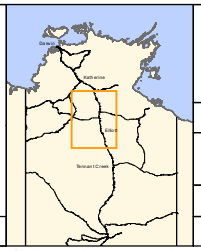


Figure 5. Map of AAPowerLink weed management zones (south)

Project: Australia-Asia PowerLink

0 10 20 30 40 Kilometers

Scale: 1:1,500,000

Coordinate System: GDA2020

A4

Reference: M-Files ID 198573

Date: 10/11/2022 | Figure 4-2 | Revision: A

SUN CABLE AUSTRALIA-ASIA PowerLink

7.3.2 Management measures

During construction, weed management activities will be undertaken to meet statutory requirements for declared weeds, as well as to ensure no increase in distribution or density of environmental weeds within the Project footprint[1]. Sun Cable will achieve this though adaptive weed management measures incorporating eradication and control of weeds. Management activities will be determined by the category assigned to each weed during prioritisation described in Section 5.

Weed management activities will be undertaken on all categories of weeds within the Project footprint. Where possible, the aim is weed eradication based on a program covering the life of the project (70 years). Actions taken during the construction phase will incorporate the long-term eradication goal at the planning level.

Adaptive weed management techniques will be employed, with both physical and chemical control methods used. All weed control activities are to be undertaken by suitably trained and qualified persons. The NT Government provides information on the requirements for training on the use of agricultural chemicals and equipment. The Weed Management Branch can be contacted for specific enquires relating to control of individual species. The NT Government Weed Management Handbook (DENR 2018) and statutory weed management plans detail specific control methods for declared weeds.

Records of all control activities are to be kept and can be used when planning the following years works in conjunction with the annual survey results. Control and survey activities can occur at the same time, after the initial survey.

Pre-construction

Following the initial survey, identification of weed management zones and categorisation of weed species, management actions will be undertaken to minimise seed presence at the time of land clearing or works in the area.

Planning will require knowledge of construction timeframes, access routes and planned works. Weed control will be undertaken preferably twice (1-2 years) before construction commences. Two seasons of targeted control will reduce seed presence and minimise recruitment during construction and disturbance works.

Construction and post-construction

Eradication and control activities during construction are to be planned in consultation with key stakeholders and contractors. Where possible, actions are to continue during construction to ensure a season is not missed and seed set does not occur.

In areas where construction is complete, rehabilitated or no longer used for construction, the most important time will be in the early wet season the first year after construction, as disturbed areas and rainfall will provide ideal germination conditions. Actions at this time will provide the best results for weed eradication. Broadacre and broad-spectrum chemical control is to be avoided to allow the regeneration of native species and natural competition to suppress weeds.

[1] This includes no introduction of Buffel Grass into the proposal footprint, and no spread of Para Grass or Annual Mission Grass along the OHTL.

Table 7. Management actions to prevent the spread of existing weeds during construction

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Prior to construction, conduct a weed survey of the construction footprint to provide a baseline of existing weeds.	~2 years prior to construction	Weed survey	All existing weeds within construction footprint are identified and mapped	-
Control weeds within Project footprint, and immediate surrounds in accordance with NT Weed Management Handbook and SWMP. Control/eradication methods will be in accordance with weed declaration status (e.g. Class A or B), as appropriate for the region.	1-2 years prior to construction	Weed survey Environmental Audits	No weeds in seed at the beginning of construction	Treat new weed infestations prior to maturity and seed set Identify source of weed infestation and treat as required
Undertake weed management activities (in accordance with NT Weed Management Handbook and SWMP) for existing and new infestations	Ongoing	Annual weed surveys Environmental audits Monitoring for weeds within construction footprint	Disturbed areas to have no new infestations (less than or equal to the distribution and percentage cover) of weed species present compared to the pre-construction condition	Treat new weed infestations prior to maturity and seed set Identify source of weed infestation and treat as required
Develop weed priorities, plans and procedures for actions. *As a minimum, Sun Cable will adopt the RWS priorities if own priorities are not developed.*	Prior to construction Review annually	Audits Training logs	Presence of priorities, procedures with controls	Review priorities, procedures, works plans Additional training
Identify and map weed management zones and provide this to all staff working these areas, along with information on management actions required for each zone (e.g. no access, weed hygiene).	Prior to control activities (1-2 years pre-construction)	Training logs Audits of works plans	All staff are aware of zones and requirements Maps available to staff	Additional training
Determine location of and develop maps to show the location of weed hygiene stations.	Prior to control activities (1-2 years pre-construction)	Training logs Audits of works plans	All staff are aware of zones and requirements Maps available to staff	Additional training
Train workers on the identification and reporting of weeds during site inductions.	Ongoing	Training logs Environmental audits	Staff and contractors are inducted and trained in weed identification Weed identification booklets and factsheets	Review and update site induction material Additional training for weed inspectors
Develop a weed identification booklet for the weed species known to occur within the construction footprint and provided to all staff. Fact sheets will be displayed at camps and in crib huts.	Prior to construction activities			

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Implement weed hygiene inspector training for relevant employees and contractors.	Prior to construction activities (1-2 years pre-construction)		are available and displayed	Develop and display booklet and factsheet
Personnel working in orange weed zones will be subject to weed hygiene, specifically checking boots and clothes for seeds prior to moving between weed zones or into 'clean' areas. Operators will be trained in this as part of the weed inspection training.	Prior to control activities (1-2 years pre-construction)	Spot checks of machinery hygiene records Environmental audits	Disturbed areas to have no new infestations (less than or equal to the distribution and percentage cover) of weed species present compared to the pre-construction condition	Communications to inform workforce of personal weed hygiene
Install weed hygiene stations at required locations and enforce the use of weed hygiene stations. At a minimum, weed hygiene stations will be installed between weed zones – and before moving into green zones. Include in contracts with contractors or sub-contractors	Prior to clearing or construction activities	Spot checks on vehicles and machinery Weed hygiene inspections register Weed hygiene declarations Log of clean downs Environmental audits	Weed hygiene stations are in place and in use. All vehicles and machinery have a valid weed hygiene declaration form	Communications to inform workforce of weed hygiene points Revise the locations or types of weed hygiene stations Additional training in weed hygiene for staff Contractual penalties
Stockpile weed infested vegetation and topsoil separately to vegetation and topsoil that is free of weeds; do not move soil or vegetation between weed zones.	During construction	Pre-construction inspections Environmental audits Weed monitoring of disturbed areas and stockpiles	Disturbed areas to have no new infestations (less than or equal to the distribution and percentage cover) of weed species present compared to the pre-construction condition No outbreak of weeds on topsoil stockpiles	Treat weed infestations prior to maturity and seed set Revise weed management procedure

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Transport routes on road and tracks outside of Sun Cable control are to be surveyed for weeds and zoned prior to use. Where high priority weeds are identified adjacent to tracks or roads, consider alternative routes or partnerships with relevant landowners/managers.	Prior to track use Ongoing	Vehicle movements Monthly environmental audits Spot checks of weed hygiene declaration forms	No unauthorised travel or works outside of approved areas Disturbed areas to have no new infestations (less than or equal to the distribution and percentage cover) of weed species present compared to the pre-construction condition	Review procedures for vehicle and machinery access approval Communications to inform workforce of weed management zones Incident investigations and remedial actions based on investigation
Only vehicles and machinery involved in active construction will access orange or red zones. *E.g. general traffic or through traffic will use alternative green routes when possible.*	Ongoing			

7.3.3 Weed hygiene

All vehicles, equipment and machinery including those involved in the initial clearing and construction are required to observe the weed management zones and use weed hygiene stations. This applies to the Project footprint including access tracks, construction areas, temporary construction infrastructure (camps, laydowns and tracks), and permanent infrastructure.

As a minimum, weed hygiene (inspection and cleaning) will be undertaken for the following activities:

- Prior to arrival on site
- Moving between weed management regions – Figure 3
- Exit from an orange or red zone
- Prior to entry into a green zone
- Moving between property boundaries (if required)
- Moving from an area of visible weed infestations or weeds in seed.

Certified weed inspectors are responsible for inspecting all vehicles and machinery at weed hygiene stations (after cleaning) and prior to moving between weed zones. Inspectors must certify and record that the vehicle or machine is weed free before it can leave the weed hygiene station.

All inspections and results will be recorded and may be provided to landholders or other stakeholders if required.

Any items that fail the inspection will be refused access to site until the item has been cleaned and passed re-inspection.

Where the work area is dry, weed hygiene can be in the form of blow-downs and use of brooms and other tools to remove soil and seeds. In the event of wet weather, or where vehicles and machinery are wet, wash-downs will be required.

No soil or plant material can be moved past a weed hygiene station, unless the material is accompanied by a weed hygiene declaration. Note that weed hygiene procedures and inspections procedures will be exempt in the following circumstances:

- Any vehicle or machinery travelling exclusively within a green zone (after initial inspection)
- Emergency vehicles and authorised site vehicles responding to an emergency
- Where an emergency has occurred, and vehicles are evacuating or moving within the Project footprint in response to the emergency
- Landholders and their guests moving around their own properties.

Access tracks

Any existing or proposed roads and tracks that do not have the presence of weeds and do not require control works prior to use will be designated ‘clean’ and become part of the green zone. For some areas of existing roads and tracks, the use of a red zone may be required to highlight weeds are present on the road shoulder or in stockpiled materials. Entry and work in red zones are prohibited without additional control e.g. weed hygiene station.

Any new access tracks, or existing tracks that are widened or improved prior to use, are considered a risk for weed management. Within the green zone, no weed hygiene stations are required but all machinery involved in construction of the track must be inspected and declared weed free prior to works. Within the orange zone, weed hygiene stations will be located at designated points to facilitate cleaning.

Locations

Weed hygiene station locations within the Project area will be determined using the follow criteria:

- Locate the site within the property that work is undertaken in (rather than the next property) such that any weeds are contained within the property that was the source of seeds
    - For specific weed infestations, choose a site close to the infestation area to prevent weed spread
- At the exit extent of the weed infestation – i.e. where the zone changes from orange to green
- In locations such that no vehicle or machinery will move from an orange or red zone into the green zone without first passing a weed hygiene station
- For access tracks, locate the hygiene station at the end that is being worked towards, or (where it is a confined infestation area) at the end of the weed infestation
- At boundaries between weed management regions
- After particularly high-risk weeds – e.g. those covered by a statutory weed management plan, identified in the TAP for the five grasses, or very easy to spread
- At property boundaries in consultation with and when required by landowner/neighbour
- At camps and temporary infrastructure points during construction
- Ease of control of weeds at washdown locations – e.g. open, flat, dry areas are preferred to prevent movement of seeds and allow ease of control
    - Locate the hygiene point in an area that will be accessible for future monitoring of weed germination, and treatment if required
    - Select a relatively flat area for health and safety, accessibility, and runoff considerations
- Not within 100m of a watercourse, riparian vegetation, or drainage lines into waterways

Review and amendments

The locations of weed hygiene sites will require amendment to remain relevant to the proposed works and methodology. Locations will be reviewed annually, or after any of the following events:

- The direction of construction changes
- New access tracks are required, or existing access tracks no longer be required
- New weed infestations are detected
- Weed control is complete in an area and weed risk level is reduced
- Closure of temporary infrastructure – i.e. camps or laydowns

Monitoring of closed hygiene locations is discussed in Section 9.1.

8 OPERATIONS AND MAINTENANCE MANAGEMENT MEASURES

Although weed risks are highest during the construction phase, weed management will be required ongoing throughout the life of the project to mitigate the risk of introducing new weeds, or the spread of existing weeds, within the operational footprint, and surrounds. The long-term objective during the operational phase is for the Project footprint to manage declared weeds in accordance with statutory obligations, with an overall decrease in distribution and density of weeds, and no new species present compared to the pre-construction condition. Weeds that are not declared, but are designated a priority for management (i.e. Buffel Grass, Para Grass and Annual Mission Grass) will also be managed within the AAPowerLink footprint to mitigate environmental risks associated with the weeds, and fire risks to infrastructure.

Sun Cable will develop detailed operational works packages to address management activities for staff or contractors.

8.1 Working together

In weed management, the success of a program, eradication or control is often due to the strength of the partnerships and level of engagement by landowners and managers. Given the long-term nature of the Project, resources will be put towards long term, successful partnerships with neighbours and affected stakeholders.

Operational weed management plans at regional and local levels will be developed by Sun Cable in consultation with key stakeholders, particularly neighbours and rail corridor managers. Coordination between stakeholders will support any existing weed management plans and achieve longer term weed management goals. This includes coordination with Consolidated Pastoral Company regarding Parkinsonia management in Lake Woods and the broader catchment.

8.2 Survey

During operations, annual weed surveys will be undertaken at the appropriate time for the region. Generally, the most appropriate time to survey will be during the growing season but before seed has set (i.e. after rain). Any weed control undertaken will be recorded, in a way that is compatible with survey data to allow tracking of infestations and effectiveness of controls. The *Weed Data Collection – A Field Guide for Collection Weed Data for the NT* describes parameters for weed data collection.

Weed surveys will be undertaken throughout the project footprint, including along access tracks and watercourses immediately downstream of project components. This includes within the Lake Woods Catchment, where watercourses immediately downstream of Project components will be surveyed to ensure the Project is not contributing weeds to Lake Woods and hindering current weed management efforts described in Section 4.

The annual survey of the operational footprint will determine any change in weed distribution and density, the presence of new weed infestations, check the relevance of weed zones, and measure the outcomes of the weed management programs.

Weed occurrence from the baseline data will be compared with annual survey results to identify whether the distribution and density weeds is less than or equal to pre-construction conditions i.e. whether existing weeds are increasing or decreasing in distribution and density, and whether any new weeds are present. An internal report, including an updated map of known weed locations, will be produced annually to monitor the progress and success – or lack of – of weed control efforts.

8.3 Introduction of new weeds

Sun Cable will implement management measures to avoid the introduction of new weeds into the Project footprint during operations and maintenance activities – see Table 8. There is a risk of introducing of new weeds during operations from maintenance and ongoing land management activities.

Prior to transport to site, all vehicles, machinery and equipment must undergo weed hygiene inspections carried out by a trained weed hygiene inspectors, and obtain a weed hygiene declaration verifying that they are free of weeds, soil or seeds. This is particularly relevant for vehicles, machinery and equipment transported from interstate or between weed management regions. Declarations will be provided to landholders and stakeholders as requested.

Where this is not possible, the weed hygiene inspection must be undertaken immediately on arrival at the work site or access road. The company will maintain a register of all inspections for each vehicle, equipment and machine. The register will include the locations of all weed hygiene activities to inform future monitoring. Companies will also maintain a cleaning log for each vehicle, equipment and machine.

Any items that fail the inspection will be refused access to site until the item has been cleaned and passed re-inspection.

Wash down/cleaning facilities (weed hygiene stations) will be provided at a minimum on the borders of weed management regions and green zones. If required, additional facilities may be installed at areas of known weed infestations and other location determined from weed management and survey data.

Management measures to avoid the introduction of new weeds into the Project footprint are summarised in Table 8.

Table 8. Management actions to prevent the introduction of weeds during operations and maintenance

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Undertake a weed survey of Project footprint, including watercourses immediately downstream of the footprint.	Annually	Weed survey	Maps and known distribution of weeds are updated annually.	Undertake survey and update known locations of weeds.
Weed hygiene inspector training for new employees and contractors.	At time of contractor engagement	Training logs	Staff are trained in weed hygiene and inspections	Additional training
All vehicles, equipment and machinery for the project shall be thoroughly cleaned, washed down and declared 'clean' (i.e. weed-free) in a weed hygiene declaration.	Prior to mobilisation to the Project footprint	Spot-checks on vehicles, machinery and equipment arriving at site to ensure inspections are completed correctly Environmental audits Spot checks of soil and fill material suppliers	All vehicles and machinery are subject to a weed hygiene inspection before use at site No weed contaminated soil or fill is imported into the operational footprint	Enforce weed hygiene inspections Incident investigations and remedial actions based on investigation Removal of contaminated fill
Any vehicles, equipment and machinery entering the Project footprint must be accompanied by a valid and properly authorised weed hygiene declaration, with the exception of irregular delivery vehicles on public roads.	Entry to Project footprint			
All materials are to be inspected for weeds, seeds and soil prior to transport to site. All materials must be stored in dedicated laydowns that are cleared of vegetation and weed free prior to stockpiling of materials.	Prior to mobilisation to the Project footprint			
Any soil or fill material that is imported must be checked for weed seeds and accompanied by a weed hygiene declaration.	Prior to mobilisation to the operational footprint			
Transport to Project footprint is to be via approved transport routes only (existing railway and roads, and access tracks).	Entry to Project footprint Ongoing	Vehicle movements	No unauthorised travel off dedicated transport routes	Incident investigations and remedial actions based on investigation
Use and maintain weed hygiene stations. Clean all vehicles, machinery, equipment and materials if weeds or seeds are identified.	Ongoing	Environmental audits	Weed hygiene facilities are installed, operational and used appropriately	Upgrade or move facilities Communications to inform workforce of location and requirement for use
Any plant species used to rehabilitate or on erosion control will not be a declared or environmental weed, or listed in a RWS or a TAP.	Ongoing – rehabilitation works	Environmental audits	No weeds planted in rehabilitation areas	Remove weeds and replace with non-weed species

8.4 Movement and spread of existing weeds

8.4.1 Management zones

During operations and maintenance, weed management zones will remain in place and be updated annually with the results from the annual survey of the Project footprint.

Weed zones will be determined based on:

- Weed survey data from annual survey and other sources
- Weed priority (as per Section 5)
- Location of property boundaries, where relevant, and stakeholder input
- Likely activities within each zone
- Proximity to watercourses or sensitive vegetation

Three weed zones will be mapped:

- Green zones: Weed free, clean zone.

  Weed hygiene inspections for all vehicles, machinery and equipment prior to travelling into green zone. Washdown as required. Survey annually for new weed incursions.

  Target is eradication of all weeds detected.

- Orange zones: Existing weeds identified within works area.

  Washdowns and inspection mandatory prior to exiting orange zone. Controls are required, and vehicle movements will be restricted between orange zones and green zones.

  Target is for short term (3-5 year) control efforts leading to long term (+10 year) eradication of existing weeds.

- Red zones: Exclusion zones.

  Existing weeds identified near works area, but not within the control of Sun Cable to manage. Area is to be avoided. Where the zone is along a road, vehicles and machinery are to avoid pulling off the road within the weed exclusion zone.

  Target is to prevent spread of weeds from red zone into Sun Cable managed land. Long term goal is eradication through partnership and collaboration with landowners/stakeholders.

The location of weed zones will inform the location of weed hygiene stations. Weed zones and hygiene stations will be reviewed annually based on survey and occurrence of weeds.

8.4.2 Management measures

Weed management activities will be undertaken to meet statutory requirements for declared weeds within the Project footprint. Sun Cable will achieve this though adaptive weed management measures, best practice and partnership with neighbours/stakeholders. This includes collaboration where existing weed management is undertaken, such as with Consolidated Pastoral Company in the Lake Woods catchment, and with the operator of the Railway Corridor.

Long-term plans and objectives will be developed for regional and local areas of the Project footprint, based on annual survey data and RWS's. Short term targets will be set for control activities in line with RWS's and Sun Cable priorities.

Surveys will be undertaken annually, including after eradication is achieved in an area. Areas where eradication of weeds has occurred will be included in the annual survey of the entire Project footprint. Survey frequency may be increased in areas with neighbouring weeds (red zone) or identified high risk of spread.

Weed hygiene stations will be reviewed and established where necessary for operational and maintenance requirements – e.g. decommissioning of stations once eradication is achieved in an area.

Ongoing programs and partnership with key stakeholders should be established to prevent the reoccurrence and introduction of weeds after eradication activities.

Maintenance activities such as slashing and grading will be planned with consideration for weed zones, including location of weed hygiene stations. Slashing and grading activities are methods of physical control – e.g. slashing of grass prior to seed set, but also pose a high risk of weed spread.

Management measures to avoid the introduction of new weeds into the Project footprint are summarised in Table 9.

8.4.3 Weed hygiene

During the operational and maintenance phase, weed hygiene inspections described in Section 7.3.3 remain in place for all vehicle and machinery traffic. Certified weed inspectors are responsible for inspecting all vehicles and machinery at weed hygiene stations (after cleaning) and prior to moving between weed zones. Inspectors must certify and record that the vehicle or machine is weed free before it can leave the weed hygiene station.

Table 9. Management actions to prevent the spread of existing weeds during operations and maintenance

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Survey of weed occurrences within Project footprint, including watercourses immediately downstream of footprint.	Annually	Weed survey	All weeds within Project footprint are identified and mapped	Undertake survey
Control weeds within Project footprint in accordance with NT Weed Management Handbook and Statutory Weed Management Plans. Control/eradication methods will be in accordance with weed declaration status (e.g. Class A or B), as appropriate for the region.	Ongoing	Weed survey Weed control QC Environmental Audits	Reduction in distribution and density of weed species present compared to the pre-construction condition	Treat new weed infestations prior to maturity and seed set Identify source of weed infestation and treat as required
Review weed priorities, plans and procedures for controls. *As a minimum, Sun Cable will adopt the RWS priorities if own priorities are not developed.*	Review annually	Audits Training logs	Presence of priorities, procedures with controls	Review priorities, procedures, works plans Additional training
Update and map weed management zones; provide this to all staff working these areas, along with information on measures required for each zone (e.g. no access, weed hygiene).	Annually	Training logs Audits of works plans	All staff are aware of zones and requirements Maps available in all operational/works documents	Additional training
Train workers on the identification and reporting of weeds during site inductions. Implement weed hygiene inspector training for relevant employees and contractors.	New staff / contractor engagement	Training logs Environmental audits	Staff and contractors are inducted and trained in weed identification Weed identification booklets and factsheets are available and displayed	Review and update site induction material Additional training for weed inspectors Develop and display booklet and factsheet
Review weed identification booklet and fact sheets for the weed species known to occur within the construction footprint and provided to all staff.	Annually			

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Personnel working in orange weed zones will be subject to weed hygiene, specifically checking boots and clothes for seeds prior to moving between weed zones or into 'clean' areas. Operators will be trained in this as part of the weed inspection training.	Ongoing	Spot checks of machinery hygiene records Environmental audits	No new infestations (less than or equal to the distribution and density) of weed species present compared to the pre-construction condition	Communications to inform workforce of personal weed hygiene
Review location and maps of weed hygiene stations.	Annually	Training logs Audits of works plans	All staff are aware of zones and requirements Maps available in all operational/works documents	Review weed hygiene station locations
Install weed hygiene stations at required locations and enforce the use of weed hygiene stations. Include in contracts with contractors or sub-contractors	Prior to operations and maintenance activities. Ongoing	Spot checks on vehicles and machinery Weed hygiene inspections register Weed Hygiene Declaration Forms Log of clean downs Environmental audits	Weed hygiene stations are in place and in use. All vehicles and machinery have a valid weed hygiene declaration form	Communications to inform workforce of weed hygiene points Revise the locations or types of weed hygiene stations Additional training in weed hygiene for staff Contractual penalties
Avoid entrance to red zones. Where red zones are identified adjacent to tracks or roads, consider alternative routes or works.	Ongoing	Access or disturbance in red zones	No unauthorised travel or works outside of clean areas	Review procedures for vehicle and machinery access approval

Management actions	Timeframe	Monitoring	Performance indicators	Corrective actions
Only vehicles and machinery involved in active works will access orange weed zones.	Ongoing	Monthly environmental audits Spot checks of weed hygiene declaration forms	No new infestations (less than or equal to the distribution and density) of weed species present compared to the pre-construction condition	Communications to inform workforce of weed management zones Incident investigations and remedial actions based on investigation
Slashing activities timed to minimise seed spread i.e. before seed set when possible.	Ongoing	Timing of works Weed hygiene declarations	No spread of weeds through slashing or mowing activities.	Staff training Review weed zones.

9 MONITORING

Monitoring and reporting of the conformance to this plan is ultimately the responsibility of Sun Cable and their delegates. All works will operate under plans and procedures (e.g. Construction Environmental Management Plan and Operational Environmental Management Plan), which includes the requirements of this management plan, and templates for weed hygiene inspections, forms and checklists.

Monitoring actions include:

- Review of hygiene records (declarations, registers) for conformance with weed hygiene procedures, accompanied by field inspections
- Spot checks of vehicles and machinery for weed hygiene compliance and weed hygiene declarations
- Monthly audits of construction areas, including laydowns, active construction footprint, work areas, and weed hygiene stations
- Checks on approved works near red zones to ensure the boundaries have been maintained and entry has not occurred into the red zone
- Checks on demarcation of weed zones for any unauthorised access or changes to demarcation
- Fortnightly auditing of vehicle movements and adherence to weed zones
- Review of works plans to ensure they address known weeds in the work areas, including transport routes and access points
- Training logs of staff and contractors for weed training and reporting
- Weed monitoring for signs of new or existing weed proliferation within the construction and Project footprints
    - Annual survey for entire Project footprint
    - Include stockpiled vegetation and topsoil materials
    - Include watercourses immediately downstream of Project footprint
    - Can include data from other sources or control efforts

Monitoring results will be recorded internally, and management actions reviewed annually incorporating results from the monitoring program.

9.1 Weed hygiene stations

Weed hygiene stations will be inspected monthly when in use. As washdowns may be carried out, weed hygiene stations can be considered irrigated and could have an out of season germination of weed seeds. All germination events of weed seed will be reported and weed control undertaken prior to the plants becoming reproductive or seed set. For plants that spread via vegetative means, additional controls will be implemented.

Weed hygiene stations which are no longer required will be decommissioned, and the location of the station will be monitored annually until two wet seasons after the last weed germination event is recorded.

9.2 Weed occurrences

Pre-construction weed survey data and existing weed records will provide the baseline comparison for on-going monitoring. Other key stakeholder information or datasets may be used for baseline comparison where available.

The annual survey, complaints and feedback, incident reports, control efforts, government data and reports of weeds from contractors and stakeholders contribute to the ongoing monitoring program.

Weed occurrence from the baseline data will be compared with annual survey results to identify whether the distribution and density of weeds is less than or equal to pre-construction conditions - i.e. whether existing weeds are spreading or increasing in density, and whether any new weeds are present. An internal report, including an updated map of known weed locations, will be produced annually to monitor the progress of weed control efforts.

Eradication and control actions will require quality control (QC) to evaluate the effectiveness of the control methods. QC checks are specific to the control method used - e.g. different chemicals have different timelines. QC checks are to be incorporated into management actions, with review and follow up actions undertaken if measures are found to be ineffective. Records are to be kept for all QC activities.

Table 10. Summary of monitoring actions

Monitoring Item	Timeframe / Schedule	Records
Hygiene inspections – vehicles, plant and equipment	Prior to mobilisation to site	Y
Hygiene inspections – use of weed hygiene stations	Prior to leaving station	Y
Construction materials	Prior to mobilisation to site	Y
Weed hygiene stations – in use	Monthly audit	Y
Weed hygiene stations – decommissioned	Annually until two seasons after last germination event	Y
Construction areas, laydowns – in use	Monthly audit	Y
Construction areas, laydowns – decommissioned	Annually until two seasons after last germination event	Y
Spot checks	As needed / Monthly audit	Y
Vehicle movements and adherence to weed zones	Fortnightly	Y
Location and extent of weed management zones	Annually	Y
Entire Project footprint, including watercourses immediately downstream	Annually	Y

10 REPORTING AND RESPONSE

The findings of inspections, audits and monitoring will be recorded and reported internally. Reporting will be in the form of:

- Inspection checklists
- Weed hygiene declarations
- Vehicle, machine, and equipment weed hygiene inspection register
- Vehicle, machine, and equipment cleaning log
- Weed survey data
- Hygiene inspector logs
- Weed treatment records
- QC results and logs
- Incident register
- Monthly audit report
- Training records
- Communications or complaints records

Following each monthly audit, an audit report outlining the findings of each audit will be produced. Audit findings will be compared to performance indicators and non-conformances will be highlighted to guide the implementation of corrective actions.

A weed management report including a map of all recorded weed infestations, controls undertake or proposed, and required follow-up monitoring will be produced annually. Any complaints received will be summarised in the report, including measures undertaken to address the complaints. The report, and supporting data, will be provided to the NT Weed Management Branch annually.

In addition to annual reporting requirements, all reports and records pertaining to specific weed-related actions or incidents will be provided to the NT Weed Management Branch upon request. Records will be provided within five business days of a request.

10.1 Incident reporting

For the purposes of internal company reporting and to support monitoring methodology, incidents that require reporting include:

- Introduction of a new weed species to Project footprint
- The significant (>10%) proliferation of existing weeds (increase in density or extent)
- Confirmed increase in weed distribution or spread (in areas not previously known).
  - Declared weeds found in areas not previously known require notification to NT Weed Management Branch within 14 days.
- Confirmed increase in weed distribution or spread of the five listed grasses in the Threat Abatement Plan (Gamba Grass, Annual Mission Grass, Perennial Mission Grass, Olive Hymenachne, Para Grass).
- Detection of any Class C or 'Alert' (Category E) species
  - Immediate notification to NT Weed Management Branch required.
- Complaints from landholders or land managers
- Non-conformance with property weed management agreements
- Non-conformance with weed hygiene procedures and/or vehicle inspection procedures
- Sites of rubbish/debris dumping
- Detection of unauthorised access or new track development
- Detection of entry into or disturbance of red zone

Any occurrence of the above listed incidents will trigger an incident investigation to identify the causes and impacts of the incident and implement corrective actions to avoid reoccurrence.

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APPENDIX A WEED MANAGEMENT PRIORITISATION TABLES

Table 11. Weed management zones - OHTL

Priority	Start KP	End KP	Management zone	Species present	Isolated	Declared	Landscape	Justification	Objective	Comments
-	1	88	Green	Nil	-	-	-	-	Maintain weed free	-
High	88	89	Orange	Buffel grass	Y	-		Isolated occurrence	Eradication	Only recorded occurrence of buffel grass within Project footprint. Priority will be to eradicate this occurrence, and avoid spread through footprint.
-	89	93	Green	Nil	-	-	-	-	Maintain weed free	-
High	93	94	Orange	Rubber bush	Y	B		Isolated occurrence of declared weed	Eradication	
-	94	128	Green	Nil	-	-	-	-	Maintain weed free	-
High	128	129	Orange	Rubber bush	Y	B		Isolated occurrence of declared weed	Eradication	
-	129	134	Green	Nil	-	-	-	-	Maintain weed free	-
High	134	135	Orange	Rubber bush	Y	B		Isolated occurrence of declared weed	Eradication	
-	135	173	Green	Nil	-	-	-	-	Maintain weed free	-
High	173	174	Orange	Gamba grass, Hyptis	Y	A		Declared weed and key threatening process (five grasses)	Eradication	Gamba records within a Class A Zone – eradicate. Hyptis records as well
-	174	189	Green	Nil	-	-	-	-	Maintain weed free	-
High	189	191	Orange	Gamba grass, Rubber Bush	Y	A		Declared weed and key threatening process (five grasses)	Eradication	Gamba records within a Class A Zone - eradicate. Rubber bush records as well
-	191	197	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	197	198	Orange	Hyptis	Y	B		Declared weed	Control	
-	198	200	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	200	205	Orange	Hyptis, Rubber bush, Sida	N	B	Watercourse	Declared weeds	Control	
-	205	213	Green	Nil	-	-	-	-	Maintain weed free	-
Low	213	215	Orange	Rubber bush, Sida	N	B		Declared weeds	Control	
-	215	224	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	224	226	Orange	Rubber bush	N	B	Watercourse	Declared weed	Control	
-	226	228	Green	Nil	-	-	-	-	Maintain weed free	-
Low	228	231	Orange	Hyptis, Rubber bush	N	B		Declared weeds	Control	
-	231	233	Green	Nil	-	-	-	-	Maintain weed free	-
High	233	236	Orange	Hyptis, Mission grass	Y	B		Declared weeds and key threatening process (five grasses)	Eradication	
-	236	264	Green	Nil	-	-	-	-	Maintain weed free	-
Low	264	269	Orange	Hyptis, Mission grass, Rubber bush	N	B		Declared weeds and key threatening process (five grasses)	Control	
-	269	280	Green	Nil	-	-	-	-	Maintain weed free	-
High	280	282	Orange	Rubber bush	Y	B	Watercourse	Declared weed	Eradication	Small <5m patches

EcOz Environmental Consultants

Priority	Start KP	End KP	Management zone	Species present	Isolated	Declared	Landscape	Justification	Objective	Comments
-	282	297	Green	Nil	-	-	-	-	Maintain weed free	-
High	297	300	Orange	Hyptis, Rubber bush	Y	B		Declared weeds	Eradication	Small <5m patches, treated in 2021
-	300	304	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	304	305	Orange	Hyptis	Y	B		Declared weed	Control	
-	305	307	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	307	308	Orange	Hyptis	Y	B		Declared weed	Control	
-	308	310	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	310	314	Orange	Hyptis	Y	B		Declared weed	Control	
-	314	317	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	317	319	Orange	Hyptis	Y	B	Watercourse	Declared weed	Control	
-	319	330	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	330	331	Orange	Hyptis	Y	B		Declared weed	Control	
-	331	340	Green	Nil	-	-	-	-	Maintain weed free	-
Low	340	344	Orange	Hyptis	N	B		Declared weed	Control	
-	344	346	Green	Nil	-	-	-	-	Maintain weed free	-
Low	346	352	Orange	Hyptis, Mission grass, Sida	N	B		Declared weeds and key threatening process (five grasses)	Control	
-	352	354	Green	Nil	-	-	-	-	Maintain weed free	-
Low	354	360	Orange	Hyptis, Mission grass, Sida	N	B		Declared weeds and key threatening process (five grasses)	Control	
-	360	393	Green	Nil	-	-	-	-	Maintain weed free	-
High	393	404	Orange	Gamba grass, Hyptis, Mission grass	N	A	Watercourse	Declared weed and key threatening process (five grasses)	Eradication	Class A for gamba grass - eradicate. Control other Class B weeds
-	404	406	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	406	410	Orange	Hyptis, Senna, Sida	N	B	Watercourse	Declared weeds	Control	Headwaters for water courses
-	410	412	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	412	414	Orange	Hyptis, Sida	N	B	Watercourse	Declared weeds	Control	
-	414	416	Green	Nil	-	-	-	-	Maintain weed free	-
High	416	417	Orange	Rubber bush	Y	B		Declared weed	Eradication	Isolated Rubber bush record - try for eradication
-	417	419	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	419	420	Orange	Sida	Y	B		Declared Weed	Control	
-	420	423	Green	Nil	-	-	-	-	Maintain weed free	-
Low	423	424	Orange	Hyptis	N	B		Declared Weed	Control	
-	424	426	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	426	436	Orange	Hyptis, Mission grass, Rubber bush	N	B	Watercourse	Declared weed and key threatening process (five grasses)	Control	

EcOz Environmental Consultants

Priority	Start KP	End KP	Management zone	Species present	Isolated	Declared	Landscape	Justification	Objective	Comments
-	436	441	Green	Nil	-	-	-	-	Maintain weed free	-
High	441	482	Orange	African mahogany, Chinee apple, Gamba grass, Hyptis, Grader grass, Mimosa, Mission grass, Neem, Parkinsonia. Rubber bush, Senna, Sesame, Sida	N	A/B	Watercourse	Declared weeds and key threatening process (five grasses)	Eradication	Class A - eradicate for Chinee Apple, and Gamba Grass south of Katherine (~KP 455). Control all class B weeds.
-	482	484	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	484	487	Orange	Rubber bush	N	B	Watercourse	Declared weed	Control	
-	487	489	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	489	493	Orange	Gamba grass, Rubber bush	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	493	497	Green	Nil	-	-	-	-	Maintain weed free	-
Low	497	498	Orange	Hyptis, Rubber bush	N	B		Declared weeds	Control	
-	498	508	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	508	521	Orange	Caltrop, Gamba grass, Hyptis, Mission grass, Rubber bush, Sida	N	B	Watercourse	Declared weeds, and key threatening process (five grasses)	Control	
-	521	525	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	525	526	Orange	Rubber Bush	Y	B	Watercourse	Declared weed	Control	
-	526	529	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	529	546	Orange	Gamba grass, Mimosa, Mission grass, Neem, Red natal grass, Rubber bush, Olive Hymenachne	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	The only records of Olive Hymenachne within the OHTL footprint are at KP544. Weed control will be implemented to avoid the spread of the weed along the OHTL.
-	546	548	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	548	549	Orange	Rubber bush	N	B	Watercourse	Declared weed	Control	
-	549	552	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	552	554	Orange	Rubber bush, Mission Grass	N	B	Watercourse	Declared weed and key threatening process (five grasses)	Control	
-	554	557	Green	Nil	-	-	-	-	Maintain weed free	-
Low	557	558	Orange	Mission grass	N	B		Declared weed and key threatening process (five grasses)	Control	
-	558	560	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	559	564	Orange	Gamba grass, Hyptis, Mission grass, Rubber bush, Sida	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	564	569	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	569	570	Orange	Hyptis, Rubber bush, Mission Grass	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	570	597	Green	Nil	-	-	-	-	Maintain weed free	-
High	597	598	Orange	Rubber bush, Senna	Y	B	Watercourse	Declared weed	Eradication	
-	598	606	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	606	608	Orange	Gamba grass	N	B	Watercourse	Declared weed and key threatening process (five grasses)	Control	

Priority	Start KP	End KP	Management zone	Species present	Isolated	Declared	Landscape	Justification	Objective	Comments
-	608	613	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	613	622	Orange	Gamba grass	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	622	689	Green	Nil	-	-	-	-	Maintain weed free	Has not been surveyed, so will require pre-clearing survey to confirm that this zone is weed free
Medium	689	725	Orange	Gamba grass, Hyptis, Mission grass, Senna, Sida, Snake weed	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	726	728	Green	Nil	-	-	-	-	Maintain weed free	-
Medium	729	748	Orange	Gamba grass, Mission grass, Snake weed	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	
-	749	764	Green	Nil	-	-	-	-	Maintain weed free	-
High	765	776	Orange	Gamba grass, Mission grass, Stylo	Y	B	Watercourse	Declared weeds and key threatening process (five grasses)	Eradication	Isolated Gamba and Mission grass
-	767	772	Green	Nil	-	-	-	-	Maintain weed free	-
High	773	774	Orange	Mission grass, Stylo	Y	B	Watercourse	Declared weeds and key threatening process (five grasses)	Eradication	Isolated Mission grass
-	775	783	Green	Nil	-	-	-	-	Maintain weed free	-

Table 12. Weed management zones - Solar Precinct and Murrumujuk Facilities

Priority	Location	Management zone	Species present	Isolated	Declared	Landscape	Justification	Objective	Comments
High	Cable Transition Facility	Orange	Mission grass, Sida and Tribulus	Y	B	Watercourse	Declared weeds	Eradication	Eradicate isolated weeds near infrastructure.
Medium	Northern electrode and access road	Orange	Gamba Grass, Mission Grass, Hyptis, Side	N	B	Watercourse	Declared weeds and key threatening process (five grasses)	Control	Control weeds within infrastructure footprint and avoid spread throughout footprint.
-	Darwin Converter Site	Green	Nil	-	-	-	-	Maintain weed free	Maintain weed free, including in water bodies immediately downstream of infrastructure.
-	Solar Precinct, ancillary infrastructure and electrode	Green	Nil	-	-	-	-	Maintain weed free	Maintain weed free, including along access tracks, in ancillary infrastructure, and watercourses immediately downstream of infrastructure.

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