


**This is a sub-plan to be used in conjunction with the
Environmental Management Plan**

**ElectraNet Project EnergyConnect SA to NSW Interconnector
330kV and 275kV Transmission Lines**

Customer: ElectraNet

Contract Number: EC 14171

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1 PURPOSE

The purpose of this sub-plan is to describe how weeds, pests and disease will be managed throughout the duration of the project. Works will be implemented in accordance with the management measures and strategies contained in this sub-plan.

2 DOCUMENT SCOPE

The scope of this plan applies to all Downer workers for ElectraNet's Project EnergyConnect (PEC). This plan incorporates the requirements in ElectraNet's project relevant documents including Scope for Environmental Management Plan EC.14171 – Project EnergyConnect Major Works Contract – Design and Construct (March 2021); Safety and Sustainability Standards; and Engineering Contract Specifications. This plan applies to all aspects of environmental management for the project.

Where additional management requirements are identified outside the scope of the Environmental Management Plan and this sub-plan specific environmental controls will be identified and documentation/procedures updated.

3 ENVIRONMENTAL MANAGEMENT PLAN STRUCTURE

A series of environmental sub-plans, as referenced in the project's environmental management plan, aim to identify environmental risks and opportunities, and provide mitigation controls to manage those risks with an emphasis on the critical risks and controls.

As with the environmental management plan, sub-plans reference any IMS documents (including but not limited to, procedures, work instructions, and forms), customer specific requirements, and project specific documents required to execute the project.

Updates to sub-plans are subject to the document review and approval process detailed in the project's document control plan.

4 REFERENCED & ASSOCIATED DOCUMENTS

4.1 Legislation

The *Landscape South Australia Act 2019* (LSA Act) administered by the Department of Environment and Water (DEW) replaced the *Natural Resources Management Act 2004* on July 1 2021. Under this new legislation, natural resource management regions have been replaced by landscape regions. Landscape South Australia Murraylands and Riverland covers the project boundary

The Murraylands and Riverland Board works closely with land managers to reduce the impacts of pest plants and animals. The Board has a pest management program to assist land managers identify and manage pest plants and animals on their properties. This program is focused on:

- preventing the establishment of identified high risk pests
- assessing and prioritising existing pests
- providing information and advice about pest control

4.1.1 Weeds or Declared Plants

Pest plants that pose a significant threat to agriculture, environment and public are called declared plants and landowners have a legal responsibility to manage these plants.

The *Landscape South Australia Act 2019* (LSA Act) sets out the legal framework for:

- banning the sale of declared plants
- Declared plants must not be moved with without appropriate permits
- destroying or controlling infestations of declared plants
- notifying authorities when an infestation is detected

The weed classifications that have been referenced in this sub-plan in regards to weed management priorities in accordance with the LSA Act and Australian government requirements are summarised in the Table below and detailed in the following Sections.

Table 1: Weed classification and requirements

Weed Classification		Description	Requirements
Declared plants	DP	Weeds which require control and/or management under the LSA Act.	Declared plants must be managed in accordance with the LSA Act.
Priority weeds of the Murraylands and Riverland Region	PW	Declared weeds with a particular risk to the Murraylands and Riverland	Implementation of measures in Pest Management Plans for those priority weeds with a plan developed.
Weeds of National Significance	WoNS	Identified by the Australian government as posing a risk	WoNS have been identified although no additional management measures are required.
Environmental weeds	EW	Weeds that have not been declared under the LSA Act but pose significant risks	Environmental weeds have been identified although no additional management measures are required.

4.1.1.1 Declared Plants

Under the LSA Act, declared plants have different levels of regulation based on their properties and potential to spread:

- movement: declared plant must not be moved on a public road with appropriate permits
- sale: declared plant must not be sold
- control: Landholders are required to take action to destroy or contain certain declared plants on their property
- notification: the presence and locations of declared plants must be reported to the Landscape Region

Each declared plant is assigned a Class which determines the applicable level of regulation and associated requirements for management. Declared plants are also assigned a Category which determines the permitting, notification and penalties associated with the legislated requirements.

4.1.1.2 Priority Weeds of Murraylands and Riverland

The Landscape Region of the Murraylands and Riverland has identified several declared pest plants as priority weeds of the region. The Murraylands and Riverland Landscape Board have developed a Pest Plant Action Plan Murraylands and Riverland Region 2021-2026 and includes 25 priority pest plant species for the region.

4.1.1.3 Weeds of National Significance

Weeds of National Significance (WoNS) are those specified by the Australian Government based on an assessment process that prioritises weeds based on their invasiveness, potential for spread and environmental, social and economic impacts.

4.1.1.4 Environmental Weeds

While not declared plants or WoNS, environmental weeds are those that have significant potential for further spread if unregulated.

4.1.1.5 Landholder Priority Weeds

While not declared plants, some weeds have been identified as being a priority to prevent their spread through discussions with landholders within the project area.

4.1.2 Pest Animals

Introduced animals are not native to Australia. Pest animals are introduced animals that have been deliberately or accidentally released and are a serious threat to South Australia's primary industries, natural environment and public safety. Declared animals under the LSA Act may have restrictions in place for keeping; moving; selling; releasing; controlling and destroying.

4.2 Diseases

Notifiable diseases are animal diseases that are a national threat. There is a legal requirement that any suspected or diagnosed cases of notifiable diseases are reported immediately to the appropriate government department. An example of a notifiable disease under the *Livestock Act 1997 (SA)* is footrot in sheep and goats.

Another relevant example of disease management requirements under legislation is Phytophthora. Phytophthora dieback occurs in native bushlands, farmlands, nurseries and gardens. It is a major threat to some of Australia's threatened native species and ecological communities. *Phytophthora cinnamomi* is listed as a key threatening process under the *Environment Protection and Biodiversity Conservation Act 1999 (Cth)* with management required in accordance with the *Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomic* (Commonwealth of Australia, 2014).

4.3 Standards and Guidelines

Standards and guidelines applicable to weed, pest and disease management are listed in the following table.

Australian Standards and Guidance Material

National Farm Biosecurity Manual, Grazing Livestock Production (Animal Health Australia, 2018)

PIRSA Controlling Declared Weeds in SA (Government of South Australia, 2022)

4.4 Downer Documents

DOWNER DOCUMENTS	
POLICIES	
DG-ZHAN-PO200	Environmental Sustainability Policy
PRINCIPLES	
DG-ZH-PN002	10 Environmental Principles
PROCEDURES	
DG-DM-PR003	Operational Change Management Procedure
DG-QA-PR003	Internal Audits Procedure
DG-RM-PR003	Project Risk and Opportunity Management
DG-ZH-PR006	Incident Management Procedure
DG-ZH-PR007	Zero Harm Performance Monitoring and Reporting Procedure
DG-ZH-PR116.1	Inspections Procedure

STANDARDS	
DG-HR-ST013	Training & Competency Management Standard
DG-ZH-ST002	Legislative and Other Requirements Standard
DG-ZH-ST013	Zero Harm Worker Consultation Standard
DA-ZH-ST071	Flora and Fauna Management
DG-ZH-ST071.1	Biosecurity Management Standard
PROJECT SPECIFIC DOCUMENTS	
14171-DOW-PRM-PLN-0379	Environmental Management Plan
14171-DOW-PRM-PLN-0380	Waste Management Sub-plan
14171-DOW-PRM-PLN-0552	Biodiversity and Rehabilitation Management Sub-plan
14171-DOW-PRM-PLN-0383	Landholder Liaison Sub-plan
14171-DOW-PRM-PLN-0384	Erosion, Sedimentation and Drainage Management Sub-plan
14171-DOW-PRM-PLN-0385	Waterways Management Sub-plan
14171-DOW-PRM-PLN-0526	RMMAC Cultural Heritage Management Sub-Plan
14171-DOW-PRM-PLN-0574	First Peoples #2 Cultural Heritage Management Sub-Plan
14171-DOW-PRM-PLN-0575	Ngadjuri Nation Cultural Heritage Management Sub-Plan

4.5 Approvals and Client Documents

PROJECT APPROVALS AND CLIENT DOCUMENTS	
DA	TBC
ECS	ElectraNet Section 3 - Engineering Contract Specification (December 2020) Section 3.2a: Transmission Lines - Detailed Design Section 3.2b: Transmission Lines - Construction
SEMP	Scope for Environmental Management Plan EC.14171 – Project EnergyConnect Major Works Contract – Design and Construct ;
S&S	ElectraNet Safety and Sustainability Standards (October 2020)
REFERENCE PLANS AND REPORTS	
EIS	EnergyConnect - EIS Volume 1 Chapter 11, Flora and Fauna (JBS&G)
NRBM	National Farm Biosecurity Manual, Grazing Livestock Production (Animal Health Australia, 2018)
WSR	Weed Survey Report (November 2021) prepared by JBS&G for ElectraNet

5 DEFINITIONS

The following terms are used in this document.

Construction Activity Zone (CAZ)	<p>Construction Activity Zones (CAZ) include all ground disturbing activities, access routes and work areas associated with the project including:</p> <ul style="list-style-type: none"> ▪ New tracks, pads and facilities ▪ Maintenance of existing access tracks including grading, widening or stabilisation ▪ Areas of disturbance associated with demolition works. <p>These designated CAZ will be available as spatial data and/or PDF maps for all workers.</p>
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Downer Worker	All individuals working for Downer as employees, contingent labour hire, contractors, subcontractors, apprentices, trainees, and work experience students.
EMP	Environmental Management Plan for the construction phase of this project
INX	The Zero Harm database used to record, investigate and follow-up events, including audits, hazards, incidents, inspections, meetings, observations, risk assessments, reviews, and suggestions.

6 IDENTIFIED SPECIES

This section details the weeds, pest animal and diseases that have been identified within the project area

6.1 Weed Species

Weed presence and weed management are dealt with at a high level within the EIS. A weed survey report was completed by JBS&G in November 2021, the report plotted information along the proposed alignment for Project EnergyConnect, including information from the EIS and the results of a weed survey undertaken in November 2021.

The weed survey traversed along the alignment (where practicable) or along the immediately adjacent roads and tracks. Vegetation on the alignment was inspected on foot in over 200 locations and data on weed presence recorded.

Over 50 exotic plant species have been recorded in or near the proposed alignment in field surveys or databases. These are listed in table 2.

Table 2: Weeds identified within the project area

Common Name	Scientific Name	Status	Threat Rating	Weed Survey	Assessment Sites	BDBSA Records
Century Plant	<i>Agave americana var (NC)</i>		2			Y
Bridal Creeper	<i>Asparagus asparagoides</i>	DP, WoNS, PW	5			y
Onion Weed	<i>Asphodelus fistulosus</i>		2	Y	101c, 15b, 1b, 4a, 6a, 8c	y
Bearded Oat	<i>Avena barbata</i>		2			Y
Wild Oat	<i>Avena fatua</i>		2		101a, 3a	
Wild Turnip	<i>Brassica tournefortii</i>		2			Y
Brome Grass	<i>Bromus sp</i>		2		1c	
Ward's weed	<i>Carrichtera annua</i>		1	y	104, 105, 111, 112, 114, 101a, 11b, 14b, 14c, 15b, 25b, 26b, 27b, 4b, 6c, 8b, 8c	y
Thistle - Saffron	<i>Carthamus lanatus</i>		2	y	101a, 1b, 1c, 3c	Y
Star Thistle	<i>Carthamus calcitrapa</i>		2	y		y
Maltese Thistle	<i>Carthamus melitensis</i>		2	y	117	y
Stinkweed	<i>Dittichia graveolens</i>		2	y		y
Salvation Jane	<i>Echium plantagineum</i>	DP, PW	2	y		y
Cut leaf heron's bill	<i>Erodium cicutarium</i>		2		1b	y
Heron's bill	<i>Erodium sp</i>		2		20b, 25b, 26b, 28b	y

Common Name	Scientific Name	Status	Threat Rating	Weed Survey	Assessment Sites	BDBSA Records
	<i>Euonymus japonicus</i>		-			y
Fennel	<i>Foeniculum vulgare</i>		2			y
Potato weed	<i>Helitrapium europaeum</i>		1		117, 7c	y
Rupture wort	<i>Herniaria cinerea</i>		-			y
Blue Barley grass	<i>Horduem glaucum</i>		1			y
Wall barley grass	<i>Hordeum leporinum</i>		1			y
Sea barley grass	<i>Hordeum marinum</i>		1		101c, 15b, 1b, 4a, 6a, 8c	y
Barley grass	<i>Horduem sp.</i>		1	y	101a, 1b, 2a	y
Barley	<i>Hordeum vulgare</i>		1		3a, 4a	y
Cats Ears	<i>Hypochaeris glabra/ radicata</i>		1		1b	y
Sea-lavender	<i>Liminium sp.</i>		2	y	112, 114, 25b, 26b	y
African Boxthorn	<i>Lycium ferocissimum</i>	DP, WoNS PW	4	y	101a, 1b, 2a	y
Horehound	<i>Marrubium vulgare</i>	DP, PW	3	y	2a, 4a	y
small Burr medic	<i>Medicago minima</i>		2		114	y
Small leaf Burr Medic	<i>Medicago praecox</i>		2			y
Medic	<i>Medicago spp</i>		2	y	11c, 12b, 13c, 14b, 1c, 25b, 26b, 28b, 2c, 3b, 3c, 6c, 7c	y
Ice plant	<i>Mesembryanthemum crystallinum</i>		2		5c	
Threaded Iris	<i>Moraea setifolia</i>		2		11b, 15b, 1b	
Tree tobacco	<i>Nicotiana glauca</i>		2		2c, 3c	y
Thistle - Stemless	<i>Onopordum acaulon</i>		3	y	104, 101a, 1c	y
Matchheads	<i>Psilocaulon granulicaule</i>		2	y	111, 27b	y
Shrubby Twinleaf	<i>Roepera aurantiaca</i>		-			y
Common onion grass	<i>Romulea rosea var. australis</i>		2			y
Tiny bristle grass	<i>Rostaria pumila</i>		1		104, 111, 112, 114, 101a	
Wild Sage	<i>Salvia verbenaca</i>		2	y	111, 114, 117, 14c, 15c, 17c, 20a, 21c, 22c	y
Pincussion	<i>Scabiosa atropurpurea</i>		2			y
Arabian grass	<i>Schismus barbatus</i>		1			y
Sand catchfly	<i>Silene apetala</i>		1			y
Smooth mustard	<i>Sisymbrium erysimoides</i>		1			y
Wild Mustard	<i>Sisymbrium sp.</i>		1	y	104, 111, 114, 117	y

Common Name	Scientific Name	Status	Threat Rating	Weed Survey	Assessment Sites	BDBSA Records
London Mustard	<i>Sisymbrium Irio</i>		1			y
Nightshade - Blackberry	<i>Solanum nigrum</i>		2			y
Thistle - Milk	<i>Sonchus oleraceous</i>		1			y
Lesser sand-spurrey	<i>Spergularia diandra</i>		1			y

6.1.1 Priority Weeds

Declared weeds will be the priority for weed management within the project area. In addition, weeds that have been identified as a priority for landholders will be managed within the project area. Declared plants (DP) under the LSA Act, priority weeds (PW) of the Murraylands and Riverland, Weeds of National Significance (WoNS) and landholder priority weeds (LPW) identified within 5km of the project site are listed below. While Onion Weed is not considered a priority species, it is a weed of concern raised by a number of landholders.

Six of these declared species have been recorded within 500m of the transmission line corridor (Bridal creeper, Salvation Jane, African Boxthorn, Horehound, Silverleaf Nightshade and Skeleton Weed (at proposed laydown area only).

Table 3: Priority weed species for management during the project

Common Name	Scientific Name	DP	PW	WoNS	LPW
Bridal Creeper	<i>Asparagus asparagoides and Asparagus declinatus</i>	Y	Y	Y	
Buffel grass	<i>Cenchrus ciliaris, C. pennisetiformis</i>	Y	Y		
Spiny Burr- grass	<i>Cenchrus longispinus</i>	Y	Y		
Spiny Burr- grass	<i>Cenchrus spinifex</i>	Y			
Skeleton weed	<i>Chondrilla juncea</i>	Y	Y		
Boneseed	<i>Chrysanthemoides monilifera</i>	Y	Y	Y	
Golden Dodder	<i>Cuscuta campestris</i>	Y	Y		
Salvation Jane	<i>Echium plantagineum</i>	Y	Y		
False Caper	<i>Euphorbia terracina</i>	Y			
Gazania	<i>Gazania sp.</i>	Y	Y		
African Boxthorn	<i>Lycium ferocissimum</i>	Y	Y	Y	
Horehound	<i>Marrubium vulgare</i>	Y	y		Y
Riverina Pear	<i>Opuntia elata</i>	y	y	y	
Erect Prickly Pear	<i>Opuntia stricta</i>	Y	Y	Y	
Creeping Knapweed	<i>Rhaponticum repens</i>	Y	Y		
Three corner Jack	<i>Rumex hypogaeus</i>	Y			
Apple of Sodom	<i>Solanum linnaeanum</i>	Y			
Noogoora Burr	<i>Xanthium strumarium</i>	Y	Y		Y
Onion Weed	<i>Asphodelus fistulosus</i>				Y

African Lovegrass	<i>Eragrostis curvula</i>		Y		
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6.2 Pest Fauna Species

The following pest animals have been identified in the Murraylands and Riverland landscape region area. Key pest species for the region include: (source: <https://www.landscape.sa.gov.au/mr/pest-plants-animals/pest-animals>)

- Dingo (*Canis lupus*) / Wild dogs
- Deer (*Cervus elaphus*) (*Dama dama*)
- Rabbit (*Oryctolagus cuniculus*)
- House mouse (*Rattus norvegicus*)

(note: marine species have been excluded)

Wild Pigs have also been identified as a pest that the Landscape Board and Department of Environment and Water are aware of in the Riverland.

If any of the above species are identified on property, notification to the Murraylands and Riverland Landscape board is to be provided within 72hrs.

6.3 Diseases

6.3.1 Phytophthora

Phytophthora is a soil-borne plant pathogen which attacks the roots of susceptible plants causing disease, Phytophthora dieback, and death. There are approximately 25 species of Phytophthora with *Phytophthora cinnamomi* being more common in South Australia.

As the disease affects plant roots, Phytophthora is often difficult to detect until the plant is fatally affected. Susceptible species can suddenly die, while less susceptible species will show crown decline symptoms such as leaf yellowing, death of primary leaf bearing branches and epicormic growth, as well as necrotic areas at the base of the tree. Eventually, these less susceptible species will also die due to the symptoms.

There are no Phytophthora records within the transmission line corridor. The nearest unconfirmed reports in the Mount Lofty Ranges in Kaiserstuhl Conservation Park.

6.3.1.1 Risk Factors

This pathogen can spread easily through soil, water and organic matter and activities involving the movement of these mediums. The pathogen can remain dormant for long periods in dry conditions and is impossible to eradicate from infested areas.

Phytophthora prefers warm, moist conditions with temperatures between 15°C and 30°C and rainfall greater than 400 mm/year. It also prefers neutral to acid soils. Many native plants are susceptible to Phytophthora so the risk of spread is heightened in, or adjacent to, areas of native vegetation.

The likelihood of occurrence increases where:

- average annual rainfall exceeds 400 mm/year
- warm, moist conditions occur
- poor drainage is present, and
- susceptible plants are present.

Given the annual rainfall in the area is less than 400mm and the calcareous soil structure, it is unlikely for Phytophthora to be present in the area.

7 CONSTRUCTION IMPACTS

7.1 Introduction of New Species

The transport of vehicles, machinery and equipment to the project has the potential to introduce new weeds, pests or diseases.

7.2 Spread of Existing Species

Construction activities have the potential to spread of weeds, pests and diseases through the movement of soil and plant material on vehicles, machinery and equipment along the transmission line alignment. Further, construction activities involving clearing and disturbance increase the opportunities for weeds to establish in new areas.

7.3 Pest Animal Movement

Construction activities have the potential to increase pest animal occurrence through vegetation clearing providing corridors for pest animals to access previously inaccessible areas and increasing potential predation of native species. There is also a risk of putrescibles attracting pest animals to construction areas, if not properly managed.

8 WEED MITIGATION AND CONTROL

8.1 Landholder Cleaning Stations

In accordance with Project EnergyConnect, Weed Survey Report (May 2021), there was nothing recorded on the weed survey that would warrant implementing measures such as washdown locations or quarantine zones.

At the request of landholder's the following vehicle cleaning stations will be included:

Ronald and Leona Clarke – Rumble strips to be installed at both sides of property with capture barriers consisting of star droppers and shade cloth along the length of the strip. Rumble strips to be removed at the end of the works and land remediated.

DH Phillips Pty Ltd – One washdown to be installed and traffic restricted to that entrance only. Washdown to be a suitable high pressure washer. Washdown to be removed at the end of the works and land remediated as was.

Michael and Denise Schuppan – Rumble strips to be installed at both sides of property with capture barriers consisting of star droppers and shade cloth along the length of the strip. Rumble strips to be removed at the end of the works and land remediated.

8.2 Vehicle and Machinery Hygiene

The spread of weeds and pathogens can be minimised by implementing best practice hygiene standards. All vehicles, machinery and equipment will be inspected upon arrival to the project area to ensure they are free of soil or other organic materials and DG-ZH-FM071.2 Hygiene Inspection Form will be completed. If required, vehicles, machinery and equipment arriving to the project area will be cleaned down at the camp or commercial washdown facility to remove any soil or other organic materials prior to mobilising onto the transmission lines.

It is noted that there is potential for light vehicles to leave the project area at the end of the rostered shift. Therefore, at the beginning of each rostered swing, Light Vehicles are to be washed down to remove potential weed or seed carried from areas outside of the project area. This will either be at a commercial washdown facility or washdown location installed at Morgan Camp. Every washdown event is to be recorded.

Onsite Pre-starts will include a visual inspection of the vehicle and if there is a visual build-up of dirt or vegetative material. If Identified the vehicle is to be cleaned down either via brush down or at a washdown location.

8.2.1 Clean Down Areas

Cleaning stations, both temporary or semi-permanent, will be appropriately sized to cater for largest machinery or vehicle to be cleaned.

The project will include 4 rumble strip cleaning stations designed to remove soil from tyres prior to accessing properties. The rumble strips will include capture barriers consisting of star droppers and shade cloth along the length of the strip. Rumble strips to be removed at the end of the works and land remediated.

Two semi-permanent washdown areas will be installed and will include an impervious surface such plastic lined with rock. The perimeter of the wash down area will be bunded approximately 100 mm higher than the surrounding area to capture water runoff. The wash down bay will be graded to ensure wash water is directed to a sediment trap or basin, where required. Sediment traps may require routine desilting or dewatering with disposal of collected materials to a licensed waste disposal facility. Water Collected from washdown facilities is to be captured and removed from site.

In addition to the washdown location installed on a landholders property, a washdown facility will also be installed at the laydown area in North-West Bend to Clean vehicles and machinery when required.



Figure 1: Examples of clean down facilities

8.3 Minimise Disturbance

Ground disturbance and vegetation clearing can initiate weed growth. All ground and vegetation disturbance will be the minimum required for safe access during construction.

Different clearing methodologies will be implemented to minimise disturbance of vegetation rootstock and promote revegetation. See the biodiversity and rehabilitation management sub-plan for further information on clearing methodologies.

Vehicle movement will be minimised around the site by restricting movements only to nominated access tracks and CAZ areas. Only nominated entry and exit points are to be utilized for the project, and are to be monitored for potential soil tracked onto roads. A Water Cart will be utilized to reduce soil being tracked onto entry and exit points where required. Refer to Traffic Management Plan for proposed road treatments/upgrades for Turnout locations from public roads to access tracks. Entry and Exit points will be inspected via the **DG-ZH-FM116.2 Environmental Inspection Checklist** to ensure roadside soils and turnout points are weed free, and weed seed or pathogens are not being tracked to or from the project site.

8.4 No-Go Areas

No-Go areas will be utilised, where required, to prevent vehicles and personnel entering areas with a high density of weeds adjacent to the access route or work areas. In particular, this will be implemented for areas with a high density of declared or priority landholder weed species. This will be implemented to prevent the potential spread of weeds from these areas. Buffers may be implemented for areas identified to contain declared weed species.

The No-Go areas will be delineated onsite using bunting and signage ('Protected area- Keep out' or similar).

The No Go areas will also be discussed with work crews at pre-start work meetings and toolbox talks.

8.5 Weed Inspection and Control

Fortnightly formal inspections for weeds on active construction sites, access tracks to active construction sites, laydown areas and camp sites, and the adjacent areas, will be undertaken using the environmental inspection checklist. Where new declared weed infestations are identified, and potentially result from project activities, ElectraNet and Landscape Board will be notified immediately.

New weed infestations are also to be reported to the Landscape Board, this will allow notification to PIRSA. Identification of reportable weeds is required within 72hours of detection. A notification email should include the name of the weed, location, any control that was conducted, and contact details for follow up.

Contact details for reporting to Murraylands and Riverland Landscape Board are as follows;

Hannah Spronk
Riverland District Manager
Hannah.Spronk@sa.gov.au
0427061377

Weeds will be controlled, as required, during the project using herbicides or physical control. Declared and landholder priority weed species will be targeted for weed control.

Murraylands and Riverland Landscape Board may provide assistance in fortnightly weed inspections or provide guidance on management options if required.

8.5.1 Herbicides

Landholder consent is required prior to using any weed control chemical on the easement and consideration given to adjoining properties if in close proximity (especially of agriculture/horticulture crops are present).

Control of weeds using herbicides may be implemented to minimise the spread of weeds in particular declared and landholder priority weed species. Declared weeds will be controlled where identified within the CAZ area (with the consent of the landholder).

Typical herbicide types and applications to control weed growth is provided in the Table below. It should be noted that weed growth will be influenced by seasonal variations, such as rain.

Controlling declared weeds in South Australia will be in accordance with the control options provided on South Australian Government, Department of Primary Industries and Regions site for Controlling Declared Weeds.

[Controlling declared weeds in SA - PIRSA](#)

Table 4: Typical weed control periods (G. Pedlar pers. comm. 19/11/20)

Control Description	Herbicide	Application
Full weed removal/bare ground	Foliar	Every 4 weeks
Vegetation cover but prevent seeding	Foliar	Every 8 weeks
Prevent emergence/bare ground	Residual	6 monthly

All weed spraying will be undertaken with permission of the landholder and in accordance with *Agricultural and Veterinary Products (Control of Use) Regulations 2004* (SA) including competency for spraying Group I herbicides, as required.

8.5.2 Physical Control

Physical removal of weeds may be implemented to establish clean work areas and minimise the spread of declared weed species, as required. Hand removal of weeds is effective for smaller juvenile or isolated plants, while machinery may be required for more established plants with deeper root systems or larger areas of weed infestation.

Declared weeds that are physically removed will be transported to licensed waste disposal facility for disposal. Under the LSA Act, a permit is required for the movement of declared plants. If declared plants are

required to transported from site for disposal at a licensed waste disposal facility, a permit will be obtained from the Murraylands and Riverland Landscape Board. This process involves contacting the Landscape Board and providing details on type of declared plant/s; number or volume or plants; location plants were removed; method of transport; and disposal location. There is no cost for this permit, and the permit typically takes one week to be issued.

8.6 Rehabilitation

Progressive rehabilitation of disturbed areas, for locations not required for ongoing maintenance works, will be implemented to reduce the establishment of weeds. This rehabilitation will commence as soon as practicable after the area is no longer required.

Declared weeds growing in topsoil and stockpiled vegetative matter will be controlled by spraying or physical removal prior to re-spreading across disturbed areas during rehabilitation. For further information on rehabilitation requirements refer to the biodiversity and rehabilitation management sub-plan.

9 OTHER MANAGEMENT REQUIREMENTS

9.1 Pest Management

To minimise the impacts of pest animals from the project the following will be implemented:

- vegetation clearing and disturbance will be the minimum required for safe access during construction to minimise the creation of predator access routes.
- progressive rehabilitation of disturbed areas, for locations not required for ongoing maintenance works, will be implemented.
- waste will be stored appropriately to discourage pest animals including covering putrescible and organic wastes.
- regular servicing of all bins and disposal to a licensed waste disposal facility.

9.2 Disease Management

To minimise the impacts of diseases from the project the following will be implemented:

- vehicles, machinery and equipment will be inspected upon arrival to the project area to ensure they are clean and free of dirt, mud or other organic materials.
- all vehicles and personnel will stay to designated tracks and work areas.
- vegetation clearing and disturbance will be the minimum required for safe access.

Other specific management measures for disease are detailed below.

9.3 Training and Awareness

Downer recognises the importance of employee training and induction, and the critical role it plays in supporting the safe and environmentally responsible conduct of project operations. All personnel must be fully informed of their specific environmental obligations and are suitably trained and competent to undertake works in accordance with ElectraNet and Downer requirements.

Specific training for key operational staff prior to the commencement of works will include inspection and cleaning of vehicles, machinery and equipment to prevent the spread of weeds and diseases.

The site induction for all staff, sub-contractors and visitors will include weed, pest and disease identification and management.

9.4 Mitigation and Management Measures

The following table outlines the mitigation and management measures that will be implemented as far as practicable throughout the project to prevent potential impacts of weeds, pests and disease.

Ref	Mitigation Strategy	Location / Activity	Downer Procedure	Responsibility	Management Measure & Monitoring of Controls
Pre-Execution Phase					
NRBM	Establishment of entry/exit points to the Project area. No additional access points to the site are to be established.	Access tracks and points	GIS mapping	Construction Manager	Scouting of preferred access tracks and exit/entry points has been undertaken. Designated access tracks including entry and exit points shown on GIS mapping. No additional access tracks or points to be established without prior approval by ElectraNet.
S&S	Develop, implement, monitor and review a documented process or management plan that controls all aspects of the management of weeds, pests and pathogens in accordance with applicable legislation and good practice.	Prior to commencing onsite	This sub-plan	Environmental Advisor	This sub-plan has been developed to include: <ul style="list-style-type: none"> management of site-specific weed, pest and pathogens management of entry and egress points detailing disturbance prevention measures provisions for prevention of introduction, spread and transference of contamination between properties.
SEMP	All personnel must be fully informed of their specific environmental obligations and are suitably trained and competent to undertake works in accordance with ElectraNet and Downer requirements.	Prior to commencing works onsite	Project Induction	Construction Manager	Personnel undertaking the works will be competent for their role and tasks. Specialist environmental training, such as vehicle inspection and washdown, will be delivered for key personnel as required. All personnel are required to undertake the Project Induction which includes weed, pest and disease identification and management prior to commencement onsite.
SEMP NRBM	Ensure all vehicles, plant and earthmoving equipment are clear of significant soil/ vegetative matter prior to site mobilisation.	Prior to commencing onsite	DG-ZH-FM071.2 Hygiene Inspection Form	Construction Manager	All vehicles, machinery and equipment will be inspected, and cleaned as required, to remove all soil and plant material, prior to entering the project area. Completion of Hygiene Inspection Form as record of inspection of clean vehicles, machinery and equipment. Register of all vehicles, machinery and equipment for the project including hygiene inspection prior to commencing onsite.
Execution Phase					
SEMP	Prepare factsheets of weed and pest species for dissemination to site staff.	Ongoing throughout the Project	DG-ZH-ST013 Zero Harm Worker Consultation Standard	Environmental Advisor	Factsheets on key weed and pest species will be developed for communication with site staff via Noticeboards, Toolbox Talks etc.
SEMP	Movement, control and destruction of declared plants in accordance with the <i>Landscape South</i>	Ongoing throughout the Project	DA-ZH-ST071 Flora and Fauna Management	Environmental Advisor	Implementation of regulatory and best practice requirements including obtaining a permit to transport declared plants on public roads through the Department of Primary Industries and Regions as

Ref	Mitigation Strategy	Location / Activity	Downer Procedure	Responsibility	Management Measure & Monitoring of Controls
	<i>Australia Act 2019</i> and PIRSA Controlling Declared Weeds in SA webpage.				detailed ins Section 8.5.2
SEMP	Management of entry/exit points so that site soils (potentially containing weed propagules) are not tracked to or from the site or between landholders.	Access tracks and points	GIS mapping	Construction Manager Environmental Advisor	All vehicles and machinery restricted to CAZ including use of designated access tracks and entry/exit points. Designated access tracks and entry/exit points shown on GIS mapping. Implementation of inspection and clean down requirements for vehicles, plant and earthmoving equipment in accordance with Section 8.2. Water Truck will be utilized to reduce dust and soils being tracked from site.
SEMP NRBM	Restrict vehicle access to defined tracks and work areas and away from locations with known weed presence.	Project area	DA-ZH-ST071 Flora and Fauna Management	Construction Manager Site Supervisor	Use of designated access tracks and entry/exit points in accordance with GIS mapping. Where necessary, signs and/or flagging will be erected to restrict access into infested weed areas.
SEMP	Prohibition of importation of weeds/seeds/ propagules or infested material into the work site. Maintain records to verify sources.	Project area	DA-ZH-ST071 Flora and Fauna Management	Construction Manager Environmental Advisor	All fill or other soil based materials imported into the project area to be verified as weed and phytophthora free. Record from the supplier confirming the fill or soil material being weed free.
SEMP	Topsoil stockpiles managed to ensure they do not become infested with weeds.	Project area	DA-ZH-ST071 Flora and Fauna Management	Environmental Advisor	Weed growth on stockpiles will be inspected and management measures, such as weed control or covering, will be implemented as required.
	Removal of ground cover and exposure of soil to be minimised to reduce opportunities for weed establishment.	Project area	DA-ZH-ST071 Flora and Fauna Management	Construction Manager	Area of disturbance to be minimised to as low as operationally practicable as detailed in Section 8.3.
SEMP S&S	Regular monitoring of weeds.	Ongoing throughout works	DA-ZH-FM116.9 Environmental Inspection Checklist	Environmental Advisor	Fortnightly formal inspection of weeds on active construction sites and access tracks, laydown areas and camp sites, and adjacent areas, though Environmental Inspection Checklist Where new declared weed infestations are identified, and potentially result from project activities, ElectraNet will be notified immediately. Implementation of weed control measures, such as spot spraying of declared weeds, as required.
SEMP	Ensure waste is appropriately stored to discourage pest animals	Ongoing throughout	DA-ZH-FM116.9	Environmental Advisor	All putrescible waste to be stored in covered bins or vehicles

Ref	Mitigation Strategy	Location / Activity	Downer Procedure	Responsibility	Management Measure & Monitoring of Controls
	including covering putrescible and organic storages associated with crib rooms and offices.	works	Environmental Inspection Checklist		onsite. Regular servicing of all bins and disposal to a licensed waste disposal facility. Fortnightly inspection of waste management through Environmental Inspection Checklist.
SEMP	Management measures to be implemented should a landholder complain about weed infestation in or adjacent to the easement.	Ongoing throughout works	INX Landholder Liaison Sub-plan	Environmental Advisor	All landholder complaints will be verbally reported to ElectraNet within 1 hour of identification outlining factual information. Landholder complaints will be reported through ElectraNet's online Incident Management System (IMS). Further information on management of landholder complaints is detailed in the Landholder Liaison Sub-plan.
SEMP	All environmental incidents identified during the project must be recorded, reported and managed effectively.	Ongoing throughout project	INX	Environmental Advisor	All environmental incidents will be verbally reported to ElectraNet within 1 hour of identification outlining factual information. Environmental incidents and hazards will be reported through ElectraNet's online Incident Management System (IMS).
Post-Execution Phase					
SEMP	Disturbed areas to be progressively rehabilitated following construction work to reduce the opportunity for weed re/establishment.	Completion of works at each location	DA-ZH-FM116.9 Environmental Inspection Checklist	Construction Manager	Implementation of progressive rehabilitation of disturbed areas, for locations not required for ongoing maintenance works.
	Post construction inspection to ensure appropriate weed control has been implemented and opportunities for weed establishment minimised.	Following completion of works	Post Construction Checklist	Environmental Advisor	Inspection of the disturbed areas for declared weed species. Implementation of management measures, such as spot spraying or manual control, as required.

10 MONITORING & REPORTING

In addition to the requirements outlined in the Environmental Management Plan, the following table outlines the monitoring and reporting to be undertaken during the pre-execution and execution phases of the project relating weed, pest and disease management.

Monitoring & Reporting Requirements	Responsibility	Reference
Pre-execution Phase		
Undertake pre-construction survey to identify presence and location of weeds relevant to the project site.	Environmental Advisor	SEMP
Execution Phase		
Record from the supplier confirming the fill or soil material imported into the Project area is weed and Phytophthora free	Environmental Advisor	SEMP
ElectraNet must be informed immediately of the discovery of any Weeds of National Significance (WoNS) or other new weeds, pests or pathogens on landholder properties	Environmental Advisor	S&S

11 REFERENCES

Animal Health Australia, 2018, National Farm Biosecurity Manual, Grazing Livestock Production

Commonwealth of Australia, 2014, Threat abatement plan for disease in natural ecosystems caused by Phytophthora cinnamomic




Government of South Australia, 2022, PIRSA Controlling Declared Weeds in SA [Controlling declared weeds in SA - PIRSA](#) (Webpage)




Government of South Australia, 2020, NatureMaps, Available at: <https://data.environment.sa.gov.au/NatureMaps/Pages/default.aspx>

In addition to the requirements outlined in the Environmental Management Plan, the following table outlines the monitoring and reporting to be undertaken during the pre-execution, execution, and post-execution phases of the project relating weed, pest and disease management.

**ANNEX A –
PROJECT ENERGYCONNECT - WEED SURVEY REPORT
November 2021**

**ANNEX B –
FACT SHEETS - DECLARED WEEDS WITHIN 500M OF
CORRIDOR**

Name	Photo	Description
Bridal Creeper		<p>Bridal creeper has long, twisting stems up to 3 m in length, branching extensively. Above ground growth is annually produced from its perennial underground root system of tubers.</p> <p>Bridal creeper has soft, shiny green 'leaves' 4-30 mm wide and 10-70 mm long which occur along the length of wiry green stems.</p> <p>Stems emerge annually in autumn from a mat, 0-10 cm deep, of branching rhizomes that bear numerous fleshy tubers.</p> <p>White flowers with 6 petals, 5-8 mm in diameter appear in early spring. Greenberries turn pink then red/burgundy in late spring-early summer.</p> <p>It forms a thick mat of underground tubers which impedes the root growth of other plants and often prevents seedling establishment. Rare native plants, such as the rice flower <i>Pimelea spicata</i>, are threatened with extinction by bridal creeper. It also cause losses to primary industries (eg by shading citrus and avocado trees and interfering with fruit picking), especially in the Murray River irrigation area</p>
Salvation Jane / Patersons Curse		<p>An erect annual plant (sometimes living into a second year), usually reaching about 60cm high and covered in short bristly hairs. Leaves produced in autumn and winter are large, oblong in shape with a short stalk and have distinct lateral veins; they grow flat on the ground from a solid taproot to form a rosette.</p> <p>Flowers are attached along one side of the stem branches, with a blue to purple trumpet shaped flower.</p> <p>It can rapidly establish a large population on disturbed ground and competes vigorously with both smaller plants and the seedlings of regenerating overstorey species.</p>
African Boxthorn		<p>African boxthorn is a woody shrub reaching up to 4 metres in height, with glossy leaves and an extensive root system incorporating a long branched taproot. The trunk and branches are light brown and smooth when young, turning darker brown or grey with age. The twigs end in a hard, sharp spike or thorn.</p> <p>The white flowers are usually produced in summer, although flowering can occur through most of the year. The fruit is an oblong berry approximately 10 mm long, going from a smooth green appearance to bright orange-red when ripe. Fruits contain numerous small, oval, flattened seeds. Seeds germinate at any time of the year and generally take two years to reach flowering stage.</p> <p>African boxthorn invades pastures and waste areas, reducing access and causing difficulty in stock movement. The spines can injure people, animals and vehicle tyres</p>

<p>Horehound</p>		<p>Horehound is a bushy perennial plant, 30 to 80cm high, with deeply crinkled leaves. The stems and lower surface of the leaves are covered with white woolly hairs, giving the plant a silvery appearance. The leaves have a "crinkly" appearance and the leaf margins have rounded teeth. The white flower clusters are densely packed, forming balls of flowers that surround the upper stems at each leaf node.</p>
<p>Silverleaf Nightshade</p>		<p>Silverleaf nightshade is a 'difficult to kill' perennial herb that spreads by seeds and root fragments. It reduces crop yields and is poisonous to stock. Silverleaf Nightshade grows to 800mm high, leaves are silver-green and have approximately 4mm long yellow prickles on the undersides and on the stems. Flowers are to 35mm in diameter, with 5 fused purple petals and prominent yellow stamens. Fruit are round and berry-like, changing from green stripes to mottled yellow and orange when mature fruit contain up to 150 seeds. Root system can penetrate to a depth of 2 metres.</p>
<p>Skeleton Weed</p>		<p>Native to southern Europe, the Mediterranean and south-west Asia. Relatively long-lived perennial with a deep tap root; stems and roots exude white latex when damaged. Single stem to each rosette, 50-125 centimetres tall, with numerous branches. The stems and branches are hairless except for a few rigid hairs at the base of the stem. Hairless leaves initially produced as many-leaved rosettes. Rosette leaves are spear shaped; 40-120 millimetres long and 15-45 millimetres wide and can often be purple in colour. Leaf margins are deeply toothed with the lobes pointing backwards towards the base. Smaller leaves are sometimes borne among the branches of flowering stems. numerous, bright yellow heads, each with nine to 12 florets. Heads can be solitary or in groups of two to five and are attached directly on the branch. Flowers are about 20 millimetres in</p>

		diameter.
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