

Annual EPBC Act Approval Compliance Report

North East Link Program

EPBC Approval: 2018-8142

Reporting Period: 18 May 2021 - 18 May 2022

08 July 2022

NEL-PW-NEL-9990-EEC-REP-0002

Security Classification: OFFICIAL

Declaration of Accuracy

I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both.

Signed:



Full Name: Duncan Elliott

Position: CEO of NELP, in my capacity as a statutory delegate of the Secretary to the Department of Transport (the Project Authority for North East Link Program).

Organisation: North East Link Program (NELP) (a division of the Major Transport Infrastructure Authority (MTIA) (ABN 69 9812 087 82)

Date: 7 July 2022

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1 Introduction

1.1 Purpose of this report

This compliance report covers the reporting period between 18 May 2021 and 18 May 2022 in respect of EPBC Approval 2018/8142 issued to the Department of Transport on 12 December 2019, as varied on 28 August 2020 and 29 June 2021 (EPBC Approval 2018/8142). The purpose of this report is to document compliance with the conditions for the Environment Protection Biodiversity Conservation Act 1999 (EPBC Act) Approval 2018/8142 Condition 12. Details of compliance are provided, and where appropriate, the timing of completion of individual actions is identified.

The key dates that relate to the approval are detailed in Table 1.

The map as presented in the EPBC Approval 2018/8142 is available in Appendix A.

Table 1 – Key NELP EPBC dates

Action	Key date
Commonwealth approval	12/12/2019
Commencement of the action	18/05/2020
Commonwealth Variation Approval	28/08/2020
Commonwealth Variation Approval	29/06/2021
Expiry of the Commonwealth Approval	03/10/2039

2 Description of activities

2.1 Overview of project

The North East Link Project (NELP) (a division of the Major Transport Infrastructure Authority (MTIA)), on behalf of the Victorian State government, is currently constructing the North East Link (NEL) Project (referred to herein as 'the Project'). The NEL is a new freeway-standard road connection to the north-east of the Melbourne Central Business District that would complete Melbourne's ring road. Specifically, the NEL will connect the Metropolitan Ring Road (M80) to the Eastern Freeway and includes works along the Eastern Freeway from near Hoddle Street to Springvale Road. The NEL is an approved action under EPBC Approval 2018/8142.

The Project has been broken down into phases to allow seamless delivery. The initial phase - Early Works - allows for utilities and secondary infrastructure to be prepared prior to the major development. Works include the relocation of utilities, relocation of Sports and Recreation spaces and development of Park and Ride services for Public Transport linkages. The following phases - Primary (Tunnelling) Package, and Secondary (Freeway) Packages - are the divisions of the road connections relevant to the development and construction of the tunnel, and interchanges with the M80 and Eastern Freeway and ancillary works respectively.

2.2 Works undertaken during the reporting period.

The following works have been undertaken in the approval area during the 2021-2022 reporting period:

2.2.1 Early works

- Utilities relocations
- Power utilities relocations along Lower Plenty Road and Greensborough Road and the Eastern Freeway
- Communications utilities relocation along Lower Plenty Road and Greensborough Road
- Gas transmission main relocations along Greensborough Road and Lower Plenty Road
- Several utilities relocations work at Borlase Reserve, Yallambie including sewer reticulation, water mains, a pressure reducing station and Banyule Creek temporary diversion
- Relocation of the Yarra East Main Sewer
- Construction of ball stop net fencing along the project boundary at Trinity Grammar, Carey Grammar and Marcellin College
- Water mains replacement works under the Eastern Freeway at Balwyn North at Koonung Creek
- Communications utilities around the northern zone at Greensborough Road and adjacent streets, including relocation of a Telco tower at Watsonia Station
- Ford Park Sport Ground Upgrades - upgrade to turf with drainage, new pavilions, lighting, car parking, players shelters, spectator facilities, running track, fencing, demolition of decommissioned buildings and redundant infrastructure
- Binnak Park Sport Ground Upgrades (scope as per Ford Park)
- Bulleen Park and Ride - New premium bus station incorporating multi-level carpark, bus interchange, road network improvements and a public open space 'green roof'.
- Simpson Barracks transfer of land - tree and vegetation clearing, erection of perimeter fence and fire/patrol roads (hardstand), construction of new buildings, demolition of decommissioned buildings, network communications
- Jemena Zone Substation - design and construct a Zone Substation to supply construction power for the North East Link tunnel boring machines
- Demolition of various commercial and residential properties in Bulleen, Yallambie and Macleod

3 Approval condition compliance

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation															
1	Unless otherwise agreed to in writing by the Minister, the approval holder must not clear more than:	Yes																	
	a) 139 Matted Flax-lily plants and/or patches of Matted Flax-lily		Compliant	<p>The Project has so far salvaged 130 of the 139 plants/patches of Matted Flax-lily and is therefore compliant within the scope of the approval</p> <table border="1"> <thead> <tr> <th>Pre-Clearance survey</th> <th>Date of Salvage</th> <th>Location</th> <th>Number of plants</th> </tr> </thead> <tbody> <tr> <td>March 2020</td> <td>01/04/2020</td> <td>Simpson Barracks</td> <td>7</td> </tr> <tr> <td>July 2020</td> <td>02/09/2020</td> <td>Simpson Barracks</td> <td>20</td> </tr> <tr> <td>April 2021</td> <td>23/08/2021-24/08/201</td> <td>Simpson Barracks</td> <td>103</td> </tr> </tbody> </table>	Pre-Clearance survey	Date of Salvage	Location	Number of plants	March 2020	01/04/2020	Simpson Barracks	7	July 2020	02/09/2020	Simpson Barracks	20	April 2021	23/08/2021-24/08/201	Simpson Barracks
Pre-Clearance survey	Date of Salvage	Location	Number of plants																
March 2020	01/04/2020	Simpson Barracks	7																
July 2020	02/09/2020	Simpson Barracks	20																
April 2021	23/08/2021-24/08/201	Simpson Barracks	103																

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
				The locations of the Matted Flax-lily salvaged to date are presented in Appendix B - Salvaged MFL Locations
	b) 11.866 hectares of Plains Grassy Woodland within Simpson Barracks		Compliant	<p>The Project has as of 06 May 2022 cleared 4.113 ha of Plains Grassy Woodland of the 11.866 ha allowed in this condition and is therefore compliant with this approval condition.</p> <p>The Early Works contractors have designed and constructed the new boundary fence, access track, ANZAC day area and associated utilities relocations at Simpson Barracks.</p> <p>2.706 ha of Plains Grassy Woodland cleared was recorded in the previous annual compliance report. The Early Works project activities have now been completed within Simpson Barracks and the impacts reconciled to confirm actual impacts on ground (4.113 ha).</p> <p>Native vegetation removal for Early Works is reported through 'Native Vegetation Removal' reports produced by qualified ecologists, as per the Victorian Guidelines. The ecologists have confirmed that, to date, 4.113 ha of Plains Grassy Woodland has been removed at Simpson Barracks, shown in Appendix A.</p> <p>The total area to be removed at Simpson Barracks will be confirmed upon completion of design of the Project's Primary Package.</p>
2	To compensate for the clearing the number of Matted Flax-lily plants and/or patches of Matted Flax-lily:	Yes		

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	a) Prior to any clearance, the approval holder must undertake a pre-clearance survey to identify the total numbers of Matted Flax-lily plants and patches of Matted Flax-lily that, if not salvaged, would be impacted by the approved action		Compliant	As outlined above, pre-clearance surveys have occurred in March 2020, July 2020 and April 2021 prior to salvaging events of the Matted Flax-lily. The pre-clearance surveys were undertaken in accordance with the Matted Flax-lily Salvage and Translocation Plan (October 2021). The Project is therefore compliant with this condition.
	b) Prior to construction, the approval holder must salvage all Matted Flax-lily plants and patches of Matted Flax-lily that were previously recorded in a pre-clearance survey and that would otherwise be impacted due to the approved action. In the event that construction occurs in stages, prior to commencing each stage the approval holder must salvage all Matted Flax-lily plants and patches of Matted Flax-lily that were previously recorded in a pre-clearance survey and that would otherwise be impacted by that stage of work		Compliant	MFL salvage and translocation has been completed for the early works stage and to facilitate the Primary (Tunnelling) Package of works in accordance with the Matted Flax-lily Salvage and Translocation Plan (October 2021) and is therefore compliant with this condition Salvage (removal) will occur in three broad stages; to facilitate the Early Works program (completed), and a larger salvage to facilitate the Primary (completed) and Secondary (Freeway) Packages of Works (future). NELP is recording salvage and translocation information as it is completed in a Matted Flax-lily Asset Management Register spreadsheet

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	<p>c) The approval holder must propagate the salvaged Matted Flax-lily plants and patches and translocate them, excepting some Matted Flax-lily plants and patches that may be kept as an insurance population, to a recipient site. The number of Matted Flax-lily plants and patches kept as an insurance population must not be the majority of Matted Flax-lily plants or patches propagated. All propagated Matted Flax-lily plants and patches of Matted Flax-lily, excepting those kept as an insurance population, must be translocated within 2 years of salvage of each Matted Flax-lily plant and patch of Matted Flax-lily.</p>		Compliant	<p>As outlined in the Matted Flax-lily Salvage and Translocation Plan Rev 4 (Oct 2021), sufficient material was taken from each plant to generate the required six (6) clones per plant/ patch, the Project is therefore compliant with this condition.</p> <p>The individuals were salvaged and processed at the selected nursery in accordance with the Matted Flax-lily Salvage and Translocation Plan Rev 4 (October 2021). At least six (6) clones have been propagated from each original individual and are surviving at time of reporting. No MFL have been translocated to the identified recipient site(s).</p>
	<p>d) The approval holder must manage the recipient site for a period of 10 years commencing on the date that the first Matted Flax-lily plant or patch of Matted Flax-lily is translocated to the recipient site</p>		Not Applicable	<p>Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred.</p>

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	e) The approval holder must monitor the recipient site for a period of at least 10 years, commencing on the date that the first Matted Flax-lily plant or patch of Matted Flax-lily is translocated to the recipient site and, concluding no sooner than 5 years after the last Matted Flax-lily plant or patch of Matted Flax-lily is translocated to the recipient site		Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred.
	f) The approval holder must, until otherwise agreed in writing by the Minister, provide the Department with a report each year as part of the compliance report, which must detail the numbers of Matted Flax-lily plants and patches that have been translocated to the recipient site and the numbers of translocated and propagated plants and patches that have survived until the end of the period reported on. The report must also document threats to the translocated Matted Flax-lily plants and patches and any management actions, including corrective actions, taken or proposed		Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred.
3	By implementing contingency measures, the approval holder must	No	Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred.

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	<p>ensure that a minimum of 85 per cent of 4 times the number of salvaged Matted Flax-lily plants and patches have survived at the recipient site at least 5 years after the date the last Matted Flax-lily plant or patch, excepting plants or patches from the insurance population, is translocated to the recipient site. The approval holder must ensure that the location of each translocated Matted Flax-lily plant and patch is recorded in the Atlas of Living Australia and Victorian Biodiversity Atlas within 6 months of being translocated</p>			
4	<p>If the Minister is not satisfied that the requirements of condition 3 have been, or are likely to be, achieved, and has given the approval holder written notice to this effect, the approval holder must:</p>	No		

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	a) Within 1 year of receiving written notification by the Minister to this effect, plant propagated Matted Flax-lily plants and/or patches to the recipient site in accordance with directions made by the Minister		Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred.
	b) Provide the Department with a report each year for an additional 5 years as part of the compliance report, which must detail the numbers of Matted Flax-lily plants and patches that have been translocated to the recipient site and the numbers of translocated and propagated plants and patches that have survived until the period reported on. The report must also document threats to the translocated Matted Flax-lily plants and patches and any management actions, including corrective actions, taken or proposed		Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	c) Each 12 months, for the following 5 years, the approval holder must translocate an additional number of Matted Flax-lily plants and/or patches to the recipient site equal or greater than the number which have not survived during the preceding 12 months. The translocated Matted Flax-lily plants and patches must be sourced from the plants and patches propagated as required under condition 2c		Not Applicable	Translocation of the Matted Flax-Lily to the recipient sites has not yet occurred
5	Prior to the commencement of the action at Simpson Barracks, to compensate for the loss of up to 11.866 hectares of Plains Grassy Woodland, the approval holder must establish an offset in accordance with the Victorian Government Guidelines and provide to the Department written evidence that DELWP is satisfied that the offset meets the requirements of the Victorian Government Guidelines. Within 2 weeks of the offset being established, the approval holder must provide the Department with evidence that the offset has been established	Yes	Compliant	In accordance with Victorian Government guidelines, the Project has established native vegetation offsets to compensate for the loss of the 4.113 ha of the allowed 11.86 ha of Plains Grassy Woodland removed to date at Simpsons Barracks; the Project is therefore compliant with this part of the condition. Offsets were secured and evidence provided to the Department in 2020.

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation															
6	The approval holder must implement the Studley Park Gum Management Framework for the period of effect of the approval. The approval holder must provide the Department with a report, as part of the compliance report, every year for 3 years, commencing from the date the first Studley Park Gum tree is planted in accordance with the Studley Park Gum Management Framework. This report must detail the number, condition, and threats faced by the Studley Park Gum trees that have been planted, as well as any maintenance or corrective actions that have been taken or are proposed	Yes	Compliant	<p>Implementation of the Studley Park Gum (SPG) Management Framework (Oct 2021) was undertaken during this reporting period, the Project is therefore compliant with this condition. The SPG Management Framework is available on the NELP website.</p> <p>A Studley Park Gum Management Plan (Nov 2021) has been developed and implemented in consultation with the Victorian Department of Environment, Water, Land and Planning (DELWP) during the period of this compliance report as per the Studley Park Gum Management Framework obligations.</p> <p>Three recipient sites were prepared in early 2021, with planting commencing across three recipient sites on 24 May 2021 and on 4 June 2021. The table below outlines the monitoring events undertaken during the reporting period 2021/2022</p> <table border="1"> <thead> <tr> <th>Monitoring Event</th> <th>Date</th> <th>Living Plants (no.)</th> </tr> </thead> <tbody> <tr> <td>Baseline Monitoring</td> <td>June 2021</td> <td>343</td> </tr> <tr> <td>2</td> <td>Nov 2021</td> <td>154 (only 2 sites assessed)</td> </tr> <tr> <td>3</td> <td>Jan 2022</td> <td>142 (only 2 sites assessed)</td> </tr> <tr> <td>4</td> <td>May 2022</td> <td>316</td> </tr> </tbody> </table>	Monitoring Event	Date	Living Plants (no.)	Baseline Monitoring	June 2021	343	2	Nov 2021	154 (only 2 sites assessed)	3	Jan 2022	142 (only 2 sites assessed)	4	May 2022	316
Monitoring Event	Date	Living Plants (no.)																	
Baseline Monitoring	June 2021	343																	
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3	Jan 2022	142 (only 2 sites assessed)																	
4	May 2022	316																	

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
				<p>On 9-10 June 2021, Melbourne experienced a major storm which resulted in minor localised flooding within the three recipient sites. Supplementary planting was required due to losses of Studley Park Gum saplings across the three sites.</p> <p>The SPG annual monitoring report (Appendix C) detailing the number, condition, and threats faced by the SPG trees, as well as any maintenance and/or corrective actions will be emailed to the Department, the Project is therefore compliant with this condition.</p>
7	The approval holder must notify the Department in writing of the date of commencement of the action within 10 business days after the date of commencement of the action	Yes	Compliant	Letter was sent to DAWE on 28 May 2020 notifying of the commencement of the action on 18 May 2020, the Project is therefore compliant with this condition
8	The approval holder must maintain accurate and complete compliance records	Yes	Compliant	NELP is maintaining compliance records in accordance with this condition. The Project is therefore compliant with this condition
9	If the Department makes a request in writing, the approval holder must provide electronic copies of requested compliance records to the Department within the timeframe specified in the request, or an alternative timeframe agreed in writing with the Department	No	Not Applicable	Not Applicable - no request has been made at the time of preparing this report.
10	The approval holder must:	Yes		

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	a) Publish the Salvage and Translocation Plan and Studley Park Gum Management Framework, not as an attachment or appendix within a larger document, on the website within 20 business days of the date of this approval of the action, or of the date a revised action management plan is submitted to the Minister or the Department, unless otherwise agreed to in writing by the Minister		Compliant	Plans were initially published on the North East Link website on 19/12/2019. The 'Salvage and Translocation Plan' (Rev 4 updated Oct 2021) and 'Studley Park Gum Management Framework' (Rev 3 updated Oct 2021) remain available on the website. The Project is therefore compliant with this condition.
	b) Exclude or redact sensitive ecological data from plans published on the website or provided to a member of the public; and		Compliant	No information was required to be redacted. The Project is therefore compliant with this condition
	c) Keep plans published on the website until the end date of this approval		Compliant	The revised Plans were published in October 2021 and these plans continue to be available on the website. The Project is therefore compliant with this condition
11	The approval holder must ensure that any monitoring data (including sensitive ecological data), surveys, maps, and other spatial and metadata	Yes	Compliant	The SPG annual compliance report (Appendix C) containing monitoring data will be provided to speciesmetadata@environment.gov.au as required by the

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	required under conditions of this approval, is prepared in accordance with the Department's Guidelines for biological survey and mapped data (2018) and submitted electronically to the Department as part of the reports required under condition 2f, condition 4b and condition 6			Department's Guidelines for biological survey and mapped data (2018), the Project is therefore compliant with this condition.
12	Unless otherwise agreed to in writing by the Minister, the approval holder must prepare a compliance report for each 12-month period following the date of commencement of the action until the approval expires, or otherwise in accordance with an annual date that has been agreed to in writing by the Minister. The approval holder must:	Yes		This report has been prepared to satisfy this condition. It will be published on the NELP website. The Project is therefore compliant with this condition.
	a) Publish each compliance report on the website within 60 days following the relevant 12-month period;		Compliant	The compliance report for the 2020/21 reporting period was completed 18 th May 2021 and published on the website by 15 th July 2021. The Project is therefore compliant with this condition The commencement of the 2021/2022 annual report was the 18 th May 2021, and as such, the due date for this report is 16 th July 2022.

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	b) Notify the Department by email that a compliance report has been published on the website and provide the weblink for the compliance report within five business days of the date of publication;		Compliant	<p>The Department was notified by email on 15th July 2021 that the 2020/2021 report was published. The Project is therefore compliant with this condition.</p> <p>The Department will be notified by email at such time as the 2021/2022 report is published.</p>
	c) Keep all compliance reports publicly available on the website until this approval expires;		Compliant	The report will remain publicly available on the website. (A link will be provided to DAWE as per Condition 12b). The Project is therefore compliant with this condition.
	d) Exclude or redact any sensitive ecological data or other sensitive information from compliance reports published on the website; and		Not Applicable	The compliance report has been reviewed to determine if any sensitive ecological data was required to be redacted.

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	e) Where any sensitive ecological data or other sensitive information has been excluded from the version published, submit the full compliance report to the Department within 5 days of publication		Not Applicable	The compliance report has been reviewed to determine if any sensitive ecological data was required to be redacted.
13	The approval holder must notify the Department in writing of any: incident, non-compliance with the conditions, or non-compliance with the commitments made in plans. The notification must be given as soon as practicable, and no later than two business days after becoming aware of the incident or non-compliance. The notification must specify:	Yes	Compliant	There have been no notifiable incidents or non-compliances during the reporting period. The Project is therefore compliant with this condition.
	a) Any condition which is or may be in breach;		Compliant	

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	b) A short description of the incident and/or non-compliance; and		Compliant	
	c) The location (including co-ordinates), date and time of the incident and/or non-compliance. In the event the exact information cannot be provided, provide the best information available		Compliant	
14	The approval holder must provide to the Department the details of any incident or non-compliance with the conditions or commitments made in plans as soon as practicable and no later than 10 business days after becoming aware of the incident or non-compliance, specifying:	No	Not Applicable	There have been no notifiable incidents or non-compliances during the 2021/2022 EPBC compliance reporting period.
	a) Any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future;		Not Applicable	
	b) The potential impacts of the incident or non-compliance; and		Not Applicable	

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	c) The method and timing of any remedial action that will be undertaken by the approval holder		Not Applicable	
15	The approval holder must ensure that independent audits of compliance with the conditions are conducted as requested in writing by the Minister	No	Not Applicable	Not Applicable - no request has been made for an independent audit.
16	For each independent audit, the approval holder must:	No		
	a) Provide the name and qualifications of the independent auditor and the draft audit criteria to the Department		Not Applicable	Not applicable - refer to Condition 15.
	b) Only commence the independent audit once the audit criteria have been approved in writing by the Department		Not Applicable	Not Applicable - refer to Condition 15.
	c) Submit an audit report to the Department within the timeframe specified in the approved audit criteria		Not Applicable	Not Applicable - refer to Condition 15.
17	The approval holder must publish the audit report on the website within 10 business days of receiving the	No	Not Applicable	Not Applicable - refer to Condition 15.

Condition No.	Approval Condition	Condition Currently Triggered	Compliance	Comments and supporting documentation
	Department's approval of the audit report and keep the audit report published on the website until the end date of this approval			
18	Within 30 days of the completion of the action, the approval holder must notify the Department in writing and provide completion data	No	Not Applicable	Not Applicable - the action has not been completed.

4 New environmental risks

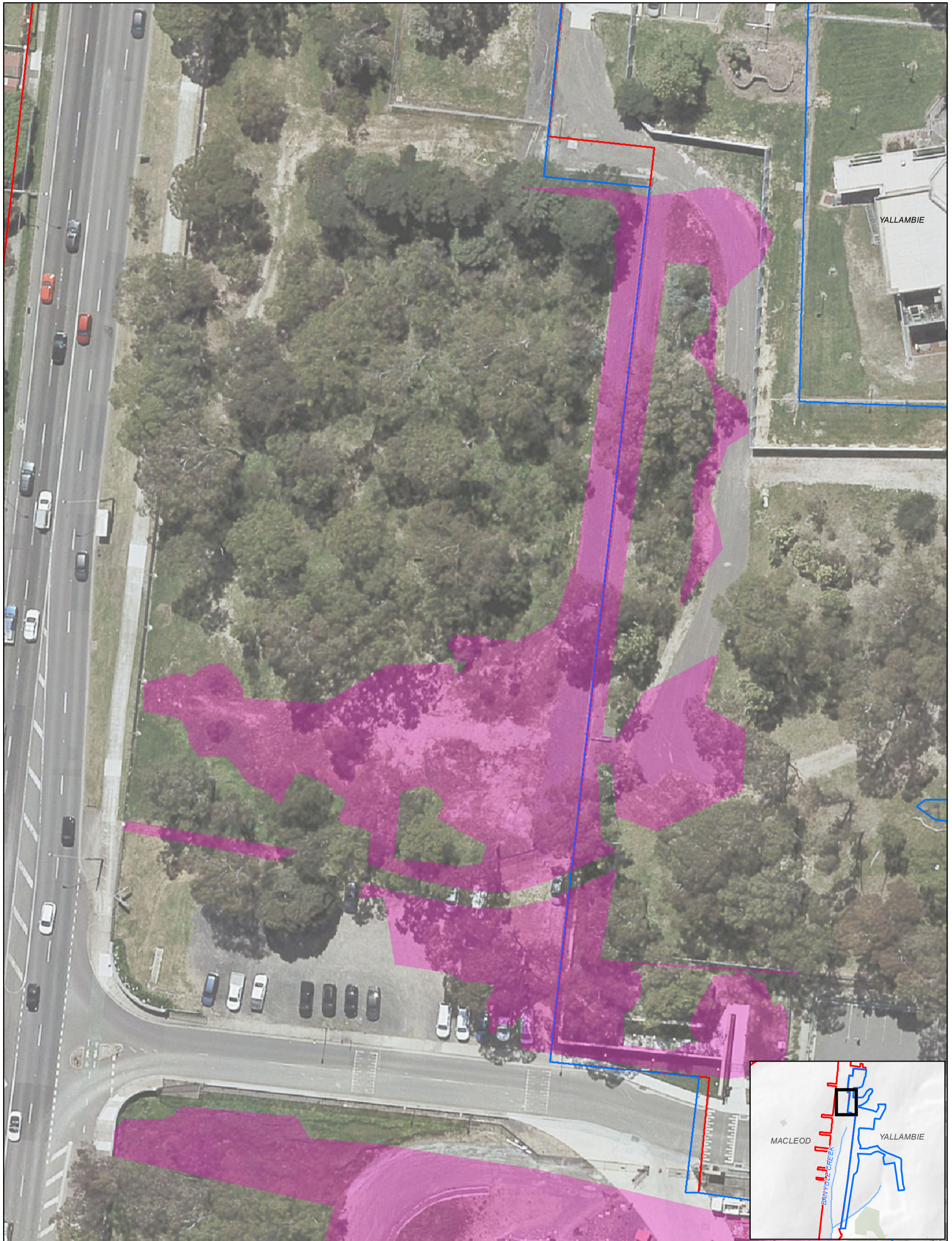
The Project is still in the early works phase and as reported in the 2020/21 compliance report, no new environmental risks have been identified.

Works undertaken during the current reporting period, refer to 2.2.1 Early works, are relatively minor by comparison to the broader Project. As the Project advances, the Environment team will continue to monitor and manage environmental risks through Contractor's ISO 14001-compliant environmental management systems.

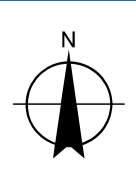
5 Appendices

- 5.1 A. Simpson Barracks native vegetation map.
- 5.2 B. Salvaged Matted Flax-lily locations.
- 5.3 C. Studley Park Gum Annual Compliance Report.

ATTACHMENT A



Paper Size A3
 0 5 10
 Metres
 Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



- Legend**
- Actual extent of native vegetation removal
 - EPBC associated works area
 - Project Boundary (SCO GC98/Inc Doc/PSA)



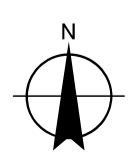
North East Link Project
 Date: 20 Jun 2022
 Revision: A

**Simpson Barracks
 actual vegetation removal area Figure 1**



Paper Size A3
 0 5 10
 Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



Legend

- Actual extent of native vegetation removal
- EPBC associated works area
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North East Link Project

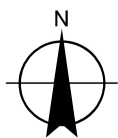
Date: 20 Jun 2022
 Revision: A

**Simpson Barracks
 actual vegetation removal area Figure 1**

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Paper Size A3
 0 5 10
 Metres
 Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
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Legend

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North East Link Project

Date: 20 Jun 2022
 Revision: A

**Simpson Barracks
 actual vegetation removal area Figure 1**

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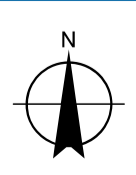
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 \ghdnet\ghdAU\Melbourne\Projects\31\35006\GIS\Maps\Working\Operational\Ecology\Ad hoc\20210611_SB_CPB_ENSYM_Comparison\3135006_SB_VegetationRemovalArea_A3P_RevA.mxd
 Data Sources: CIP Imagery - DELWP - 2021 | Cadastre, Roads, Planning Zones - Vicmap - 2021 | NELP data - 2021 Created by:zzuo



Paper Size A3
 0 5 10
 Metres

Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



- Legend**
- Actual extent of native vegetation removal
 - EPBC associated works area
 - Project Boundary (SCO GC98/Inc Doc/PSA)



North East Link Project

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 Revision: A

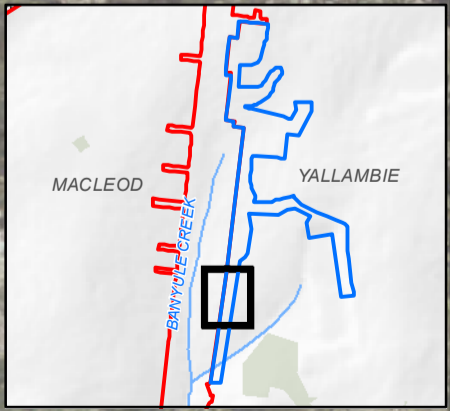
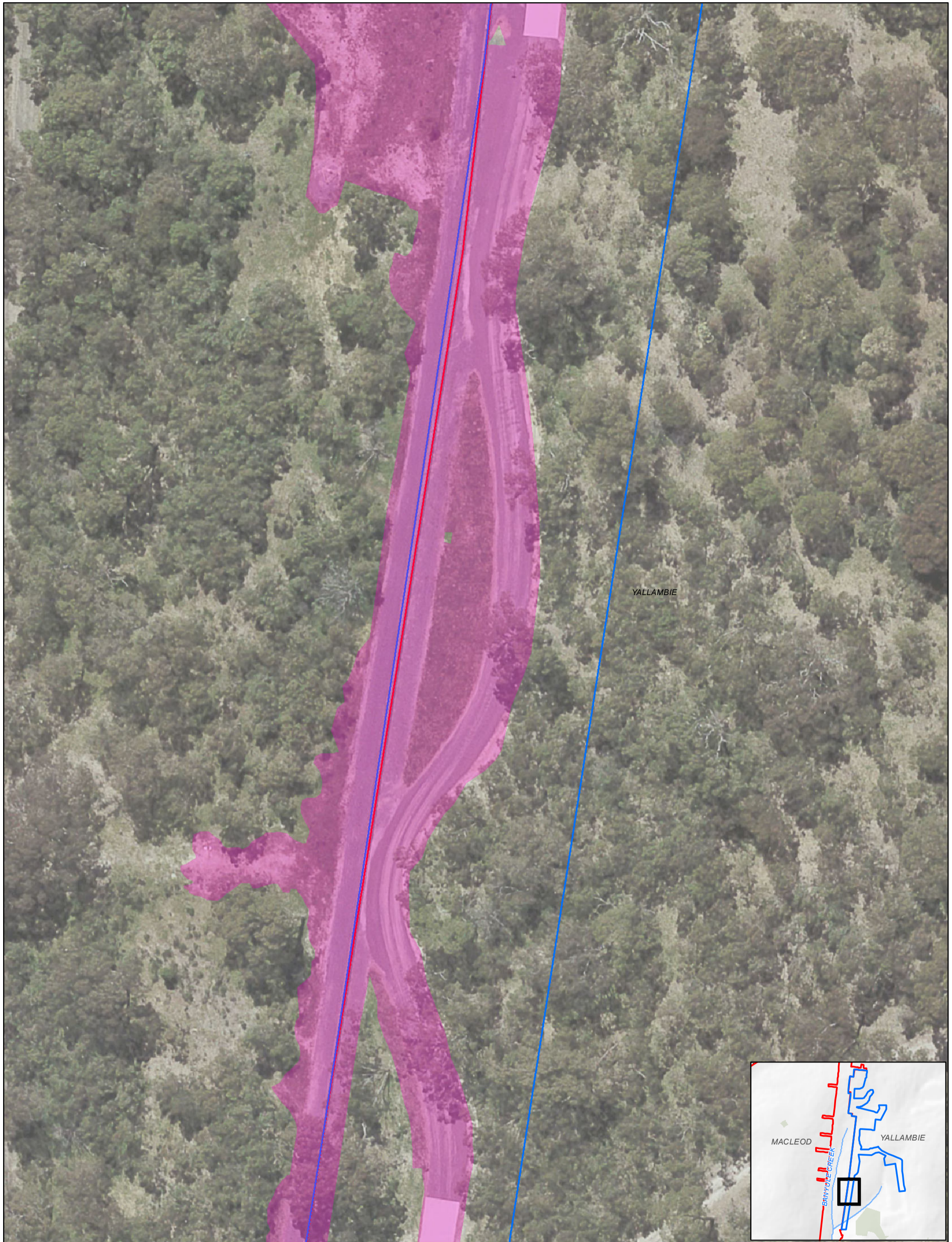
**Simpson Barracks
 actual vegetation removal area Figure 1**

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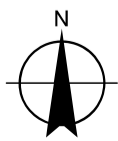
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 Data Sources: CIP Imagery - DELWP - 2021 | Cadastre, Roads, Planning Zones - Vicmap - 2021 | NELP data - 2021 Created by:zzuo

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Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



Legend

- Actual extent of native vegetation removal
- EPBC associated works area
- Project Boundary (SCO GC98/Inc Doc/PSA)



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**Simpson Barracks
 actual vegetation removal area Figure 1**

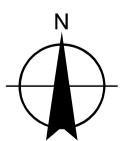
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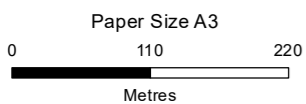
**Simpson Barracks
actual vegetation removal area Figure 1**

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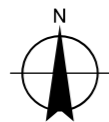
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ATTACHMENT B



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



Legend

- ★ MFL salvaged at Simpson Barracks
- NEL Project Boundary (PSA GC98/Inc Doc/SCO)



North East Link Project

**Simpson Barracks
 Salvaged Matted Flax-lily Locations**

Job Number 31-35006
 Revision A
 Date 20 Jun 2022

ATTACHMENT C



NORTH EAST LINK PROJECT
Studley Park Gum monitoring report
Annual report 2022
NEL-PW-GHD-9990-EEE-REP-0010

Revision 0

20 June 2022

Document prepared by:



Document Control Page

Release

Revision	Date Released	Release Status	Comment
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Appendix B – Site preparation photos

Appendix C – Annual photo monitoring

Appendix D – Representative photos of Studley Park Gums: May 2022

Appendix E – Monitoring Data: recipient site results 2021- 2022

Appendix F – Previous maintenance or corrective actions undertaken (2021- 2022)

Abbreviation Table

Abbreviations	
cm	Centimetre
DAWE	Department of Agriculture, Water and the Environment
DBH	Diameter at breast height
DELWP	Department of Environment, Land, Water and Planning
EES	Environment Effects Statement
EPBC Act	Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPR	Environmental Performance Requirements
EVC	Ecological vegetation class
FFG Act	<i>Flora and Fauna Guarantee Act 1988</i>
ha	Hectare
m	Metre
MTIA	Major Transport Infrastructure Authority
M80	Metropolitan Ring Road
NEL	North East Link
NELP	North East Link Project
PER	Public environment report
Project Co	The private party to be engaged by the State to execute the Project Deed and deliver the Primary Package.
VBA	Victorian biodiversity atlas

1. Introduction

1.1 Project background

The North East Link Project (NELP) (a division of the Major Transport Infrastructure Authority (MTIA)), on behalf of the Victorian State government, is currently undertaking the North East Link (NEL) project (referred to herein as 'the project'). The NEL is a new freeway-standard road connection to the north-east of the Melbourne Central Business District that will complete Melbourne's ring road. Specifically, the NEL will connect the Metropolitan Ring Road (M80) to the Eastern Freeway and includes works along the Eastern Freeway from near Hoddle Street to Springvale Road.

The impacts to biodiversity values due to the project have been determined through ecological impact assessments which informed the development of an Environment Effects Statement (EES) in accordance with the Victorian *Environment Effects Act 1978* and a Public Environment Report (PER) in accordance with the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Ecological impact assessments have identified that the project has the potential to impact *Eucalyptus x studleyensis* (Studley Park Gum), which is listed as 'Critically endangered' on the Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act) threatened flora list.

1.2 Approval conditions

The ministerial assessment of the EES made a number of recommendations regarding the Environmental Performance Requirements (EPR) for NELP. EPR FF10 states 'To mitigate impacts on the Studley Park Gum, a Studley Park Gum Management Framework must be developed and corresponding management plan must be developed and implemented in consultation with DELWP'.

Condition 6 of the EPBC 2018/8142 approval requires NELP to implement the Studley Park Gum Management Framework and to report to the Department of Agriculture, Water and the Environment (DAWE) on the outcomes every year for three years as part of compliance reporting.

NELP have developed and had approved the Studley Park Gum Management Framework (Emerge Associates and GHD 2021), consequentially the Studley Park Gum Management Plan (Emerge Associates and GHD 2020) to support the Management Framework has also been prepared and implemented in consultation with DELWP. The Studley Park Gum Management Framework (Emerge Associates and GHD 2021) and Studley Park Gum Management Plan (Emerge Associates and GHD 2020), outline the requirements for planting and ongoing management and monitoring of the Studley Park Gums.

1.3 Purpose of this report

This report is the Year 1 annual compliance report following one year of active Studley Park Gum translocation. The purpose of this annual report is to summarise quarterly monitoring outcomes of the health and condition of the Studley Park Gums (SPGs) at the recipient sites; Westerfolds Park and Montpelier Reserve in the Yarra Valley Parklands. This report meets the reporting requirements of the EPBC Act approval (EPBC 2018/8142) conditions and the requirements of the Studley Park Gum Management Framework (Emerge Associates and GHD 2021) and the SPG Management Plan (Emerge Associates and GHD 2020).

2. Translocation goal

2.1 Translocation goal

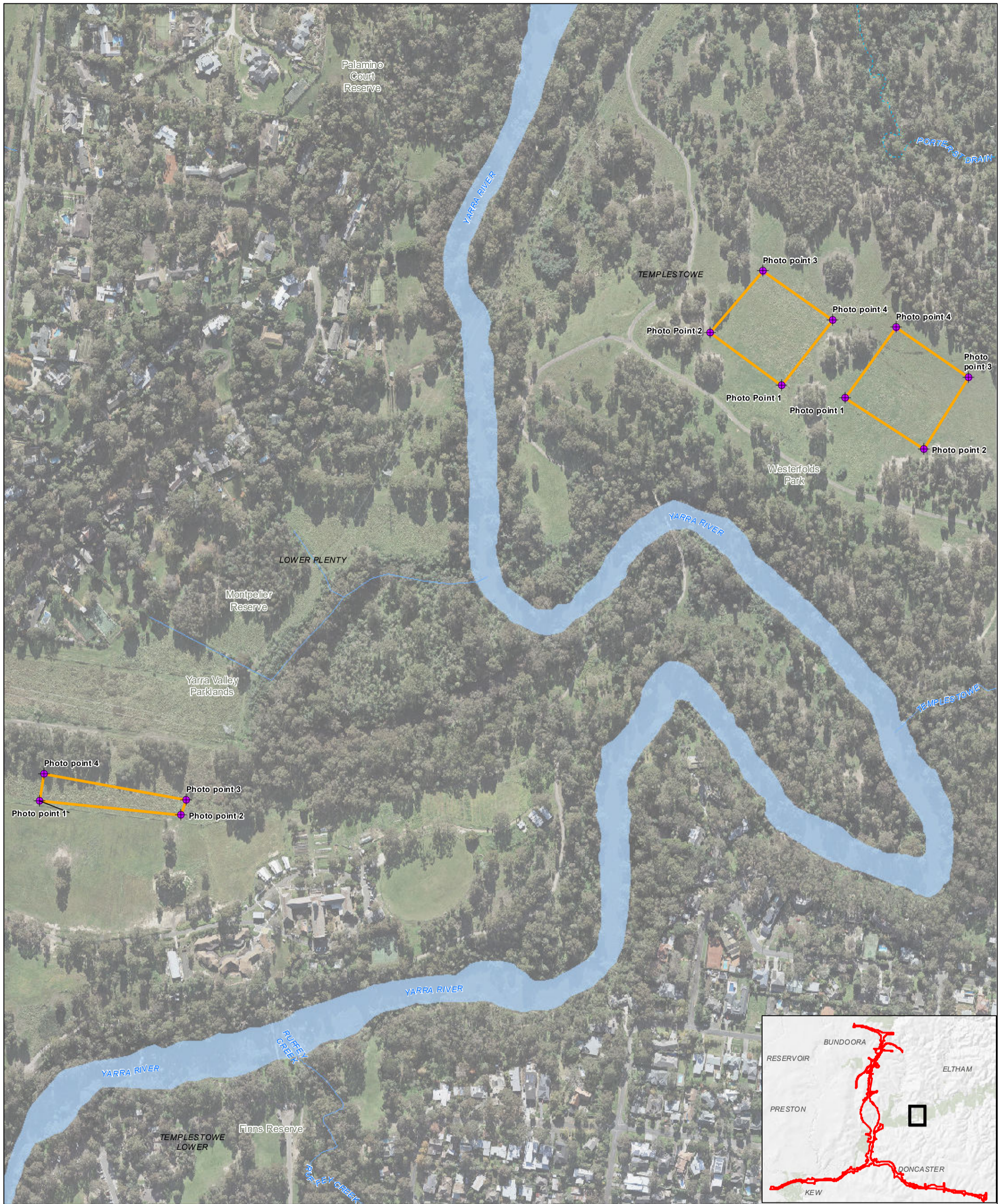
The goal of translocating the Studley Park Gum is to initiate and deliver the establishment of a new population of Studley Park Gum to assist with the ongoing conservation of the taxon. To achieve this goal, it is proposed to establish a minimum of **104 Studley Park Gum trees** across two recipient sites. For the Studley Park Gum trees to be considered established, 104 individuals need to have survived three years following planting. The goal of 104 trees is based on a replacement ratio of two translocated Studley Park Gums established for each individual tree likely to be impacted by the North East Link Project.

To achieve the establishment goal of at least 104 plants for the North East Link Project, it is proposed that a total of 310 Studley Park Gum saplings are initially planted at the recipient sites. This accounts for unavoidable plant loss assuming a 70% survival rate for each year over a three-year period. The following provides details of the 70% survival rate:

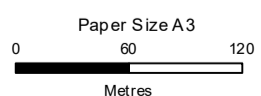
- Year 0: 303 saplings planted
- Year 1: 212 saplings (@ 70% survival)
- Year 2: 149 saplings (@ 70% survival)
- Year 3: 104 plants established

2.2 Recipient site locations

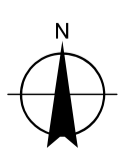
The Yarra Valley Parklands sites were deemed by the relevant land manager (and based on feedback from DELWP) to be appropriate recipient sites (Emerge Associates and GHD 2021a). Discussions with Parks Victoria determined Westerfolds Park and Montpelier Reserve within Yarra Valley Parklands to be suitable available recipient sites. Within these two sites, three recipient sites were prepared. Two sites are located within Westerfolds Park and one within Montpelier Reserve (Figure 1).



- Legend**
- ◆ Photo point locations
 - Recipient Site
 - Watercourse



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 55



North East Link Project

Date: 25 Nov 2021
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Studley Park Gum Recipient Site

Figure 1

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3. Method

The following method as outlined in the Studley Park Gum Management Framework (Emerge Associates and GHD 2021) and the Studley Park Gum Management Plan (Emerge Associates and GHD 2020) was used to undertake the monitoring.

3.1 Monitoring timing

Monitoring has been undertaken quarterly during Year 1 and will be undertaken quarterly for the remainder of the establishment period (first three years after planting until 104 SPG are established) to determine whether plants are establishing and whether contingency actions need to be undertaken to facilitate plant survival. Monitoring will then become less frequent (minimum annually) until the goal of 104 trees considered established is met. Monitoring events will align with EPBC Act Approval 2018/8142 annual compliance reporting. Monitoring visits are to take place at the following intervals:

- Establishment period (Years 1, 2 & 3): quarterly, at approximately the beginning of each season (e.g. September, December, March and June). This includes an initial monitoring visit in the week post-planting to record initial conditions (baseline) and audit the site establishment activities so that compliance is achieved with the Recipient Site Management Prescriptions.
- Post-establishment (Years 4 onwards): annually until the goal of >104 SPG trees established which have been planted for at least 3 years has been met (to a maximum of ten years).

See Appendix A for a table of monitoring events that have been completed to date and future planned monitoring events.

3.2 Method

Monitoring involved a physical inspection of the saplings planted at the recipient sites by an appropriately skilled Ecologist/Botanist.

3.2.1 Data

Weather conditions

A desktop analysis of the conditions recorded by the Bureau of Meteorology at the Viewbank¹ weather station has been undertaken to provide a summary of the weather conditions experienced at the recipient sites since the initial planting; these conditions have been compared with site and time-matched long-term weather data. Data reviewed included:

- Number of days with rain >1 mm
- Temperature (Max and min temps)
- Total rainfall for the period and against the mean expected rainfall
- Any unexpected weather events (e.g., heat wave, storm, flooding).

¹ <http://www.bom.gov.au/products/IDV60901/IDV60901.95874.shtml>

Total number of living translocated plants

The total number of SPG has been recorded by observing each SPG and determining if it was alive or dead. Dead plants to be removed so as not to recount these individuals in future monitoring events.

The monitoring method has been amended to require that:

- Trees recorded as dead for the first time were not removed, so to allow time to resprout if alive belowground.
- Trees recorded as dead for a second consecutive survey are removed, along with their unique identification tags.
- SPGs observed as dead during prior monitoring events were not counted again as dead in the following monitoring event.

Condition of translocated plants

The condition of the translocated plants at the time of the monitoring event were noted, including:

- Stress – if the tree is experiencing stress, the type of stress has been recorded (e.g., drought/herbivory/disease/other)
- Condition – the condition of the tree has been recorded to determine its likelihood of surviving. Condition classes are as follows:
 - Dead = no living material evident
 - Poor <30% leaves are healthy
 - Moderate >30<70% of leaves healthy
 - Good >70% leaves healthy
- Plant height (cm)
- Diameter of the trunk (cm) at the base of the tree until it reaches a height to record at both the base and at breast height (1.4 m) from the base
- Flowering / fruiting (Y/N).

Condition of the recipient site

To capture the condition of the recipient site, and any threats that weeds and/or herbivores pose to SPG establishment, the following items will be monitored:

- Presence of noxious weeds, with the percentage cover within a 1.5 m radius of each SPG
- Presence of herbivory within the recipient site, defined by the presence of partially eaten specimens, dropping/scats or diggings.

Incidental observations within the recipient site

Any incidental observations within the recipient sites has been recorded, including:

- Stagnant/excess water
- Emerging weeds
- If slashing is required to maintain biomass levels suitable for sapling establishment

- Any other incidental observations.

Maintenance requirements

The recording of any programmed maintenance that has been undertaken as prescribed in the Studley Park Gum Management Plan (Emerge Associates and GHD, 2020), or if previous monitoring events identified actions and if any additional maintenance is required. This may include:

- Fencing maintenance
- Rectifying unauthorised access
- Slashing of grass within or surrounding recipient site
- Additional planting events.

3.2.2 Photo points

Photo-point monitoring has also be undertaken during monitoring. Mapped locations for photo-point monitoring are provided in Figure 1, and spatial locations provided below in Table 1.

Table 1 Photo point locations (Eastings and Northings)

Photo Point	Westerfolds Site 1	Westerfolds Site 2	Montpelier
1	334805, 5820680	334732, 5820690	333889, 5820220
2	334894, 5820620	334651, 5820750	334049,5820200
3	334945, 5820700	334711, 5820820	334055, 5820220
4	334862, 5820760	334791, 5820760	333894, 5820250

3.2.3 Sample size

All SPG saplings translocated to the site have been monitored throughout the monitoring period.

3.3 Adaptive management

The results of the quarterly monitoring (as reported in Section 4) during the first three years post-planting has been used to inform site management, maintenance and track the survival of translocated plants. Any adaptive management actions required to rectify issues were identified at each monitoring event and timelines nominated for the task to be undertaken. The fourth quarterly event each year coincides with the annual monitoring event.

Further, an annual evaluation (this report) has been undertaken to determine progress of the site towards the collective goal. This involved tracking the number of surviving Studley Park Gum plants in the recipient sites. Any actions resulting from the assessment against the evaluation process provided in Table 2 has been provided in Section 5.

Table 2 Evaluation process for the recipient site

Timing	Measure	Action
Each quarter for 3 years after planting	Environmental changes that impact SPG survival	Alert management authority Alter Recipient Site Management Prescriptions, if needed
Each year for 3 years after planting	>70% SPG survival	None required
	<70% SPG survival	Undertake supplementary planting
End of 4th year after planting End of 5th year after planting	104 or more SPG plants established (which have been planted in recipient site for at least 3 years)	Hand over site to management authority Minimal ongoing management activity
	<104 SPG plants	Undertake supplementary planting
Years 5-10 (only required if goal is not met prior)	<104 SPG plants	Review management actions to improve success. Undertake supplementary planting

4. Results – June 2021 to May 2022

4.1 Monitoring summary

Site preparation at the three recipient sites commenced on 9 April 2021. Weed control and pest control were completed at each site by 30 April 2021. Fencing was erected from 21 May to 2 June 2021.

Planting commenced at the two Westerfolds recipient sites on 24 May 2021 and on 4 June 2021 at the Montpelier recipient site. Mulching around each plant was completed by 5 June 2021.

The initial baseline monitoring event and planting audit was undertaken on 15 June 2021. The condition of the Studley Park Gums planted and the manner they were planted was observed by GHD Senior Botanist, Jessica Lamb.

Quarterly and monitoring was undertaken in November 2021, January 2022, and May 2022 by GHD Botanist Rebecca Korossy-Horwood. Timing and or scope of monitoring events was adjusted to accommodate COVID-19 restrictions, maintenance, plantings, or herbicide withholding periods where required (Appendix A).

4.1.1 Weather

The following weather conditions were observed at the recipient sites between the first and fourth monitoring events for Year 1 (15 June 2021 to 12 May 2022). Data were collected from the BOM Viewbank Weather Station (station 086068) (BoM 2022a, 2022b).

Table 3 Annual weather summary: 15 June 2021- 12 May 2022

	Actual days from Viewbank Station (332 days)	Long-term annual average
Average min temp C	10.4	10.0
Average max temp C	21.6	20.9
Total rainfall (mm)	658.4	669.8
Number of days with rain >1 mm	151	96

On 9-10 June 2021, Melbourne experienced a major storm which resulted in 44.8 mm of rain falling within 48 hours. Minor flooding occurred throughout Melbourne and was observed in some locations within the three recipient sites. This trend continued through the remaining monitoring year: although total rainfall was standard compared to long term averages, rain events were more frequent than usual. Viewbank Station experienced 55 more days with more than 1 mm of rainfall than the average (151 days between June 2021- May 2022, versus 96 days on average) (Table 3).

4.1.2 Site preparation

A total of 364 sapling Studley Park Gums were planted within the three recipient sites between 24 May 2021 and 4 June 2021. This was above the 303 saplings required to be planted, however; due to success in the nursery and available space in the sites more saplings were available and therefore used. Transplanted saplings were approximately seven months old, with an average height of 51.7 cm. Planted saplings were observed to be well spaced out and

planted in clusters as per the SPG Management Plan prescriptions. Saplings had been planted away from the fence to allow for future slashing.

Each planting location had been previously sprayed with herbicide, and the grasses and forbs were observed to be dead. Plant holes were greater in width than the plant and had been appropriately back filled with soil. Mulching was at the correct thickness, with some mulching washed into the planting holes due to the heavy rainfall events. Photos showing preparation of the sites are provided in Appendix B.

4.1.3 SPG translocation goal

The SPG translocation goal at the end of Year 1 is a minimum of 212 saplings, accounting for an estimated 70% survival from 303 initial saplings required to achieve the Year 3 goal of 104 established SPGs. This has been achieved: as of May 2022, 320 SPGs survive across the three sites, with 217 in good condition. The results of monitoring at the start of Year 1 are shown in Appendix E, and results from end of Year 1 shown in Table 4

SPG condition annual overview

Initial plantings undertaken between 24 May 2021 and 5 June 2021 saw 364 saplings planted. Of these, a total of 343 (94.2%) survived until the first monitoring event on 15 June 2021. The condition of half the surviving saplings was considered good (52.2%). However, 19.5% of saplings remaining alive were in poor condition, and considered likely to die. The poor condition was attributed to severe waterlogging at the site. Of the remaining trees, 28.3% were of moderate condition, and showing signs of stress due to the waterlogging and potentially planting shock.

Due to ongoing waterlogging during Winter and Spring 2021, replacement SPGs were required to be planted. Replacement plantings balanced risk by planting younger, smaller seedlings; outside of waterlogged areas; and by planting after seasonal rains had ceased. By November, the site's soils had drained sufficiently to alleviate the site of standing water, whilst soil-moisture levels remained suitable to accommodate new plantings. Adapting the timing of replacement plantings to work with seasonal conditions resulted in a significantly higher success rate than planting more advanced saplings during wetter parts of the year. For example, at Westerfolds Site 1 there was an 84.3% improvement in survival when SPGs were planted in November (86.4% survival) versus July (1.8% survival). Plate 1 shows an example of an SPG planted in November 2021 and observed establishing well in May 2022.

At the time of the fourth quarterly survey in May 2022, *ad hoc* replacement plantings had brought the total number of SPGs across the three sites to 328. Of these, 320 SPGs (97.6%) were alive (Figure 2, and Table 4). Of the 320 living SPGs, 217 (67.8%) were in good condition. Trees categorised as in good condition alone meet the criteria for establishment of 212 SPGs by the end of the first year of monitoring.

Across the three sites, 84 individuals (26.3%) were in moderate condition and 19 (5.9%) in poor condition. Eight (8) of 328 SPGs were dead or missing (2.4%). These rates are within expected range for in situ plantings. No herbivory, notable environmental stress or disease was observed during May 2022 monitoring.



Plate 1 Establishing SPG at Westerfolds 1 (ID 436) (May 2022), planted November 2021

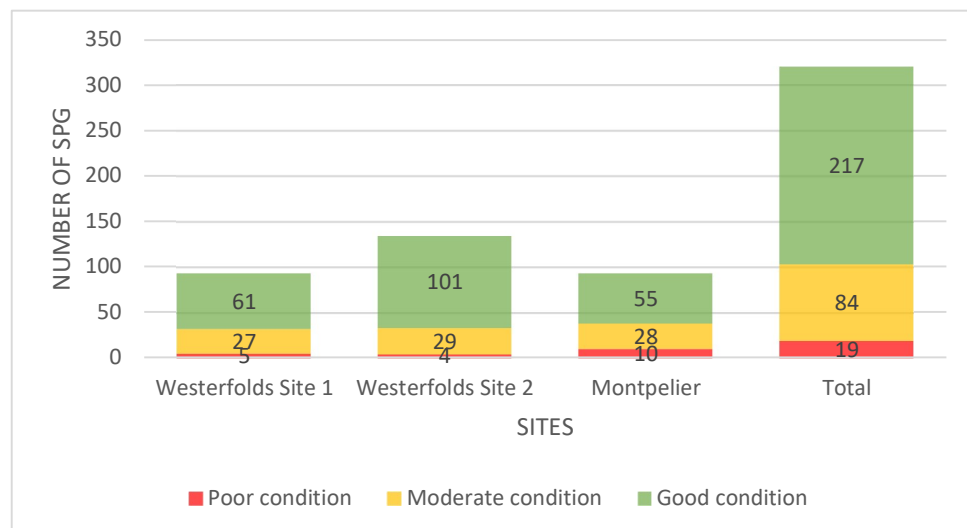


Figure 2 Condition of SPG across the three recipient sites: Fourth quarterly survey May 2022

4.1.4 Threats

Predominant threats to SPG establishment as of May 2022 include the following:

Waterlogging

As far as practicable, SPGs have been moved from locations observed prone to waterlogging, whilst maintaining spacing recommendations (Emerge Associates and GHD, 2020).

Fence condition and erosion

Erosion is causing a risk to fence condition and herbivory prevention at Montpelier, with rill and gully erosion forming in and around prior wombat burrows and rabbit warrens. Erosion will soon cause opening of anti-burrowing skirt fencing at the site.

Noxious weed cover

Weed cover was above the recommended levels of <1% within SPG mulch circles at all sites during May 2022 survey. Noxious weed cover in mulch circles surrounding SPG saplings ranged between 19.1% (Montpelier) and 41.9% (Westerfolds Site 2) (Table 4). Noxious weed cover was almost exclusively *Anthoxanthum odoratum* (Sweet Vernal Grass) across all sites, consistent with prior surveys.

Cover of other grassy weeds was also high in all sites, predominantly contributed by perennial grassy weed *Phalaris aquatica* (Toowoomba Canary Grass).

It is noted that tree condition does not appear significantly compromised by weed cover at this stage. With the ongoing formation of gully erosion at Montpelier, and history of waterlogging at all sites, grassy cover is currently acting as a soil stabiliser and water 'pump' until the SPGs are established enough to fulfil this ecological role. The current approach of managing grassy weed biomass by brushcutting rather than spraying is recommended to continue, so long as SPG health is maintained and SPGs are free of weeds to at least 50 cm from their base. Control of woody weeds and forbs should continue as per the Studley Park Gum Management Plan (Emerge Associates and GHD, 2020). Noxious weed *Nassella neesiana* (Chilean Needle Grass) should likewise be controlled as per the Studley Park Gum management plan, due to its high risk of biodiversity impact to the surrounding park, and its persistence in the soil seed bank.

Woodchip

Woodchip is below recommended levels of 70-100 mm at all sites (Emerge Associates and GHD, 2020). Planting contractors have noted that woodchip is providing habitat for rats and mice at SPG bases.

4.2 Recipient site results

Monitoring results recorded for the three recipient sites during May 2022 are provided in Table 4 with the summary of the four quarterly monitoring reports data presented in Table 8, and each quarterly monitoring results data presented in full in Appendix E.

Table 4 Monitoring results fourth quarterly event May 2022

Recipient Site	Westerfolds Site 1	Westerfolds Site 2	Montpelier	Total
Living plants (no.)	93	134	93	320
Dead plants (no.) (including missing)	5	1	2	8
% of living plants with >70% of healthy leaves (good condition)	65.6% (61 plants)	75.4% (101 plants)	59.1% (55 plants)	67.8% (217 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	29.0% (27 plants)	21.6% (29 plants)	29.0% (28 plants)	26.3% (84 plants)
% of living plants with <30% of healthy leaves (poor condition)	5.4% (5 plants)	3.0% (4 plants)	10.8% (10 plants)	5.96%% (19 plants)
Average tree height (cm)	55.5 cm	55.2 cm	83.8 cm	64.8 cm
Average Basal diameter (cm)	<1 cm	<1 cm	<1 cm	<1 cm
Proportion of plants with flowering / fruiting present?	0	0	0	0
Average cover of noxious weeds within 1.5 m radius (%)	23.9%	41.9%	19.1%	28.3%
Herbivory Present (%)	0%	0%	0%	0%
Programmed maintenance undertaken satisfactorily	Some	Some	Some	
Previous additional maintenance/ adaptive measures undertaken?	Yes	Yes	Some	
Additional maintenance required?	Yes	Yes	Yes	

Photos taken at each site’s monitoring points at June 2021 and May 2022 are provided in Appendix C, with representative photos of establishing Studley Park Gums (May 2022) provided in Appendix D. Monitoring data for each site during each quarterly surveys (1-4) is provided in Appendix E.

5. Adaptive management measures and recommendations

5.1 Proposed maintenance and/ or corrective actions

Proposed maintenance and corrective actions identified during each monitoring event, and the outcomes subsequently achieved, are detailed for each site in Appendix F

At this stage of establishment, protection from waterlogging; herbivore browsing, and elevating tree tag identification numbers are required to maximise translocation success. The following actions are a summary of what is required beyond May 2022 to achieve this:

- During maintenance activities and monitoring, the effects of excess water from rain events should be monitored. If supplementary planting is required after these events, then SPG saplings should not be planted back into holes that had become waterlogged or within standing water in the last high rainfall event. New planting locations should be moved to a freer draining position. This recommendation has been in effect since June 2021 and is to be actioned for each new planting event.
- Slashing or brushcutting fence boundaries to allow easy inspection of fence condition and to reduce risk of herbivore egress during the SPG establishment period.
- Fencing should be assessed for preventative repair and reinforcement at Westerfolds 2 and Montpelier Reserve.
- Grassy weeds may be managed with brushcutting rather than herbicide spraying on sites where waterlogging is considered a greater threat to SPG establishment than weed competition. In this event, <1% noxious weed cover should be maintained within 50 cm of the plant via handweeding. Noxious weed *Nassella neesiana* (Chilean Needle Grass), should it emerge at Site, should remain controlled as per the Studley Park Gum management plan (Emerge Associates and GHD, 2020) due to its persistence in the soil seed bank. Control of woody weeds and noxious forbs should likewise proceed as per the Studley Park Gum Management Plan (Emerge Associates and GHD, 2020).
- Woodchip may be reduced at sites where it is observed to host rats and mice burrows, and where these are also negatively impacting SPG success.
- Tree tags may now be elevated to metal stakes in cases where trees are establishing strongly and a height of 1 m or more. Metal stakes (approximately 1 m) are recommended to be placed on the outer edge of the SPG's mulch circle. Elevating tree tags will prevent them being impacted by maintenance activities, particularly with expected increase in brushcutting to manage grassy weed biomass when sites are waterlogged.

6. References

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Appendices

Appendix A – Table of Monitoring events

Year	Monitoring event	Expected date of event	Date event completed	Comments
1	Baseline Monitoring Event and 1 st quarterly event.	Planting expected in May 2021, monitoring one week following planting.	Planting: 24/05/21 Monitoring: 15/06/2021	Monitoring delayed by one week due to Victorian Government mandated COVID-19 lockdown, and a public holiday between planting and monitoring event.
1	2 nd Quarterly event	September 2021	9/11/2021	Site visit paused until replacement plantings could be installed, as per prior audit recommendations. Monitoring occurred within one week of plant installation. During this monitoring event ecologists were unable to enter Westerfolds 2 site due to safety hazards.
1	3 rd Quarterly event	December 2021	18/01/2022	Delay from prior survey carried forward to this monitoring event, to allow time for meaningful plant growth to occur. Westerfolds 2 sapling numbers could not be assessed due to maintenance activities being underway.
1	4 th Quarterly event	March 2022	12/05/2022 – 13/05/2022	Delayed due to herbicide withholding period, and to allow completion of maintenance activities.
2	1 st Quarterly event	June 2022		
2	2 nd Quarterly event	September 2022		

2	3 rd Quarterly event	December 2022		
2	4 th Quarterly event	March 2023		
3	1 st Quarterly event	June 2023		
3	2 nd Quarterly event	September 2023		
3	3 rd Quarterly event	December 2023		
3	4 th Quarterly event	March 2024		
4	Annually in June	June 2024		
5	Annually in June	May 2025		
6	Annually in June	May 2026		
7	Annually in June	May 2027		
8	Annually in June	May 2028		
9	Annually in June	May 2029		
10	Annually in June	May 2030		
10	End of project	May 2031		

Appendix B – Site preparation photos

<p>Fence</p>		<p>Correctly planted SPG, which has been submerged due to the heavy rainfall event</p>	
<p>Appropriately spaced planting locations</p>		<p>Wombat burrow which has been closed off from the outside.</p>	

Appendix C – Annual photo monitoring

Table 5 Westerfolds 1 Photo monitoring points: June 2021 to May 2022

Location	Westerfolds site 1 June 2021	Westerfolds site 1 May 2022
1 (gate)		
2		

3



4



Table 6 Westerfolds 2 Photo monitoring points: June 2021 to May 2022

Location	Westerfolds Site 2 June 2021	Westerfolds Site 2 May 2022
1 (gate)		
2		

3



4



Table 7 Montpelier Reserve Photo monitoring points: June 2021 to May 2022

Location	Montpelier Reserve	Montpelier Reserve
1 (gate)		
2		





3



4



Appendix D – Representative photos of Studley Park Gums: May 2022

SPG Number (site)	Image of individual	SPG Number (site)	Image of individual
21000 2005 004 (W1)		434 (W1)	
A44 (W2)		A3 (W2)	

338
(MP)



316
(MP)



Appendix E – Monitoring Data: recipient site results 2021- 2022

Table 8 Summary totals of each quarterly event: 2021- 2022

Recipient Site	June 2021	Nov 2021* *W2 site not assessed	Jan 2022* *W2 site not assessed	May 2022
Living plants (no.)	343	154	142	320
Dead plants (no.) (including missing)	21	14	33	8
% of living plants with >70% of healthy leaves (good condition)	52.2% (179 plants)	59% (91 plants)	76.1% (108 plants)	67.8% (217 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	28.3% (97 plants)	31.8 % (49 plants)	19% (27 plants)	26.3% (84 plants)
% of living plants with <30% of healthy leaves (poor condition)	19.5% (67 plants)	8.4% (13 plants)	9.7% (7 plants)	5.96%% (19 plants)
Average tree height (cm)	51.7 cm	38.7 cm	45.4 cm	64.8 cm
Average Basal diameter (cm)	<1 cm	<1 cm	<1 cm	<1 cm
Proportion of plants with flowering / fruiting present?	No	0	0	0
Noxious weeds present (within 1.5 m radius)	No	6.1	19.7%	28.3%
Herbivory Present (%)	0%	0	0.6% (1 plant)	0%
Programmed maintenance undertaken satisfactorily	Yes	Additional slashing required	Somewhat	Somewhat
Previous additional maintenance/ adaptive measures undertaken?	Yes	Yes	Yes	Yes
Additional maintenance required?	Yes	Yes	Yes	Yes

Table 9 Summary of quarterly monitoring event: June 2021

Recipient Site	Westerfolds Site 1	Westerfolds Site 2	Montpellier	Total
Living plants (no.)	97	146	100	343
Dead plants (no.)	14	7	0	21
% of living plants with >70% of healthy leaves (good condition)	36.1% (35 plants)	37.7% (55 plants)	89% (89 plants)	52.2% (179 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	33.0% (32 plants)	37.7% (55 plants)	10% (10 plants)	28.3% (97 plants)
% of living plants with <30% of healthy leaves (poor condition)	30.9% (30 plants)	24.7% (36 plants)	1% (1 plant)	19.5% (67 plants)
Average tree height (cm)	52.3 cm	50.8 cm	52.1 cm	51.7 cm
Average Basal diameter (cm)	<1 cm	<1 cm	<1 cm	<1 cm
Proportion of plants with flowering / fruiting present?	No	No	No	No
Noxious weeds present (within 1.5 m radius)	No	No	No	No
Herbivory Present (%)	0%	0%	0%	0%
Programmed maintenance undertaken satisfactorily	Yes	Yes	Yes	Yes
Previous additional maintenance/ adaptive measures undertaken?	Yes	Yes	Yes	Yes
Additional maintenance required?	Yes	Yes	No	Yes

Table 10 Summary of quarterly monitoring event: November 2021

Recipient Site	Westerfolds Site 1	Westerfolds Site 2* *Could not assess due to safety hazards	Montpellier	Total
Living plants (no.)	68	N/A	86	154
Dead plants (no.) (including missing)	0		14	14
% of living plants with >70% of healthy leaves (good condition)	90% (61 plants)		34% (30 plants)	59% (91 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	10.3% (7 plants)		49% (42 plants)	31.8 % (49 plants)
% of living plants with <30% of healthy leaves (poor condition)	0%		15% (13 plants)	8.4% (13 plants)
Average tree height (cm)	11.7 cm		53 cm	38.7 cm
Average Basal diameter (cm)	<1 cm		<1 cm	<1 cm
Proportion of plants with flowering / fruiting present?	0		0	0
Noxious weeds present (within 1.5 m radius)	8.1		4.0	6.1
Herbivory Present (%)	0		0	0
Programmed maintenance undertaken satisfactorily	No- slashing required		No- slashing required	No-slashing required
Previous additional maintenance/ adaptive measures undertaken?	Yes		None required	
Additional maintenance required?	Yes		Yes	

Table 11 Summary of quarterly monitoring event: January 18 2022

Recipient Site	Westerfolds Site 1	Westerfolds Site 2 *Many individuals could not be assessed due to maintenance.	Montpelier	Total* *Of sites assessed
Living plants (no.)	70	Could not assess	72	142
Dead plants (no.) (including missing)	11	Could not assess	22	33
% of living plants with >70% of healthy leaves (good condition)	72.9% (51 plants)		79.2% (57 plants)	76.1% (108 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	21.4% (15 plants)		16.7% (12 plants)	19% (27 plants)
% of living plants with <30% of healthy leaves (poor condition)	5.7% (4 plants)		4.2% (3 plants)	9.7% (7 plants)
Average tree height (cm)	34.5cm		56.2cm	45.4cm
Average Basal diameter (cm)	<1cm		<1	<1
Proportion of plants with flowering / fruiting present?	0		0	0
Average cover of noxious weeds within 1.5 m radius (%)	14.5%		24.9%	19.7%
Herbivory Present (%)	1.2% (1 plant)		0%	0.6% (1 plant)
Programmed maintenance undertaken satisfactorily	Some	Some	No	
Previous additional maintenance/ adaptive measures undertaken?	Yes	Yes	Some	
Additional maintenance required?	Yes	Yes	Yes	

Table 12 Summary of quarterly monitoring event: May 12-13 2022

Recipient Site	Westerfolds Site 1	Westerfolds Site 2	Montpelier	Total
Living plants (no.)	93	134	93	320
Dead plants (no.) (including missing)	5	1	2	8
% of living plants with >70% of healthy leaves (good condition)	65.6% (61 plants)	75.4% (101 plants)	59.1% (55 plants)	67.8% (217 plants)
% of living plants with >30<70% of healthy leaves (moderate condition)	29.0% (27 plants)	21.6% (29 plants)	29.0% (28 plants)	26.3% (84 plants)
% of living plants with <30% of healthy leaves (poor condition)	5.4% (5 plants)	3.0% (4 plants)	10.8% (10 plants)	5.9% (19 plants)
Average tree height (cm)	55.5 cm	55.2 cm	83.8c m	64.8 cm
Average Basal diameter (cm)	<1 cm	<1 cm	<1 cm	<1 cm
Proportion of plants with flowering / fruiting present?	0	0	0	0
Average cover of noxious weeds within 1.5 m radius (%)	23.9%	41.9%	19.1%	28.3%
Herbivory Present (%)	0%	0%	0%	0%
Programmed maintenance undertaken satisfactorily	Some	Some	Some	
Previous additional maintenance/ adaptive measures undertaken?	Yes	Yes	Some	
Additional maintenance required?	Yes	Yes	Yes	

Appendix F – Previous maintenance or corrective actions undertaken (2021- 2022)

Type		Westerfolds site 1	Westerfolds site 2	Montpelier
Tree replacement	Action	Planting replacement SPGs		
	Date to be completed	June-September 2021		
	Outcome	Complete. Ongoing from November 2021	Ongoing from November 2021	Ongoing from November 2021
Slashing	Action	Slashing boundaries	Slashing boundaries	Slashing boundaries
	Date to be completed	Jan 2022	Jan 2022	Jan 2022
	Outcome	Partially complete	Complete	Not complete
	Action	Slashing boundaries	Slashing boundaries	Slashing boundaries
	Date to be completed	May 2022	May 2022	May 2022
	Outcome	Complete	Complete	Not complete
	Action			Slashing or brushcutting boundaries
	Date to be completed			August 2022
Weed control	Action	Weed control within 1.5m SPGs	Weed control within 1.5m SPGs	Weed control within 1.5m SPGs
	Date to be completed	Jan 2022	Jan 2022	Jan 2022
	Outcome	Not complete	Not complete	Not complete
	Action	Weed control within 1.5m SPGs	Weed control within 1.5m SPGs	Weed control within 1.5m SPGs
	Date to be completed	May 2022	May 2022	May 2022

Type		Westerfolds site 1	Westerfolds site 2	Montpelier
	Outcome	Partial	Partial	Partial – alternate method used to good effect.
	Action	Weed control within 1.5m SPGs	Weed control within 1.5m SPGs	
	Date to be completed	August 2022	August 2022	
	Outcome			
Tree tag remediation	Action		1. Attach unique tree ID tags to trees missing IDs. 2. Remove copper wire tags, replace with tags on pins in ground.	Remove copper wire tags, replace with tags on pins in ground.
	Date to be completed		Jan- March 2022	Jan- March 2022
	Outcome		Complete	Majority complete
	Action			Remove residual copper wire tags, replace with tags on pins
	Date to be completed			May 2022
	Outcome			Complete
	Action	Place tree tags on metal stakes on outer edge of mulch circles – established trees only.		
	Date to be completed	August 2022		
	Outcome			
	Action	Ecologists to re-allocate tree IDs where ID numbers used twice		
	Date to be completed	September 2022		
	Outcome			

Type		Westerfolds site 1	Westerfolds site 2	Montpelier
Fencing	Action		Repair	Repair
	Date to be completed		End of 2022 if deemed necessary	August 2022
	Outcome			