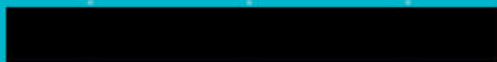


Final Report

Ecological Management Report: 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria

Prepared for



August 2024



Ecology and Heritage Partners Pty Ltd




DOCUMENT CONTROL

Assessment type	Ecological Management Report
Address	1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria
Project number	18149
Project manager	[REDACTED] Consultant Ecologist)
Report reviewer	[REDACTED] (Associate Botanist)
Other EHP staff	[REDACTED] Graduate Botanist)
Mapping	[REDACTED] (GIS Coordinator)
File name	18149_EHP_EMP_1157-1165BurwoodHighway_Final_13082024
Client	[REDACTED]
Bioregion	Highlands – Southern Fall
Catchment Management Authority	Port Phillip and Westernport
Council	City of Knox

VERSION CONTROL

Report version	Comments	Report updated by:	Report reviewed by:	Date submitted
Draft	Report sent to the client for review	[REDACTED]	[REDACTED]	12/07/2024
Final	Report updated based on clients review			13/08/2024

 Ecology and Heritage Partners acknowledge the Traditional Owners of the country we live and work on, and we pay our respect to Elders past, present and emerging.

Copyright © Ecology and Heritage Partners Pty Ltd

This document is subject to copyright and may only be used for the purposes for which it was commissioned. The use or copying of this document in whole or part without the permission of Ecology and Heritage Partners Pty Ltd is an infringement of copyright.

Disclaimer

Although Ecology and Heritage Partners Pty Ltd have taken all the necessary steps to ensure that an accurate document has been prepared, the company accepts no liability for any damages or loss incurred as a result of reliance placed upon the report and its contents.

CONTENTS

1	INTRODUCTION.....	4
1.1	Background.....	4
1.2	Study Area.....	4
1.3	Regulatory Context	5
1.4	Legislation and Policy	5
2	EXISTING CONDITIONS	7
2.1	Native Vegetation	7
3	ECOLOGICAL MANAGEMENT PLAN ACTIVITIES SCHEDULE	8
4	RESPONSIBILITIES.....	12
4.1	Responsibilities	12
	REFERENCES.....	13
	FIGURES	14
	APPENDIX 1: WEED CONTROL MEASURES.....	17
	APPENDIX 2: LANDSCAPE PLAN	20

1 INTRODUCTION

1.1 Background

Ecology and Heritage Partners Pty Ltd was commissioned by [REDACTED] to provide an Ecological Management Report for 1157-1165 Burwood Highway, Upper Ferntree Gully, Victoria.

We understand that it is a requirement of the Planning Permit to rehabilitate and restore the ecological features of 1157-1165 Burwood Highway. As per Condition 19 of the Planning Permit (P/2020/6347), an Ecological Management Plan be prepared as part of a management strategy. The EMP outlines the overall maintenance of vegetation within the study area, including landscaping to the north of the proposed building, which is to be retained as an ecological restoration project. The EMP outlines how the ecological values will be maintained, managed and improved, detailing:

- Existing environmental values;
- Minimal disturbance to native vegetation;
- Replacement planting in accordance with the Bushfire Emergency Management Plan;
- Minimal mulching; and,
- Emphasis on locally indigenous plants and native lawn grass; and,
- A plan for maintenance actions, and the parties responsible.

The EMP has been prepared to inform management actions described within this document in a clear and accessible format for those who will be responsible for implementing the EMP. The landowner is responsible for all management actions described in this plan and are subsequently responsible for engaging relevant experienced contractors where required. The engaged contractors must record all management actions undertaken in order to comply with the requirements set out in this EMP. The requirements of the EMP are outlined below.

1.2 Study Area

The study area is located at 1157-1165 Burwood Highway, Upper Ferntree Gully and is approximately 30 kilometres east of Melbourne's CBD (Figure 1). The study area approximately 0.4 hectares and the adjoining road reserve to the south. It is bound by a walking path and rail-reserve to the north, Burwood Highway to the south and vacant properties to the east and west.

The study area currently resides as a vacant block. It slopes slightly from north to south, with the highest point to the north. The road reserve between the study area's southern boundary and Burwood Highway slopes down steeply.

According to the Department of Environment, Land, Water and Planning (DELWP) NatureKit Map (DEECA 2024a), the study area is located within the Highlands – Southern Fall bioregion, Port Phillip and Westernport Catchment Management Authority (CMA) and City of Knox.

1.3 Regulatory Context

The EMP has been prepared in accordance with Condition 19 of the Planning Permit (P/2020/6347). The management actions within this EMP have been prepared with reference to the following environmental legislation and policies:

- Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*;
- Victorian *Planning and Environment Act 1987*;
- Victorian *Flora and Fauna Guarantee Act 1988* (FFG Act);
- Victorian *Catchment and Land Protection Act 1994* (CaLP Act);
- Victorian *Wildlife Act 1975*;
- Victorian *Prevention of Cruelty to Animals Act 1986*; and,
- Environment Protection Authority (EPA) State Environmental Planning Policies (SEPPs).

1.3.1 Approval Conditions

An EMP for 1157-1165 Burwood Highway must be submitted to and endorsed to the satisfaction of the responsible authority (i.e. Knox City Council).

1.3.2 Field Assessment

A field assessment was undertaken on 12 June 2024 to obtain information on flora and fauna values within the study area. The study area was walked, with all commonly observed vascular flora and fauna species recorded, significant records mapped and the overall condition of vegetation and habitats noted. Ecological Vegetation Classes (EVCs) were determined with reference to DEECA pre-1750 and extant EVC mapping (DEECA 2024a) and their published descriptions (DEECA 2024b).

1.4 Legislation and Policy

The following items are the main legislation and policy drivers that relate to the requirement to control and manage weeds within the study area. Declared noxious weeds are plants proclaimed under the *Catchment and Land Protection Act 1994* (CaLP Act) because they cause environmental and/or economic harm or have the potential to cause such harm, including potential risks to human health. Weeds of National Significance (WoNS) are weeds that have been identified as already causing significant environmental damage due to their invasiveness, environmental, social and economic impacts, and must be eradicated (< 1% cover).

1.4.1 Catchment and Land Protection Act 1994

The CaLP Act contains provisions relating to catchment planning, land management, noxious weeds and pest animals. Under the CaLP Act, landowners are responsible for the control of any infestation of noxious weeds and pest animals to minimise their spread and impacts. Landowners must, to the best of their ability:

- Eradicate regionally prohibited weeds;

- Prevent the growth and spread of regionally controlled weeds; and,
- Prevent the spread of, and as far as possible eradicate, established pest animals on their land.

Noxious weeds are defined as either State Prohibited (S), Regionally Prohibited (P), Regionally Controlled (C), or Restricted (R). This classification is dependent on the type and level of threat to primary production, Crown land, the environment and community health.

These categories are further defined under the Act as per the descriptions below:

- **State Prohibited (S)** - These weeds do not occur in Victoria, but pose a significant threat if they invade and can reasonably be expected to be eradicated;
- **Regionally Prohibited (P)** - Regionally Prohibited Weeds are not widely distributed in a Region but are capable of spreading further and should be managed with the goal of eradicating them from the Region. Landowners and managers, including public authorities responsible for the management of Crown lands, are responsible for control of these weeds on their lands;
- **Regionally Controlled (C)** - These weeds are usually widespread and are considered important in a particular region. To prevent their spread, continuing control measures are required. Landowners have the responsibility to take all reasonable steps to control and prevent the spread of these weeds on their land and the roadsides that adjoin their land; and,
- **Restricted (R)** - This category includes plants that pose an unacceptable risk of spreading in this State or to other parts of Australia. Trade for these plants is prohibited.

Sections 70, 70A and 71 of the CaLP Act for all declared noxious weeds, irrespective of category or region, prohibits the:

- Transport of a noxious weed or its propagules within Victoria; and,
- Deposition on land of a noxious weed or its seeds (DPI 2008).

1.4.2 *Weeds of National Significance (WoNS)*

The National Weeds Strategy Executive Committee was established in 1997, which concluded that the greatest impact from weed problems within Australia was related to the effect and spread of specific individual species. On this basis, they developed a list of Weeds of National Significance, commonly known as 'WoNS'.

The determination of WoNS is the first attempt to prioritise weeds over a range of land uses at the national level. WoNS are those weeds that have been identified as already causing significant environmental damage and must be eradicated (i.e. reduced to <1% cover abundance).

It is the landowner's responsibility to ensure weeds are controlled to the specified amount under the legislation/policy. Fines or prosecution are possible if landowners do not control weeds within their land.

2 EXISTING CONDITIONS

2.1 Native Vegetation

Several patches of native vegetation and scattered native trees occur within the study area. The remainder of the study area comprises introduced and planted vegetation, present as pasture grass and ornamental gardens.

Remnant native vegetation in the study area is representative of one EVC: Swampy Woodland (EVC 937) (Figure 2). The presence of this EVC is generally consistent with the modelled pre-1750s native vegetation mapping (DEECA 2024c).

A total of four Large Trees (LTs) in Swampy Woodland patches are present within the study area, with three occurring along the Burwood Highway Road reserve (Figure 2). These trees consist of two Swamp Gums and two Messmate Stringybarks (Figure 2).

Four scattered trees (Swamp Gum and Messmate Stringybark) occur towards the eastern end of the study area (Figure 2).

2.1.1 Introduced and Planted Vegetation

Areas not supporting remnant native vegetation have a very high cover (>95%) of exotic grass species (Plate 4). The disturbed areas were dominated by environmental weeds such as *Paspalum dilatatum* and Panic Veldt-grass *Ehrharta erecta* var. *erecta*, with other weedy species present such as Canola *Brassica X napus*, Yorkshire Fog *Holcus lanatus* and Black Nightshade *Solanum nigrum*.

Environmental weeds were also present, including Large-leaf Cotoneaster *Cotoneaster glaucophyllus* var. *serotinus*, Sweet Pittosporum *Pittosporum undulatum*, English Ivy *Hedera helix* and Cocksfoot *Dactylis glomerata*.

Eight noxious weeds are present within the study area, including Spear Thistle *Cirsium vulgare*, Soursob *Oxalis pes-caprae*, Blackberry *Rubus fruticosus* spp. agg., Boneseed *Chrysanthemoides monilifera*, Bridal Creeper *Asparagus asparagoides* and Great Mullein *Verbascum thapsus* subsp. *Thapsus*. Bridal Creeper, Boneseed and Blackberry are also Weeds of National Significance (WoNS).

3 ECOLOGICAL MANAGEMENT PLAN ACTIVITIES SCHEDULE

Table 1. Ecological Management Plan Activities schedule, outlining the proposed management action, descriptions, applicable zones, and on-going requirements

Management Action	Description	Applicable Area	Establishment Maintenance and On-going Management Considerations	Frequency of Actions and/or Targets	Handover Benchmark/Handover Target	Ongoing Maintenance and On-going Monitoring Considerations	Frequency
Responsibility – Construction Contractor							
Erosion and Sedimentation	<p>Construction activities (e.g. soil excavation, vehicle storage and movement, stockpile areas) may increase the potential for erosion and sedimentation and can pose a significant risk to site ecological values, and exacerbate the spread of weeds. However, sediment fencing must be installed along both perimeters of the building envelope to reduce the risk of onsite erosion and sedimentation.</p> <p>Install sediment retention structures to divert runoff away from exposed soils and prevent degradation to native vegetation. Such structures will include either or a combination of silt fences, sandbags, coir logs, rock or gravel, catch drains, earth banks, slopes or batters and rock bunds. A wide range of sediment retention structures are described in detail in EPA (2020b). Sediment structures should be implemented surrounding the proposed building envelope.</p>	Entire Study Area	Install sediment fencing prior to and during construction, or as per requirements of the CEMP.	Prior to commencement of construction.	<p>Implementation of sediment fencing as per the requirements of the CEMP.</p> <p>Sediment fencing removed following completion of construction and sedimentation risk is considered low.</p>	<p>Recommended - All sediment controls implemented will be checked on a weekly basis and before, during and after any major rain or extreme wind events, to ensure controls are working effectively. Any issues identified with sediment controls must be rectified within 24 hours. The site contractor will be responsible for implementation of erosion and sediment controls including monitoring and reporting of their effectiveness.</p>	Prior to commencement of construction and during construction
Fencing and No-Go Zones	Without active management and appropriate fencing, unrestricted access into areas where native vegetation is to be retained may result in loss of native vegetation cover, soil disturbance and compaction, and weed facilitation. Temporary protective exclusion fencing will be installed around the proposed construction footprint and stockpile areas to adequately protect areas of sensitivity during construction works. No access will be permitted at any time during construction as outlined below (i.e. to protect the area from construction related activities), excluding weed management and revegetation efforts which are to be undertaken within these areas.	Entire Study Area	<p>Exclusion fencing must be constructed of (plastic bunting) to the satisfaction of the responsible authority (DEECA).</p> <p>The exclusion fence must remain in place at least until all works are completed to the satisfaction of the responsible authority (Council).</p> <p>The exclusion fence will be highly visible at height of 1.8 metres mounted on vertical steel pipes at three metre intervals driven 0.7 metres in ground.</p>	Prior to commencement of construction.	<p>Fencing and No-Go Zones removed following completion of construction.</p> <p>No inadvertent impacts to native vegetation due to construction activities.</p>	The site contractor will be responsible for implementation of exclusion fencing including monitoring and reporting of their effectiveness.	Temporary fences and signs are to be checked on a weekly basis to ensure they remain in place and are effective. Damage to temporary fences will be repaired immediately upon discovery.

Management Action	Description	Applicable Area	Establishment Maintenance and On-going Management Considerations	Frequency of Actions and/or Targets	Handover Benchmark/Handover Target	Ongoing Maintenance and On-going Monitoring Considerations	Frequency
Stockpile Management	Stockpiles are to be placed outside of retained Tree Protection Zones (TPZ) and patches of native vegetation to be retained.	Entire Area	No stockpiles are to be within TPZs, No-Go Zones or within patches of native vegetation to be retained.	Prior to commencement of construction.	No inadvertent impact to native vegetation due to the location of the designated stockpile area.	N/A	N/A
Responsibility – Land Management Contractor							
Weed Control	<p>Weed control works should be carried out by an experienced contractor. Licensed weed control contractors will have a greater ability to make appropriate decisions on which technique to use based on individual situations and the targeted species. Contractors will also need to be aware of the potential for new outbreaks of weed species not recorded in this assessment and implement appropriate weed control techniques as necessary.</p> <p>Several management techniques are recommended to control weeds, including physical removal, brush cutting and herbicide application. In most cases, herbicide will only be applied to weeds by using the spot-spraying technique, to prevent damage to non-target species. A summary of weed management techniques is provided in Appendix 1.</p> <p>The presence of weeds should be identified during regular monitoring events and follow up treatment applied. The manual removal of weeds is the preferred method of eradication but where impracticable the spraying of an appropriate natural herbicide such as pine oil could be used to treat grasses and herbaceous weeds, ensuring there is no off-target damage.</p>	Entire Area	Commence weed control within the study area for WoNS and CaLP Act-listed weeds.	Frequency of weed management to be nominated by the land management contractor.	Control and eradication of noxious weeds and WoNS to <1% cover.	<p>Monitor the effectiveness of weed management activities. The intensity of weed management activities may need to vary to ensure that weeds are adequately managed. It will be the contractor's responsibility to ensure that weeds are managed to the levels specified in this plan.</p> <p>Monitoring should be conducted annually to ensure weed management targets are met.</p>	Monitoring of weed control efforts to be conducted annually.
Weed Control	<p>Weeds of National Significance (WoNS)</p> <p>Blackberry, Boneseed, and Bridal Creeper are recognised as WoNS. WoNS must be appropriately managed in the study area, and if feasible eradicated. The goal is to eliminate WoNS to <1% cover, across the study area.</p>	Entire Area	Commence management of weeds, prior to revegetation efforts.	Frequency of weed management to be nominated by the land management contractor.	Eliminate WoNS to <1% cover prior to completion of construction.	<p>Monitor the effectiveness of weed management activities. The intensity of weed management activities may need to vary to ensure that weeds are adequately managed. It will be the contractor's responsibility to ensure that weeds are managed to the levels specified in this plan.</p>	Monitoring of weed control efforts to be conducted annually.

Management Action	Description	Applicable Area	Establishment Maintenance and On-going Management Considerations	Frequency of Actions and/or Targets	Handover Benchmark/Handover Target	Ongoing Maintenance and On-going Monitoring Considerations	Frequency
Weed Control						Any new and emerging WoNS must also be appropriately managed.	
	<p>Noxious Weeds</p> <p>Soursob and Great Mullein are listed as Restricted, and Spear Thistle is listed as a Regionally Controlled noxious weed under the CaLP Act. Landowners are responsible for the control of any infestation of noxious weeds to minimise their spread and impact on ecological values under the CaLP Act, which contains provisions relating to catchment planning, land management, noxious weeds and pest animals.</p> <p>The goal of management is to eliminate weeds to <1% cover, across the study area.</p>	Entire Study Area	Commence management of weeds prior to revegetation efforts.	Frequency of weed management to be nominated by the land management contractor.	Eliminate CaLP Act-listed weeds to <1% Cover prior to completion of construction.	<p>Monitor the effectiveness of weed management activities. The intensity of weed management activities may need to vary to ensure that weeds are adequately managed. It will be the contractor's responsibility to ensure that weeds are managed to the levels specified in this plan.</p> <p>Any new and emerging WoNS must also be appropriately managed.</p>	Monitoring of weed control efforts to be conducted annually.
Landscaping and Revegetation	<p>Landscaping and revegetation are proposed to the north of the Childcare Centre, which is being retained as an ecological restoration project (Figure 3). Additional revegetation is being conducted as part of the wider landscape plan. Revegetation must be undertaken in accordance with the Bushfire Emergency Management Plan (Terramatrix 2024), which outlines vegetation maintenance requirements, including proposed planting densities. The purpose of revegetation is to enhance the biodiversity and ecological values within the study area, which may provide habitat for native fauna species, without compromising the objectives of the Bushfire Emergency Management Plan. The proposed plantings will occur where weeds are removed.</p> <p>Revegetation of the Ecological Restoration Project area (Figure 3) must be undertaken with locally indigenous species specific to the Swampy Woodland EVC which is present.</p> <p>Landscaping and revegetation will be conducted in accordance with the Landscape Plan (Appendix 2).</p>	Ecological Restoration Project Area	<p>Commence landscaping and revegetation as per the requirements of the Landscape Plan.</p> <p>The aim of revegetation is to establish vegetation communities within the site that are of similar structure and floristic composition as Swampy Woodland.</p>	Frequency of plantings to be nominated by the land management contractor.	Proposed densities of landscaping activities are to be adhered to. If specified densities of landscaping and revegetation have not been met, additional revegetation will be required.	Monitor the effectiveness of revegetation and plantings. If survivorship of plantings is low, then additional plantings may be required. It is the contractors responsibility to ensure that the landscape plan is adhered to and relevant densities of plants are met.	Monitoring of revegetation activities to be conducted annually.
Mulching	As per the requirements of the planning permit (P/2020/6347), mulching is not proposed to occur for this project. Mulching may inadvertently increase	Entire Study Area	No mulch established on site.	N/A	No mulch established on site.	N/A	N/A

Management Action	Description	Applicable Area	Establishment Maintenance and On-going Management Considerations	Frequency of Actions and/or Targets	Handover Benchmark/Handover Target	Ongoing Maintenance and On-going Monitoring Considerations	Frequency
	bushfire risk by increasing the amount of flammable material within the study area.						
Qualifications	Revegetation and weed control Weed control works should be carried out by an experienced contractor. Licensed weed control contractors will have a greater ability to make appropriate decisions on which technique to use based on individual situations and the targeted species. Contractors will also need to be aware of the potential for new outbreaks of weed species not recorded in this assessment and implement appropriate weed control techniques as necessary.	N/A	Prior to commencement of activities, a land management contractor with experience in managing riparian corridors should be engaged to undertake works	Prior to commencement of weed management and revegetation efforts.	Land management contractor appropriately manages and implements revegetation and weed management efforts to the specifications of this plan.	Land management contractor must adhere to the requirements of this plan, and ensure that targets are revegetation and land management efforts are appropriately undertaken. It is the responsibility of the land management contractor to ensure that monitoring of each weed management and revegetation activities is appropriately undertaken.	Monitoring to be undertaken per the specifications in this plan.

4 RESPONSIBILITIES

4.1 Responsibilities

The Landowner will be responsible for all management actions described in this plan as part of the management strategy for the study area located at 1157-1165 Burwood Highway, Upper Ferntree Gully, and are subsequently responsible for engaging relevant experienced contractors where required.

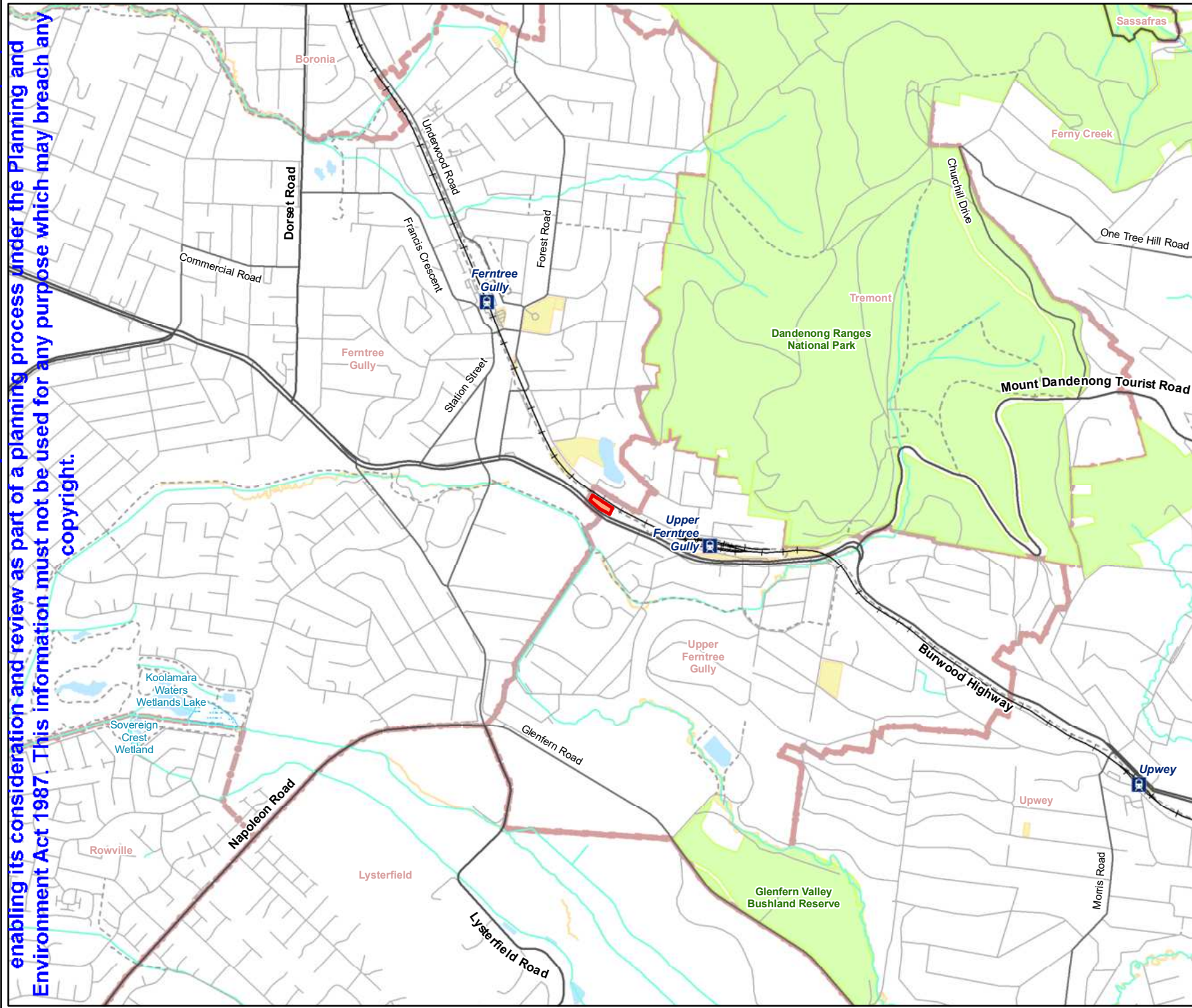
The implementation and success of the Ecological Management Plan must be reviewed and endorsed to the satisfaction of the responsible authority.

Should circumstances out of the control of the contractor not allow completion within the required timeframe, a revised timeframe is to be nominated by the ecologist.

REFERENCES

- CRC 2004. Developing and Implementing a Weed Management Plan. CRC for Australian Weed Management and Commonwealth Department of the Environment and Heritage.
- DEECA 2024a. NatureKit Map [www Document]. URL: <https://maps2.biodiversity.vic.gov.au/Html5viewer/index.html?viewer=NatureKit>. Victorian Department of Energy, Environment and Climate Action, Melbourne, Victoria.
- DEECA 2024b. Native Vegetation Regulation Map [www Document]. URL: <https://mapshare.vic.gov.au/nvr/>. Victorian Department of Energy, Environment and Climate Action, Melbourne, Victoria.
- DEECA 2024c. Ecological Vegetation Class (EVC) Benchmarks for each Bioregion [www Document]. URL: <https://www.environment.vic.gov.au/biodiversity/bioregions-and-evc-benchmarks>. Victorian Department of Energy, Environment and Climate Action, Melbourne, Victoria.
- DTP 2024. VicPlan Map [www Document]. URL: <https://mapshare.vic.gov.au/vicplan/>. Victorian Department of Transport and Planning, Melbourne, Victoria.
- EPA 2020a. *Civil construction, building and demolition guide*. Publication 1834. Published document prepared by the Victorian Environmental Protection Authority, Melbourne, Victoria.
- EPA 2020b. *Erosion, sediment and dust: Treatment train*. Publication 1893. Published document prepared by the Victorian Environmental Protection Authority, Melbourne, Victoria.
- Terramatrix 2024. Upper Ferntree Gully Childcare Centre - 1157 - 1165 Burwood Highway. Bushfire Emergency Management Plan. Prepared by Terramatrix, May 2024.

FIGURES



Legend

- Study Area
- Railway
- Major Road
- Collector Road
- Minor Road
- Proposed Road
- Minor Watercourse
- Permanent Waterbody
- Wetland/Swamp
- Parks and Reserves
- Crown Land
- Localities



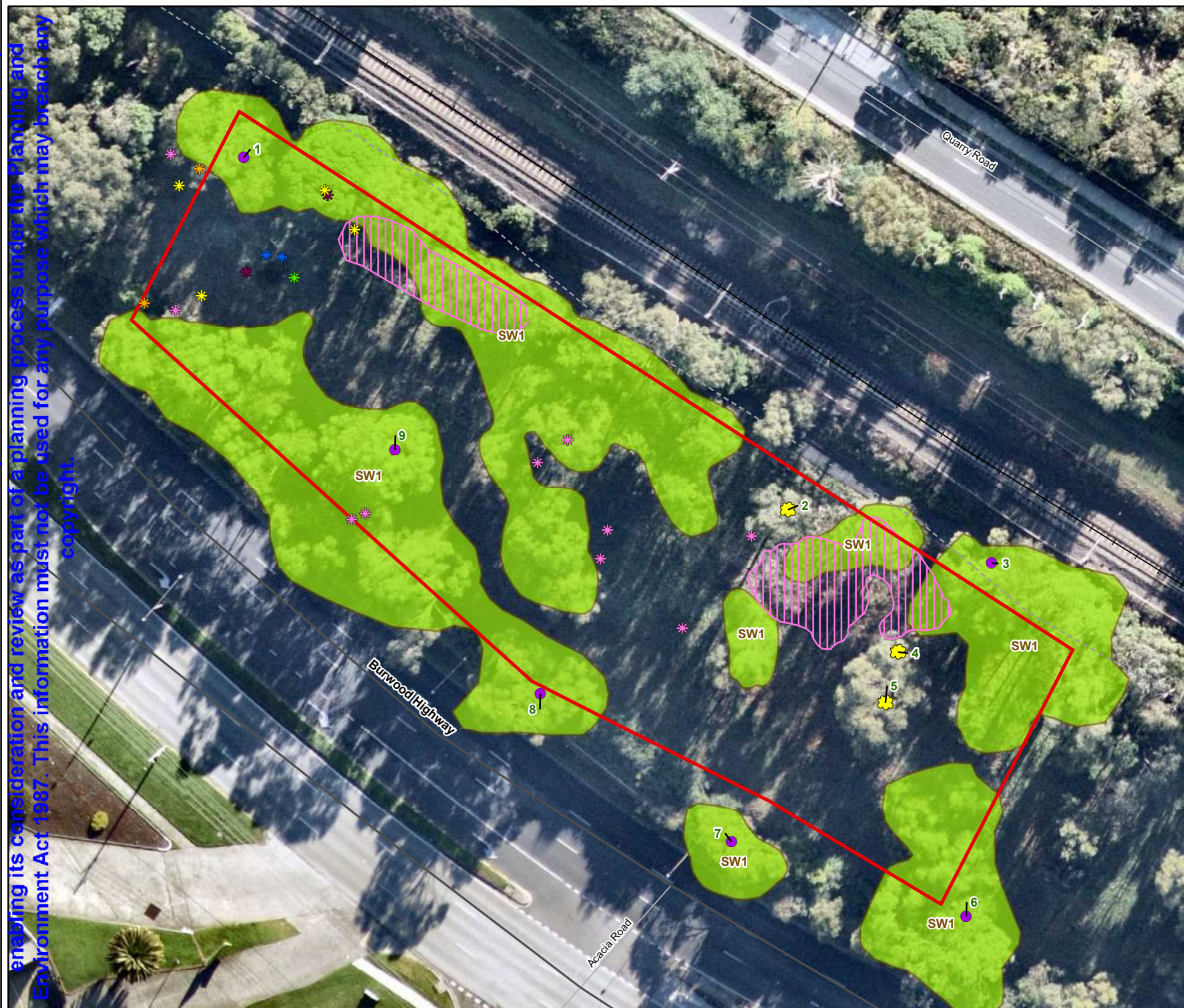
Figure 1
Location of the study area
*Ecological Management Plan
for 1157-1165 Burwood
Highway, Upper Ferntree Gully*

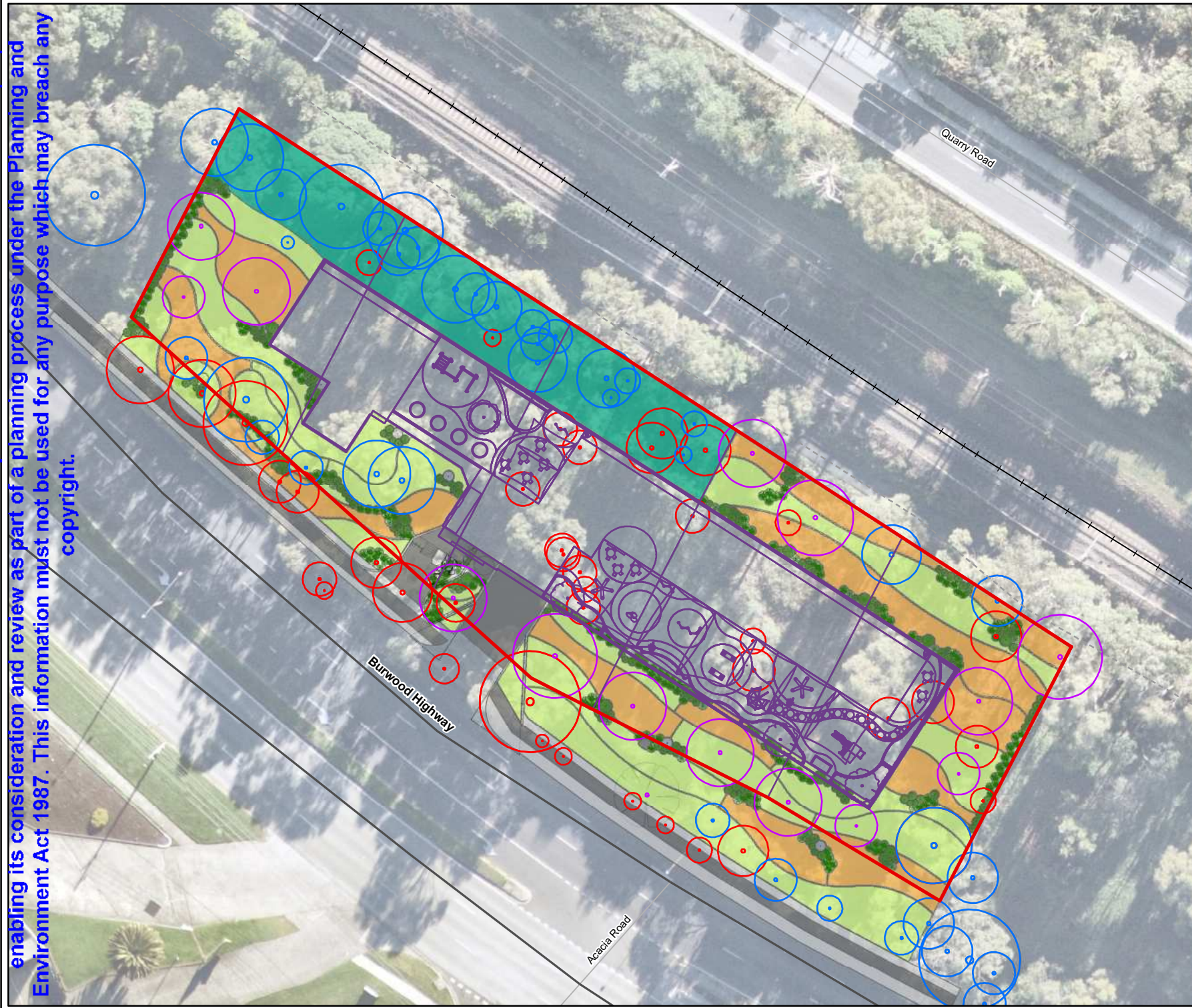
0 300 600
Metres

Map Scale: 1:25,000 @ A4
Coordinate System: GDA2020 MGA Zone 55

Base data source: Victoria State Government. Disclaimer: the State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

18149_Fig01_StudyArea_G20 18/06/2024 psorensen





Legend

- Study Area
- Development plan**
 - Learning centre
 - Tree to be removed
 - Proposed new tree
 - Existing tree
 - Existing vegetation to be retained
 - Shrubs
 - Proposed grasses
 - Proposed groundcovers
 - Path or paving
 - Path edging

Melbourne

Upper Ferntree Gully

Knox (C)

Figure 3

Development plan

Ecological Management Plan for 1157-1165 Burwood Highway, Upper Ferntree Gully

0 5 10 Metres

Map Scale: 1:600 @ A4

Coordinate System: GDA2020 MGA Zone 55

Base data source: Victoria State Government. Disclaimer: the State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

18149_Fig03_DevPlan_G20 10/07/2024 psorensen

APPENDIX 1: WEED CONTROL MEASURES

Weed control measures identified in Table 3 are described in detail below; as well as additional common alternative methods. Weed control measures (including type of herbicide) must follow the guidance of an experienced contractor for the control of the weed species identified above.

Herbicides

Spot spraying and Rig-spraying

The application of herbicides is an effective and efficient control technique for a range of woody, herbaceous and grass weeds. The correct use and application of herbicides can provide targeted control of a range of species, however it must be stressed all use of herbicides must be used in accordance with the manufacturer's specifications and occupational health and safety policies.

Application methods for herbicides include spot spraying with a knapsack for small or sensitive areas, or for targeted species. Rig spraying is best used in larger areas which are not sensitive to high volume application of herbicide and there is limited potential for off-target damage. Dabbing of species with foam tipped application device, with the herbicide applied from an attached bottle, must be used in sensitive areas or in areas where weed control is targeted to a small number of plants, especially bulbs or tuberous plants.

Timing of intervals, plant age and growth seasons, plant stress levels and climatic factors all need to be considered when develop methodologies for the application of herbicides to ensure successful outcomes. Problems exist with ongoing unsuccessful herbicide treatments, which may result in weeds developing herbicide resistance, or the build-up of chemicals in the soil. Surrounding plants' susceptibility to herbicides and ongoing uses of the treated areas must also be considered when choosing the right herbicide to be used in a weed control program, as some herbicides are residual and may persist within the soil for varying durations.

Drill and Fill

Drill and fill, also known as direct injection, is a method where the selected herbicide (usually Glyphosate) is injected through a device into a hole that has been made into the targeted plant (i.e. woody species). The hole is usually made through the use of a drill but sometimes a tomahawk or saw may be used to put small nicks into the targeted plant. It is essential that the hole or nick must always be lower than the first branch containing foliage (i.e. ideally, the lowest possible point on the plant) and also the herbicide is applied into the hole as quick as possible. The general rule of thumb is that the herbicide must be applied within 30 seconds. Holes are scattered around the main trunk at 50 millimetre intervals, depending on the diameter of the trunk and also branches or angle of the trunk. It is essential that a complete ring around the trunk of the plant be made of this herbicide filled holes to ensure plant death, as large gaps may allow sections of the target tree to survive. Generally, the holes or nicks do not need to be deeper than 20 millimetres, but do need to be deep enough to penetrate the outer cambium layer of the tree. This allows the phloem to carry the herbicide into the roots, which will kill the plant over a number of weeks, depending on conditions.

The benefits of this method include: the retention of standing material for habitat, no costs for the removal of the plant from the site; no dragging of material across sensitive areas; and, speed, as the method is fast to execute (i.e. drill and fill, and move on).

The drawbacks of this method are that if it is not executed correctly, trees may re-grow, particularly as accessing the base of the trunk of spiny plants such as Hawthorn and African Box-thorn can be difficult. However if the application is successful, dead standing vegetation can become a fire hazard and look aesthetically displeasing to the community.

Cut and Paint

The cut and paint method of control requires the cutting of the target species at the very base, under any foliage, and the immediate application of herbicide (usually a glyphosate, dependent on the target species). The application can be done through a 'dabber' bottle or paint brush. Care must be undertaken during application, to avoid splash of herbicide causing non-target damage. Once cut down, the biomass of the target species may sometimes be left on the ground, but usually requires removal. This is particularly necessary if it bears fertile seeds or has the potential to re-shoot from contact with moist ground (i.e. *Salix* sp.), or covers native vegetation.

Many herbicides are available that are very effective in the control of woody weed species. Typically these herbicides are applied to the stem, trunk or roots of the target plant by 'drill and fill', 'cut and paint' or 'frilling' methods of application. These herbicides can be more effective than manual removal alone, as the chance of the plant re-sprouting is significantly reduced.

Mechanical Removal

Mechanical removal by machine may include grooming of woody weed infestations by a tractor-mounted groomer (slasher/mulcher), which is quite effective on Gorse, African Box-thorn and Hawthorn infestations. The excavation of Spiny Rush has been used in areas of dense infestations where other means of eradication may be a slow process due to difficult access.

Manual Removal

Some weed species are resilient against other methods of eradication, such as herbicides, and must be targeted by manual removal. Infestations of species such as African Box-thorn, Fennel, Serrated Tussock and Toowoomba Canary-grass must be combated by manual removal techniques.

Additionally, manual removal is a crucial technique when used in conjunction with herbicides for the control of both woody and herbaceous weed species. This combination of weed eradication is advised for almost all weed species.

Ring-barking

Ring-barking is a viable technique for use when eradicating large woody shrubs and trees. The technique involves the use of a large knife, tomahawk or axe to make a continuous cut around the trunk of the plant. The cut must be 5-10 centimetres wide and deep enough to penetrate the heart-wood (Muyt 2001). This technique must not be used when removing species which can reproduce by suckering.

Mowing

While it has been found that mowing may enhance the survival of many weed species, in some instances mowing can be used to control their spread. Areas located in close proximity (500 metres – 1 kilometre) to sites of ecological significance that are currently mown, must undergo an intensive mowing regime (every week), particularly in spring. This method of weed control is only effective against species which are prevalent within mown areas. It will prove most effective in controlling the spread of grass species such as Chilean Needle-grass, Serrated Tussock and Toowoomba Canary-grass.

Mulching

It is advised that mulching be used in areas of revegetation which were previously dominated by exotic vegetation. Mulching can be a very effective technique in suppressing species which may invade, particularly from mown areas.

In areas of native vegetation, mulch must be used very carefully. Only people who have an in-depth knowledge and long history of the specific site must advise the use of mulch in these areas to ensure native species (particularly rare and threatened species) are not affected by the use of mulch.

Soil Scalping

Soil scalping involves the removal of a thin layer of topsoil in areas of extremely high weed cover abundance. Care must be taken in order to ensure that enough soil is removed to eliminate the possibility of re-colonisation from the soil seedbank. If soil scrapping is to be undertaken, a minimum of depth of 10cm of soil needs to be removed to be effective. Soil scalping cannot be undertaken in areas of native vegetation nominated for retention and protection.

It is important that this process is directly followed by high density revegetation and mulching in order to reduce the migration of other weeds into these areas. This process is only favoured in areas that are considered a major source population for weed species of high threat to agriculture, heritage or areas of conservation significance.

APPENDIX 2: LANDSCAPE PLAN

L701 EXISTING TREES
L702 EXTERNAL PLANTING PLAN - NORTH
L703 EXTERNAL PLANTING PLAN - SOUTH
L710 SPECIFICATION AND DETAIL

Planting has been adapted from initial town planning drawings by John Patrick Landscape Architects dated 20/06/2022, using the same planting palette as this issue and including the indigenous planting area along the north west embankment. This has also been developed in line with the arborist report by John Patrick Landscape Architects dated Jun 2022 and the Bushfire Management Plan by Terramatrix issued Jun 17 2024

TPZ
+
EXISTING VEGETATION - RETAIN
TPZ = TREE PROTECTION ZONE
See Arborist report by John Patrick Landscape Architects date June 2022

+
EXISTING VEGETATION - REMOVE
See Arborist report by John Patrick Landscape Architects date June 2022

XX
●
PROPOSED TREE
SEE VG04

XX ● **XX** ●
PROPOSED UNDERSTOREY
AS INDICATED
SEE VG01/02/03

XX ● **XX** ●
PROPOSED GRASS
AS INDICATED
SEE VG01/02/03

GROUND COVERS UNDER 10CM
RANDOM LAYOUT
SEE VG01/02/03

LOW PLANTING (UNDER 1M)
RANDOM LAYOUT
SEE VG01/02/03

INDIGENOUS PLANTING
RANDOM LAYOUT
SEE VG01/02/03
Existing Indigenous Vegetation to be Retained
Supplemented with Additional Site Indigenous
(EVC 937 Swampy Woodland). See Ecological
Management Plan by Ecology & Heritage Partners

SHRUBS
In 5m² groups set min. 5m
apart as per BAL report

PLANTED AREAS
Details on L710
See VG01/02/03 for in-ground planting
See VG04 for tree planting
See VG05/06 for standard planterbox

ECOLOGICAL ZONE
Proposed planting as per EVC 937
Swampy Woodland, see Ecological
Management Plan by EH Partners

Code	Botanical Name	Common Name	Size (HxW)	Pot Size	Qty
TREES					
Eo	<i>Eucalyptus obliqua</i>	Messmate	20 x 10	30cm	2
Eov	<i>Eucalyptus ovata</i>	Swamp Gum	12 x 9	30cm	1
Er	<i>Eucalyptus radiata</i>	Peppermint Gum	12 x 8	30cm	8
Me	<i>Melaleuca ericifolia</i>	Swamp Paperbark	8 x 8	30cm	4
SHRUBS					
Aa	<i>Acacia acinacea</i>	Gold Dust Wattle	1.5 x 2	20cm	3
Ca	<i>Correa alba</i>	White Correa	1.3 x 1.3	20cm	2
Cr	<i>Correa reflexa</i>	Native Fuschia	1 x 1	20cm	52
Go	<i>Goodenia ovata</i>	Hop Goodenia	1 x 1.5	20cm	25
Ia	<i>Indigophera australis</i>	Austral Indigo	1.5 x 1.5	20cm	10
SaBC	<i>Syzygium australe</i> 'Bush Christmas'	Bush Christmas Lilly-pilly	2.3 x 1	20cm	6
WAB	<i>Westringia</i> 'Aussie Box'	Native Box	0.8 x 0.8	20cm	22
UNDERSTORY PLANTING					
Bm	<i>Brachyscome multifida</i>	Cut-leaf Daisy	0.2 x 0.4	14cm	192
Dv	<i>Dianella revoluta</i>	Black-anther Flax Lily	0.5 x 0.5	14cm	222
Ga ra	<i>Gahnia radula</i>	Thatch Saw-sedge	1 x 1	14cm	143
Gsi	<i>Gahnia sieberiana</i>	Red-fruited Saw-sedge	1.5 x 2	14cm	17
HvM	<i>Hardenbergia violacea</i> 'Meema'	Meema Purple Coral Pea	0.3 x 1.5	14cm	126
LI	<i>Lomandra longifolia</i> 'Tanika'	Tanika Mat Rush	0.6 x 0.65	20cm	182
PL	<i>Poa labillardieri</i>	Native Tussock Grass	1 x 1	14cm	275
GROUNDCOVERS UNDER 10cm					
Cha	<i>Chryscephalum apiculatum</i>	Common Everlasting	0.1 x 0.8	14cm	360
Cg Ci	<i>Casuarina glauca</i> 'Cousin It'	Cousin It Groundcover	0.1 x 1.5	14cm	156
Dv	<i>Dichondra repens</i>	Kidney Weed	0.1 x 1	14cm	106
MyP	<i>Myoporum parvifolium</i> 'Yareena'	Yareena Creeping Boobialla	0.1 x 1	14cm	254
P	<i>Persoonia chamaepeuce</i>	Dwarf Goebrug	0.1 x Spreading	14cm	208
Vc	<i>Viola hederacea</i>	Native Violet	0.1 x Spreading	14cm	162
Cm	<i>Carporobrotus modestus</i>	Inland Pigface	0.1 x Spreading	14cm	14
Kp	<i>Kennedia prostrata</i>	Running Postman	0.1 x Spreading	14cm	19
INDIGENOUS SHRUBS					
Le co	<i>Leptospermum continentale</i>	Prickly Tea-tree	2 x 2	tube	6
Ozf	<i>Ozothamnus ferrugineus</i>	Tree Everlasting	2 x 1	tube	19
INDIGENOUS UNDERSTORY					
Cap	<i>Carex appressa</i>	Tall Sedge	0.8 x 0.6	tube	320
Eap	<i>Epacris impressa</i>	Common Heath	0.6 x 0.4	tube	146
Ga ra	<i>Gahnia radula</i>	Thatch Saw-sedge	1 x 1	tube	141
Hb	<i>Hibbertia procumbens</i>	Spreading Guinea Flower	0.3 x 0.6	tube	190
Hr	<i>Hibbertia bipartita</i>	Erect Guinea-flower	0.8 x 0.6	tube	180
LI	<i>Lomandra filiformis</i>	Wattle Mat-rush	0.5 x 0.2	tube	115
PL	<i>Poa labillardieri</i>	Native Tussock Grass	1 x 1	tube	254
Pt	<i>Poa tenera</i>	Slender Russock-grass	0.3 x 0.8	tube	275
Hv	<i>Hardenbergia violacea</i> (indigenous var)	Purple Native Wisteria	0.1 x 1	tube	156

EXISTING TREE SCHEDULE				See arborist report issued by John Patrick Landscape Architects issued June 2022	
No.	Botanical Name	Common Name	TPZ (m)	Arb. Value	
1	<i>Eucalyptus ovata</i>	Swamp Gum	5.8	Low	
2	<i>Eucalyptus obliqua</i>	Messmate Stringybark	6.8	Low	
3	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.7	Low	
4	<i>Eucalyptus ovata</i>	Swamp Gum	4.8	Low	
5	<i>Eucalyptus obliqua</i>	Messmate Stringybark	8.7	Low	
5A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
6	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	
7	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
7A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
8	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low	
9	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	Medium	
10	<i>Eucalyptus ovata</i>	Swamp Gum	2.2	Low	
11	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low	
12	<i>Eucalyptus ovata</i>	Swamp Gum	6.0	Low	
13	<i>Eucalyptus ovata</i>	Swamp Gum	4.3	Low	
14	<i>Eucalyptus ovata</i>	Swamp Gum	4.7	Low	
14A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
15	<i>Eucalyptus ovata</i>	Swamp Gum	7.2	Low	
15A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
15B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
16	<i>Eucalyptus ovata</i>	Swamp Gum	7.2	Low	
16A	<i>Eucalyptus cinerea</i>	Argyle Apple	2.0	Low	
16B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
16C	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
16D	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
17	<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint	2.2	Low	
18	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
19	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low	
20	<i>Eucalyptus ovata</i>	Swamp Gum	3.1	Low	
21	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.7	Medium	
22	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	High	
23	<i>Eucalyptus ovata</i>	Swamp Gum	3.4	Low	
24	<i>Eucalyptus ovata</i>	Swamp Gum	2.6	Low	
25	<i>Eucalyptus ovata</i>	Swamp Gum	4.1	Low	
26	<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint	6.0	Low	
27	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low	
28	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low	
29	<i>Eucalyptus ovata</i>	Swamp Gum	2.5	Low	
30	<i>Eucalyptus obliqua</i>	Messmate Stringybark	6.0	Low	
31	<i>Eucalyptus obliqua</i>	Messmate Stringybark	9.6	Low	
32	<i>Eucalyptus ovata</i>	Swamp Gum	5.2	Low	
32A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	
33	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low	
34	<i>Eucalyptus obliqua</i>	Messmate Stringybark	4.2	Low	
35	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low	
36	<i>Eucalyptus ovata</i>	Swamp Gum	5.8	Low	
37	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.8	Low	
38	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.8	Low	
38A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.2	Low	
38B	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	
39	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low	
40	<i>Eucalyptus obliqua</i>	Messmate Stringybark	5.5	Low	
41	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
41A	<i>Eucalyptus ovata</i>	Swamp Gum	2.5	Low	
42	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.0	Low	
43	<i>Eucalyptus ovata</i>	Swamp Gum	3.7	Low	
43A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low	
44	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low	
44A	<i>Eucalyptus ovata</i>	Swamp Gum	4.6	Low	
45A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.7	Low	
46	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.4	Low	
46A	<i>Eucalyptus ovata</i>	Swamp Gum	3.0	Medium	
46B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
46C	<i>Acacia measmii</i>	Black Wattle	2.8	Medium	
46D	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.8	Medium	
46E	<i>Eucalyptus obliqua</i>	Messmate Stringybark	4.3	Low	
46F	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	
46G	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low	
46H	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	
47	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Medium	
48	<i>Acacia melanoxylon</i>	Blackwood	2.0	Low	
49	<i>Acacia melanoxylon</i>	Blackwood	2.0	Low	
50	<i>Eucalyptus ovata</i>	Swamp Gum	2.4	Low	
51	<i>Eucalyptus gonicalyx</i>	Long Leaved Box	2.4	Low	
52	<i>Eucalyptus gonicalyx</i>	Long Leaved Box	2.4	Low	
53	<i>Acacia measmii</i>	Black Wattle	4.8	Medium	
53A	<i>Eucalyptus ovata</i>	Swamp Gum	2.4	Low	
54	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	High	
55	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.0	Low	
56	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	High	
57	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low	



•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
Rev	Amendments	App'd	Date

NOTE:

The location of services are indicative only and must be proven prior to the commencement of works.

Contractor to verify all dimensions on site and report all discrepancies to the superintendent prior to construction.

Figured dimensions to be taken in preference to scaling from drawings. All dimensions are in millimetres unless otherwise noted.

This drawing is copyright and must not be retained, used or copied in whole or in part without Strata Landscape Architect's written approval other than for the express purpose for which it has been commissioned.



Scale: 1:200 @ A1

Scale Bar:

1:200 2 4 6 8 10 20 metres

Principal Designer: [REDACTED]

Contact Number: [REDACTED] 03 9482 7868

Email: [REDACTED]

Assistants: [REDACTED]

Checked by: .

Drawing Name: **EXTERNAL PLANTING SCHEME**

Project Name:
FERNTREE GULLY ELC

Drawing Status: Town Planning

Client Name:	[REDACTED]
Project Address:	1157-1164 Burwood Highway, Upper Ferntree Gully

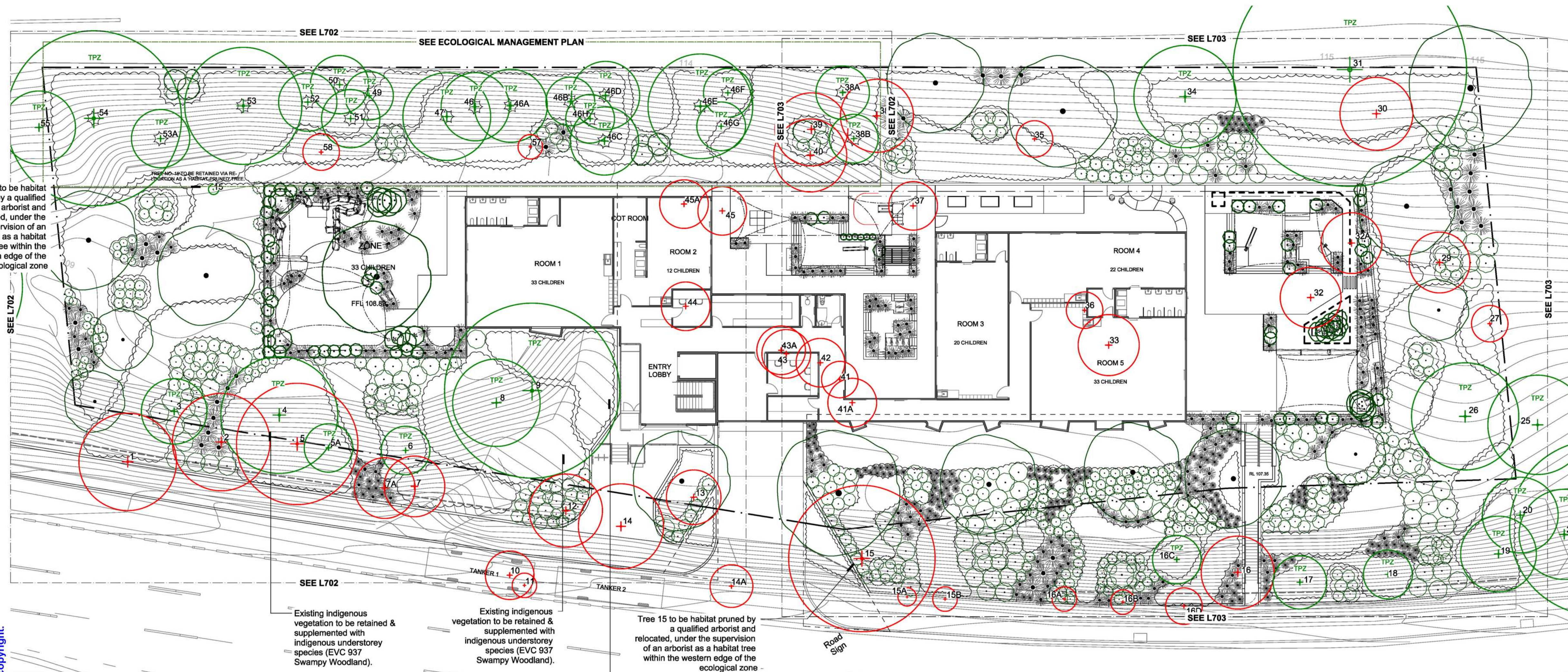
Date: 10-Jul-24

Sheets: 1 of 4

Project #: 40208

Sheet Name:

L700



EXISTING TREES

01 PLAN
SCALE 1:200 @ A1

PLANTING

TPZ
+
EXISTING VEGETATION - RETAIN
TPZ = TREE PROTECTION ZONE
See Arborist report by John Patrick Landscape
Architects date June 2022

EXISTING VEGETATION - REMOVE
See Arborist report by John Patrick Landscape Architects date June 2022



PROPOSED TREE
SEE L702/L703



PROPOSED UNDERSTOREY
SEE L702/L703

PROPOSED GRASS
 SEE L702/L703 **MASS PLANTING**
SEE L702/L703

EXISTING TREE SCHEDULE See arborist report issued by John Patrick
Landscape Architects issued June 2022

No.	Botanical Name	Common Name	TPZ (m)	Arb. Value
1	<i>Eucalyptus ovata</i>	Swamp Gum	5.8	Low
2	<i>Eucalyptus obliqua</i>	Messmate Stringybark	6.8	Low
3	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.7	Low
4	<i>Eucalyptus ovata</i>	Swamp Gum	4.8	Low
5	<i>Eucalyptus obliqua</i>	Messmate Stringybark	8.7	Low
5A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
6	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
7	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
7A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
8	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low
9	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	Medium
10	<i>Eucalyptus ovata</i>	Swamp Gum	2.2	Low
11	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low
12	<i>Eucalyptus ovata</i>	Swamp Gum	6.0	Low
13	<i>Eucalyptus ovata</i>	Swamp Gum	4.3	Low
14	<i>Eucalyptus obliqua</i>	Swamp Gum	4.7	Low
14A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
15	<i>Eucalyptus ovata</i>	Swamp Gum	7.2	Low
15A	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
15B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
16	<i>Eucalyptus ovata</i>	Swamp Gum	7.2	Low
16A	<i>Eucalyptus cinerea</i>	Argyle Apple	2.0	Low
16B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
16C	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
16D	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
17	<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint	2.2	Low
18	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
19	<i>Eucalyptus ovata</i>	Swamp Gum	4.0	Low
20	<i>Eucalyptus ovata</i>	Swamp Gum	3.1	Low
21	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.7	Medium
22	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	High
23	<i>Eucalyptus ovata</i>	Swamp Gum	3.4	Low
24	<i>Eucalyptus ovata</i>	Swamp Gum	2.6	Low
25	<i>Eucalyptus ovata</i>	Swamp Gum	4.1	Low
26	<i>Eucalyptus radiata</i>	Narrow-leaved Peppermint	6.0	Low
27	<i>Eucalyptus ovata</i>	Swamp Gum	2.5	Low
28	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low
29	<i>Eucalyptus ovata</i>	Messmate Stringybark	3.6	Low
30	<i>Eucalyptus obliqua</i>	Messmate Stringybark	6.0	Low
31	<i>Eucalyptus obliqua</i>	Messmate Stringybark	9.6	Low
32	<i>Eucalyptus ovata</i>	Swamp Gum	5.2	Low
32A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
33	<i>Eucalyptus ovata</i>	Swamp Gum	3.0	Low
34	<i>Eucalyptus obliqua</i>	Messmate Stringybark	4.2	Low
35	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low
36	<i>Eucalyptus ovata</i>	Swamp Gum	5.8	Low
37	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.0	Low
38	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.8	Low
38A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.2	Low
38B	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
39	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low
40	<i>Eucalyptus obliqua</i>	Messmate Stringybark	5.5	Low
41	<i>Eucalyptus ovata</i>	Swamp Gum	2.4	Low
41A	<i>Eucalyptus ovata</i>	Swamp Gum	2.5	Low
42	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.0	Low
43	<i>Eucalyptus ovata</i>	Swamp Gum	3.7	Low
43A	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.6	Low
44	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Low
45	<i>Eucalyptus ovata</i>	Swamp Gum	4.5	Low
45A	<i>Eucalyptus ovata</i>	Messmate Stringybark	3.7	Low
46	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.4	Low
46A	<i>Eucalyptus ovata</i>	Swamp Gum	3.0	Medium
46B	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
46C	<i>Acacia mearnsii</i>	Black Wattle	2.8	Medium
46D	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.8	Medium
46E	<i>Eucalyptus obliqua</i>	Messmate Stringybark	4.3	Low
46F	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
46G	<i>Eucalyptus ovata</i>	Swamp Gum	2.0	Low
46H	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
47	<i>Eucalyptus ovata</i>	Swamp Gum	3.6	Medium
48	<i>Acacia melanoxylon</i>	Blackwood	2.0	Low
49	<i>Acacia melanoxylon</i>	Blackwood	2.0	Low
50	<i>Eucalyptus ovata</i>	Swamp Gum	2.4	Low
51	<i>Eucalyptus goniolax</i>	Long leaved Box	2.4	Low
52	<i>Eucalyptus goniolax</i>	Long leaved Box	2.4	Low
53	<i>Acacia mearnsii</i>	Black Wattle	4.8	Medium
53A	<i>Eucalyptus ovata</i>	Swamp Gum	2.4	Low
54	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	High
55	<i>Eucalyptus obliqua</i>	Messmate Stringybark	3.0	Low
56	<i>Eucalyptus obliqua</i>	Messmate Stringybark	7.2	High
57	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low
58	<i>Eucalyptus obliqua</i>	Messmate Stringybark	2.0	Low

•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
•	•	•	•
Rev	Amendments	App'd	Date

NOTE:

The location of services are indicative only and must be proven prior to the commencement of works.

Contractor to verify all dimensions on site and report all discrepancies to the superintendent prior to construction.

Figured dimensions to be taken in preference to scaling from drawings. All dimensions are in millimetres unless otherwise noted.

This drawing is copyright and must not be retained, used or copied in whole or in part without Stralis Landscape Architecture's written approval other than for the express purpose for which it has been commissioned.

STRATIS
LANDSCAPE ARCHITECTS

Scale: 1:200 @ A1	
Scale Bar:	
<p>A scale bar for a drawing at a scale of 1:200. The bar is divided into segments representing 2, 4, 6, 8, 10, and 12 metres. The text '1:200' is written above the first segment, and 'metres' is written below the bar.</p>	
Principal Designer:	[Redacted]
Contact Number:	[Redacted] 03 9482 7868
Email:	[Redacted]
Assistants:	[Redacted]
Checked by:	[Redacted]

Drawing Name:		EXISTING TREES	
Project Name:		Date: 10-Jul-24	
FERNTREE GULLY ELC		Sheets: 1 of 4	
		Project #: 40208	
Drawing Status: Town Planning		Sheet Name:	
Client Name: [REDACTED]		L701	
Project Address: 1157-1164 Burwood Highway, Upper Ferntree Gully			

NOTE:

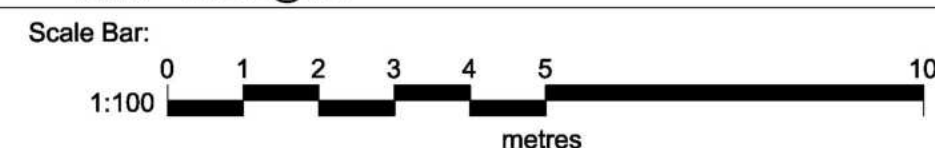
The location of services are indicative only and must be proven prior to the commencement of works.

Contractor to verify all dimensions on site and report all discrepancies to the superintendent prior to construction.

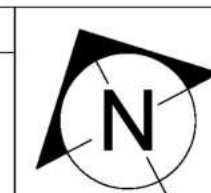
Figured dimensions to be taken in preference to scaling from drawings. All dimensions are in millimetres unless otherwise noted.

This drawing is copyright and must not be retained, used or copied in whole or part without Stratis Landscape Architect's written approval other than for the express purpose for which it has been commissioned.

Scale: 1:100 @ A1



Principal Designer:	[REDACTED]
Contact Number:	[REDACTED] 03 9482 7866
Email:	[REDACTED]
Assistants:	[REDACTED]
Checked by:	[REDACTED]



Drawing Name:

PLANTING PLAN AND SCHEDULE

Project Name: **FERNTREE GULLY ELC**

	Drawing Status: Town Planning
--	-------------------------------

Client Name:	[REDACTED]
Project Address:	1157-1164 Burwood Highway, Upper Ferntree Gully

Date: 10-Jul-24

Sheets: 2 of 4

Project #: 40208

Sheet Name

L702

TPZ

+ TPZ = TREE PROTECTION ZONE
See Arborist report by John Patrick Landscape Architects date June 2022

+ EXISTING VEGETATION - REMOVE
See Arborist report by John Patrick Landscape Architects date June 2022

XX ●
PROPOSED TREE
SEE VG04

XX ● XX ●
PROPOSED UNDERSTOREY
AS INDICATED
SEE VG01/02/03

xx xx
PROPOSED GRASS
AS INDICATED
SEE VG01/02/03

RANDOM LAYOUT
SEE VG01/02/03

LOW PLANTING (UNDER 1M)
RANDOM LAYOUT
SEE VG01/02/03

INDIGENOUS PLANTING
RANDOM LAYOUT
SEE VG01/02/03

Existing Indigenous Vegetation to be Retained & Supplemented with Additional Site Indigenous Species (EVC 937 Swampy Woodland). See Ecological Management Plan by Ecology & Heritage Partners

SHRUBS
In 5m² groups set min. 5m apart as per BAL report.

PLANTED AREAS
Details on L710
See VG01/02/03 for in-ground planting
See VG04 for tree planting
See VG05/06 for standard planterbox

STRATIS
LANDSCAPE ARCHITECTS

Date: 10-Jul-24
Sheets: 3 of 4
Project #: 40208
Sheet Name: L703

ADVERTISED DOCUMENT - This document has been copied and made available for the sole purpose of enabling its consideration and review as part of a planning process under the Planning and Environment Act 1987. This information must not be used for any purpose which may breach any copyright.

PLANTING SPECIFICATION

1. VEGETATION AND PLANTING

- 1.1 Immediately following collection from the nursery the contractor must ensure that at all times prior to planting all plants are stored upright in a protected location free of extremes of wind, temperature and sunlight and thoroughly watered at least early morning and late afternoon, ensuring that the entire root ball is completely saturated on each occasion
- 1.2 Location of services (overhead and underground) to be checked prior to excavation for tree planting. Plant no species with an expected mature height of more than three metres under power lines. Where plants are have been specified under powerlines seek advice and direction from the landscape architect prior to proceeding
- 1.3 All labels, wires, twine and other binding materials are to be removed from plants and root ball prior to backfilling
- 1.4 Immediately after planting water well into saucer around crown of plant. Plants shall be thoroughly watered regardless of weather conditions. Water sufficiently to consolidate the backfill around the roots and saturate the root ball to its core
- 1.5 Site to be left clean and tidy on completion of planting
- 1.6 Remove weeds and building spoil from all planting beds
- 1.7 All plants are to be true to species, healthy, free from pests disease and stress
- 1.8 Ground levels within all landscape areas should drain away from buildings towards the paths, pits, kerbs etc. in accordance with all regulations. Ensure all drainage areas have contingency overflow clear of buildings
- 1.9 All dimensions are to be verified on site prior to construction commencing. Any discrepancies are to be immediately reported to the Project Manager for further instruction
- 1.10 Any variations to this specification and associated details are to be submitted for approval prior to any planting

2. IRRIGATION

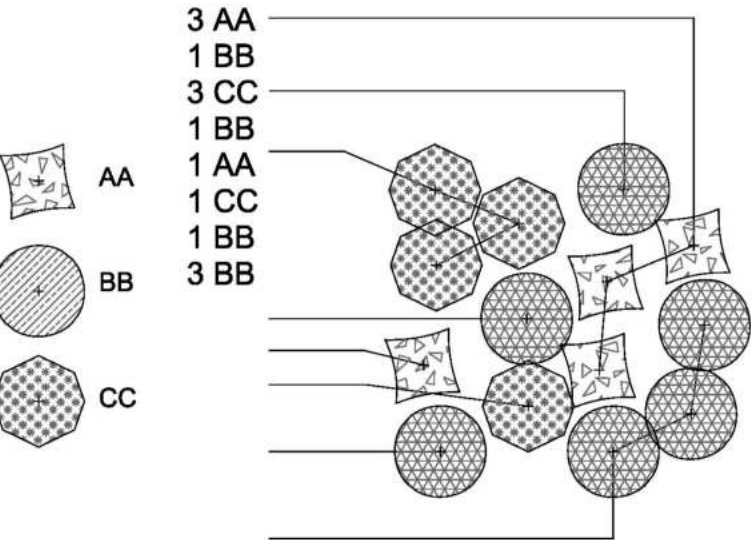
- 2.1 The contractor shall design an irrigation system specifically for existing trees 8 & 9 and all new canopy trees.
- 2.2 The system must take into account soil types and hydro-zones or planting-zones with different water requirements and different operating pressures. Where necessary the contractor is to organise as part of their works any electrical and/or plumbing that is required for the irrigation system
- 2.3 The irrigation system is to be drip irrigation with 1) 25mm dia. HDPE feedline and 2) 15mm drip lines situated min. 100mm below finished surface level. Ensure coverage 360 degrees around each tree, suitably located to encourage further root growth.
- 2.4 Each zone shall be fitted with all necessary flush and air-release/vacuum breaker valves protected by valve boxes. Valve boxes are to be placed in easily accessible yet out of the way locations
- 2.5 The entire irrigation system is to operate automatically by means of a controller and solenoid valves. The system shall be fitted with all necessary safety check valves and backflow prevention devices to prevent any water contamination and also for ease of servicing the system. The contractor is to supply and install the irrigation system including its components to industry best practice
- 2.8 All irrigation works carried out are to comply with all relevant Australian Standards, including but not limited to:
AS 1159 Polyethylene Pipe for Pressure Applications
AS 1432 Copper Tubes for plumbing, gas fittings and drainage applications
AS 1460 Fittings for use with Polyethylene Pipes
AS 1462 Methods for testing UPVC pipe and fittings
AS 2032 Code of practice for installation of UPVC pipe and fittings
AS 2698.1 Polyethylene micro irrigation pipe
As 3500.1 Section 4 and 7 National Plumbing and Drainage Code
- 2.9 Upon completion of works the contractor is to provide the client all manuals and warranties, as well as a minimum of two watering programs (eg. summer and winter) typed out and laminated
- 2.10 Should the contractor require assistance designing the irrigation system they may engage an experienced licensed irrigation expert such as: Reece Irrigation, Ph: 03 9872 4533 Email: irrigationdesign@reece.com.au

3. GARDEN PREPARATION - OPEN AREAS

- 3.1 Prior to preparing garden beds the entire soil profile is to be thoroughly cleared of weeds, building rubble and other debris.
- 3.2 Where it is not reasonably practical to rework existing site soil (see note on detail drawing below), garden must be established with imported sandy loam to a minimum depth of 200mm. The pH value of imported sandy loam should be between 5.5 and 6.5. Organic additives to the sandy loam should be based on well rotten vegetative material free from harmful chemicals, grass and weeds. Imported soils must comply with AS4419 Soils for landscaping and garden use
- 3.3 Rip Subgrade & cultivate site soil to a broken up friable texture. In clay soils incorporate gypsum at the rate of 2.0 kg/square metre. Mix through well decomposed low nutrient organic material (eg fine pine sawdust, not manure) at a ratio of 25% organic material to 75% site soil. Organic material must be completely free from harmful chemicals, grass and weed seed or cuttings
- 3.4 Gardens must be shaped with a defined crown and tapered downhill and out of the property, or towards existing pits and drains. Under no circumstance may garden areas include low spots that may retain surface water, excepting to the extent that planting instructions elsewhere in this drawing package may require that shallow dams to be formed around individual plants

4. GARDEN PREPARATION - EXISTING TREES

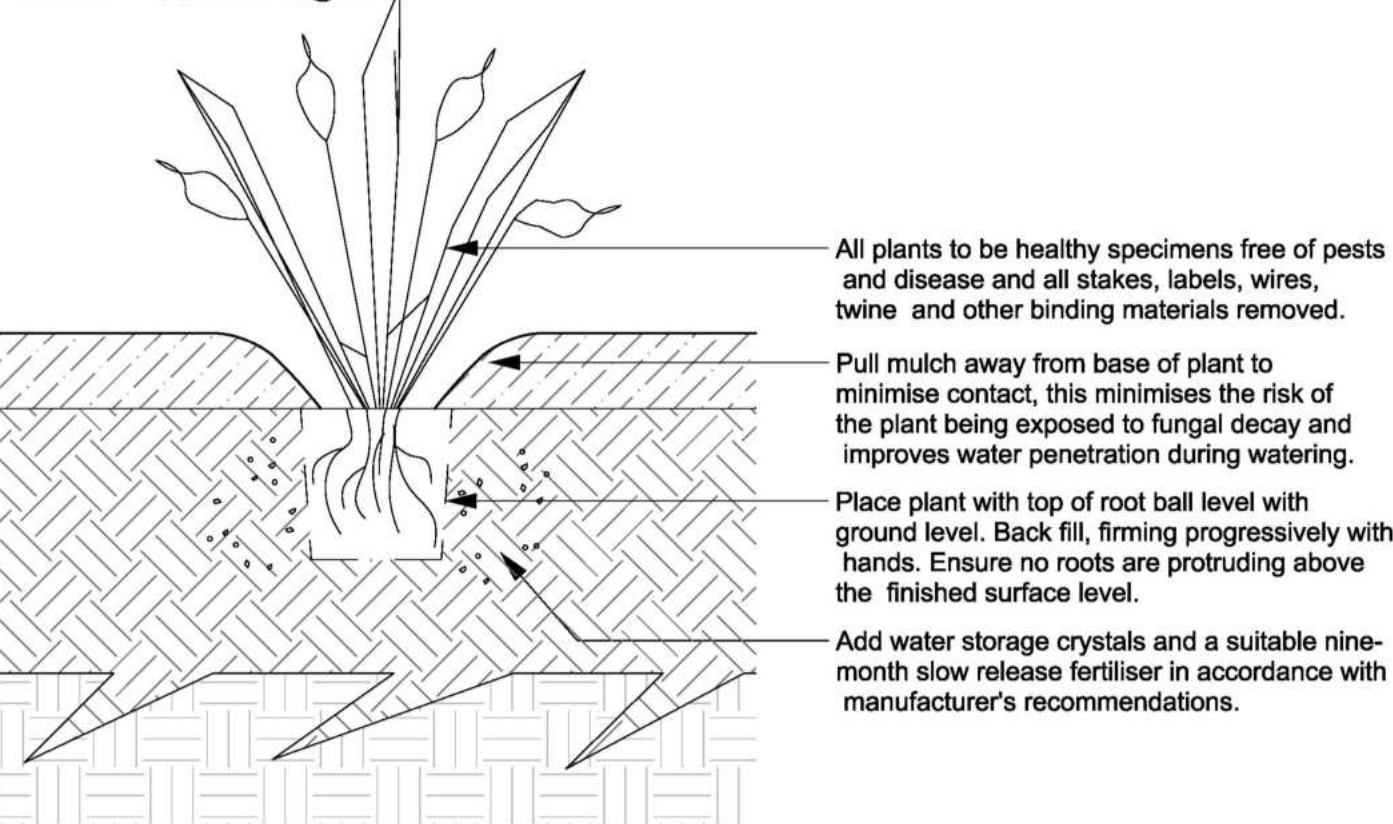
- 4.1 Attention must be paid to tree protect zones and structural root zones & avoid any deep digging within these areas
- 4.2 All digging must be undertaken by hand.
- 4.3 Plant location may vary on the ground to account for roots & tree trunks
- 4.4 If existing soil cannot be ripped then the existing ground should be lightly raked and loosened as much as possible without disturbing tree roots, & required soil levels compensated by raising the level of infill soil & mulch.



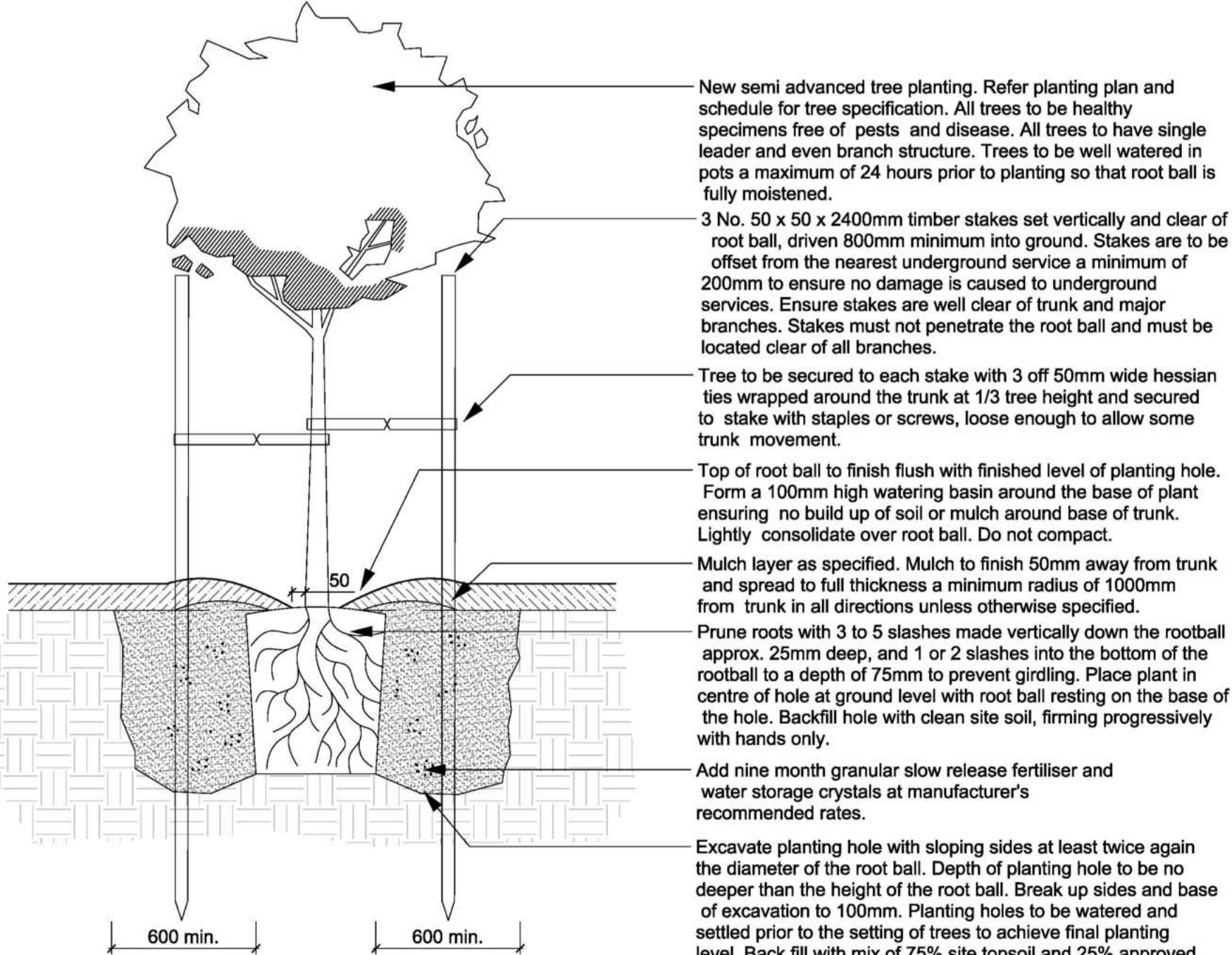
VG03 MASS PLANTING - TYPICAL SETOUT
SECTION 01
SCALE 1:10 @ A1

NOTES:
1. Prior to preparing garden beds the entire soil profile is to be thoroughly cleared of weeds, building rubble and other debris
2. Where it is not reasonably practical to rework existing site soil (see note on detail drawing below), garden must be established with imported sandy loam, The pH value of imported sandy loam should be between 5.5 and 6.5. Organic additives to the sandy loam should be based on well rotten vegetative material free from harmful chemicals, grass and weeds. Imported soils must comply with AS4419 Soils for landscaping and garden use
3. Gardens must be shaped with a defined crown and tapered downhill and out of the property, or towards existing pits and drains. Under no circumstance may garden areas include low spots that may retain surface water, excepting to the extent that planting instructions elsewhere in this drawing package may require that shallow dams to be formed around individual plants

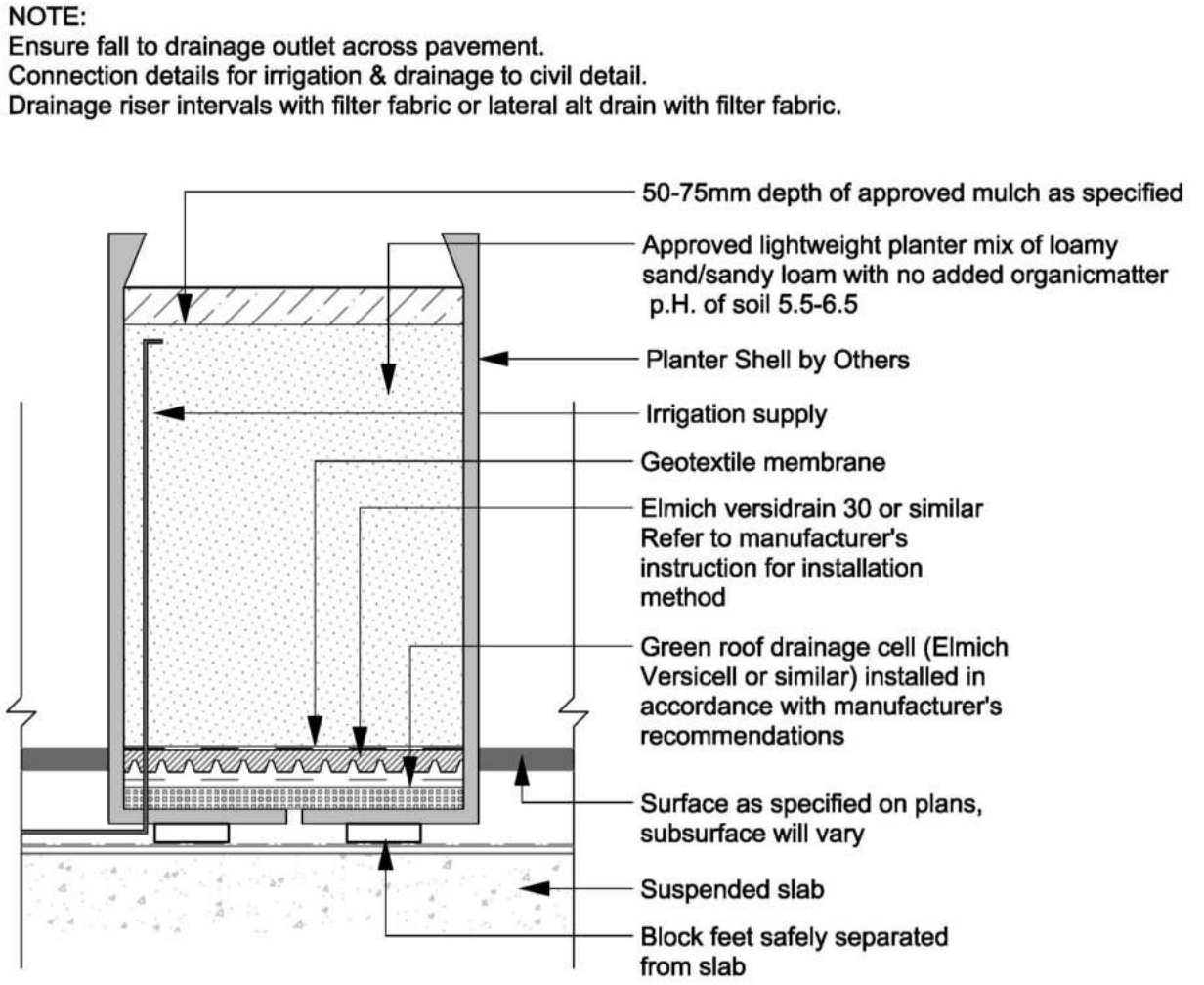
VG01 GARDEN BED TYPICAL
SECTION 01
SCALE 1:10 @ A1



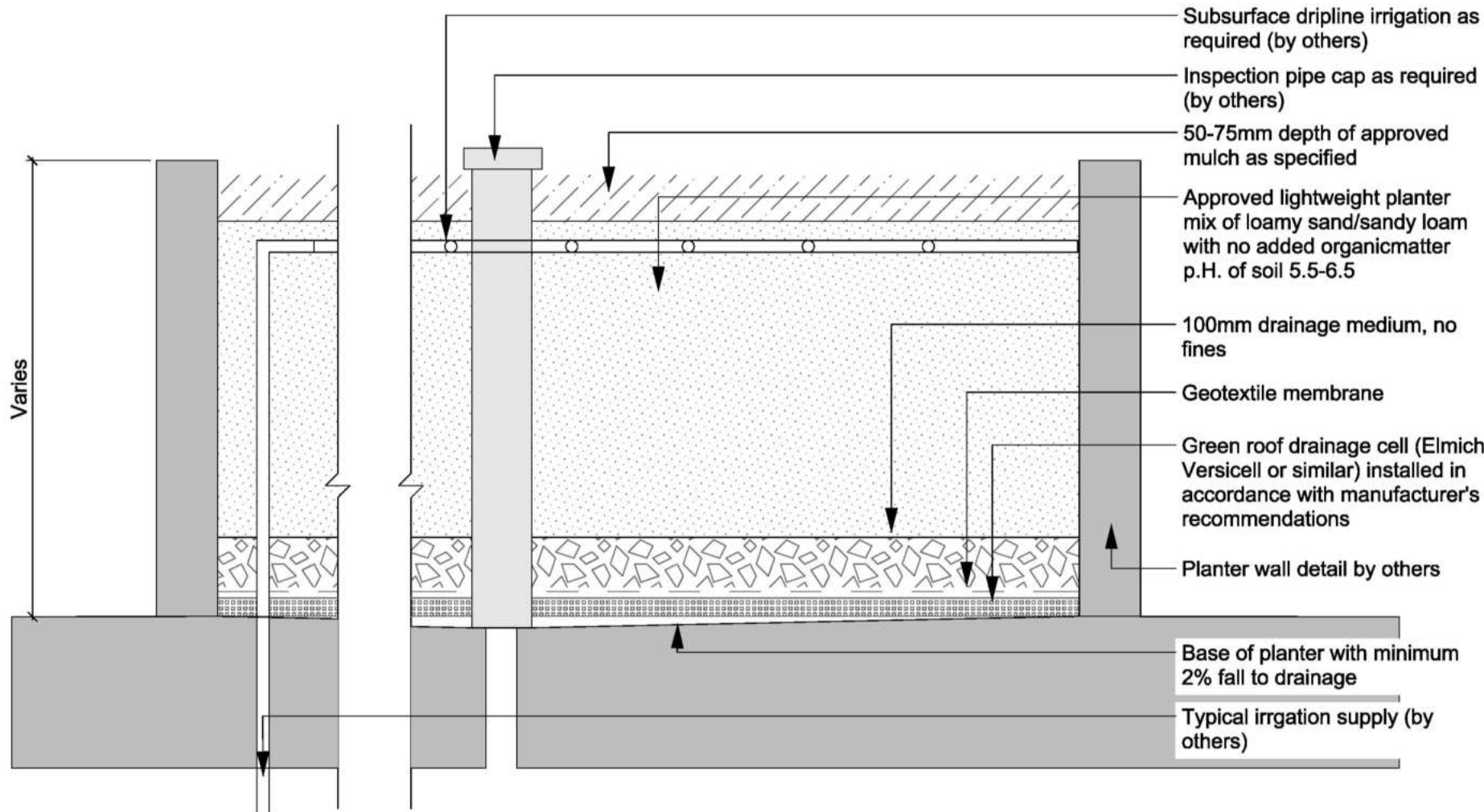
VG02 PLANTING DETAIL
SECTION 01
SCALE 1:10 @ A1



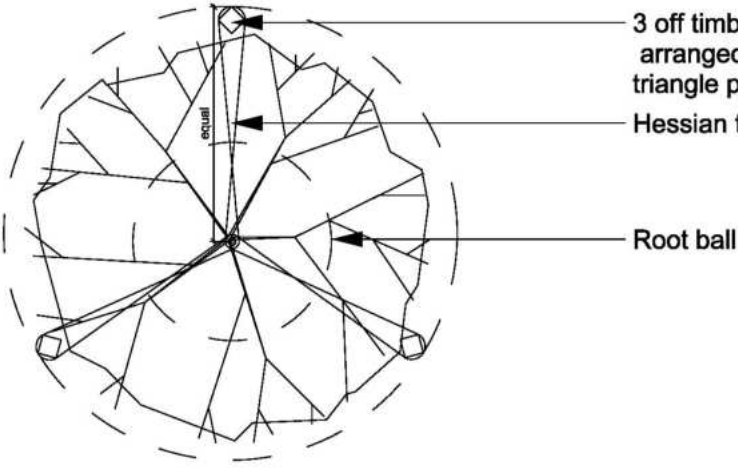
VG04 ADVANCED TREE PLANTING
SECTION 02
SCALE 1:20 @ A1



VG05 TYPICAL RAISED GARDEN BED ON SLAB
SECTION 01
SCALE 1:10 @ A1



VG06 TYPICAL LIGHTWEIGHT FIXED PLANTER BOX
SECTION 01
SCALE 1:10 @ A1



VG04 ADVANCED TREE PLANTING
PLAN 01
SCALE 1:20 @ A1

-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
Rev	Amendments	App'd	Date

NOTE:
The location of services are indicative only and must be proven prior to the commencement of works.
Contractor to verify all dimensions on site and report all discrepancies to the superintendent prior to construction.
Figured dimensions to be taken in preference to scaling from drawings. All dimensions are in millimetres unless otherwise noted.
This drawing is copyright and must not be retained, used or copied in whole or in part without Stratix Landscape Architect's written approval other than for the express purpose for which it has been commissioned.

STRATIS
LANDSCAPE ARCHITECTS

Scale: 1:10 & 1:20 @ A1	
Scale Bar:	
1:10	0 .1 2 .3 .4 .5 1
1:20	.2 .4 .6 .8 1 2
Principal Designer:	
Contact Number:	03 9482 7868
Email:	
Assistants:	
Checked by:	

Drawing Name:	SPECIFICATION, DETAILS AND IRRIGATION
Project Name:	FERNTREE GULLY ELC
Date:	10-Jul-24
Sheets:	4 of 4
Project #:	40208
Drawing Status:	Town Planning
Client Name:	
Project Address:	1157-1164 Burwood Highway, Upper Ferntree Gully
Sheet Name:	L710