



# **Yan Yean Pipe Track – Childs Road to McDonalds Road, Mill Park**

## **Heritage Impact Statement Report and Archaeological Assessment**

Prepared for City of Whittlesea

18 March 2024



## Acknowledgement of Country

We respect and acknowledge the Wurundjeri Woi-Wurrung people, their lands and waterways, their rich cultural heritage and their deep connection to Country, and we acknowledge their Elders past, present and emerging. We are committed to truth-telling and to engaging with Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal Corporation to support the protection of their culture and heritage. We strongly advocate social and cultural justice and support the Uluru Statement from the Heart.

## Cultural warning

Aboriginal and Torres Strait Islander readers are advised that this report may contain images or names of First Nations people who have passed away.

# Report register

The following report register documents the development of this report, in accordance with GML's Quality Management System.

Job no.	Issue no.	Notes/description	Issue date
2830b	1	Draft Report	22 October 2021
2830b	2	Final Report	31 August 2022
2830b	3	Revised Final Report	15 March 2024

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# Contents

<b>1</b>	<b>Introduction .....</b>	<b>1</b>
1.1	Purpose of this report.....	1
1.2	Background .....	2
1.3	Subject site.....	3
1.3.1	Works Staging .....	4
1.4	Statutory context .....	7
1.4.1	Victorian Heritage Register .....	7
1.4.2	Victorian Heritage Inventory .....	8
1.5	Heritage controls .....	8
1.5.1	National Heritage List .....	8
1.5.2	Victorian Heritage Register and Inventory.....	8
1.5.3	Heritage Overlay—City of Whittlesea .....	9
1.5.4	National Trust of Australia (Vic.).....	9
1.6	Methodology.....	9
1.7	Constraints .....	9
1.8	Authorship .....	10
<b>2</b>	<b>History.....</b>	<b>11</b>
2.1	Contextual history .....	11
2.2	Early water supply issues in Melbourne .....	12
2.3	Yan Yean Water Supply System development.....	13
2.4	Historical timeline .....	17
<b>3</b>	<b>Cultural heritage significance .....</b>	<b>19</b>
3.1	VHR H2333, Yan Yean Water Supply System .....	19
3.2	Numbers 1, 3 and 5 mains, McDonalds Road, Mill Park to McKimmies Road, Bundoora .....	21
3.3	Valve House, Wright Court, Mill Park .....	22
3.4	VHI H7922-0281, Yan Yean Pipe Track .....	23
3.5	National Trust of Australia.....	23
3.6	Aboriginal cultural heritage sensitivity.....	23
3.7	Levels of significance .....	24
3.8	Tolerance for change .....	26

3.9	Opportunities and constraints .....	27
<b>4</b>	<b>Existing condition .....</b>	<b>28</b>
4.1	Site description and current use .....	28
4.2	Surviving fabric.....	33
<b>5</b>	<b>Assessment of archaeological potential .....</b>	<b>34</b>
5.1	Archaeological potential - Yan Yean Pipe Track (H7922-0281).....	34
<b>6</b>	<b>Assessment of archaeological significance.....</b>	<b>36</b>
6.1	Heritage Council of Victoria heritage assessment criteria .....	36
6.2	Significance of the potential archaeological resource.....	37
6.3	Research potential .....	37
<b>7</b>	<b>Proposed works and heritage impacts .....</b>	<b>39</b>
<b>8</b>	<b>Assessment against the Heritage Act.....</b>	<b>41</b>
8.1	Demolition and construction activities .....	41
8.2	Paths .....	42
8.3	Hold rails, bollards and signage.....	43
8.4	Landscaping and seating .....	43
8.5	Playgrounds and rest areas .....	47
8.6	Pedestrian crossings and traffic signals .....	48
8.7	Fencing, paving and landscaping around the Valve House .....	49
8.7.1	Reason for works around Valve House and options considered .....	49
8.7.2	Assessment of proposed works around Valve House.....	50
8.8	Interpretation .....	54
8.9	Reasonable and economic use.....	55
<b>9</b>	<b>Management and mitigation measures.....</b>	<b>56</b>
9.1	Archaeological induction .....	57
9.2	Archaeological monitoring.....	57
9.3	Unexpected finds and notifications protocol .....	58
9.4	Artefact management.....	60
9.4.1	Artefact Management and Retention Policy .....	60
<b>10</b>	<b>Summary of impacts and conclusion .....</b>	<b>62</b>
<b>11</b>	<b>References.....</b>	<b>63</b>

## Appendices..... 64

### Figures

Figure 1.1 Wider project area showing stages 1-6 in red, from Darebin Creek Trail to McDonalds Road, Mill Park. (Source: GML) .....	5
Figure 1.2 Study area showing works area of Stages 3-6 from Childs Road to McDonalds Road outlined in red. All of study area, bar Hinkler Park, is listed on the VHR and VHI (Source: GML) .....	6
Figure 1.3 Location of bluestone Valve House circled in yellow. (Source: Nearmap with annotation by GML) .....	7
Figure 2.1 Yan Yean Reservoir, 1859. (Source: SLV BIB ID 1728118) .....	14
Figure 2.2 Map of the Yan Yean System 1885. (Source: SLV BIB ID 966566) .....	15
Figure 2.3 Melbourne's water supply, engraved by F A Sleaf in 1883. Yan Yean Reservoir is pictured in the centre. (Source: SLV BIB ID 1764933) .....	16
Figure 4.1 Northern extent of the study area near McDonalds Road, view looking southwest. (Source: GML 2021) .....	29
Figure 4.2 Study area at the northern extent in proximity to Hickey Court, view from southwest. (Source: GML 2021) .....	29
Figure 4.3 Exposed cast iron pipe with C & C embossing, northern extent of the study area. (Source: GML 2021) .....	30
Figure 4.4 Study area at northern extent, showing earth-covered mounds, facing southwest. (Source: GML 2021) .....	30
Figure 4.5 Exposed cast iron pipe joints at the northern extent of the study area. (Source: GML 2021) .....	31
Figure 4.6 Bluestone Valve House, view from northeast. (Source: GML 2021) .....	32
Figure 4.7 Bluestone Valve House, view from northwest. (Source: GML 2021) .....	33
Figure 8.1 Typical proposed path construction detail. (Source: Civil Road Solutions Pty Ltd, Yan Yean Pipe Track, A13293, A13294, A13295, A13296, A13297, dated 7–29 November 2019 and 25 March 2020) .....	42
Figure 8.2 Typical proposed park bench seating on concrete slab. (Source: Design Table Landscape Architecture and Urban).....	44
Figure 8.3 Typical proposed timber post and cable fencing. (Source: Design Table Landscape Architecture and Urban Design 9 April 2021) .....	44
Figure 8.4 Proposed tree selection. (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021).....	45
Figure 8.5 Proposed plant selection (shrubs and groundcovers, grasses and strappy leaved, swales). (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021) .....	45
Figure 8.6 Standard detail, rock beaching. (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021) .....	46

Figure 8.7 Hinkler Park concept plan. (Source: Concept Plans for Playgrounds, dated 28 September 2021) .....	48
Figure 8.8 Landscaping around the Valve House—concept design. (Source: Design Table Landscape Architecture and Urban Design, 30 May 2023) .....	49
Figure 8.9 Landscaping option without fence around the Valve House—sketch design. (Source: Design Table Landscape Architecture and Urban Design, November 2022).....	50
Figure 8.10 Landscaping steel fencing panels around the Valve House—sketch design. (Source: Design Table Landscape Architecture and Urban Design, 30 May 2023) .....	52
Figure 8.11 Location of interpretive signage, expansion of concrete paving, and area between the fence and the Valve House—sketch design. (Source: Design Table Landscape Architecture and Urban Design, 30 May 2023) .....	54

## Tables

Table 3.1 Tolerance for change levels.....	26
Table 9.1 Unexpected finds—likely artefact management advice. ....	59

# 1 Introduction

## 1.1 Purpose of this report

This heritage impact statement (HIS) and archaeological assessment has been prepared for the City of Whittlesea regarding the proposed construction of a section of a shared path within the alignment of the Yan Yean Pipe Track between the Darebin Creek Trail and McDonalds Road, Mill Park. The proposed Yan Yean Pipe Track itself is to extend from inner city Melbourne and the Plenty Valley Growth Corridor, ending at the Yan Yean Reservoir in Yan Yean. The proposed works involve constructing a concrete shared path within the activity area with rest areas, park improvements and plantings.

The works are split into construction Stages 1 - 6, with Stages 1 - 2 (Darebin Creek Trail to Childs Road) and Stages 3 – 6 (Childs Road to McDonalds Road) occurring in over two distinct development stages.

This HIS addresses the works associated with Stages 3-6 (Childs Road to McDonalds Road).

Permit P37364 has been issued for Stages 1-2 (Darebin Creek Trail to Childs Road) of the Yan Yean Pipe Track.

Design Table has been commissioned to design the works. This report responds to the following drawing sets, copies of which are attached as an appendix:

- Stage 3 Yan Yean Pipe Track Valve House (concept document water tower\_30.05.2023) designed by Design Table, supplied to the City of Whittlesea.
- Stage 4 Yan Yean Pipe Track, Mill Park – Shared Path Moorhead Drive to Centenary Drive Landscape Works designed by Design Table dated 28 May 2023, supplied to City of Whittlesea
- Stage 5 Yan Yean Pipe Track, Mill Park – Shared Path Centenary Drive to Bush Boulevard Landscape Works designed by Design Table dated 28 May 2023, Revision C1, supplied to City of Whittlesea
- Stage 6 Yan Yean Pipe Track – Bush Boulevard to McDonalds Road. City of Whittlesea, 2 June 2021.
- Yan Yean Pipe Track, Concept Plans for Playgrounds designed by Design Table dated 28 September 2021, supplied to City of Whittlesea

GML Heritage Victoria Pty Ltd was engaged to prepare the HIS and archaeological assessment to accompany the application for a Heritage Permit and Consent for the

proposal. The whole of the Yan Yean pipeline is listed on the Victorian Heritage Register (VHR H2333), and historical archaeological sites along the route of the pipeline are included on the Victorian Heritage Inventory (VHI). The VHI listing of interest to this project is the Yan Yean Pipe Track (H7922-0281).

A Cultural Heritage Management Plan (CHMP 18124) was also prepared for the management of Aboriginal cultural heritage associated with the project area. CHMP 18124 was approved on 21 February 2024 by Wurundjeri Woi-Wurrung Cultural Heritage Aboriginal Corporation.

## 1.2 Background

The following background follows the HIS template provided in Heritage Victoria's *Guidelines for Preparing Heritage Impact Statements* (June 2021):

### **The heritage impact statement for:**

The Yan Yean Pipe Track that extends from the Darebin Creek Trail to McDonalds Road, Mill Park.

### **Victorian Heritage Register Number:**

H2333—Yan Yean Water Supply System, Clonbinane, Whittlesea, Humevale, Yan Yean, Doreen, Mernda, South Morang, Mill Park, Bundoora, Thomastown, Reservoir, Preston, Thornbury, Northcote and Fitzroy North.

### **Victorian Heritage Inventory Number:**

H7922-0281—Yan Yean Pipe Track, Yan Yean and Doreen and South Morang and Mill Park and Reservoir, Whittlesea City, Darebin City.

### **Heritage Overlay:**

The City of Whittlesea has a Heritage Overlay in place for Yan Yean Water Supply System, HO43.

### **This heritage impact statement forms part of the permit application for:**

Construction of a shared path along the Yan Yean Pipe Track between Childs Road and McDonalds Road, Mill Park.

The proposed works include:

- 3 m wide shared concrete path
- 2.5 m wide link paths to the surrounding street network and points of interest
- regulatory signage

- landscaping, including tree plantings and garden beds
- seating and rest areas
- pedestrian crossings at Roycroft Avenue, Appletree Drive, Moorhead Drive, Centenary Drive and Brabham Drive
- pedestrian-operated traffic signals at Childs Road, Bush Boulevard and McDonalds Road
- provision of new fencing, paving and landscaping around the bluestone Valve House near Wright Court
- Landscaping, park furniture and playground equipment associated with the upgrade of two playground areas

**Address and location description:**

The study area (Stages 3-6) is located between Childs Road and McDonalds Road, Mill Park (Figure 1.2).

The Yan Yean Pipe Track extends along the original site of the 1853 Yan Yean Water Supply System, Melbourne's first large-scale engineering water supply system. The system was constructed to supply better quality water to Melbourne's growing population. It included a series of catchment weirs and reservoirs which were connected by aqueducts and a pipe track between north of the Great Dividing Range to the Merri Creek.

**This report has been prepared by:**

GML Heritage Victoria Pty Ltd

**This report has been prepared for:**

City of Whittlesea, 25 Ferres Boulevard, South Morang VIC 3752.

## 1.3 Subject site

The Yan Yean Pipe Track extends along the original site of the Yan Yean Water Supply System. The works are split into construction Stages 1 – 6, with Stages 1 – 2 (Darebin Creek Trail to Childs Road) and Stages 3 – 6 (Childs Road to McDonalds Road) occurring in over two distinct development stages. Landscaping works regarding a bluestone Valve House are within Stage 3.

The wider project area begins at McDonalds Road in Mill Park and continues through the suburb of Mill Park before intersecting with the Darebin Creek Trail at the southern extent of the study area. Darebin Creek is located adjacent to the southern end of the track (Figure 1.1). The Yan Yean Pipe Track runs diagonally in a south-westerly direction from

McDonalds Road and crosses several roads: Bush Boulevard, Centenary Drive, Moorhead Drive, Childs Road, Roycroft Avenue and Appletree Drive. The existing track is mostly informal and covered with dense introduced and native grasses. Occasional sections of the track, particularly around the bluestone Valve House, are gravelled. Residential areas are located to the northwest and southeast of the track, with two schools situated to the southeast of the track between Moorhead Drive and Childs Road. Two playgrounds are located along the track including Hinkler Park, and Roycroft Park (Wenden Road west).

The study area (Stages 3 – 6) follows the alignment of the Yan Yean Pipe Track and is bounded by Childs Road to the south and McDonalds Road to the north (Figure 1.2). The study area is approximately 2.5km in length.

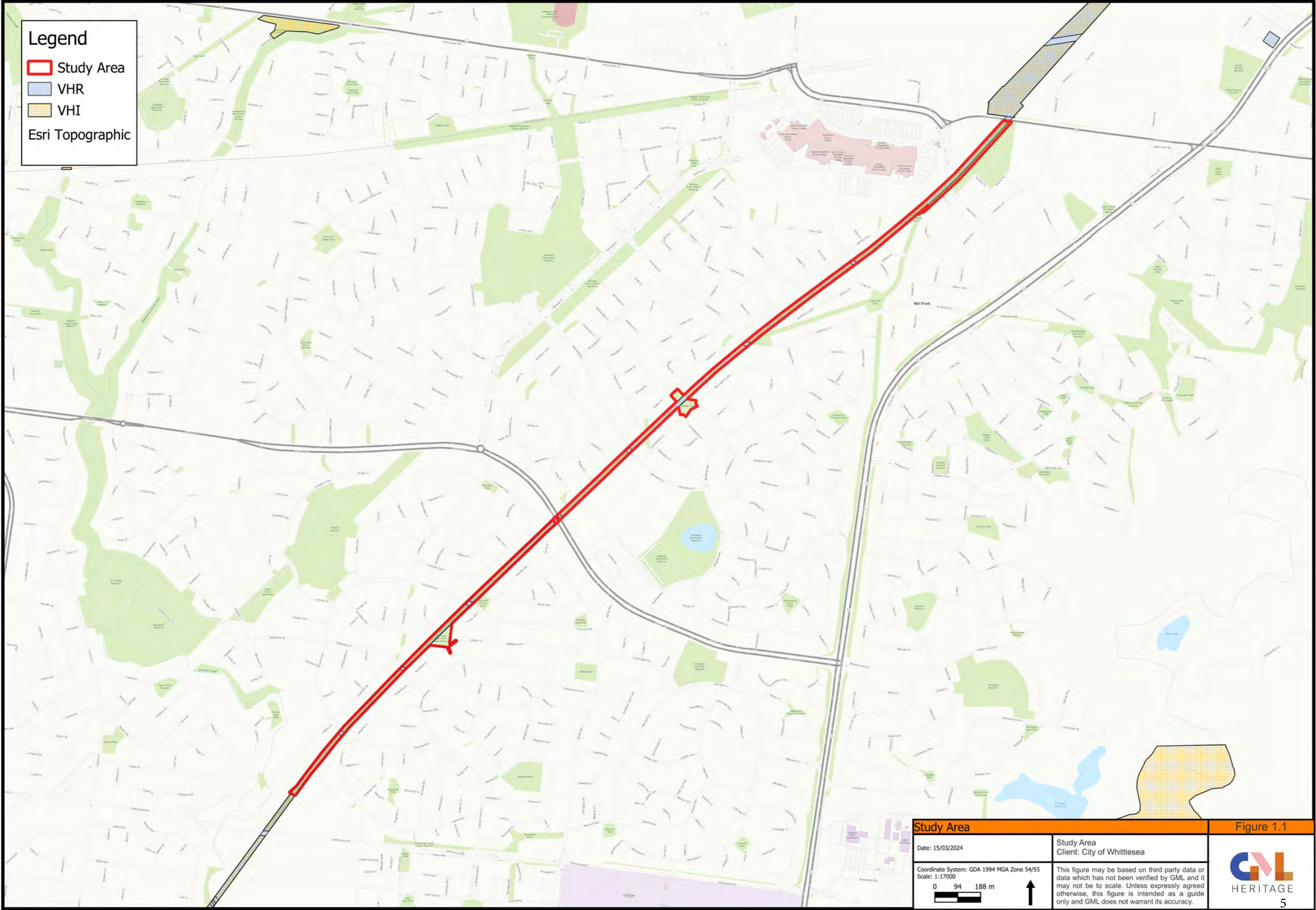
The bluestone Valve House is the only above-ground structure relating to the Yan Yean Water Supply System present within the study area. The Valve House is located in the centre of the study area between Wright Court to the northwest and Mill Park Secondary College to the southeast (Figure 1.3).

Recreational Park and playground, Hinkler Park, is also located within the study area. Hinkler Park is bisected by the VHR and VHI listing.

### **1.3.1 Works Staging**

The works by City of Whittlesea Contractors on Stage 1 and Stage 2 had commenced, when a Stop Works Order (ref X11597) was issued by Heritage Victoria on 31 January 2023. A heritage permit was subsequently issued for Stage 1 and Stage 2 only, on 8 February 2023.

Stages 3 - 6 were scheduled to recommence after CHMP 18124 was approved. That approval was granted on 21 February 2024.



**Legend**

- Study Area
- VHR
- VHI
- Esri Topographic

Study Area		Figure 1.1
Date: 15/03/2024	Study Area Client: City of Whittlesea	 5
Coordinate System: GDA 1994 MGA Zone 54/55 Scale: 1:17000  	This figure may be based on third party data or data which has not been verified by GML and it may not be to scale. Unless expressly agreed otherwise, this figure is intended as a guide only and GML does not warrant its accuracy.	

Legend

Study Area - Stages 3-6

VHR

VHI

Esri Topographic



Figure 1.2



Figure 1.3 Location of bluestone Valve House circled in yellow. (Source: Nearmap with annotation by GML)

## 1.4 Statutory context

### 1.4.1 Victorian Heritage Register

The Victorian Heritage Register (VHR) was established by the *Heritage Act 1995*. The Register is administered by Heritage Victoria and is intended to protect places and sites of non-Indigenous cultural heritage. Some of the places on the VHR may also relate to the activities of Aboriginal people in the post-occupation period and may be of cultural significance to Aboriginal people. The *Heritage Act 1995* has been superseded by the *Heritage Act 2017* (the Heritage Act).

The VHR provides a listing of places or objects, including buildings, structures, areas or precincts which have been assessed as being of state cultural heritage significance using

assessment criteria established by the Heritage Council of Victoria. All places on the VHR are legally protected under the Heritage Act.

## **1.4.2 Victorian Heritage Inventory**

Archaeological sites receive general protection under the Heritage Act, whether or not they are included on the VHR or the VHI. The VHI lists known archaeological sites and artefacts. Places listed on the VHI may also be listed on the VHR.

Section 3 of the Heritage Act defines an 'archaeological site' as:

A place (other than a shipwreck) which—

- (a) Contains an artefact, deposit or feature which is 75 or more years old; and
- (b) Provides information of past activity in the State; and
- (c) Requires archaeological methods to reveal information about the settlement, development or use of the place; and
- (d) Is not associated only with Aboriginal occupation of the place.

It is an offence to knowingly or negligently damage, deface or otherwise carry out an act that would damage an archaeological site without the prior consent of Heritage Victoria (ss.123 and 124).

If works are proposed that will disturb an archaeological site, a Consent under the Heritage Act must be

obtained from Heritage Victoria. On that basis, an archaeological assessment is required to establish the nature, extent and significance of any archaeological remains on the site. The assessment forms part of the support documentation for an application for Consent to uncover, excavate and/or damage the archaeological remains.

## **1.5 Heritage controls**

### **1.5.1 National Heritage List**

The Yan Yean Water Supply System is not included in the National Heritage List.

### **1.5.2 Victorian Heritage Register and Inventory**

The Yan Yean Water Supply System is listed on the VHR as H2333.

The Yan Yean Pipe Track is listed on the VHI as H7922-0281.

### 1.5.3 Heritage Overlay—City of Whittlesea

The City of Whittlesea has a Heritage Overlay (HO) in place for the Yan Yean Water Supply System (HO43).

### 1.5.4 National Trust of Australia (Vic.)

The Yan Yean Water Supply System is not listed on the National Trust database.

## 1.6 Methodology

This report has been prepared with reference to the following documents and guidelines:

- *Heritage Victoria Guidelines for preparing heritage impact statements* (June 2021)
- the Australia ICOMOS Burra Charter, 2013 (the Burra Charter)

As the proposed works along the length of the shared pathway are highly repetitive, the types of works were broken into a series of categories to analyse their potential heritage impacts.

A site inspection was undertaken by GML staff Dr Kim Roberts and Leah Tepper on 15 July 2021.

Close analysis of relevant documentation was also undertaken including:

- Victorian Heritage Database
- City of Whittlesea Planning Scheme Schedule to Clause 43.01 Heritage Overlay
- Department of Environment, Land, Water and Planning Property Report
- *Yan Yean Water Supply System Conservation Management Plan Volumes 1- 6, Context*, May 2007 (CMP)
- Documentation listed in Section 1.1

## 1.7 Constraints

No detailed construction plans are available for the section of proposed track between Bush Boulevard and McDonalds Road, Mill Park. However, a preliminary design plan by Traffic Works dated 9 September 2021 showing this section was supplied by City of Whittlesea and this section was also surveyed during the site visit by Dr Kim Roberts and Leah Tepper (GML) and Paul Diffey (City of Whittlesea).

The scope of the HIS did not provide for assessment of impacts on Indigenous heritage values. A cultural heritage management plan (CHMP 18124) is currently in progress for the proposed works to address impacts to Aboriginal cultural heritage.

Due to Victorian Government COVID-19 restrictions, historical research was limited to online sources and could not extend to archival research.

## **1.8 Authorship**

This report was prepared by Dr Kim Roberts, Leah Tepper, Kristine Slawinski and Emma Moore. It was reviewed by Dr Janine Major and Martin Rowney.

## 2 History

### 2.1 Contextual history

The study area is located on the traditional lands of the Wurundjeri-willam clan, which forms part of the Woi-wurrung language group (Clark 1990, p. 385; Barwick 1984, p. 122). Before the arrival of Europeans, the Wurundjeri-willam clan lived along the tributaries of the Yarra River, including Darebin Creek, and the Plenty River (Patterson 2003, p. 11). The Creator within Wurundjeri-willam belief system is Bunjil the Eaglehawk. The belief system of the Wurundjeri is extremely important and has an impact on the way that Wurundjeri lived their daily lives (Nicholson and Jones 2018, p. 380). This can be reflected within the moiety system used by Wurundjeri and the broader Woi wurrung language group. Within this system there are two totemic groups identified, Waa and Bunjil; only men who have the totem Waa can marry a Bunjil woman and vice versa. Wurundjeri used fire as a form of land management. This encouraged the growth of murnong, a yam daisy with a tuber that formed a large part of the diet of the Wurundjeri (Presland 1985, pp. 8, 12, and 43).

In 1824 William Hovell and Hamilton Hume were the first Europeans to record their journey overland from Sydney to Port Phillip Bay. The first description of the area now occupied by the City of Whittlesea and the study area appeared in Hovell's journal on 14 December 1824. It was his description of the land that affirmed its desirability and, effectively, ensured that it would be settled. In 1835, after hearing about the area, John Batman decided to investigate.

Batman formed the Port Phillip Association and in May 1835 travelled to Victoria. In June he met with eight *Ngurungaeta* (clan heads) to discuss an agreement about acquiring a large portion of land in the Port Phillip (Nairn) area (Bell 1965, p.6). One of these eight *Ngurungaeta* was Billibellary of the Wurundjeri-willam clan, which had connections to the Maribyrnong River across to Darebin Creek, near the location of the Yan Yean Pipe Track (City of Yarra and Wurundjeri Tribe 2015). Billibellary is recognised as a wise, empathetic and thoughtful statesman, and learned to speak English in an attempt at diplomacy to avoid violence (Aboriginal Victoria 2021). The *Ngurungaeta* perceived that new settlers and Batman wanted to take part in the *Tanderrum* ritual, which provides official protection to visitors as well as short-term entry and land use as long as the hosts are not impacted by the activities of the guest (Aboriginal Victoria 2021). The events surrounding the signing of the treaty are vague, and the treaty was also seen as worthless by colonial authorities. However, Batman's descriptions of the land around Port Phillip sparked great interest.

Despite initial opposition from the Colony's administration, settlers began to flow into the region (Context 2013, p. 8).

In 1836 Joseph Gellibrand, a lawyer and friend of Batman who had prepared the treaty documents for him in June 1835, named the Plenty River which flows to the southeast of the activity area (Context 2013, p. 8). The river ultimately came to give its name to the valley through which it flowed. Following Gellibrand's visit the area was formally surveyed in 1838–39, in accordance with instructions from the colonial surveyor, Robert Hoddle (Context 2013, p. 8). During the 1839 land sales the northeastern end of the activity area, towards Bush Boulevard, was sold to Henry Miller. The legacy of Henry Miller lives on in the area, with the suburb of Mill Park, within which most of the activity area is located, being named after Henry Miller's Mill Park Estate. Miller had a mind for business and his entrepreneurial activities included racehorse breeding, dairy products and grazing activities earned him the nickname Henry 'Money' Miller (Preston, H 2015).

## 2.2 Early water supply issues in Melbourne

After the establishment of Melbourne in 1835, there were increasing problems with the quality of the water supply as the population expanded. Early Melburnians drew their water supplies from the Yarra River, but problems of pollution and the high cost of delivery soon prompted a search for a better water supply.

Melbourne Town Council, formed in 1842, sought suggestions for a clean piped water supply. The favoured scheme was that of Melbourne's Town Clerk, John King, who proposed pumping Yarra water into a reservoir on high ground near Dight's Falls. Although Council saw the provision of a water supply as its right and responsibility, the new Victorian Government had little faith in the ability of a municipal council to execute such an ambitious engineering project and was unwilling to provide the necessary funding. A decade of deliberations followed before a decision could be made regarding a suitable water supply system for Melbourne (Context 2013, p. 10).

On 16 April 1849 James Blackburn, a convict from Hobart, arrived in Melbourne and quickly established the Melbourne Water Company (Australian Dictionary of Biography 2006). After this time a slight improvement in quality and price was achieved when the Melbourne Water Company commenced pumping water from the Yarra. The water was filtered through charcoal and stored in iron tanks on the corner of Elizabeth and Flinders Streets. From there it was distributed by water carters (Context 2007, p. 11). In 1850 the Melbourne Town Council tasked engineer James Blackburn with finding a reliable source of water for the growing population of Melbourne. Following the separation of Victoria from New South Wales in 1851, the new Victorian Legislative Council, instead of providing the

hoped-for funds to the Melbourne Town Council, appointed a Commission of Sewers and Water Supply in 1853. This took the issues surrounding Melbourne's water supply out of municipal control (Context 2013, p. 10). After this action, the initiative for a new water supply system gained momentum.

Two schemes were considered: James Blackburn's proposal for a gravity-fed water supply drawn from the Plenty River and its tributaries, and JC King's original 1842 proposal using a more conventional mechanical pumping station to supply a reservoir near Dight's Falls. Blackburn's scheme was recommended, with some changes that potentially increased the capacity of the reservoir to serve a city of 200,000 (Context 2013, p. 10).

The construction of the Yan Yean Water Supply System became Victoria's first major public works engineering project. The new water supply system from Yan Yean was the first of its kind in Australia (Context 2007, p. 12).

## **2.3 Yan Yean Water Supply System development**

Blackburn's selection of the Plenty River as the source of the new supply system rested on the relative purity of the proposed catchment area, the economic benefits of a close proximity to Melbourne (compared, for example, with the Upper Yarra) and a sufficient gravity fall through the Plenty Valley to Melbourne (Context 2013, p. 21). Blackburn designed the concept plan for the Yan Yean system that was adopted a few years later, but did not live to see it built, as he died of typhoid fever in 1854 (Context 2007, p. 13).

Blackburn's scheme to bring water from miles outside Melbourne was innovative in a time when cities tended to rely on water in streams, swamps, or wells within or close to city boundaries. London, for example, drew its supplies from the River Thames; Sydney relied on streams and swamps in and around the town until the 1880s. Local supplies in unsewered cities were suffering increasingly from pollution, as human and industrial wastes mingled with stream waters used for drinking. Conventional urban systems usually relied on pumping machinery and small impounding reservoirs within or close to the towns. This was the type of scheme King had proposed for Melbourne (Context 2007, p. 13).

Blackburn had recently designed the Launceston water supply system, which brought water from 13 miles away. For Melbourne, Blackburn proposed to make use of the clear mountain streams that flowed into swamps feeding the Plenty River. Measuring flows above and below the swamps, Blackburn found that almost half of this water was lost through seepage and evaporation, so he planned a channel that would collect the water and take it into the Plenty River below the swamps. Eighteen miles of aqueduct would then take the water from the river to a reservoir on the outskirts of Melbourne. This scheme was calculated to provide a city of 70,000 people with 40 gallons (182 litres) each per day,

a very large quantity by the standards of the time. Aware that the diversion of water from the Plenty River would reduce the flow needed to power some mills downstream of the aqueduct, Blackburn proposed a small reservoir to provide sufficient water for the mills and prudent in the likely event of drought. The site of the proposed Yan Yean Reservoir, known as Ryder's Swamp, was a natural basin that could be closed by a dam (Context 2007, p. 12). The Yan Yean Reservoir is shown in Figure 2.1.



Figure 2.1 Yan Yean Reservoir, 1859. (Source: SLV BIB ID 1728118)

In 1853 the Victorian Government appointed a Board of Commission of Sewers and Water Supply (the Water Board) to investigate options for supplying the City of Melbourne with water, to operate the city's sewers and water supply and to levy water rates on the public. The Commission in turn appointed a British engineer, Matthew Jackson, to investigate the various schemes that had been proposed. Jackson concluded that the scheme proposed by Blackburn was, with some modifications, the best that could be constructed. The scheme became known as the Yan Yean Water Supply System (Figure 2.2). It was Melbourne's first large-scale engineering water supply system and the first such system to be completed in Australia (Context 2013, p. 20).

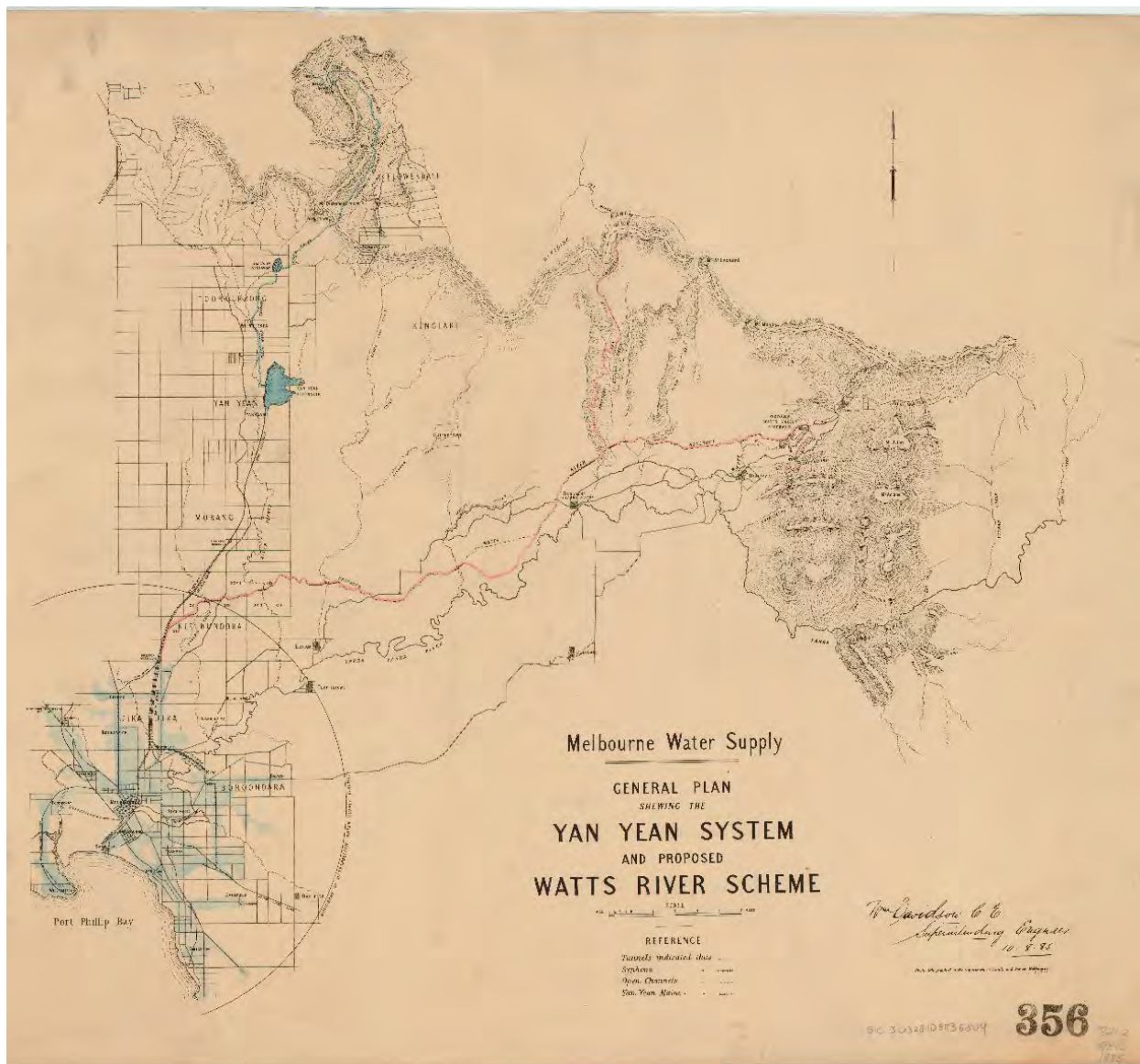


Figure 2.2 Map of the Yan Yean System 1885. (Source: SLV BIB ID 966566)

When construction started on 20 December 1853, Charles La Trobe, the Lieutenant-Governor of Victoria, turned the first sod. Cast-iron pipes were shipped from England and transported to the site on a tramway starting at the Carlton Gardens and running up St Georges Road and along Plenty Road, continuing to Yan Yean. This route was chosen to avoid Ruckers Hill on High Street, Northcote (Context 2013, p. 20). A community of workers also developed at the construction site, and the entire area became substantially developed. The Melbourne suburb of Reservoir, close to the study area, was named after the reservoirs that were built in the area because of the scheme (Patterson 2003, p. 11). Several structures were built as part of the Yan Yean scheme, including the Valve House at

Mill Park and several other valve houses along the Yan Yean system. The bluestone used in the construction of the valve houses was meticulously cut and dressed with careful masonry detailing. The strong shapes used at the valve houses are reflective of Blackburn's previous architectural work in Tasmania. The purpose of the valve houses was to reduce pressure build-up in the pipeline. The Valve House in Mill Park is similar to the valve house at the Preston Reservoir, which is more intact (Context 2013, p. 20).

The 'Yan Yean', as Melbourne's water supply came to be known, was a key resource in Melbourne's transformation from a small port town to a sophisticated modern city (Context 2007, p. 12). On 31 December 1857 a large crowd assembled at the valve house in Carlton Gardens to witness Major General Edward Macarthur, deputising for the Governor, turning on the Yan Yean water supply. A procession then moved through the streets to the standpipe on the corner of Elizabeth and Flinders Streets, where the Chairman of the Commission turned on a jet of water that 'projected sixty or seventy feet in a perpendicular direction', splashing the onlookers (Edwards, D 1978, p. 28).

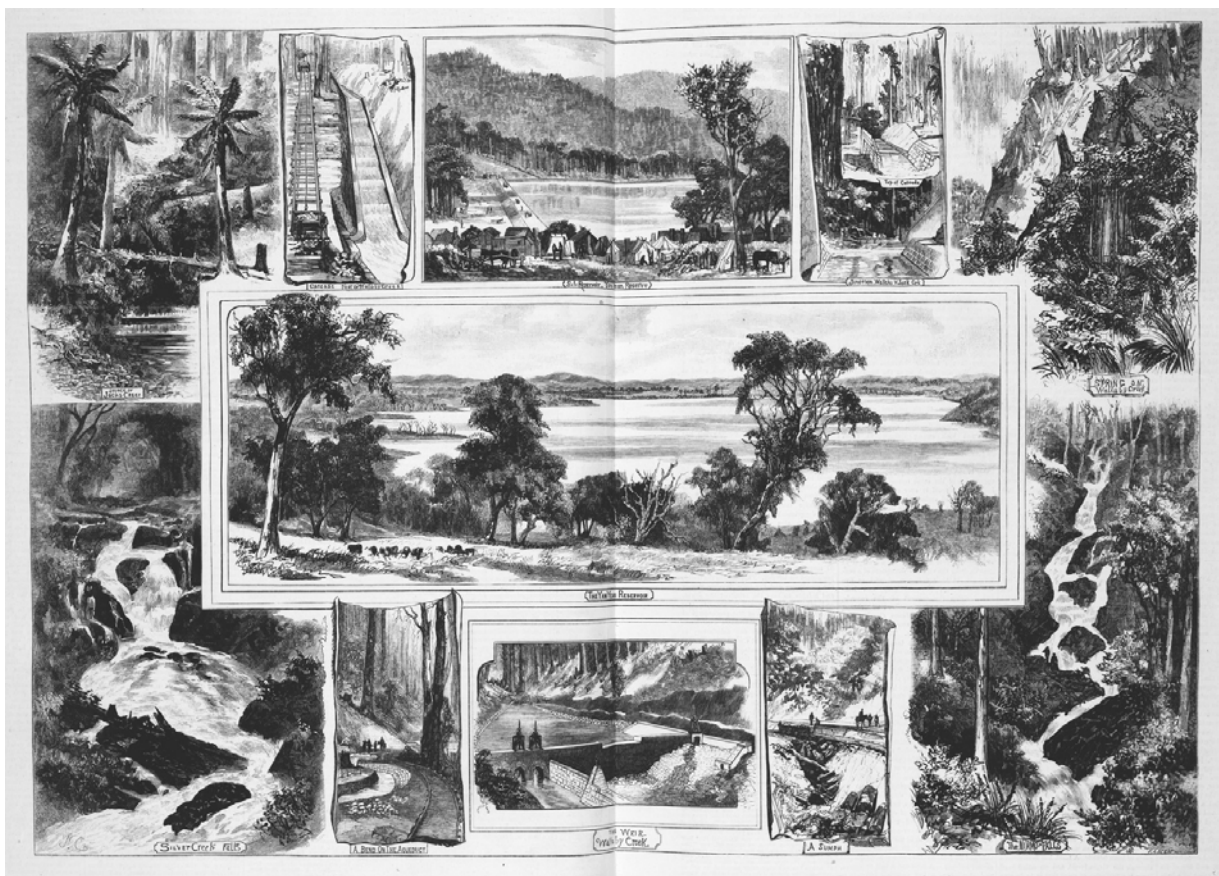


Figure 2.3 Melbourne's water supply, engraved by F A Sleaf in 1883. Yan Yean Reservoir is pictured in the centre. (Source: SLV BIB ID 1764933)

Despite initial enthusiasm for the system, major problems soon emerged with both the quality and quantity of the water supply. A high incidence of illness in Melbourne, thought to be the result of lead-poisoning, was blamed on the new tin-lined lead pipes, which turned out to be faulty. Many people refused to drink the Yan Yean water and instead relied on rainwater tanks. Two government inquiries were held in the late 1850s and 1860s to determine the cause of these problems. To stop the water supply being contaminated, one of the tributaries of the Plenty River, Bruces Creek, was diverted away from the inflow channel because it was found to be contaminated by stock, and the Clearwater Channel was constructed (Context 2013, p. 21).

By the early 1870s Melbourne's population had reached 200,000, the maximum the Yan Yean system had been built to serve; and by 1880 it had increased to almost 300,000. Water shortages were experienced, particularly by residents of the higher suburbs east of Melbourne. During the 1870s and 1880s the Water Supply Department (established in 1865 after the Commission of Sewers and Water Supply was abolished in 1860) took measures to increase the rate of delivery of water to Melbourne (Context 2013, p. 21).

A Royal Commission appointed to inquire into Melbourne's sanitary condition reported favourably on the quality of Yan Yean water, finding it 'unusually free from living micro-organisms' (Royal Commission to Inquire Into and Report Upon the Sanitary Condition of Melbourne 1889, p. 14). By the late 1880s the construction of the system was widely perceived to have been a success (Context 2013, p. 21).

## 2.4 Historical timeline

Event	Date
William Hovell and Hamilton Hume travel overland from Sydney to Port Phillip; Hovell describes the area later known as Plenty Valley. The favourable description results in John Batman investigating the area.	1824
John Batman signs a treaty, which sparks further interest in the area. Melbourne is officially founded.	1835
Melbourne residents use the Yarra as their main water supply. Problems with pollution and costs prompt the search for a solution.	1830s
Jospeh Gellibrand names the Plenty River.	1836
Advertisements for allotments in the vicinity of the study area appear in the Port Phillip Gazette.	31 July 1839

Event	Date
Plenty Valley, including the activity area, is officially surveyed in accordance with instructions from Robert Hoddle. Allotments at the northeastern end of the activity area are purchased by Henry 'Money' Miller.	1838-1839
Melbourne Town Council seek suggestions for a clean piped water supply. John King proposes pumping water from the Yarra River on high ground near Dight's Falls.	1842
James Blackburn moves to Melbourne and establishes the Melbourne Water Company. Slight improvements in quality and price are achieved when the Melbourne Water Company commences pumping water from the Yarra. Water is filtered with charcoal.	1849
James Blackburn reports to Melbourne Town Council that Plenty River would be an ideal water source, proposing an early concept of the Yan Yean Water Supply System.	1851
Charles La Trobe turns first sod, marking the start of construction on the project. Victorian Legislative Council appoints a Commission of Sewers and Water Supply taking the matter out of municipal control.	1853
Yan Yean Water Supply System is completed.	1857
A large crowd gathers at the valve house in Carlton Gardens to see the Yan Yean Water Supply System turned on, and there is a procession through the streets of Melbourne.	31 December 1857
An inquiry is conducted into the quality of the Yan Yean Water Supply System.	Late 1850s
Another enquiry is conducted into the water quality of the Yan Yean Water Supply System. As a result of this enquiry, Bruce's Creek, a tributary of the Plenty River, is diverted to stop contamination.	Late 1860s
Melbourne's population reaches 200,000, the maximum capacity the Yan Yean Water Supply System can serve. Water shortages are experienced.	Early 1870s
30-inch pipe from Yan Yean Reservoir to Morang is replaced by an open aqueduct with a higher carrying capacity.	1875
Royal Commission into the sanitary conditions of Melbourne reports favourably on the quality of water from Yan Yean.	1888
The Yan Yean Water Supply System is perceived to be a success.	Late 1880s

## 3 Cultural heritage significance

The Yan Yean Pipe Track is of cultural heritage significance to the State of Victoria and to the City of Whittlesea.

### 3.1 VHR H2333, Yan Yean Water Supply System

The Yan Yean Water Supply System is listed on the Victorian Heritage Register (VHR): H2333, Yan Yean Water Supply System, Clonbinane, Whittlesea, Humevale, Yan Yean, Doreen, Mernda, South Morang, Mill Park, Bundoora, Thomastown, Reservoir, Preston, Thornbury, Northcote and Fitzroy North.

The VHR Statement of Significance for the Yan Yean Water Supply System (VHR H2333) is as follows:

#### **What is significant?**

- The Yan Yean Water Supply System was constructed from 1853 as the first large scale engineered water supply system in Victoria. It consists of a series of catchment weirs and reservoirs connected by aqueducts and pipe track which extend from north of the Great Dividing Range to the Merri Creek, 5 kilometres north of the Melbourne Central Business District.

#### **How is it significant?**

- The Yan Yean Water Supply System satisfies the following criteria for inclusion in the Victorian Heritage Register:
- Criterion A Importance to the course, or pattern, of Victoria's cultural history
- Criterion B Possession of uncommon, rare or endangered aspects of Victoria's cultural history
- Criterion C Potential to yield information that will contribute to an understanding of Victoria's cultural history
- Criterion D Importance in demonstrating the principal characteristics of a class of cultural places and objects
- Criterion F Importance in demonstrating a high degree of creative or technical achievement at a particular period.
- Criterion H Special association with the life or works of a person, or group of persons, of importance in Victoria's history.

### Why is it significant?

- *The Yan Yean Water Supply* is significant at the State level for the following reasons:
- *The Yan Yean Water Supply System, constructed in the years from 1853, is the oldest surviving water supply system in Victoria and still forms part of Melbourne's water supply today. It pre-dates the Coliban system at Bendigo by 5 years and probably influenced its design as well as those of later systems such as Ballarat. The continuous use of the system for its original purpose is an important part of its significance. It was the first of the major infrastructure projects that later included the development of railways and the Melbourne Sewerage Scheme that were of critical importance in the development of Melbourne (and Victoria) in the wake of the gold rush. For over 30 years it remained the major source of water supply to Melbourne. (Criterion A).*
- *The Yan Yean Water Supply System is a rare example of an early continually-operating, water supply system serving a major urban centre that still operates largely according to its original design. It remains a small but nonetheless important component of the city water supply. It provides rare evidence of the evolution of engineering practices and techniques in the mid to late nineteenth century, and incorporates early technical elements such as in-line pressure reducing valves and engineered cascades to aerate incoming water that are not found in other systems in Victoria or Australia. The Yan Yean Water Supply System also provides detailed and varied evidence of engineering construction techniques prior to the revolution brought by concrete construction, which was used extensively in water supply systems built later in the nineteenth century and in the twentieth century. (Criterion B).*
- *The Yan Yean Water Supply System remains, 150 years after it was completed, a working system where the function and use of many of the original features can still be understood and interpreted. Another notable feature of the Yan Yean Water Supply System is the extent of archaeological remains, which include decommissioned pipes, reservoirs, aqueducts and other infrastructure that have the potential to provide further evidence about the system and how it was constructed and operated. For example, the recent replacement of early cast and wrought iron pipe mains in the pipe reserve between South Morang and Preston has yielded valuable information about nineteenth century construction techniques, including the method of manufacture and installation and repairs and improvements that were made. (Criterion C).*
- *The Yan Yean Water Supply System contains representative examples of most (if not all) of the features associated with nineteenth and early-twentieth century water supply systems including storage and service reservoirs, weirs, pipe mains and reserves, aqueducts, siphons, tunnels and, as such, is one of the best representative examples of a such a system not only in Victoria, but also Australia.*

As previously noted, it includes features that are rare or possibly unique such as the valve houses and The Cascades. A notable feature is that much of the original infrastructure remains intact and still in use and therefore the way that the system was used and operated can still be understood and interpreted relatively easily. While essentially intact, it has been modified and adapted to improve water supply and quality and to meet changing technical requirements and standards and this provides a fascinating illustration of the evolution of water supply technology over a 150-year period. From the 1880s, the closed catchment of the Yan Yean Reservoir landscape has suffered little human interference, and in the latter part of the 20th century two areas within it were reserved as Reference Areas providing a natural standard for comparison (Criterion D).

- *The Yan Yean Water Supply System was the first large scale engineered water supply in Victoria and introduced a number of engineering innovations that were to be influential in the design and construction of later systems in Victoria and Australia. Chief amongst these was the concept based on a remote supply fed by gravity rather than machinery to the city and the successful application of British dam construction technologies to Australian conditions. Lessons learnt at Yan Yean were used to make improvements that benefited these later systems. As previously noted, what is notable about the system is that much of the original infrastructure is still in use and has been little modified since it was first constructed. (Criterion F).*
- *The Yan Yean Water Supply System has strong associations with people who were influential in the historic development of Melbourne and Victoria in the nineteenth century including Clement Hodgkinson, Matthew B Jackson, James Brady and Ferdinand Von Mueller. The Yan Yean Water Supply System also has associations with Sir John Monash, engineer, and his Reinforced Concrete & Monier Pipe Construction Co., which built Reservoir No 2 at Preston. Finally, the Yan Yean system led to the creation of the Water Supply Branch of the Public Works Department, which was the first State authority to control the planning, development and management of water supplies in Victoria. It also has strong associations with the Melbourne & Metropolitan Board of Works (MMBW), which managed the system from 1891 to 1991. (Criterion H).*

## 3.2 Numbers 1, 3 and 5 mains, McDonalds Road, Mill Park to McKimmies Road, Bundoora

The Yan Yean Water Supply System Conservation Management Plan (CMP) (May 2007) provides the following Statement of Significance for the Numbers 1, 3 and 5 mains that run through the site area:

### **What is significant?**

- The remnants of the No.1 main, laid in 1853-7, the No.3 main, originally laid in 1853-7 and re-laid in this location in 1875, and the No.5 main laid in 1887 which are situated within the pipe reserve extending from the Pipehead Reservoir to Preston Reservoir.

**How is it significant?**

- The remnants of the Nos. 1, 3 and 5 mains are of historical and technical significance to the State of Victoria as part of the Yan Yean water supply system.

**Why is it significant?**

- Historically, the [sic] Nos. 1, 3 and 5 mains provide important evidence of significant stages in the nineteenth century development of the Melbourne's water supply system including the construction of the original Yan Yean system and the changes that were made to increase and improve supply. Up until 1891 when the Watts River weir was commissioned (now part of the Maroondah system), the Yan Yean system provided the whole of Melbourne's reticulated water supply. (HV criterion A) Technically, the Nos. 1 and 3 mains are of particular significance as examples of early cast iron pipes that are rare in Victoria and probably nationally. (HV criteria B & F)

### 3.3 Valve House, Wright Court, Mill Park

The Yan Yean Water Supply System CMP (May 2007) provides the following statement of significance for the Valve House at the southeast end of Wright Court, Mill Park:

**What is significant?**

- The Valve House, designed by Matthew Jackson and constructed c.1857, situated within the Yan Yean pipe reserve at the eastern end of Wright Court, Mill Park.

**How is it significant?**

- The valve house at Mill Park is of primary historical and aesthetic significance as a component of the original Yan Yean system constructed between 1853-7.

**Why is it significant?**

- *Historically, the valve house provides evidence of the development of the original system. Aesthetically, the valve house is a finely detailed example of a small building using dressed and rough bluestone.*

### 3.4 VHI H7922-0281, Yan Yean Pipe Track

The Yan Yean Pipe Track is on the VHI as H7922-0281 Yan Yean Pipe Track, Yan Yean and Doreen and South Morang and Mill Park and Reservoir, Whittlesea City, Darebin City.

The significance of the site is articulated on the VHI as:

- The Yan Yean system remains, 150 years after it was completed, a working system where the function and use of many of the original features can still be understood and interpreted. It provides increasingly rare evidence of the evolution of engineering practices and techniques in the mid to late nineteenth century, and incorporates early technical elements such as in-line pressure reducing valves and engineered cascades to aerate incoming water that are not found in other systems in Victoria or Australia. The Yan Yean system contains representative examples of most (if not all) of the features associated with nineteenth and early-twentieth century water supply systems including storage and service reservoirs, weirs, pipe mains and reserves, aqueducts, siphons, tunnels and, as such, is one of the best representative examples of a such a system not only in Victoria, but also Australia. The system is also notable for the remnants of the early landscaping schemes around Yan Yean and Toorourrong reservoirs (thought to use planting schemes suggested by Baron Ferdinand von Mueller, Victoria's first Government Botanist and former Director of the Melbourne Botanic Gardens) and along the aqueducts and pipe reserves, which illustrate the influences of nineteenth century notions of the 'picturesque'.

### 3.5 National Trust of Australia

The study area is not registered on the National Trust of Australia database.

### 3.6 Aboriginal cultural heritage sensitivity

Under the Victorian *Aboriginal Heritage Act 2006*, a mandatory cultural heritage management plan is required when proposed works are considered to be a high impact activity and part, or all, of the activity area is considered to be an area of cultural heritage sensitivity.

The proposed pathway is within 50m of two registered Aboriginal places which are considered areas of cultural heritage sensitivity according to the Aboriginal Heritage Regulations 2018 (r.25). Furthermore, the proposed works are also within 200m of a waterway (Darebin Creek), which is also considered an area of cultural heritage sensitivity (r.26).

As such, approved Cultural Heritage Management Plan (CHMP #18124) was prepared for the Yan Yean Pipe Track between Childs Road and McDonalds Road. A CHMP provides contingencies in the event that Aboriginal cultural material is found.

## 3.7 Levels of significance

Understanding the cultural heritage significance of a place and its components is a critical step in establishing levels of tolerance to change of individual components.

On the basis of the history, the site analysis and the established significance of the place as presented in this report, elements of the place can be divided into the following significance categories:

1. **Primary significance.** Elements of high significance that play a crucial role in supporting the significance of the place.
2. **Secondary significance.** Elements of lesser cultural significance that play a moderate role in supporting the significance of the place.
3. **Limited significance.** Elements that retain only minor significance. They may play a minor role in supporting the significance of the place.
4. **No significance.** Elements that have no significance, some of which may be considered intrusive (that is, they obscure rather than support the significance of the place).

The Yan Yean Water Supply System CMP (May 2007) articulates the levels of heritage significance of the water supply system as follows (elements associated with the study area are bolded for emphasis):

### *Primary significance*

- These are features and attributes that are integral to the significance of the place. They include elements that provide important evidence of its historical development and are directly associated with the key historic period of development and use from the commencement of construction in 1853 until 1891, which is the date that the first stage of the Maroondah system came online and was connected with the Yan Yean system at the Junction Basin.

The elements of primary significance are those that are associated with:

*The initial construction of the Yan Yean system from 1853 to 1857. This includes items that are still in use as well as decommissioned items, as follows:*

- *Yan Yean Reservoir, including inlet channel, dam wall to the extent of the 1850s fabric (not including any materials associated with the reinforcement of 1999),*

**Valve House**, Outlet Tower, By-wash (Spillway, including the channel leading to the Plenty River), Caretaker's House & tank, remnants of early landscaping.

The pipe reserve between Yan Yean Reservoir and Merri Creek including the remnants of original cast iron pipes (No. 1 and No. 3 mains) that remain in situ.

- **Valve House, Mill Park**
- Darebin Creek Bridge (1850s section)
- Valve House, Preston Reservoir
- the remains of the Merri Creek Pipe Bridge
- Watertank from Eastern Hill, now at Werribee Sewerage Farm.

**The additions and alterations that were made to the Yan Yean system up to 1891, which illustrate refinements to the system's operating performance and water quality, rather than expansions of capacity.**

- *Mature trees surrounding Yan Yean reservoir, particularly conifers and sugar gums*
- Preston Reservoir No 1 (1864) and Caretaker's Residence and garden (1865)
- Morang Aqueduct (1875) and associated features (drystone walls, and brick & bluestone culverts)
- Pipehead Reservoir at McDonalds Road (1873–75)
- Flume over Plenty River (rebuilt 1879)
- Clearwater Channel (1885) and remnant early trees
- Toorourrong Reservoir and landscaped park (1883–85)
- Jacks Creek and Deviation Channel (1880s)
- *Silver Creek (1886) and Wallaby Creek (1885) systems (including the Wallaby Creek Quarters, The Cascades and associated quarries and tree plantations)*
- Junction Basin (1891) which signals end of Yan Yean as the sole source of water supply in Melbourne.

#### *Secondary significance*

- These are features and attributes that are important as evidence of the development of the Yan Yean system after 1891 when the Maroondah system came on-stream and prior to 1949 when the development of the Upper Yarra system began.
- These elements are of secondary significance in the context of the development of the original Yan Yean system from 1853-1891, but may be significant for other reasons.

*The elements of secondary significance include:*

- MMBW Rates office (1900) and Preston Reservoir No 2 (1909) and Preston Reservoir No 3 (1913)

- Egyptian Revival Valve House and instrumentation cubicle valve houses, St Georges Road (1928-9)
- Pipes installed from 1892 to c.1950
- MMBW depot at Yan Yean Reservoir behind Caretaker's House (c.1920s)
- Caretaker's Residence (1928–29) at Toorourrong Reservoir
- Timber bridges across the Clearwater Channel aqueduct (c.1940s)

#### *Limited significance*

- *The elements of limited significance, but are of some interest in demonstrating the continuing development of the Yan Yean system in the twentieth century are those that are associated with changes to the Yan Yean system made after c.1930:*
  - Infrastructure, buildings and landscaping dating from after c.1950.
  - Pipeline from Yan Yean Reservoir to Morang (placed within the aqueduct in 1960)

## 3.8 Tolerance for change

The tolerance for change levels used in this report are tied directly to the relative significance rankings established in Section 3.7.

Table 3.1 Tolerance for change levels.

Significance	Tolerance for change
1 Primary	Low
2 Secondary	Moderate
3 Limited	High
4 None	High

The entire Yan Yean system has a low tolerance for change, as do the Numbers 1, 3 and 5 mains which are elements of primary significance.

The entire study area—comprising the pipe reserve, pipes pre-dating 1950 and the bluestone Valve House—is of primary heritage significance and therefore has a low tolerance for change.

As noted in the CMP, for below ground (i.e., archaeological) sites, this will require making the asset secure and safe and preventing further damage or intervention except in accordance with the conservation policy' (Context 2007).

For above-ground structures such as the Valve House, the CMP conservation policy is focused on conserving disused structures associated with the Yan Yean system of primary significance as 'artefacts' and for their interpretive value. This involves minimal change to these elements and their protection, maintenance and preservation in accordance with Burra Charter definitions.

Generally, any works should be planned and undertaken in accordance with the heritage policy outlined in the CMP and in a way that:

- Conserves or reveals significance, and/or
- Minimises the impact upon the significance of the Yan Yean system or its components (Context 2007).

Any new development should:

- be sited carefully in relation to the historic setting and heritage elements
- retain an appropriate visual setting and any views and vistas that contribute to the significance of the place
- not overwhelm the historic setting and be complementary in form, scale and materials
- be identifiable as new work and clearly contemporary in design.

## 3.9 Opportunities and constraints

The main heritage constraint linked with the project area is the low tolerance for change associated with the pipe reserve area. However, the elongated nature of the reserve, the physical corridor it provides through Mill Park and to the adjoining suburbs of Morang (to the northeast) and Bundoora (to the south), and its open landscaped setting are characteristics that are compatible with its use as a recreational area for the community.

This recreational use of the subject site is associated with relatively low infrastructural requirements and a general visual compatibility with the heritage setting. The provision of improved pathways, landscaping and rest areas is likely to improve the controlled use and management of the site, and community engagement with it. This presents heritage interpretation opportunities to enhance the dissemination and community understanding of the heritage values of the Yan Yean Water Supply System.

## 4 Existing condition

### 4.1 Site description and current use

Dr Kim Roberts and Leah Tepper inspected the study area on 15 July 2021.

The wider project area comprises a 3.8 km section of the Yan Yean Pipe Track located between McDonalds Road, Mill Park and the Darebin Creek Trail. The study area for Stages 3-6 comprises the section of the Yan Yean Pipe Track between Childs Road and McDonald's Road, the study area contains the subsurface remains of the aqueduct and other iterations of water pipe, and a disused bluestone Valve House. The water supply reserve continues to support Melbourne's water supply. Two abandoned water main pipes are present in the study area, along with one live water main.

The study area comprises an informal linear track located in a reserve between dense residential housing. The track is currently grassed with a mixture of pastoral and native grasses. Native grasses are far more abundant at the southern extent of the study area where the track meets the Darebin Creek Trail. Native and exotic trees and small shrubs have been planted along sections of fence lines flanking the reserve. Informal tracks left by pedestrians can be seen in the grass. There are several sections of the pipe track which are crossed by roads. These road crossings are fenced, with access gates for pedestrians. Road crossings have been built up substantially with fill, approximately 3.5 m above the original ground surface.

At the northwestern extent of the track, there are multiple small areas of erosion through which exposed pipe joins can be seen (Figure 4.5). Some sections of exposed pipe joins are marked with 'C&C' and 'MMW' (see Figure 4.3), indicating this is the 1920s pipe work (Paul Diffey, pers comm 15 July 2021). There is also a clear earth-covered mound that can be seen on the ground surface, indicating where pipework is present (Figure 4.4).

The bluestone Valve House is located in a triangular section of the pipe track reserve, bounded by Wright Court to the northwest and Mill Park Secondary College to the southeast (Figure 4.6). In this section of the pipe track there are gravel tracks, presumably to cater for the higher foot traffic associated with the proximity of the school. The Valve House is constructed of bluestone and is finely detailed. It includes an arched opening with a keystone and voussoirs, and a cornice at the top to the northeast and low walls to the southwest (Figure 4.7). The original metal roof, metal aqueduct cover, door and valve equipment have been removed. Intrusive modern metal fencing has been erected around the structure.



Figure 4.1 Northern extent of the study area near McDonalds Road, view looking southwest.  
(Source: GML 2021)



Figure 4.2 Study area at the northern extent in proximity to Hickey Court, view from southwest.  
(Source: GML 2021)



Figure 4.3 Exposed cast iron pipe with C & C embossing, northern extent of the study area. (Source: GML 2021)



Figure 4.4 Study area at northern extent, showing earth-covered mounds, facing southwest. (Source: GML 2021)



Figure 4.5 Exposed cast iron pipe joints at the northern extent of the study area. (Source: GML 2021)



Figure 4.6 Bluestone Valve House, view from northeast. (Source: GML 2021)



Figure 4.7 Bluestone Valve House, view from northwest. (Source: GML 2021)

## 4.2 Surviving fabric

The Yan Yean Pipe Track is noted for its largely intact below-ground infrastructure. The decommissioned Number 1 main, dating to 1857, and 1920s pipe are still present within the study area. Sections of the Numbers 3 and 5 mains are also present within the study area, as some sections have been removed and replaced in part over the years.

Within the study area, the bluestone Valve House structure is the only surviving above-ground structure. It remains somewhat intact, although elements of it have been removed. Its visibility within the site area presents a good opportunity for heritage interpretation of the Yan Yean Water Supply System.

## 5 Assessment of archaeological potential

This section discusses the Yan Yean Pipe Track's potential to contain historical archaeological material. This assessment is based on a consideration of the current site conditions and an examination of historical information related to the development and use of the site, including evidence of demolition or construction activities that may have disturbed the archaeological remains associated with the site's many features and activities.

The term 'archaeological potential' is defined as the likelihood that a site contains physical evidence related to an earlier phase of activity, occupation or development.

### 5.1 Archaeological potential - Yan Yean Pipe Track (H7922-0281)

The study area has potential for subsurface archaeological deposits. The remains of the Numbers 1, 3 and 5 mains are present and have the potential to contain further archaeological evidence that will provide further information about the construction and maintenance of the Yan Yean system between 1857 and 1887. The following statement of archaeological potential is outlined in the VHI citation: (Context 2007, p4):

The Yan Yean system is archaeologically significant because it contains a range of known or potential archaeological deposits associated with the construction, development and use of the system over the past 100 years. This ranges from workers camp associated with the construction of the system to decommissioned equipment such as early cast-iron pipe technology and the former Morang Aqueduct and former Pipehead Reservoir. These archaeological sites have the potential to provide valuable information particularly in relation to early engineering construction techniques and provide a greater understanding of how a project of this magnitude was undertaken. They also can provide insight into the lives of the people involved in construction.

There is potential for archaeological deposits to be present in the pipeline trenches. These deposits would likely be associated with the construction of the pipeline, including but not necessarily limited to:

- evidence of undocumented details of construction methods,
- evidence of undocumented, ad-hoc, changes to the design and installation of the pipe made on site during installation,

- discarded or lost personal items from the construction workers, such as clay tobacco pipes, buttons, coins, and other small items.

There is also potential for workers camps associated with the construction of the system to be present close to the alignment of the Yan Yean Pipe Track. A temporary village was located at Yan Yean to house the workers employed on the construction of the reservoir. Men employed on the construction of the pipelines, and probably their families too, were most likely accommodated in temporary camps that shifted with the location of the work. These camps may have been located near the present pipe track but perhaps were more likely located at sites along the Darebin Creek and at places more convenient to inns or shanties and stores. No archival records are known to exist showing the locations of the workers camps.

However, several projects have been undertaken within the study area to upgrade the water pipe infrastructure, with sections of the cast iron pipeline removed and replaced. These works have removed some of the archaeological resource.

## 6 Assessment of archaeological significance

### 6.1 Heritage Council of Victoria heritage assessment criteria

Assessments of cultural significance endeavour to identify the heritage values that a place may embody. The Heritage Council has adopted a number of assessment criteria to assist heritage practitioners in this regard. They are:

**Criterion A**—Importance to the course, or pattern, of Victoria's cultural history

**Criterion B**—Possession of uncommon, rare or endangered aspects of Victoria's cultural history

**Criterion C**—Potential to yield information that will contribute to an understanding of Victoria's cultural history

**Criterion D**—Importance in demonstrating the principal characteristics of a class of cultural places and objects

**Criterion E**—Importance in exhibiting particular aesthetic characteristics

**Criterion F**—Importance in demonstrating a high degree of creative or technical achievement at a particular period

**Criterion G**—Strong or special association with a particular present-day community or cultural group for social, cultural or spiritual reasons

**Criterion H**—Special association with the life or works of a person, or group of persons, of importance in Victoria's history.

The heritage value of archaeological relics is difficult to assess when the extent and nature of the archaeological feature is unknown, as is the case with the current site. It becomes necessary for judgements to be formulated on the basis of expected or potential attributes. The element of judgement can be enhanced by research, as has been carried out in the current study.

Where archaeological relics are found to embody significant heritage values, it is usually because they have satisfied Criterion C above (although archaeological sites and artefacts may also satisfy other criteria).

A primary objective of any proposed excavation is to establish whether the relics that survive at a site are in situ and extensive enough to be useful for future archaeological, historical, and wider social/scientific research.

## **6.2 Significance of the potential archaeological resource**

The study area contains a number of below- and above-ground structures. The Yan Yean Pipe Track has potential to contain archaeological remains demonstrating how Melbourne's water supply has been developed and altered over a 150-year period.

Archaeological deposits in the pipe trench would likely be associated with the construction of the pipeline, and may also yield information about personal aspects of the construction workers.

Therefore, any archaeological remain buried below the Yan Yean Pipe Track would be significant for their ability to demonstrate early cast iron pipe technology and early engineering construction techniques, as well as providing a greater understanding of how this significant, large-scale project was undertaken. The archaeological remains of the Yan Yean Pipe Track would also be significant for their ability to provide insight into the lives of the people involved in construction.

There is also potential for workers camps associated with the construction of the system to be present close to the alignment of the Yan Yean Pipe Track. As no archival records are known to exist showing the locations of the workers camps, these archaeological deposits would be significant in understanding the workers lives.

## **6.3 Research potential**

As noted above, the Yan Yean Pipe Track is significant for its ability to provide rare evidence of the evolution of engineering practices and techniques in the mid to late nineteenth century. The site has potential to provide further evidence about the system and how it was constructed and operated, as well as the workers involved. The potential archaeological resource at the site could also supplement data available from other sources.

The value of the site as a research resource will depend on the nature of in situ artefacts. The degree of significance will be dependent on the nature, extent and research investigations of the artefacts.

Themes that could direct research into realising the potential significance of this resource include:

Understanding the nature of the archaeological site formation:

- What is the nature of the archaeological deposits at the site?
- What natural and cultural taphonomic processes have contributed to the archaeological site and its associated deposits?

Analysing the assemblage of artefacts associated with the Yan Yean pipe construction:

- What artefacts are associated with the Yan Yean pipe construction?
- Are there particular concentrations of artefacts within these areas?
- What types and quantities of major artefact groups are present in specific archaeological deposits?
- What do the artefacts reveal about the daily lives of the Yan Yean construction workers?
- What can the artefacts tell us about the construction of the Yan Yean Water Scheme?
- Can the artefacts tell us about the allocation of work between social and ethnic groups and/or use of seasonal/itinerant labour?

Comparison of the archaeological resource across a wider context:

- What similar sites have been investigated within the local or broader context?
- How do the archaeological site characteristics, and the artefact assemblage characteristics compare between these sites?
- Do these comparisons give rise to wider thematic research directions?

## 7 Proposed works and heritage impacts

The proposed works within the study area are to utilise the Yan Yean Pipe Track as a shared walking and cycling path. Details of the proposed works to be carried out by the City of Whittlesea are shown in the Yan Yean Pipe Track Darebin Creek Trail to Bush Boulevard Stage 1 to Stage 5 drawing set (Civil Road Solutions Pty Ltd 2019) and in the Stage 1 and Stage 2 Pre Tender Landscape Package (Design Table Landscape and Urban Design, undated).

No detailed construction plans are available for the section of proposed track between Bush Boulevard and McDonalds Road, Mill Park, as yet; however, a Functional Path Layout drawing (201131-FLT-01) prepared by Traffic Works dated 9 September 2021 provides a preliminary indication of the intended works in this area. This section of the site was also surveyed during the site visit by Dr Kim Roberts and Leah Tepper (GML) and Paul Diffey (City of Whittlesea).

Concept designs prepared by Design Table Landscape and Urban Design provided a preliminary indication of proposed works (Yan Yean Pipe Track Shared Path Landscape Site Analysis, undated).

Further landscape drawings by Design Table Landscape and Urban Design were provided to GML on 6 October 2021 (Concept Plan for Valve House, Rev 2, undated, Concept Plans for Playgrounds Rev 3, dated 28 September 2021; Landscape Works for Stage 4 and 5, Construction Revision 1, 28 May 2023).

The works will include the following:

- construction of a 3m wide concrete path to a depth of 250mm on the western side of the study area
- construction of 2.5m wide link paths to the surrounding street network and points of interest
- installation of 1.2m high hold rails with concrete footings at road crossings, to depths of 450mm
- installation of 1.2m high lockable bollards with concrete footings, to depths of at 750mm at road crossings
- installation of regulatory signage with a concrete base to depths of 700mm
- removal of existing fences and gates
- landscaping, including tree and shrub plantings, garden beds and rock beaching
- construction of seating and rest areas
- upgrade of existing parks and playgrounds

- construction of pedestrian crossings at Childs Road, Bush Boulevard, Moorhead Drive, Centenary Drive, McDonalds Road and Brabham Drive
- installation of pedestrian-operated traffic signals at Childs Road, Bush Boulevard and McDonalds Road
- new fencing, paving, and landscaping around the bluestone Valve House near Wright Court.

Works are only occurring within the Yan Yean Pipe Track reserve and on Crown Land. Proposed works are discussed in more detail in Section 8 below.

## 8 Assessment against the Heritage Act

The following discussion addresses the potential heritage impacts of the proposed works in terms of types of work proposed.

The proposed work categories include:

- demolition and construction activities
- paths
- hold rails, bollards and signage
- landscaping and seating
- rest areas and playgrounds
- pedestrian crossings and traffic signals
- fencing, paving and landscaping around the Valve House
- interpretation.

### 8.1 Demolition and construction activities

During the construction phase of the activity, it is likely that heavy vehicles will require access to the Yan Yean Pipe Track area via street crossings. Vehicles may be required to travel across the track which is considered to hold archaeological potential. This could cause possible impacts to historical archaeological material.

Mitigation measures will help reduce the potential impacts on historical archaeology.

Recommended measures include:

- archaeological induction for staff/contractors involved in the construction of the shared path (Section 9.1)
- implementation of an unexpected finds and notifications protocol (Section 9.2)
- avoiding construction along the alignment of Numbers 1, 3 and 5 mains, and the 1920s pipe, where possible
- where construction along the alignment of the Numbers 1, 3 and 5 mains, and the 1920s pipe, is not avoidable, ensuring adequate soil coverage is achieved by artificially building up the ground to protect the pipes
- laying of geofabric and a protective barrier of sand and gravel across areas that cannot be avoided by heavy machinery access during construction.

During the construction phase of the activity, it is likely that vehicles and machinery will require access to the Yan Yean Pipe Track area in the vicinity of the Valve House. This could pose a risk of vehicle strike and cause possible impacts to the historical fabric.

Mitigation measures will help reduce the potential impacts on historical fabric.

Recommended measures include:

- To avoid impacts to heritage assets, erect temporary fencing around the asset prior to commencement of works.
- Caution during works. When works are being carried out close to the asset and temporary fencing is not feasible, provide an exclusion zone and a spotter to ensure there are no accidental strikes to the heritage elements from machinery and equipment.

## 8.2 Paths

The proposed shared path will be constructed in the western extent of the study area, along the general alignment of two abandoned water pipes. A concrete path will be installed above a bed of recycled crushed rock (Figure 8.1). The ground will be excavated to depths of 250mm, where a small smooth drum roller will proof roll the excavated surface. If sections of ground are soft, these are to be excavated out and replaced with compacted fill material.

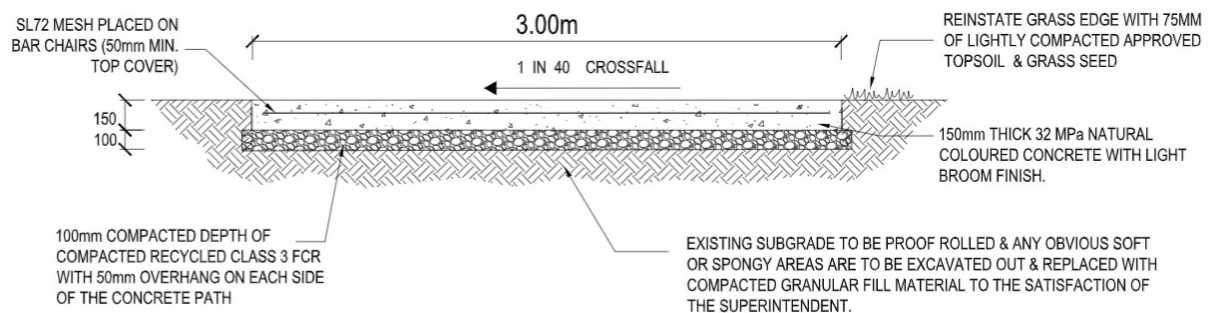


Figure 8.1 Typical proposed path construction detail. (Source: Civil Road Solutions Pty Ltd, Yan Yean Pipe Track, A13293, A13294, A13295, A13296, A13297, dated 7–29 November 2019 and 25 March 2020)

Archaeological deposits associated with the Yan Yean pipeline, if present, are likely to be found in the excavated pipe trench. It is unlikely that these deposits would be disturbed during the construction of the shared path.

Some sections of pipe are visible along the surface of the track, and their shallow subsurface presence is evident in clear alignments of earth-covered mounds, particularly

towards the northern end of the site just south of Bush Boulevard. This indicates that some areas of heritage pipe are very close to the surface and likely to be damaged by construction, resulting in heritage impacts, unless mitigation measures are implemented.

Recommended measures include:

- archaeological induction for staff/ contractors involved in the construction of the shared path (Section 9.1)
- implementation of an unexpected finds and notifications protocol (Section 9.2)
- avoiding construction along the alignment of Numbers 1, 3 and 5 mains, and the 1920s pipe, where possible
- where construction along the alignment of the Numbers 1, 3 and 5 mains, and the 1920s pipe, is not avoidable, ensuring adequate soil coverage is achieved by artificially building up the ground to protect the pipes.

## 8.3 Hold rails, bollards and signage

Lockable bollards, signs and hold rails are to be installed within the study area, which require the excavation of soils to maximum depths of 750mm and a concrete footing 450mm wide. These elements are required for public safety, amenity, and the management and maintenance of the Yan Yean Pipe Track shared path.

The footprint of each footing is minimal and any potential for impacts of subsurface heritage can be readily mitigated by:

- providing an archaeological induction for staff and contractors involved in the construction of the shared path (Section 9.1)
- implementing an unexpected finds and notifications protocol (Section 9.2)
- avoiding construction along the alignment of Numbers 1, 3 and 5 mains, and the 1920s pipe, where possible
- hand-digging footing holes where these are to be located in close proximity to water mains and pipe.

## 8.4 Landscaping and seating

Landscaping, including the installation of bench seating, rock beaching, timber bollards, timber post and cable fencing and bollards, and the planting of trees, shrubs and creation of garden beds, is proposed for the Yan Yean Pipe Track reserve as part of the shared path project. These works are aimed at improving the presentation of, and public amenity and safety within, the site area.

Bench seats installed on concrete pad footings are to be intermittently located along the track. Seats are to be a black powder coated Commercial Systems seat (TM4035). Concrete pad footings are to be 300mm deep and 400mm wide (Figure 8.2). These benches will be visually recessive within the general context of the pipeline reserve area adjacent to the shared path. The footings will be relatively shallow, and the mitigation measures listed at the end of this section will manage any risks to subsurface heritage.

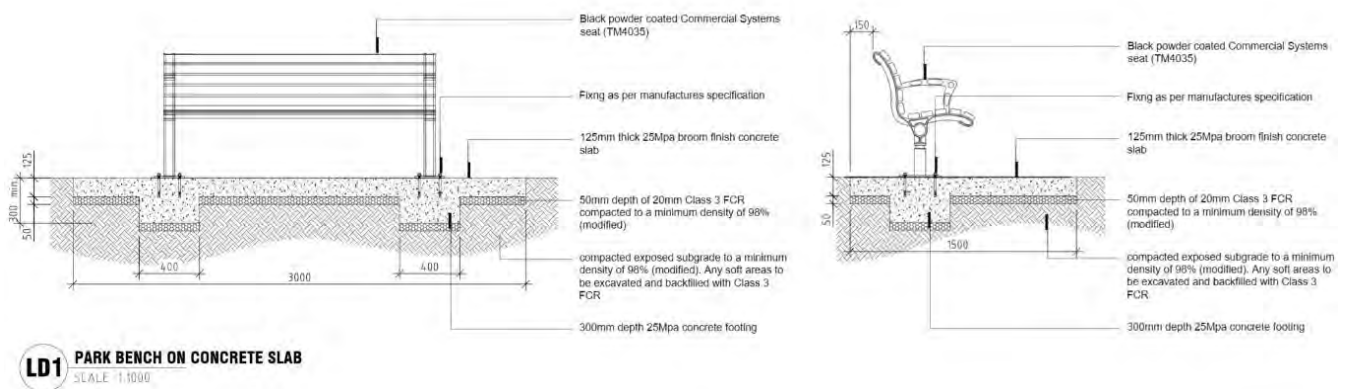


Figure 8.2 Typical proposed park bench seating on concrete slab. (Source: Design Table Landscape Architecture and Urban)

Timber bollards and timber post and cable fences are proposed in locations where the track intersects with existing roadways (Figure 8.3). These elements will have a low visual impact and the footings will be relatively shallow. The mitigation measures listed at the end of this section will manage any risks to subsurface heritage.

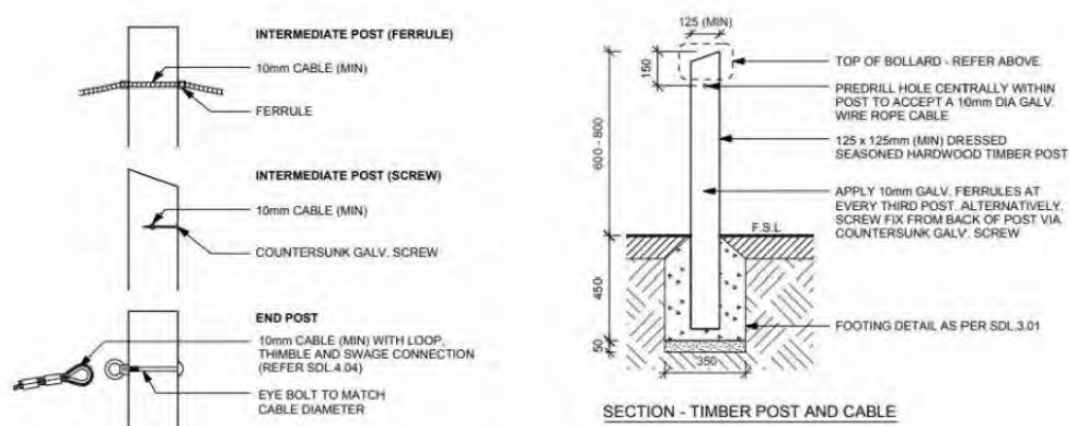


Figure 8.3 Typical proposed timber post and cable fencing. (Source: Design Table Landscape Architecture and Urban Design 9 April 2021)

Drawings prepared by Design Table Landscape Architecture and Urban Design indicate that a 5m grass zone is to be maintained within the pipe easement area. Planting zones either side of this area are to have a 2.5m buffer from the pipe easement and tree planting zones will have a 5-metre buffer from the pipe easement. These proposed planting and tree planting buffers seek to mitigate any damage to the heritage mains and pipes from trees and plantings. The selected planting palette is native and includes trees, shrubs and ground covers, grasses and strappy leaved plants and rushes and sedges to swales (Figure 8.4 and Figure 8.5). The general approach is considered generally acceptable from a heritage perspective. Further mitigation and management measures to protect subsurface heritage are listed at the end of this section.

**TREE SCHEDULE**  
STAGES 1 & 2

CODE	BOTANICAL NAME	COMMON NAME	MATURE SIZE m	POT SIZE	QTY.
<b>TREES</b>					
Cor mac	<i>Corymbia maculata</i>	Spotted Gum	30x15	140mm	7
Cor fic	<i>Corymbia ficifolia</i>	Red Flowering Gum	15x10	140mm	87
Euc man	<i>Euc. Mannifera 'Little Spotty'</i>	Dwarf Red Spotted Gum	6x4	140mm	4
Fra exc	<i>Fraxinus excelsior laurea</i>	Golden Ash	7x7	140mm	19

Figure 8.4 Proposed tree selection. (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021)

**PLANT SCHEDULE**  
STAGE 1

AREA (r)  
PLANTING DENSITY (Plants/r)  
TOTAL PLANTS IN AR

CODE	BOTANICAL NAME	COMMON NAME	MATURE SIZE m	POT SIZE
<b>SHRUBS &amp; GROUNDCOVERS</b>				
Atr sem	<i>Atriplex semibaccata</i>	Creeping Sultbush	prostrate	140mm
Goo ova	<i>Goodenia ovata</i>	Hoop Goodenia	1-2.5x1-3	140mm
Har vio	<i>Hardebergia violacea</i>	Purple Coral-pea	0.5 x 2m	140mm
Cor ref	<i>Correa reflexa</i>	Common correa	0.5-2x1.2	140mm
Chr api	<i>Chrysocephalum apiculatum</i>	Common Everlasting	0.5 x 2m	140mm
<b>GRASSES &amp; STRAPPY LEAVED</b>				
Dia rev	<i>Dianella revoluta</i>	Black-anther Flax-lily	0.7-1x0.7-1	140mm
The tri	<i>Themeda triandra</i>	Kangaroo Grass	0.3-0.9x0.8	140mm
Lom lon	<i>Lomandra longifolia</i>	Spiny-headed Mat-rush	0.5-1x0.5-1.2	140mm
Poa lab	<i>Poa labillardierei</i>	Common Tussock-grass	1x1	140mm
<b>SWALES</b>				
Fes gla	<i>Festuca glauca</i>	Blue Fescue	0.5 x 0.5	140mm
Car app	<i>Carex appressa</i>	Tall Sedge	1 x 1 m	140mm
Bra mul	<i>Isolepis nodosa</i>	Knobby Club Rush	1 x 1.5	140mm

Figure 8.5 Proposed plant selection (shrubs and groundcovers, grasses and strappy leaved, swales). (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021)

Discrete areas of rock beaching are proposed northeast of Roycroft Road and northwest of Devitt Court. Natural boulders are to be bedded on compacted subgrade material in a layer of 150mm concrete. Voids are to be backfilled with mulch or topsoil (Figure 8.6). While no indicative measurements are provided regarding the intended scale of the boulders to be placed, it is understood that these elements are relatively low-lying within the pipeline corridor and should not unduly obstruct views in the areas.

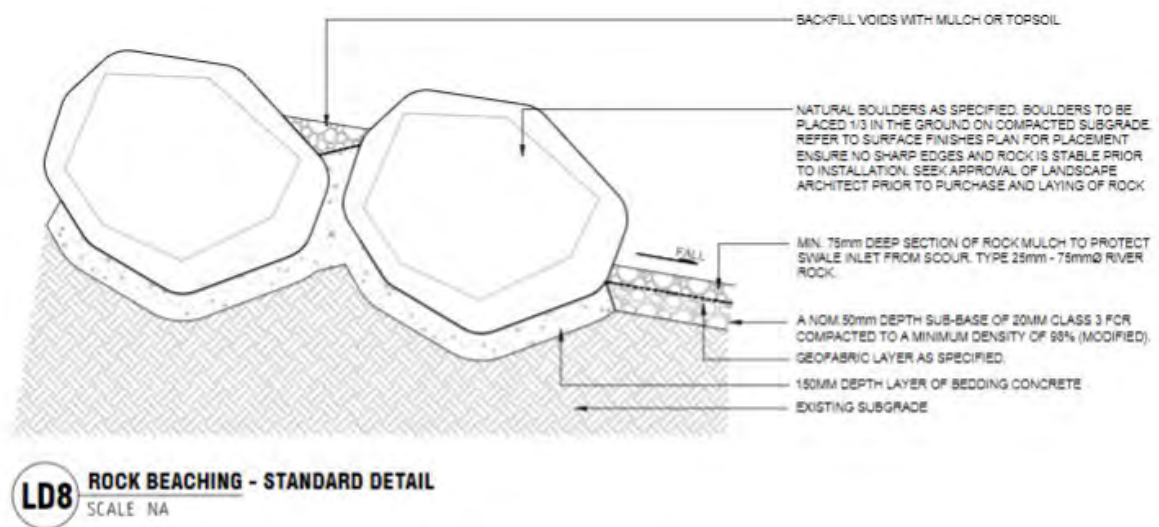


Figure 8.6 Standard detail, rock beaching. (Source: Design Table Landscape Architecture and Urban Design, Landscape works Tender Issue, 21 May 2021)

The footprint footings associated with bench seating, rock beaching and fencing elements are minimal and planting zones have suitable buffers to the pipeline easement.

Any potential for impacts of subsurface heritage can be readily mitigated by:

- inducting staff and contractors involved in the works directly in and around the bluestone Valve House (Section 9.1)
- implementing an unexpected finds and notifications protocol (Section 9.2)
- hand-digging holes for footings where these are to be located in close proximity to water mains and pipe
- hand-digging holes for planting and maintaining the proposed planting and tree planting buffers from the pipe easement
- hand-digging holes for rock beaching areas and maintaining buffers from the pipe easement.

## 8.5 Playgrounds and rest areas

The upgrade of existing parks and playground areas is proposed at Hinkler Park (near Hinkler Drive near Cunningham Drive and McLaughlin Crescent). This area is to have new play equipment installed and new landscaping is proposed around existing established trees (Concept Plans for Playgrounds, dated 28 September 2021).

Parks, playgrounds and rest areas are set back from the pipe easements where landscaping, plantings and playground equipment associated with these areas will not obstruct views within the pipe reserve area. These works will enhance the amenity of the heritage place and offer opportunities for heritage interpretation along the Yan Yean Pipe Track. Thoughtful design choices, including siting, plant selection and detailing should mitigate the relatively minor heritage impacts associated with these works.

Concept plans for Hinkler Park prepared by Design Table Landscape Architecture and Urban Design show a park with pathways, landscaping and an exercise circuit on a rubber base to the northwest of the pipeline and a larger area with junior and senior playground zones to the southeast of the pipeline (Figure 8.7). The exercise and playground areas are buffered from the pipeline and neighbouring properties by garden beds and planting and are sited between residential properties well back from the pipeline reserve.

Materials indicated in the concept plan include natural timber finishes, tan and ochre ground surfacing, and brightly coloured play equipment elements. The high-colour elements appear to be discreet elements rather than large blocks and they are largely visually buffered from the pipeline reserve by planting. As such, it is likely that this will be acceptable from a heritage perspective.



Figure 8.7 Hinkler Park concept plan. (Source: Concept Plans for Playgrounds, dated 28 September 2021)

## 8.6 Pedestrian crossings and traffic signals

Pedestrian crossings are proposed for construction at Childs Road, Bush Boulevard, Moorhead Drive, Centenary Drive, McDonalds Road and Brabham Drive. The installation of pedestrian-operated traffic signals are proposed at Childs Road, Bush Boulevard and McDonalds Road. Pile footings to a depth of 3m will be required.

These are proposed as public safety measures and are located within sections of the Yan Yean Pipe Track that are already occupied by roadways and crossings. There are several metres of fill that have been installed over the pipeline in these areas to raise the road level and provide clearance over the pipe (Paul Diffey, personal communication, 15 July 2021).

It is considered that the potential for further heritage impacts in these areas is negligible due to the previous construction and deposition of fill. No specific mitigation measures are required; however, a generally cautious approach should continue to apply.

## 8.7 Fencing, paving and landscaping around the Valve House

It is planned to remove the existing intrusive fencing around the Valve House and install new fencing and low-level landscaping in its place. In the concept drawings prepared by Design Table Landscape Architecture and Urban Design, new concrete paving is proposed outside the fenced area around the Valve House (Figure 8.8).



Figure 8.8 Landscaping around the Valve House—concept design. (Source: Design Table Landscape Architecture and Urban Design, 30 May 2023)

### 8.7.1 Reason for works around Valve House and options considered

The bluestone Valve House is located in the vicinity of the proposed trail, and the design has considered the integration of this significant built structure into the wider landscape design.

Earlier in the design phase, an option was presented by Design Table, showing a design which did not include a fence (Figure 8.9). This option also included the incorporation of fixed panels across openings in the structure.

There have been past incidents of vandalism and climbing on the Valve House structure, for this reason, along with its location in close proximity to a local high school, Whittlesea Council has identified an increased risk of vandalism and unauthorised access.



Figure 8.9 Landscaping option without fence around the Valve House—sketch design. (Source: Design Table Landscape Architecture and Urban Design, November 2022)

### 8.7.2 Assessment of proposed works around Valve House

The landscaping works around the Valve House include a physical barrier in the form of a fence. While detailed drawings for the fence have not yet been developed, the proposed fencing as depicted in the concept design is a simple contemporary fence in a dark colour, consisting of slender vertical pickets (Figure 8.10). This design approach is generally in line with CMP guidelines for new works which require that they be clearly identifiable as new works. The inclusion of fencing in the landscape works is considered an appropriate measure to deter vandalism and discourage climbing on the Valve House structure. While no lighting is shown on the concept, the designer has advised that lighting will be considered in the design development stages.

To align with policy, it is important that the new development does not overwhelm the historical setting, and should be complementary in form, scale, and materials. The design of the landscaping and paved surface in the area surrounding the Valve House is based on a considered and sympathetic design approach. The form and scale of the fence is generally complementary to the setting and has the potential to provide a sufficient level of visual transparency, however it is recommended that the specification of the fence should be developed with the aim to increase and maximise the level of transparency in order to retain an appropriate visual setting and limit the impact on views towards the heritage fabric of the Valve House. It is also recommended that clarification is provided on the drawings relating to the inclusion of screening to the arched openings of the valve house, it is recommended that these be left open and that the fence provides the required barrier.

The drawings note vertical steel fencing but also refer to high tensile aluminium with 65 x 16mm rectangular section pickets. The vertical steel is the preferred option and may provide the opportunity for a more refined design and slender section. The developed design could also consider a wider spacing of the slender vertical uprights, which allows for the required physical separation and security whilst providing a higher level of visual transparency. To further reduce the impact on the setting, the position of the fence could be modified, to provide a wider buffer or 'breathing space' around the Valve House, and improve views towards the structure. The patterns on the ground could be used as reference to further visually integrate the fence with the proposed ground surface treatment.

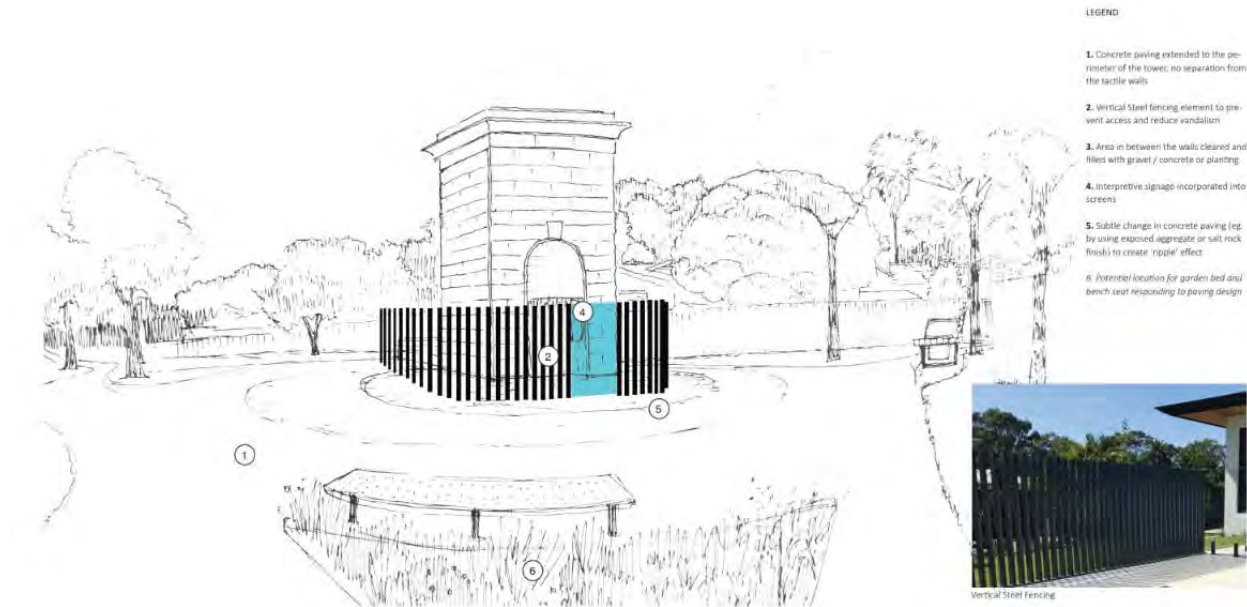


Figure 8.10 Landscaping steel fencing panels around the Valve House—sketch design.  
(Source: Design Table Landscape Architecture and Urban Design, 30 May 2023)

A Perspex panel that would provide an area for interpretation information is proposed along with a lockable gate to facilitate access to the Valve House for maintenance purposes (Figure 8.11). The use of a Perspex panel is considered appropriate as it will contribute to a level of visual transparency and maintain views towards the Valve House. A graffiti and scratch proof treatment should be investigated, to ensure that the panel is protected and maintains its appearance. The interpretive panel provides an opportunity to reveal information relating to the significance of the place and is in line with conservation policy. It should also be noted that concrete paving, landscape and seating areas could offer further opportunities to present interpretive material in engaging ways that would not visually obscure the Valve House. Interpretation is further discussed in Section 8.8 below.

Recessive colours such as charcoal grey are considered appropriate and are complementary, but we suggest that black is avoided, unless it is a natural finish such as ‘flat black steel’ which is the preferred finish if steel uprights are used.

Concrete paving is proposed around the Valve House, but the paving is to stop short of the bluestone walls of the structure, allowing a gravel-filled border to articulate the gap between paving and heritage structure. The width of this border should be confirmed and should allow sufficient space and proportions to emphasise the visual separation of the

structure from the hard surface paving. The use of a perimeter buffer of permeable material is considered an appropriate measure to mitigate impacts to the structure.

A simple circular design is proposed for the paving around the Valve House as a subtle interpretive element representing that the ripple of water, alluding to the Yan Yean water supply scheme. Changes in colour/aggregate finish to the concrete paving around the Valve House to emphasise it is considered an acceptable approach. The proposed triangular paving area with its three converging paths and addition of four trees and a seat to the north is considered acceptable from a heritage perspective.

The ground surface within the interior of the Valve House structure is proposed to be cleared and filled with gravel/concrete or planting. Laying concrete in this area would be inappropriate, and potentially have a detrimental impact on the structure and should not be used. Any works to the interior of the structure should be informed by the recommendations of a specialist contractor who is suitably experienced and qualified to carry out work on the heritage fabric of bluestone structures.

Any works in the vicinity of the Valve House structure should require the use of careful hand-dig methods to help to avoid adverse impacts to the structure. Any concrete surfaces should be adequately separated from the bluestone fabric of the Valve House.

Refer also to section 9 of this report for recommendations regarding works adjacent to the Valve House.

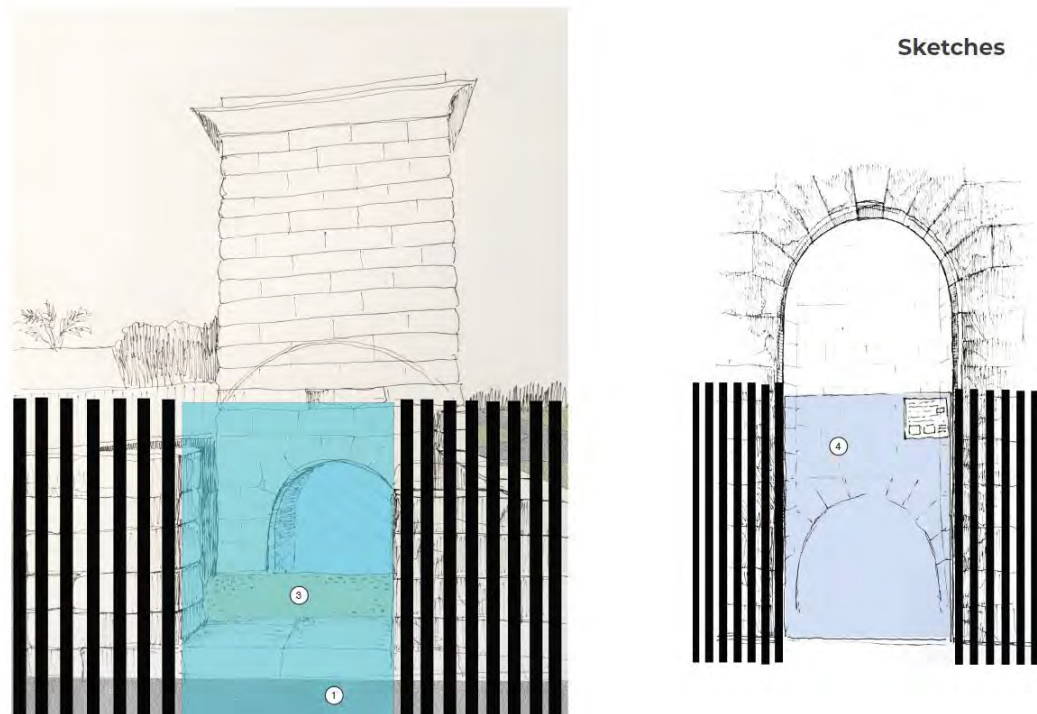


Figure 8.11 Location of interpretive signage, expansion of concrete paving, and area between the fence and the Valve House—sketch design. (Source: Design Table Landscape Architecture and Urban Design, 30 May 2023)

Archaeological deposits and artefacts related to the construction and operation of the bluestone Valve House may be present in subsurface deposits surrounding the structure, potentially within the aqueduct cutting. These deposits have the potential to be disturbed during fencing, paving and landscaping activities. Such deposits and artefacts have the potential to yield some information about technical aspects of the Valve House's construction, and also about the people who participated in that work.

Any potential for archaeological impacts should be managed through on-site monitoring of the works by a qualified archaeologist.

## 8.8 Interpretation

Details regarding heritage interpretation of the Yan Yean Water Supply System have not been provided for comment, but discussions with Paul Diffey (City of Whittlesea) indicated that the City of Whittlesea are likely to be open to providing some level of heritage interpretation along the upgraded Yan Yean Pipe Track. In addition to the bluestone Valve House structure and sections of surfacing pipe, other areas along the track that may be

suitable areas for incorporating heritage interpretation include proposed path junctions, seating, rest areas, parks and playgrounds. It is recommended that a heritage interpretation plan for the works area is developed in reference to Section 3.4.4, Interpretation, in Volume 4 of the CMP.

## **8.9 Reasonable and economic use**

The Yan Yean Pipe Track will provide a continuous off-road shared path link filling an existing gap in the trail network from the M80 Ring Road northwards to McDonalds Road, Mill Park, where it will connect with an existing section of the trail.

The Yan Yean Pipe Track connection will provide a connection through the Plenty Valley growth corridor and provide continuous off-road access from the wider metropolitan path network with the Plenty Valley Town Centre, Plenty Gorge Parkland, Mill Park Leisure Centre, nearby schools, local activity centres and the growth suburbs of Doreen, Mernda and South Morang. The size of the catchment of the track is relatively large and growing.

This track has been identified as a regional trail by the State Government and is included in the Northern Regional Trails Strategy (2016). It will enhance regional connectivity of the existing network by completing the Yan Yean Pipe Track. The land is owned by Yarra Valley Water, which has agreed to the use of the reserve as a cycling path. Funding has been secured for construction from the Department of Environment, Land, Water and Planning and City of Whittlesea new works program.

The improved community use of the Yan Yean Pipe Track as an off-road shared path is considered a valid and reasonable use of the site, and one that is broadly compatible with the heritage values of the heritage place. It provides opportunities to interpret the heritage of the place and heighten community awareness and understanding of the heritage values of the Yan Yean Water Supply System.

## 9 Management and mitigation measures

A generally cautious approach to construction of the shared path and associated safety measures, signage and landscaping will apply.

Specific management and mitigation measures that will apply include:

- archaeological induction for staff/ contractors involved in the construction of the shared path (Section 9.1)
- archaeological monitoring of ground disturbing works around the Valve House (Section 9.2)
- implementation of an unexpected finds and notifications protocol (Section 9.2)
- avoiding construction along the alignment of Numbers 1, 3 and 5 mains, and the 1920s pipe, where possible
- where construction along the alignment of the Numbers 1, 3 and 5 mains, and the 1920s pipe is not avoidable, ensuring adequate soil coverage is achieved by artificially building up the ground to protect the pipes
- laying of geofabric and a protective barrier of sand and gravel across areas that cannot be avoided by heavy machinery access during construction
- hand digging footing holes where these are to be located in close proximity to water mains and pipe
- hand digging holes for planting and maintaining the proposed planting and tree planting buffers from the pipe easement.

Management and mitigation measures, and recommendations specific to the Valve House works include:

- further develop the design and specification of the fence to minimise the visual impact on the Valve House and retain an appropriate visual setting, views and vistas towards the Valve House
- investigate graffiti-resistant treatments for Perspex panels
- avoid the use of concrete on the ground surface in the area between the Valve House walls
- ensure that any works within the interior of the structure should be informed by the recommendations of a specialist contractor who is suitably experienced and qualified to work on heritage masonry structures
- ensure that no works are carried out which impact the physical structure of the Valve House unless they are conservation works under the supervision of a

suitably qualified contractor who has suitable experience working with heritage bluestone structures. Any conservation works must first be approved by Heritage Victoria.

- incorporate barriers which do not impact the fabric of the Valve House and do not require the attachment of panels into existing openings
- consider the incorporation of lighting in the design development
- further develop interpretation and design elements to communicate the history and heritage significance of the Valve House

Further mitigation would also include:

- inducting staff and contractors involved in the works directly in and around the bluestone Valve House (Section 9.1)
- implementation of an unexpected finds and notifications protocol (Section 9.2)
- hand-digging holes for fence posts and planting
- hand-digging methods for any works around the perimeter and within the Valve House

## 9.1 Archaeological induction

All staff and contractors involved in the works are to attend an archaeological induction prior to the commencement of works.

The induction must summarise the type of archaeological material which may be discovered, the process of reporting a discovery, and the relevant provisions of the Act. The induction must include images of examples of archaeological material that may be uncovered.

The induction can be provided in person, online, or via recorded video by a qualified archaeologist.

## 9.2 Archaeological monitoring

Landscaping works around the Valve House should be undertaken under the supervision of an archaeologist qualified in historical archaeology. If archaeological deposits, features and artefacts are identified, works must stop temporarily while the archaeologist records those deposits and features, and collects and assess artefacts.

## 9.3 Unexpected finds and notifications protocol

If archaeological objects or features are identified within the project area at any time before, during or after the works, the following process must be followed.

It is expected that for the majority of finds work could proceed soon after the initial notification by the contractor to the archaeologist. See Table 9.1. for detail on the likely advice that would be provided for unexpected finds.

### 1. Discovery

- If suspected archaeological objects or features are discovered, all activity within a one-metre buffer must stop.
- The suspected archaeological objects or features must be left in place and protected from harm or damage.
- The contractor or City of Whittlesea must ensure a barrier (such as fencing) is erected around the buffer for the suspected archaeological object or feature, within one working day of its discovery.

### 2. Notification

- City of Whittlesea must be notified of any suspected archaeological object or feature by the site manager immediately.
- The archaeologist listed on the Consent must be notified by the site manager or City of Whittlesea within one working day of the discovery of a suspected archaeological object or feature. This notification can be via phone, text or email. A photograph of the suspected archaeological object or feature must be provided to the archaeologist. The photograph must include a scale or an object for scale. A location of the suspected archaeological object or feature must also be provided.
- City of Whittlesea must notify Heritage Victoria of the unexpected find following the archaeologist's assessment (see Step 3, Assessment).

### 3. Assessment

- The archaeologist listed on the Consent must fully assess the significance of the find and, if required, attend and make a detailed record of the archaeological objects or features.
- The archaeologist listed on the Consent must advise Heritage Victoria and make recommendations in relation to the appropriate management of the archaeological objects or features.

#### 4. Impact mitigation and/or salvage

- If the archaeological objects or features are assessed by the archaeologist listed on the Consent in consultation with Heritage Victoria to be of high significance, an archaeological excavation may be required. The methodology for the excavation will be determined by the archaeologist listed on the Consent, in consultation with Heritage Victoria.
- The activity may recommence within the one-metre buffer area once this is confirmed by Heritage Victoria.

Table 9.1 Unexpected finds—likely artefact management advice.

Type of find	Significance*	Artefact management
In situ pipe or structure remains	High	<p>Cease works in the area.</p> <p>Contact the archaeologist listed on the Consent.</p> <p>Contractor to take photographs, with scales, of the feature.</p> <p>Archaeologist will then record the element on site.</p> <p>Elements are to be retained where feasible.</p>
Artefacts associated with pipe construction workers	Moderate	<p>Cease work in the area.</p> <p>Contact the archaeologist listed on the Consent.</p> <p>Contractor to take photographs, with scales, of the feature.</p> <p>Contractor to take measurements of the feature.</p> <p>Archaeologist will then evaluate the deposit/arte fact to determine if they are significant.</p>
Artefacts associated with pipe construction	Moderate	<p>Cease work in the area.</p> <p>Contact the archaeologist listed on the Consent.</p> <p>Contractor to take photographs, with scales, of the feature.</p> <p>Contractor to take measurements of the feature.</p> <p>Archaeologist will then evaluate the deposit/arte fact to determine if they are significant.</p>
Other artefacts	Low to Moderate	<p>Cease work in the area.</p> <p>Contact the archaeologist listed on the Consent.</p> <p>Contractor to take photographs, with scales, of the feature.</p> <p>Contractor to take measurements of the feature.</p>

Type of find	Significance*	Artefact management
		Archaeologist will then evaluate the deposit/arteifact to determine if they are significant.
* High .....	In situ deposits with a high research potential.	
Moderate .....	Moderately disturbed contexts or artefacts and features with a questionable integrity and a moderate research potential.	
Low .....	Disturbed, imported fill or modern demolition contexts, or artefacts and features with a limited research potential.	

## 9.4 Artefact management

An Artefact Management Proposal / Artefact Retention Policy is required by Heritage Victoria as part of all Permit or Consent applications. A more detailed Artefact Retention Policy will be required following the conclusion of the proposed works if historical archaeological artefacts have been discovered during the course of these works.

### 9.4.1 Artefact Management and Retention Policy

Artefact management, including artefact cataloguing, analysis and storage, is to be undertaken in accordance with Heritage Victoria's *Guidelines for Investigating Historical Archaeological Artefacts and Sites* (Heritage Victoria 2015).

All historical archaeological artefacts, with the exception of hazardous materials (which will be only recorded), are to be initially retained in a secure location on site but may be transferred to a secure location by the archaeologist listed on the Consent. These artefacts must be retained until the Executive Director, Heritage Victoria, approves the submitted Artefact Retention Policy (including methodology for assessing artefact significance), which is to be lodged with Heritage Victoria within three months of the conclusion of the proposed works. All retained artefacts must be documented in a catalogue provided to Heritage Victoria.

If any retained artefacts require conservation, a suitably qualified conservator (as endorsed by the Executive Director, Heritage Victoria) must be commissioned and an Artefact Conservation Proposal (ACP) prepared. The ACP must be prepared by a suitably qualified archaeologist and a conservator, and submitted to the Executive Director, Heritage Victoria, within three months of the conclusion of the proposed works for approval. The ACP must include the details of the proposed conservation treatments. All conservation works proposed within the ACP must be completed within two years of the date of endorsement. If potentially significant artefacts are recovered that have urgent conservation requirements, a conservator must be engaged immediately to address the

conservation requirements of the recovered artefacts. Any artefacts proposed for display must be approved by the Executive Director, Heritage Victoria.

The archaeologist listed on the Consent must lodge all artefacts approved for retention with Heritage Victoria within two years of date the Consent was issued, unless an extension has been granted by the Executive Director, Heritage Victoria. All artefacts must be packed, labelled and curated in accordance with Heritage Victoria's *Guidelines for Investigating Historical Archaeological Artefacts and Sites*, and to the satisfaction of the Executive Director, Heritage Victoria.

The applicant (City of Whittlesea) is liable for all expenses arising from the conservation, storage, management and curation of any significant historical archaeological artefacts that are recovered and retained as a result of the project works, to the satisfaction of the Executive Director, Heritage Victoria.

## 10 Summary of impacts and conclusion

A concrete shared path is to be constructed between the Darebin Creek Trail and McDonalds Road, Mill Park, within the Yan Yean Pipe Track extent. The Yan Yean Pipe Track is listed on both the VHR (H2333), VHI (H7922-0281) and HO (HO43).

The Yan Yean Water Supply System is listed on the VHR for its historical, rarity, technological, representative and associative heritage values. The Yan Yean Pipe Track is also listed on the VHI as having potential to contain archaeological deposits which relate to the technologically and historically significant project and the lives of the people who constructed it. As the Yan Yean Pipe Track is protected under the *Heritage Act 2017*, approvals are required from Heritage Victoria.

This HIS has identified and assessed the heritage impacts of the works proposed to the significance of the Yan Yean Water Supply System. There will be no permanent detrimental impacts on the cultural heritage significance of the place as a result of the proposed works.

The Valve House is historically and aesthetically significant and contributes strongly to the cultural heritage significance of H2333 Yan Yean Water Supply System. The Valve House will be retained, enhanced and integrated into the designed landscape. No works are proposed to the fabric of the Valve House. The design generally provides an appropriate response to the setting which enhances the Valve House within the designed landscape and provides a level of interpretation to communicate its values. The recommendations in this HIS will ensure that the design will be refined further to provide a final design which integrates the Valve House in a carefully managed and sensitive manner.

The improved community access and use of the Yan Yean Pipe Track which the proposed works will facilitate, is one that is broadly compatible with the heritage values of the place. This in turn provides opportunities for communicating the heritage significance of the place and its components via the use of interpretive elements.

This assessment has found that the proposed shared path and associated works are generally compatible with the heritage place and constitute an acceptable impact on the VHR and VHI values. Recommended mitigation and management measures will ensure impacts to the heritage significance of the Yan Yean Water Supply System are minimised.

# 11 References

- Aboriginal Victoria 2021, 'Billibellary', <https://www.aboriginalvictoria.vic.gov.au/billibellary>, accessed 19 July 2021.
- Barwick, D. E. 1984, 'Mapping the Past: An Atlas of Victorian Clans 1835-1904', *Aboriginal History*, vol. 8, pp. 100-132.
- Bell, Agnes Paton 1965. *Melbourne: John Batman's village*. Cassell Australia Ltd, Melbourne.
- City of Yarra and Wurundjeri Tribe 2015, *The Aboriginal History of Yarra Sites of Significance*, Aboriginal History of the Yarra, <https://aboriginalhistoryofyarra.com.au/>, accessed 19 July 2021.
- Clark, ID 1990, 'Aboriginal Languages and Clans: a Historical Atlas of Western and Central Victoria', *Monash Publications in Geography No. 7*.
- Context 2007, Victorian Water Supply Heritage Study, Volume 1: Thematic Environmental History, prepared for Heritage Victoria.
- Context 2007, Yan Yean Water Supply System: Conservation Management Plan, prepared for Melbourne Water.
- Context 2013, City of Whittlesea Heritage Study, Volume 1: Thematic Environmental History, prepared for the City of Whittlesea.
- Context 2015, City of Whittlesea Heritage Study, Volume 3: Citations, prepared for the City of Whittlesea.
- Edwards, Dianne 1978, *Yan Yean: A History*, Yan Yean School Council, Melbourne.
- Nicholson, Mandy & Jones, David 2018, 'Urban Australian Identity: "I can't see the dirt (stars) in the city" in *Remaking Cities Conference Proceedings 2018*, Australasian Urban History Planning History Group and the RMIT Centre for Urban Research, Melbourne.
- Patterson, Lyndon 2003, 'An Archaeological Survey: Yan Yean Pipe Track from Hickford Street, Reservoir to McDonalds Road, Mill Park', Terra Culture, prepared for Context Pty Ltd.
- Presland, Gary 1985, *Aboriginal Melbourne: the lost land of the Kulin people*, McPhee Gribble, Melbourne.
- Preston, Harley 1966, 'James Blackburn', *Australian Dictionary of Biography*, <https://adb.anu.edu.au/biography/blackburn-james-1789>, accessed 19 July 2021.
- Victorian Places 2015, 'Mill Park', <https://www.victorianplaces.com.au/mill-park>, accessed 19 July 2021.

# Appendices

Curriculum Vitae

Drawings reviewed



**Heritage is about culture. Not only the things we want to keep, but a much deeper reflection of who we are and what we value in our lives and communities.**

## Leah Tepper

Associate / Team Leader, Archaeology (Melbourne)

Leah is a heritage specialist and archaeologist. Her expertise lies in the preparation and delivery of cultural heritage management plans, cultural heritage due diligence assessments, cultural values assessments, salvage reports and heritage assessments. Leah is a listed Heritage Advisor under the *Aboriginal Heritage Act 2006* (Vic) and is passionate about community and stakeholder consultation and engagement. She also specialises in built heritage assessments and archival recordings.

Leah has over ten years' experience in the cultural heritage industry in Australia. She has coordinated a variety of large and complex cultural heritage projects throughout Victoria. Leah has consulted with federal, state and local stakeholders, as well as private and commercial clients.

Leah has an excellent understanding of heritage legislation, particularly the *Victorian Aboriginal Heritage Act 2006* and *Heritage Act 2017* and the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999*.

Leah has extensive experience with site surveys and assessments; hand and mechanical subsurface testing and salvage programs; Indigenous and historic artefact analysis; and recording of Indigenous places, historical sites and built sites. She specialises in contributing robust advice to masterplanning projects.

### Qualifications

Honours (First Class), La Trobe University  
Bachelor of Archaeology, La Trobe University  
Summer School in Building Conservation

### Professional affiliations

Member, Australia ICOMOS  
Associate Member AACAI  
Member, National Trust of Australia (Vic)

### Key experience

#### Aboriginal cultural heritage

- Battery Energy Storage System, Portland Cultural Heritage Management Plan—Client: Cogency, current. Role: Project Manager
- Adaptive Waste Water Pilot Program, Penshurst Cultural Heritage Management Plan—Client: Wannon Water, 2023. Role: Project Director
- Jells Park Shared User Trail Cultural Heritage Management Plan—Client: Parks Victoria, 2023. Role: Project Director
- Royal Park, Conservation Management Plan: Aboriginal Cultural Values Assessment—Client: City of Melbourne, 2023. Role: Facilitator
- Health Centre, Hunter Street Cultural Heritage Management Plan—Client: Winda-Mara Aboriginal Corporation, 2023. Role: Project Director
- Ridgewalk/Ngurrak Barring Interpretation Content Plan—Client: Winda-Mara Aboriginal Corporation, 2023. Role: Project Manager
- First Peoples Engagement—Royal Exhibition Building & Carlton Gardens, Heritage Management Plan—Client: Museums Victoria, 2022. Role: Project Manager
- Grassdale, Aboriginal Cultural Values Assessment—Client: Gunditj Mirring Traditional Owners Aboriginal Corporation, 2022. Role: Project Manager
- 8 Mair Street, Ballarat, Cultural Heritage Management Plan—Client: Urbis Pty Ltd, 2022. Role: Project Manager
- Freeway Golf Course, Aboriginal Heritage Due Diligence Assessment—Client: City of Boroondara, 2021. Role: Project Manager
- Palais Theatre and Luna Park, Cultural Heritage Management Plan—Client: City of Port Phillip, 2021. Role: Project Manager
- Wyndham Park Redevelopment, Cultural Heritage Management Plan and Amendment and Salvage—Client: Wyndham City Council, 2020. Role: Project Manager
- Western Outer Ring, Main Complex Assessment and Cultural Heritage Management Plans—Client: APA, 2020. Role: Project Manager

- Education Centre, Narre Warren East, Complex Assessment, Cultural Heritage Management Plan and Amendment—Client: Muhammediyah Australia, 2019
- NBN Optical Fibre Cable (various locations), Complex Assessment and Cultural Heritage Management Plan—Client: NBN Co, 2019. Role: Project Manager
- Aspendale Surf Life Saving Club Redevelopment, Complex Assessment and Cultural Heritage Management Plan—Client: City of Kingston, 2019. Role: Project Manager
- Bonbeach Surf Life Saving Club Redevelopment, Complex Assessment and Cultural Heritage Management Plan—Client: City of Kingston, 2019. Role: Project Manager
- Chisholm Prison Expansion, Cultural Heritage Management Plan—Client: Department of Justice and Regulation, 2018. Role: Project Manager
- Aurora Estate Sewer and Sound Walls, Standard Assessment, Cultural Heritage Management Plan and Advice—Client: Lendlease, 2018. Role: Project Manager
- Flood Levee Construction, Quambatook, Complex Assessment and Cultural Heritage Management Plan—Client: Ganawarra Shire Council, 2018. Role: Archaeologist
- Buninyong Childcare Facility, Complex Assessment and Cultural Heritage Management Plan—Client: Ganawarra Shire Council, 2018. Role: Archaeologist
- Youth Justice Centre, Cultural Heritage Management Plan and Archaeological Salvage—Client: Department of Justice and Regulation, 2017. Role: Project Manager
- Puffing Billy Railway, Cultural Heritage Management Plan and Conservation Management Plan—Client: Puffing Billy, 2017. Role: Project Manager
- Ararat to Maryborough Line Upgrade, Complex Assessment and Cultural Heritage Management Plan—Client: V/LINE, 2017. Role: Archaeologist
- Flood Levee, Boort, Standard Assessment and Cultural Heritage Management Plan—Client: Loddon Shire Council, 2017. Role: Project Manager
- Wetland Redevelopment, Sages Road, Complex Assessment, Cultural Heritage Management Plan and Amendment—Client: Melbourne Water, 2017. Role: Project Manager

### Heritage management plans

- Simpson Barracks, Heritage Management Plan—Client: Department of Defence, 2020. Role: Archaeologist
- HMAS Cerberus and West Head Gunnery Range, Heritage Management Plan—Client: Department of Defence, 2020. Role: Project Manager
- Garden Island Defence Precinct, Heritage Management Plan—Client: Department of Defence, 2020. Role: Project Manager
- North and South Jervis Bay, Heritage Management Plans—Client: Department of Defence, 2020. Role: Archaeologist

### Heritage impact assessments

- RAAF Edinburgh Heritage Impact Assessment and Contractor Inductions—Client: JBS & G, 2023. Role: Project Manager
- Victoria Barracks, Heritage Impact Assessment and Contractor Inductions—Client: Department of Defence, 2019. Role: Project Manager
- RAAF Williams Point Cook, Heritage Impact Assessment and Photographic Archival Recording—Client: Aurecon, 2019. Role: Project Manager
- RAAF Amberley, Heritage Impact Assessment and Photographic Archival Recording—Client: Stantec 2019. Role: Project Manager
- Bandiana, Heritage Impact Assessment—Client: Stantec, 2019. Role: Project Manager

- HMAS Cerberus, Heritage Impact Assessment—Client: Aurecon, 2019. Role: Project Manager
- Borneo Barracks, Heritage Impact Assessment and Peer Review—Client: Conrad Gargett, 2019

### Heritage assessments

- Nerre Nerre Warren History/Heritage Report—Client: OFFICE, 2023. Role: Project Manager
- Inland Rail Glenrowan Railway Station — Client: City of Whittlesea, current. Role: Project Manager
- Inland Rail Wangaratta Railway Station — Client: City of Whittlesea, current. Role: Project Manager
- Yan Yean Pipe Track, Historical Archaeological Assessment—Client: City of Whittlesea, current. Role: Project Manager
- Yarra Valley and Dandenong Ranges Light Up Nature into Art Aboriginal and Historical Heritage— Client: Urban Enterprise, 2023. Role: Project Manager
- Aradale Asylum, Heritage Constraints and Opportunities—Client: Tract, 2022. Role: Project Manager
- Shrine to Sea, History/Heritage Report—Client: DELWP, 2022. Role: Project Manager
- Fishermans Bend, Photographic Archival Recording—Client: Barpa Pty Ltd, 2021. Role: Project Manager
- Western Outer Ring, Main Technical Specialist Impact Report—Client: APA, 2020. Role: Project Manager
- Warburton Mountain Bike Destination, Technical Specialist Impact Report—Client: AECOM, 2020. Role: Project Manager
- 247 Russell Street, Heritage Consent—Client: Iglu, 2020. Role: Archaeologist

### Professional background

Associate/Team Leader, Archaeology (Melbourne), GML Heritage Victoria (formerly Context), 2024–present

Senior Heritage Consultant/Team Leader, Archaeology (Melbourne), GML Heritage Victoria (formerly Context), 2022–2024

Heritage Consultant, GML Heritage Victoria (formerly Context), 2021–2022

Heritage Consultant, Biosis, 2014–2020

Archaeologist—subcontractor, Ochre Imprints, 2015–2016

Archaeologist—subcontractor, Heritage Insight, 2010–2012

### Publications

Tepper, Leah M 2013, 'Smoke Signals: A Study of 19th Century Clay Pipe Consumption in Victoria, Australia', unpublished Honours thesis, Archaeology Department, La Trobe University, Melbourne, Australia

### Presentations

'Don't Fence Me In! Managing Dry Stone Walls in Victoria', online webinar, Melbourne (2020)

'Evolving knowledge along Bendigo Creek, Epsom', Victorian Archaeology Colloquium (2018)

### Professional Development

CPCCWHS1001 Work Safely in the Construction Industry (White Card)

First Aid, Accredited First Aid Courses Australia

Intermediate 4WD Course certification

Train Track Safety Awareness Level 1

AACAI Photogrammetry Workshop

AACAI Historic Artefact Recording and Analysis

Introduction to Built Heritage (Urban Design)



# CITY OF WHITTLESEA

## YAN YEAN PIPE TRACK, MILL PARK - SHARED PATH MOORHEAD DRIVE TO CENTENARY DRIVE - STAGE 4

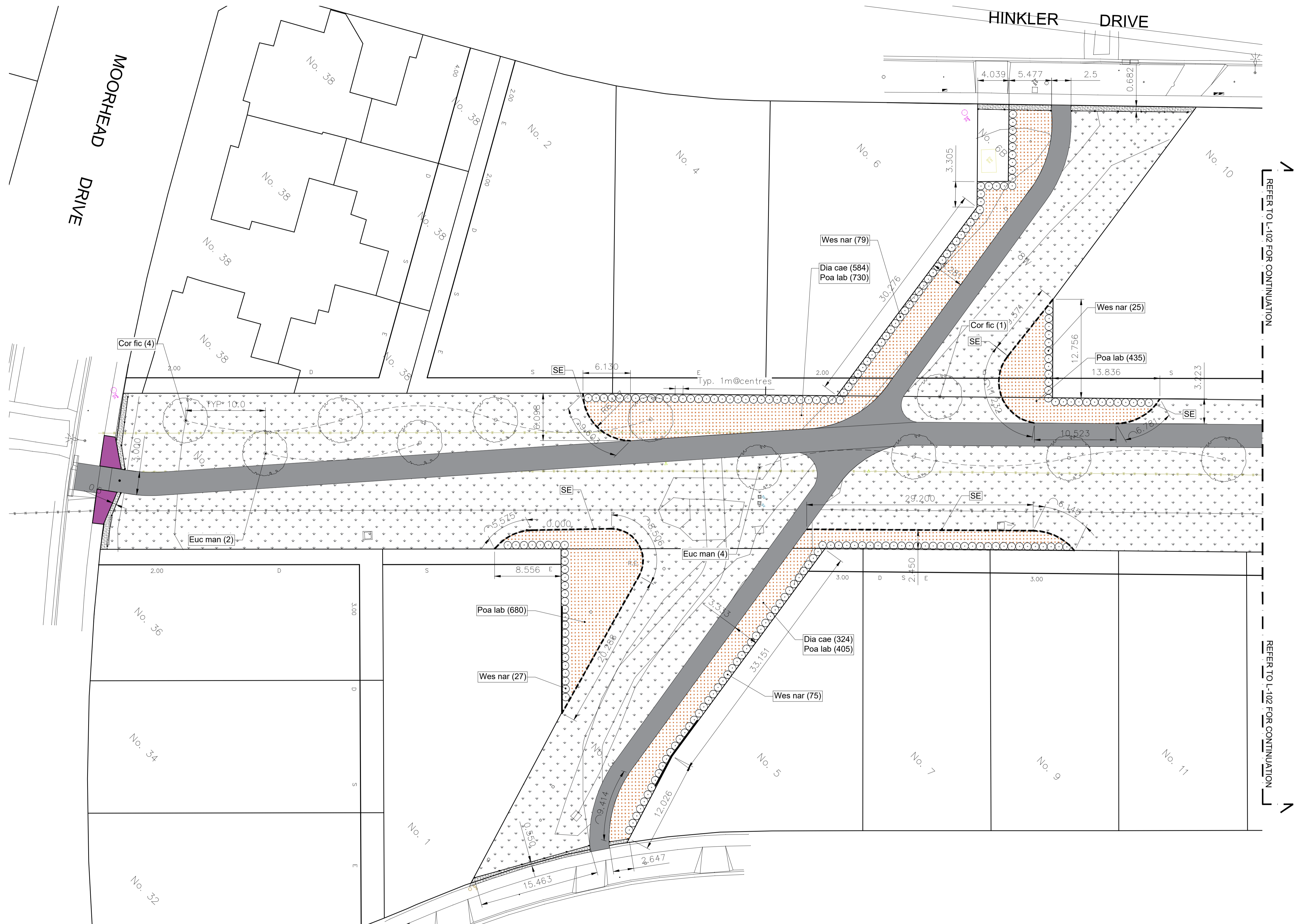
### LANDSCAPE WORKS TENDER ISSUE 01



Number	Title	Scale	Issue No.
L-000	DRAWING COVER SHEET / DRAWING INDEX	NA	1
<b>100 SERIES - SET-OUT PLANS &amp; ELEVATIONS</b>			
L-101-104	SET-OUT & PLANTING PLANS	As Shown	1
<b>140 SERIES - DETAILS &amp; SPECIFICATIONS</b>			
L-141	DETAILS 01	As Shown	1
L-142	PLANT SCHEDULE STAGE 4	As Shown	1

	<p><b>NEW TREE</b> Refer to Planting Schedule</p>
	<p><b>NEW SHRUBS, GRASSES &amp; GROUNDCOVERS</b> Refer to Planting Schedule</p>
	<p><b>SE- SPAEDE CUT EDGE</b> Refer to specification</p>
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	<p><b>COMPACTED CRUSHED ROCK</b> Refer to detail and specification</p>

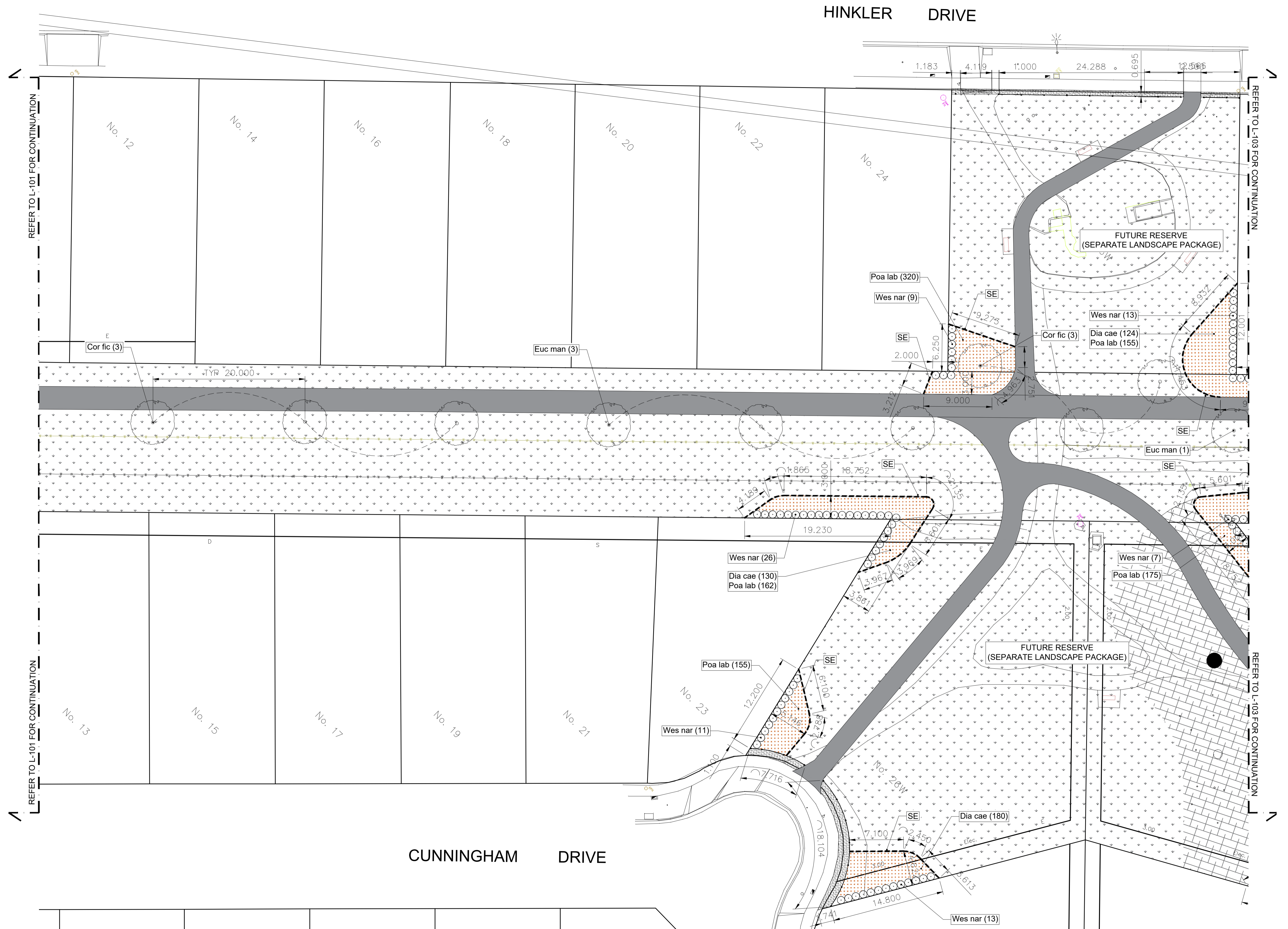
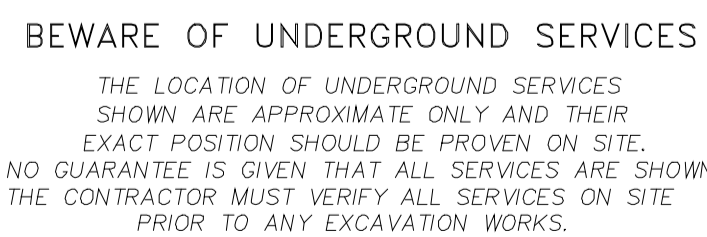



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					CI	For Construction Revision 1	LJ	28/05/2023	
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	<p><b>SE-SPADE CUT EDGE</b> Refer to specification</p>
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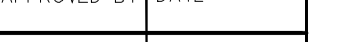
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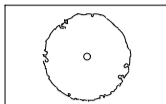
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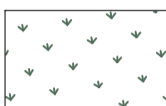
<div>SUITE 2, 2A GLOUCESTER AVENUE BERNICK, VICTORIA 3806 LW@designstable.com.au 0414 329 718 www.designstable.com.au AIN 429636389 ABN 77 428 346 789</div>	<div><div>City of Whittlesea</div></div>	PROJECT YAN YEAN PIPE TRACK STAGE 4 LANDSCAPE PACKAGE	PM: LJ DESIGNED: LJ CHECKED: BU	<div>NOTES:</div> <div>LANDSCAPE WORK INFORMATION</div> <div>1. Prior to commencement of any landscape works, please contact [insert name, landscape superintendent for the City of Whittlesea insert number]. [insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection.</div> <div>2. The Contractor must verify all services on site prior to all excavation works.</div> <div>3. All dimensions are in millimetres unless otherwise noted.</div> <div>4. Do not scale from this drawing.</div> <div>5. Verify all dimensions on site prior to construction.</div>	REVISION	DESCRIPTION	APPROVED BY	DATE	<div><div>North</div></div> <div>SCALE 1:250 @ A1</div>
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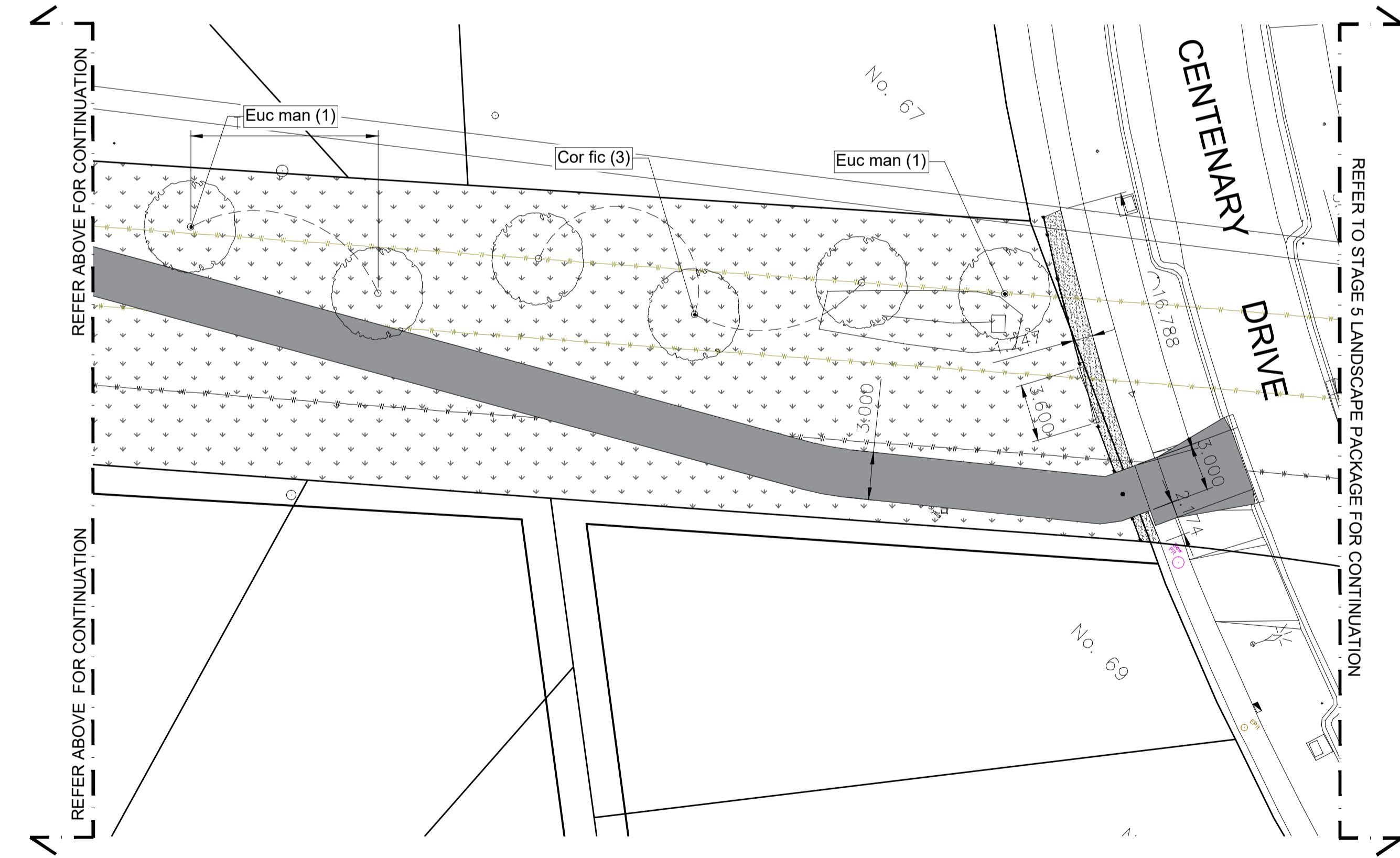
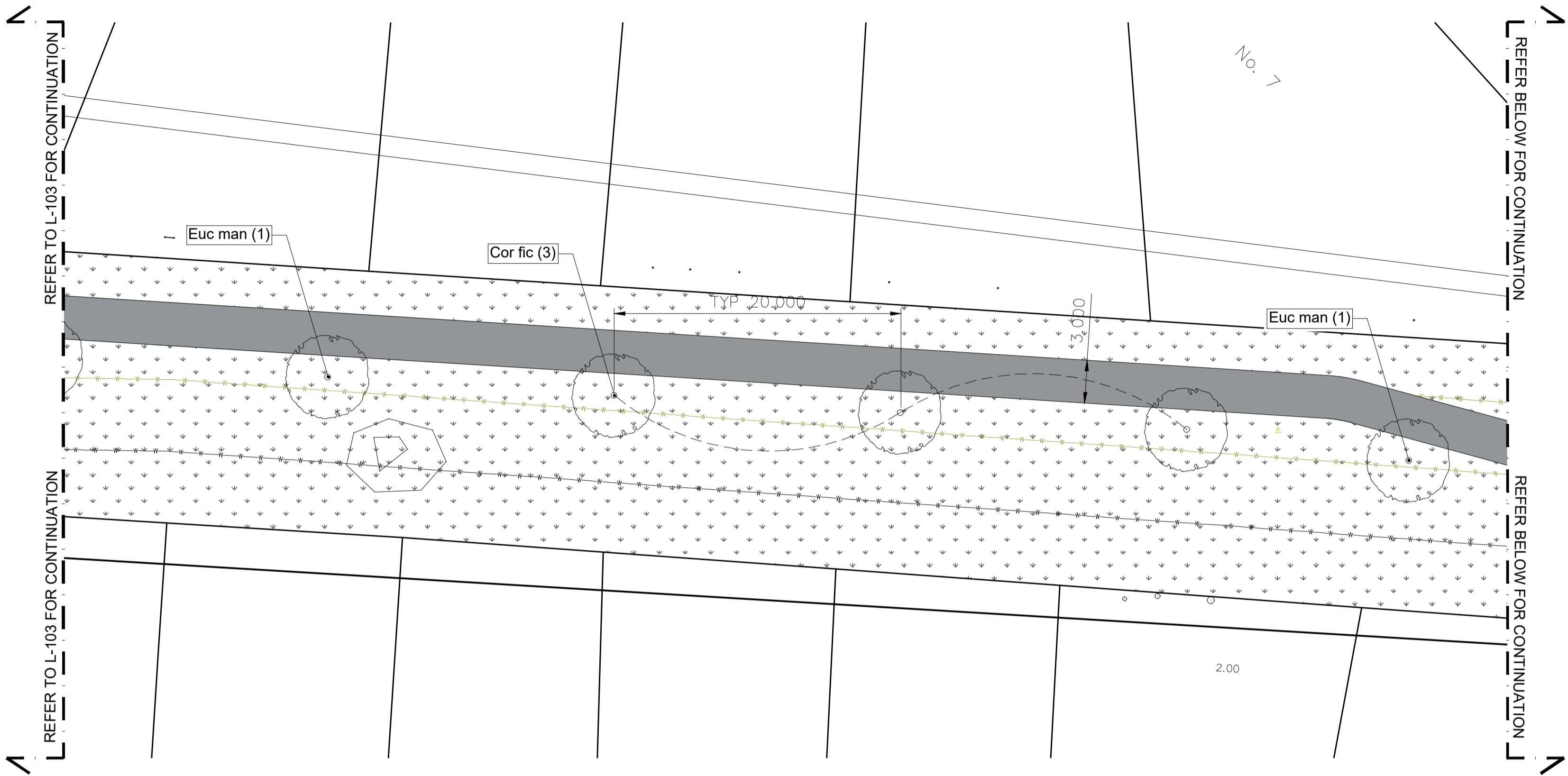
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SE- SPADE CUT EDGE  
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EXISTING GRASS AREAS  
To be retained
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COMPACTED CRUSHED ROCK  
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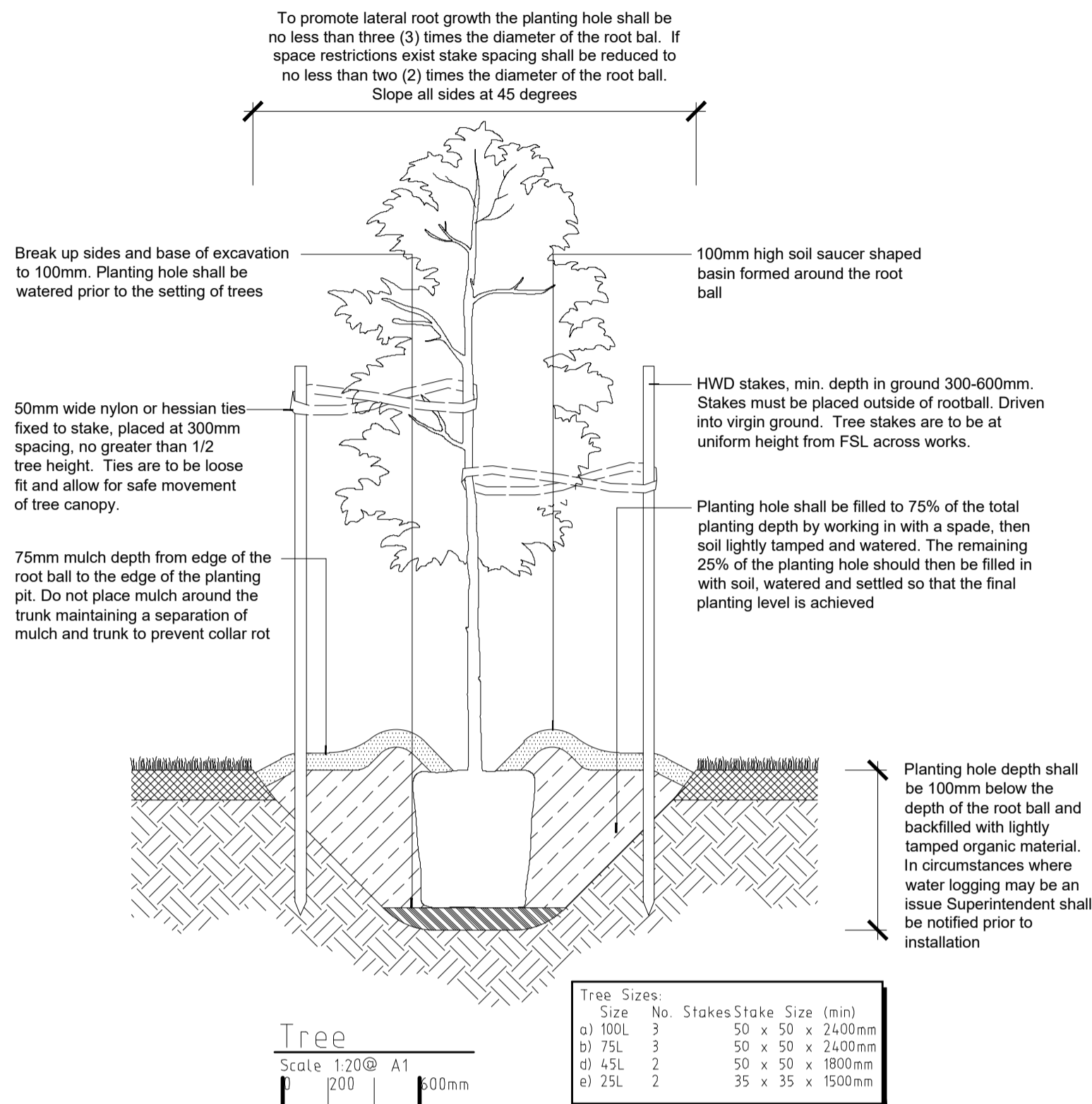
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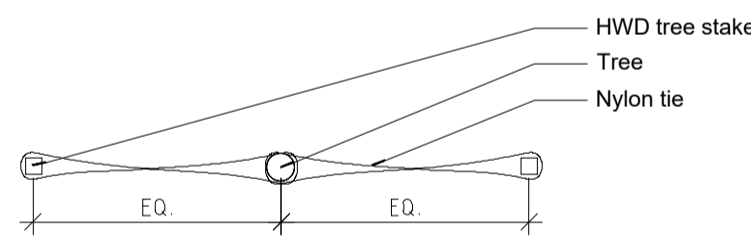
<div>SUITE 2, 2A GLOUCESTER AVENUE BERWICK, VICTORIA 3806 luka@designstable.com.au 0434 329 718 www.designstable.com.au AON 628346789 ABN 77 628 346 789</div>	<div>CLIENT</div> <div></div>	PROJECT	PM: LJ	NOTES:  LANDSCAPE WORK INFORMATION 1. Prior to commencement of any landscape works, please contact [Insert name, landscape superintendent for the City of Whittlesea insert number]. [Insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection. 2. The Contractor must verify all services on site prior to all excavation works. 3. All dimensions are in millimetres unless otherwise noted. 4. Do not scale from this drawing. 5. Verify all dimensions on site prior to construction.	REVISION	DESCRIPTION	APPROVED BY	DATE	<div> North</div> <div>SCALE 1:250 @ A1</div>
		YAN YEAN PIPE TRACK STAGE 4 LANDSCAPE PACKAGE	DESIGNED: LJ		P	Preliminary Pre-Tender Revision For Council Comment	LJ	13/03/2021	
		TITLE	CHECKED: BU		PT	Pre-Tender Revision	LJ	09/04/2021	
		LANDSCAPE PLAN	AUTHORISED: BU		C	For Construction	LJ	20/04/2021	
			CLIENT REF: WCC_01/20		CI	For Construction Revision 1	LJ	28/05/2023	
		STATUS	SHEET No. 5 OF 7						
		CONSTRUCTION L - 104	REV P						

NOTES:

- 1) Trees shall have a well developed taper and be self supporting
- 2) Trees shall be of good health and vigor
- 3) Ensure all labels, wires, twine and other binding materials are removed from planting material, including root balls prior to backfilling.
- 4) Water immediately following planting, saucer to be filled twice.
- 5) Site to be left clean and tidy on completion of planting, remove weeds and building spoil from tree planting zone.
- 6) Any variations to this detail to be submitted for approval prior to any planting.

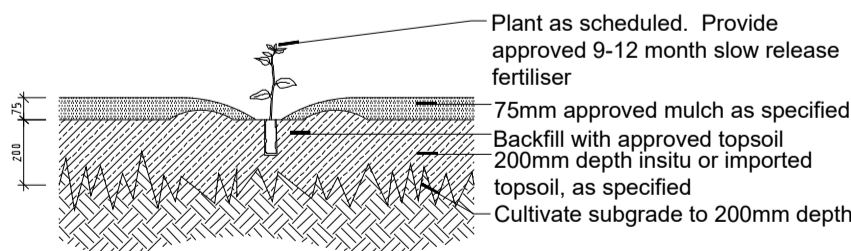


**LD1 ADVANCED TREE - STANDARD DETAIL**  
SCALE 1:20

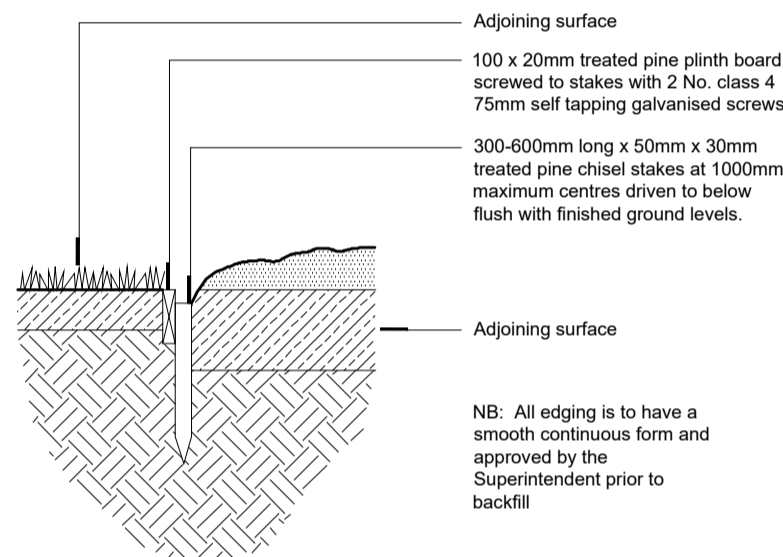


**LD2 TWO TIE STAKE ARRANGEMENT**  
SCALE 1:20

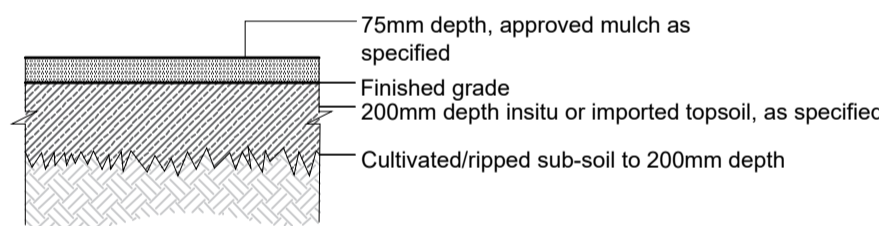
NOTE: A MINIMUM SETBACK OF 500mm MUST BE ACHIEVED WHEN PLANTING AGAINST A PATH.



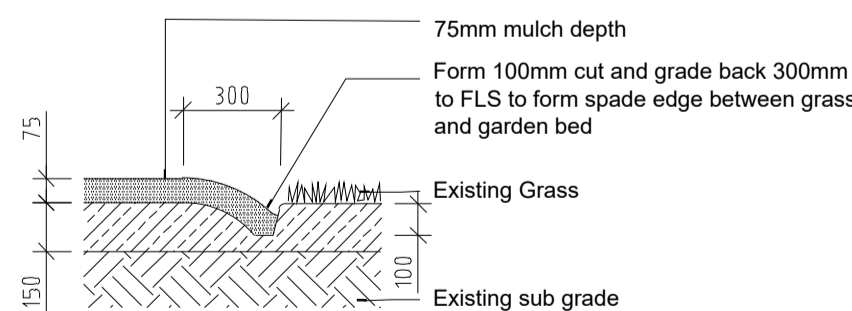
**LD3 TUBE STOCK - STANDARD DETAIL**  
SCALE 1:20



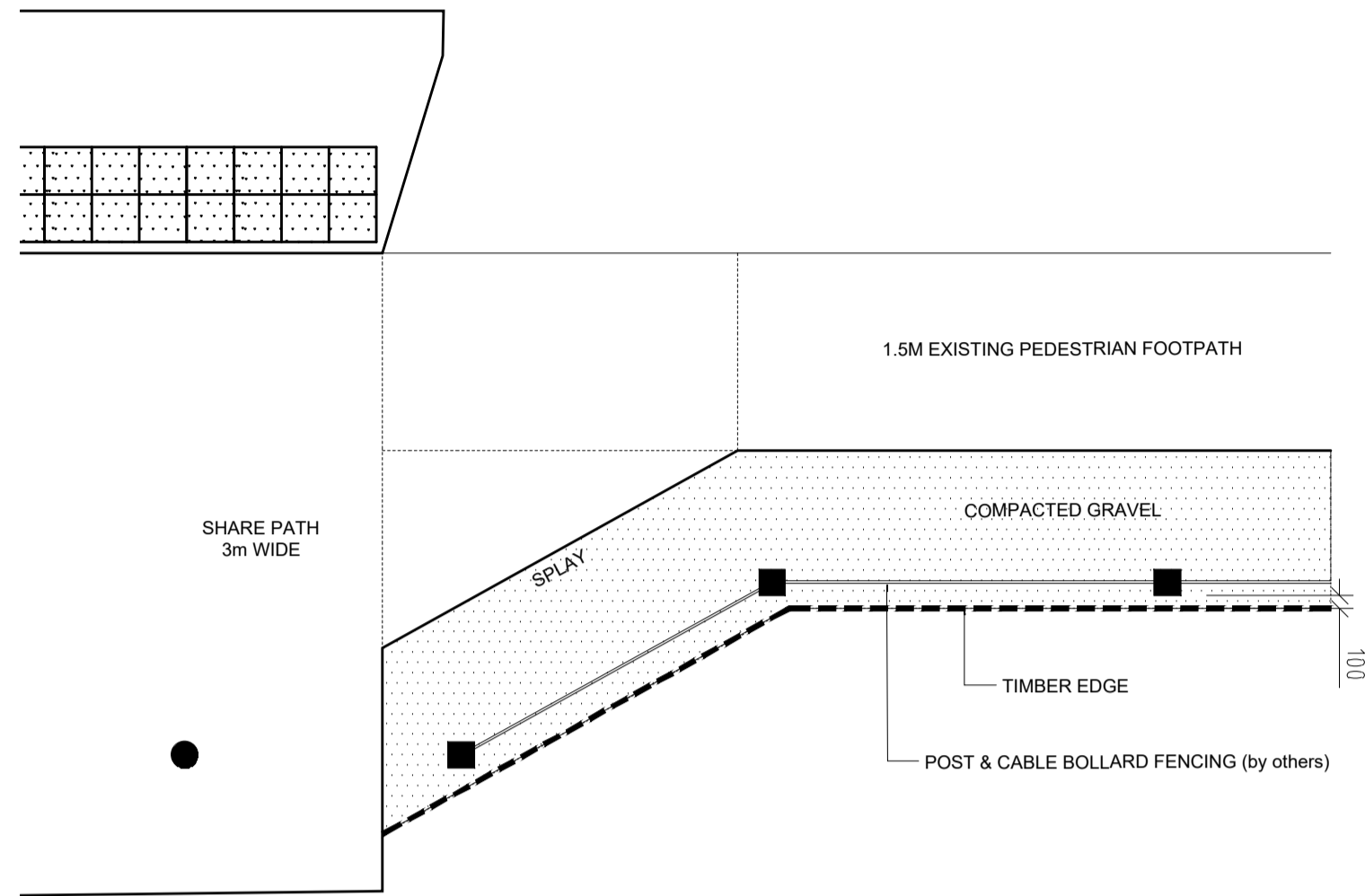
**LD4 TIMBER EDGE - STANDARD DETAIL**  
SCALE 1:10



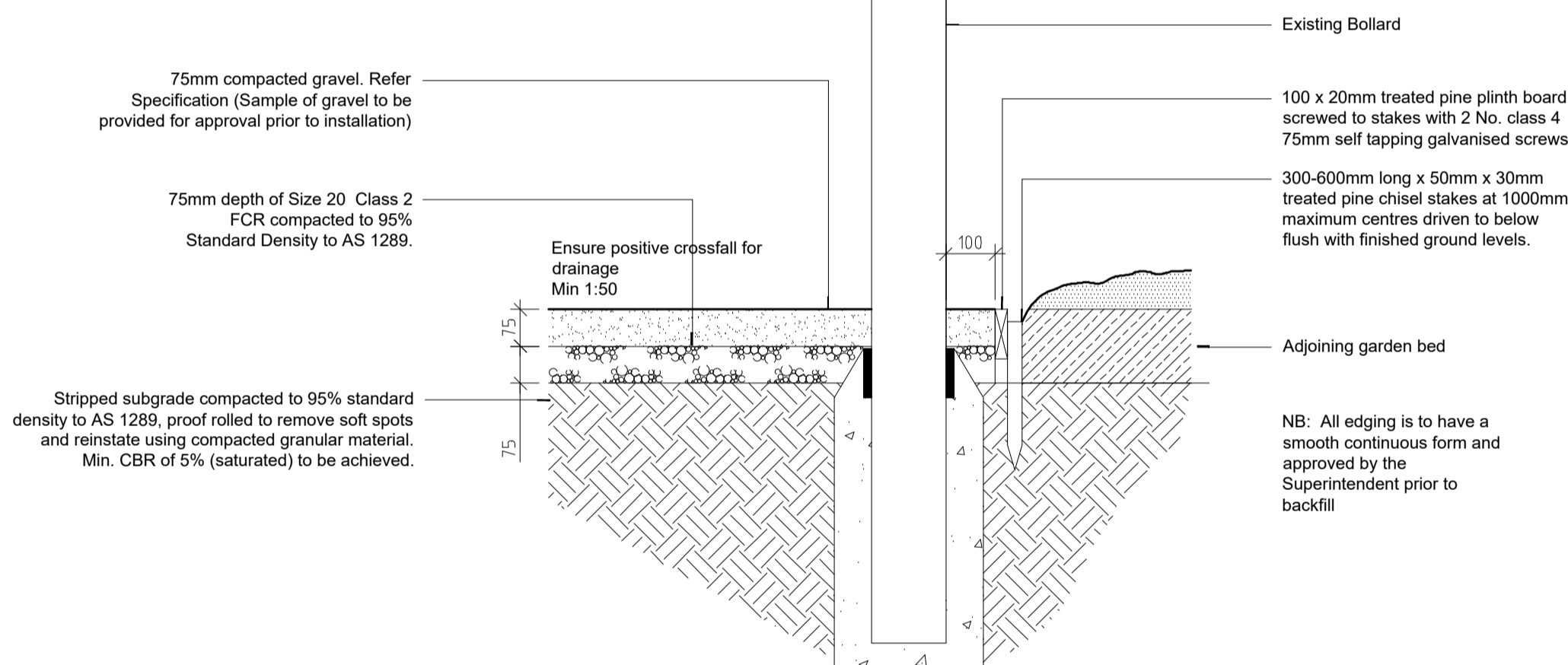
**LD5 GARDEN BED MULCH- STANDARD DETAIL**  
SCALE 1:10



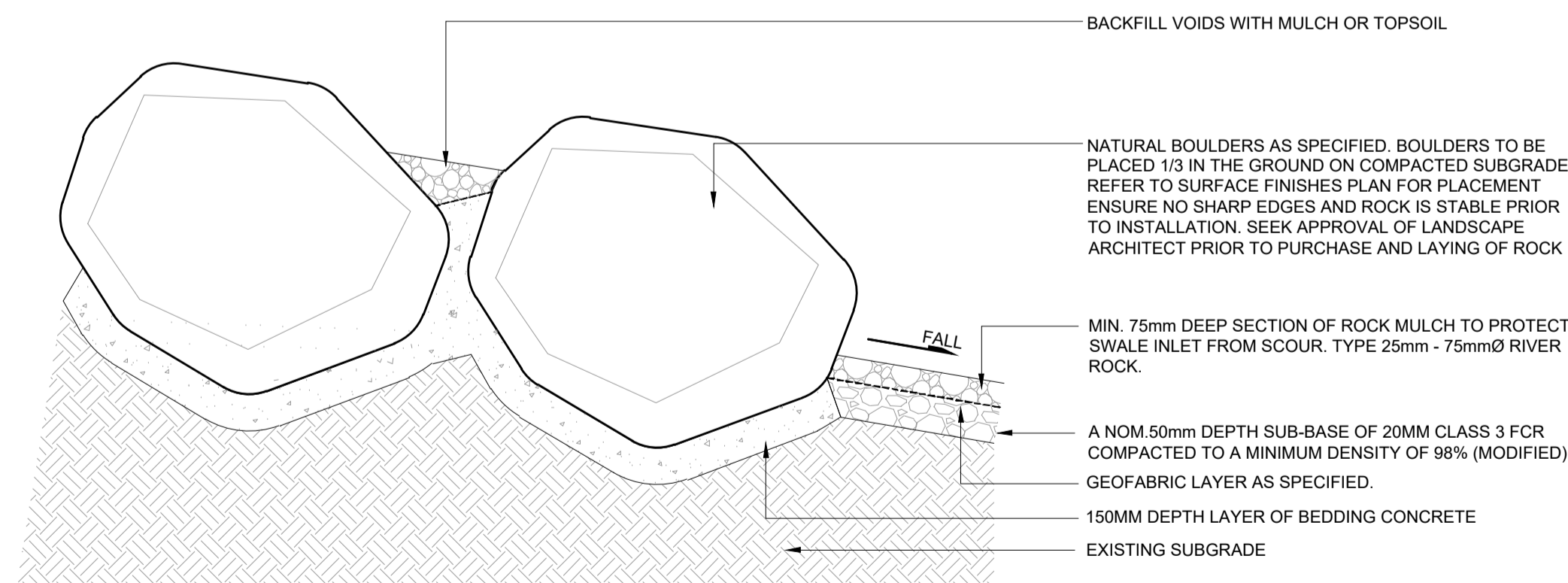
**LD6 SPADE CUT EDGE - STANDARD DETAIL**  
SCALE 1:10



**LD7 PLAN VIEW - COMPACTED GRAVEL WITH TIMBER EDGE**  
SCALE 1:50



**LD8 COMPACTED GRAVEL WITH TIMBER EDGE - STANDARD DETAIL**  
SCALE 1:20



**LD9 ROCK BEACHING - STANDARD DETAIL**  
SCALE 1:20

SUITE 2, 2A GLOUCESTER AVENUE BERWICK, VICTORIA 3806 luke@designstable.com.au 0416 319 118 www.designstable.com.au ACN 628346789 ABN 77 628 346 789		PROJECT YAN YEAN PIPE TRACK LANDSCAPE PACKAGE  TITLE LANDSCAPE DETAILS  STATUS CONSTRUCTION	L - 141	PM: LJ DESIGNED: LJ CHECKED: BU AUTHORISED: BU CLIENT REF: WCC_01/20 SHEET No. 6 OF 7 REV. P	NOTES: LANDSCAPE WORK INFORMATION 1. Prior to commencement of any landscape works, please contact [Insert name, landscape superintendent for the City of Whittlesea insert number]. [Insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection. 2. The Contractor must verify all services on site prior to all excavation works. 3. All dimensions are in millimetres unless otherwise noted. 4. Do not scale from this drawing. 5. Verify all dimensions on site prior to construction.	REVISION DESCRIPTION		APPROVED BY DATE		 SCALE 1:1000 @ A1
						P	Preliminary Pre-Tender Revision For Council Comment	LJ	23/07/2020	
						PT	Pre-Tender Revision	LJ	09/04/2021	
						C	For Construction	LJ	20/04/2021	
						CI	For Construction Revision 1	LJ	28/05/2023	

STAGE 4 PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SPACING	HEIGHT X WIDTH AT MATURITY	MIN SUPPLY SIZE	QTY
TREES						
Euc man	<i>Eucalyptus mannifera</i> 'Little Spotty'	Dwarf Red Spotted Gum	As shown	7 x 5m	50L	19
Cor fic	<i>Corymbia ficifolia</i>	Red Flowering Gum	As shown	12 x 8m	50L	20
					TOTAL	39
SHRUBS & GROUNDCOVERS						
Wes nar	<i>Westringia hybrid</i> 'WES01' PBR	Coastal Rosemary	1/m2	1-2 x 1-1.5m	140mm pot	337
Dia cae	<i>Dianella caerulea</i> 'Little Jess'	Little Jess Paroo Lily	4/m2	0.4 x 0.4m	140mm pot	1462
Poa lab	<i>Poa labillardieri</i> 'Eskdale'	Eskdale Tussock Grass	5/m2	0.6 x 0.5m	140mm pot	3202
					TOTAL	5001
					TOTAL SHRUBS	5040



# CITY OF WHITTLESEA

## YAN YEAN PIPE TRACK, MILL PARK - SHARED PATH CENTENARY DRIVE TO BUSH BOULEVARD - STAGE 5

### LANDSCAPE WORKS TENDER ISSUE 01

Number	Title	Scale	Issue No.
L-000	DRAWING COVER SHEET / DRAWING INDEX	NA	1
<b>100 SERIES - SET-OUT PLANS &amp; ELEVATIONS</b>			
L-101-105	SET-OUT & PLANTING PLANS	As Shown	1
<b>140 SERIES - DETAILS &amp; SPECIFICATIONS</b>			
L-141	DETAILS 01	As Shown	1
L-142	PLANT SCHEDULE STAGE 5	As Shown	1

	<p><b>NEW TREE</b> Refer to Planting Schedule</p>
	<p><b>NEW SHRUBS, GRASSES &amp; GROUNDCOVERS</b> Refer to Planting Schedule</p>
	<p><b>SE- SPAED CUT EDGE</b> Refer to specification</p>
	<p><b>EXISTING GRASS AREAS</b> To be retained</p>
	<p><b>COMPACTED CRUSHED ROCK</b> Refer to detail and specification</p>




REFER TO L-102 FOR CONTINUATION



THE LOCATION OF UNDERGROUND SERVICES  
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SUITE 2, 24 GLOUCESTER AVENUE  
BERWICK, VICTORIA 3806  
luke@designstable.com.au  
0434 329 718  
www.designstable.com.au  
ACN 629546789  
ABN 77 628 346 789



City of Whittlesea

CLIENT

YAN YEAN PIPE TRACK STAGE 5  
LANDSCAPE PACKAGE

PROJECT

YAN YEAN PIPE TRACK STAGE 5  
LANDSCAPE PACKAGE

PM: LJ

DESIGNED: LJ

CHECKED: BU

AUTHORISED: BU

CLIENT REF: WCC-01/20

SHEET NO. 2 OF 8

REV 1 P

NOTES:

LANDSCAPE WORK INFORMATION

1. Prior to commencement of any landscape works, please contact [insert name, landscape superintendent for the City of Whittlesea insert number]. [insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with contract, practical completion inspection and final handover inspection.

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REVISION

	DESCRIPTION	APPROVED BY	DATE
P	Preliminary Pre-Tender Revision For Council Comment	LJ	13/03/2021
PT	Pre-Tender Revision	LJ	09/04/2021
C	For Construction	LJ	20/04/2021
C1	For Construction Revision 1	LJ	28/05/2023



North

SCALE 1:1000 @ A1

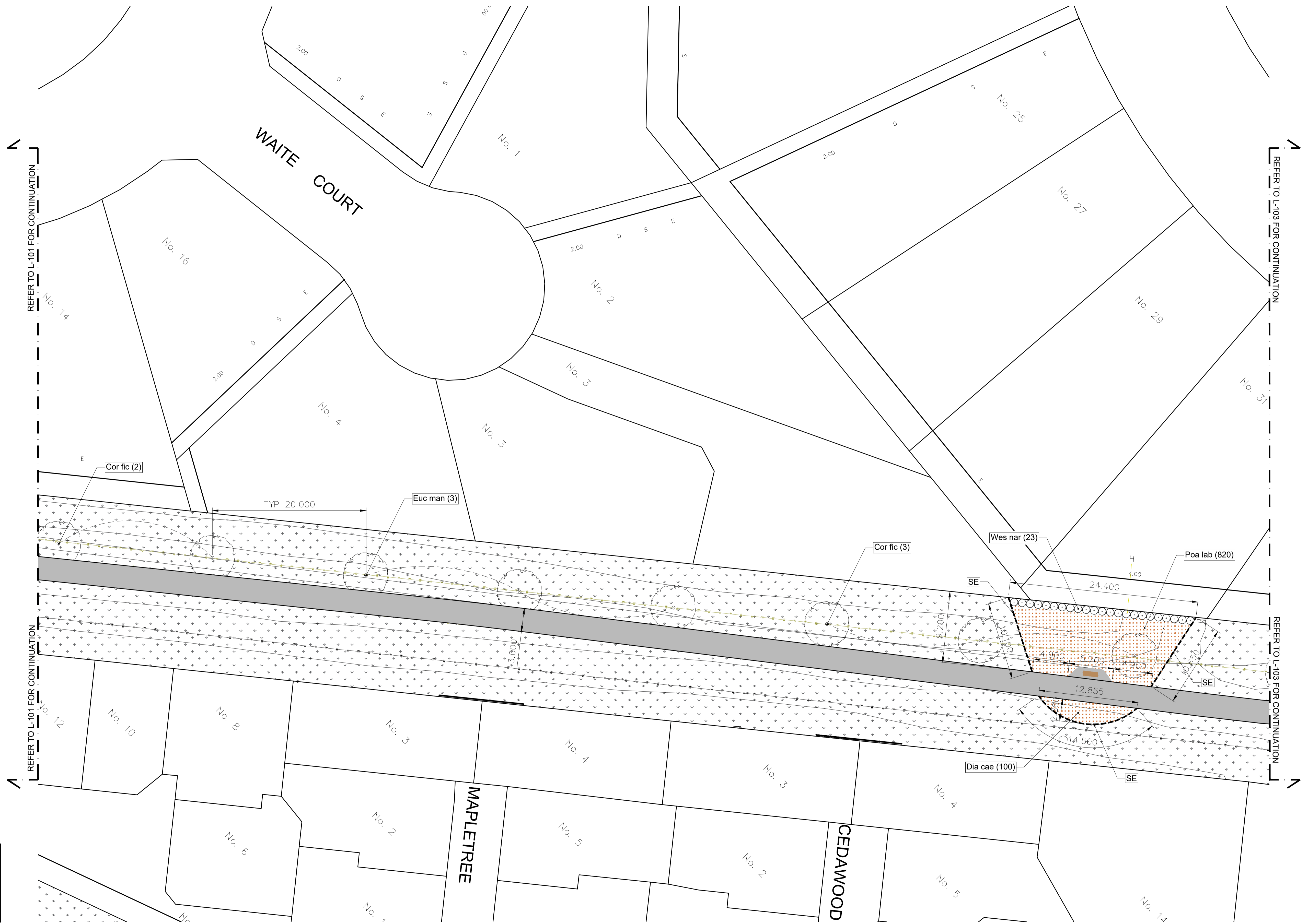
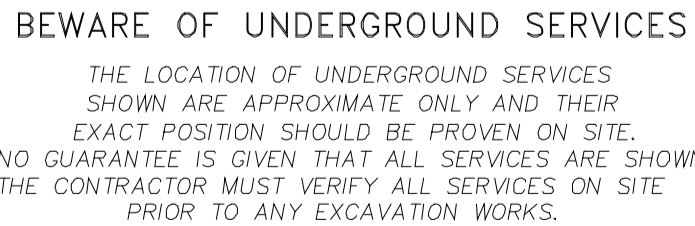
TITLE



LANDSCAPE PLAN

STATUS

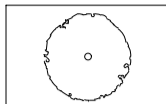
CONSTRUCTION L - 101


	<p><b>NEW TREE</b> Refer to Planting Schedule</p>
	<p><b>NEW SHRUBS, GRASSES &amp; GROUNDCOVERS</b> Refer to Planting Schedule</p>
	<p><b>SE- SPADE CUT EDGE</b> Refer to specification</p>
	<p><b>EXISTING GRASS AREAS</b> To be retained</p>
	<p><b>COMPACTED CRUSHED ROCK</b> Refer to detail and specification</p>




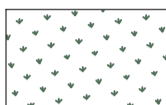
<div>SUITE 2, 2A GLOUCESTER AVENUE BERWICK, VICTORIA 3805 law@assanteplans.com.au 0414 329 718 www.assanteplans.com.au ACN 628546789 ABN 17 628 346 789</div>	<div><b>City of Whittlesea</b></div>	PROJECT	PM: LJ	<div>NOTES:</div> <div>LANDSCAPE WORK INFORMATION</div> <div>1. Prior to commencement of any landscape works, please contact [insert name, landscape superintendent for the City of Whittlesea insert number].</div> <div>[insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection.</div> <div>2. The Contractor must verify all services on site prior to all excavation works.</div> <div>3. All dimensions are in millimetres unless otherwise noted.</div> <div>4. Do not scale from this drawing.</div> <div>5. Verify all dimensions on site prior to construction.</div>	REVISION		APPROVED BY DATE		<div> North</div> <div>SCALE 1:1000 @ A1</div>	
		YAN YEAN PIPE TRACK STAGE 5 LANDSCAPE PACKAGE	DESIGNED: LJ		P		LJ			13/03/2021
		TITLE	AUTHORISED: BU		PT		LJ			09/04/2021
		LANDSCAPE PLAN	CHECKED: BU		C		LJ			20/04/2021
			CLIENT REF: WCC_01/20		C1		LJ			28/05/2023
			SHEET No. 3 OF 8 REV P							
	STATUS CONSTRUCTION L - 102									

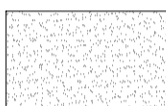
LEGEND

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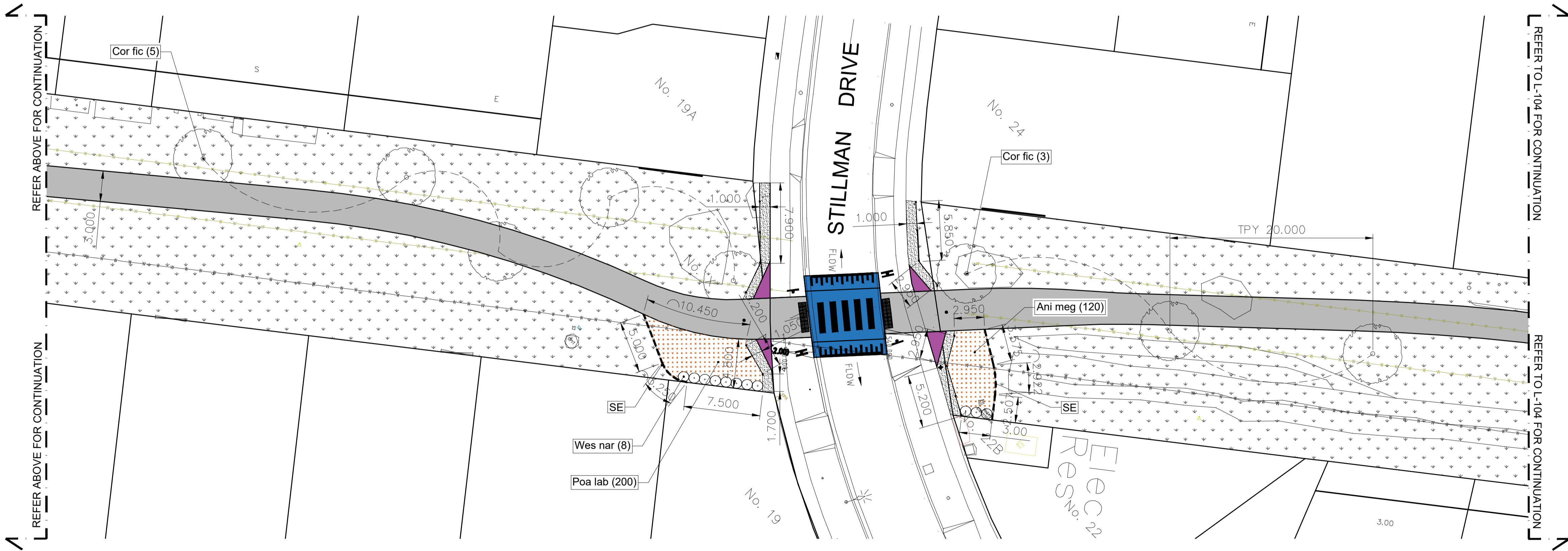
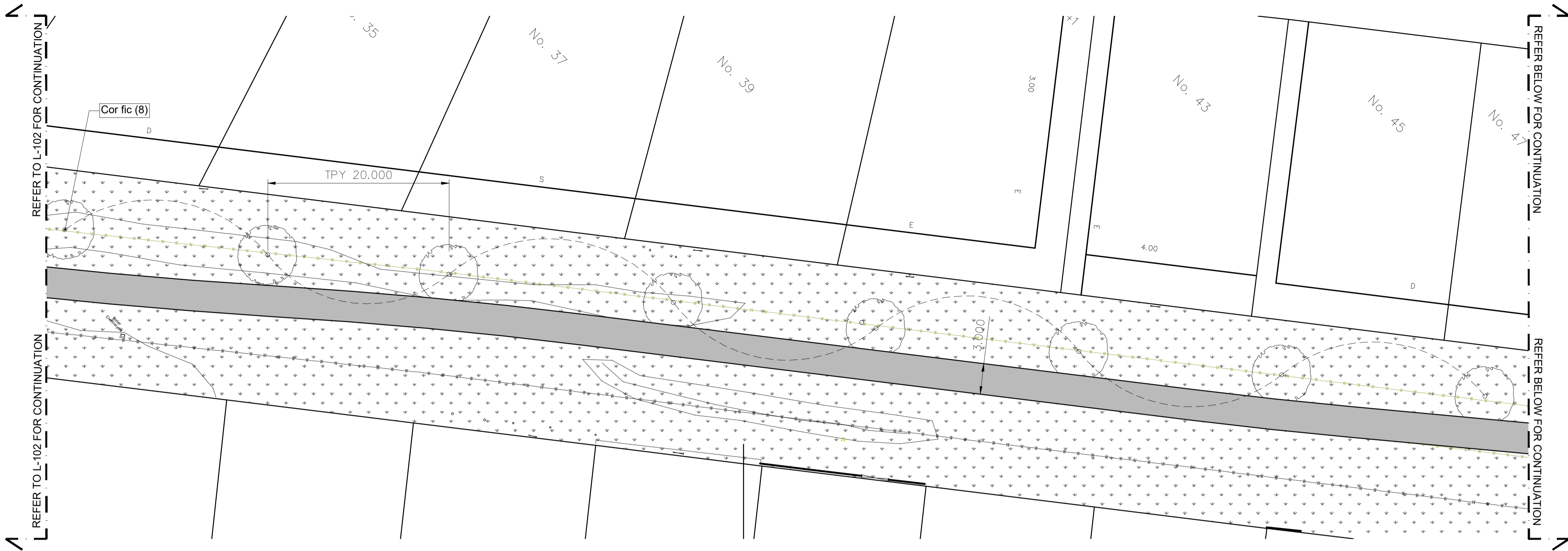
NEW TREE  
Refer to Planting Schedule
- 

NEW SHRUBS, GRASSES & GROUNDCOVERS  
Refer to Planting Schedule
- 



SE- SPADE CUT EDGE  
Refer to specification
- 

EXISTING GRASS AREAS  
To be retained
- 

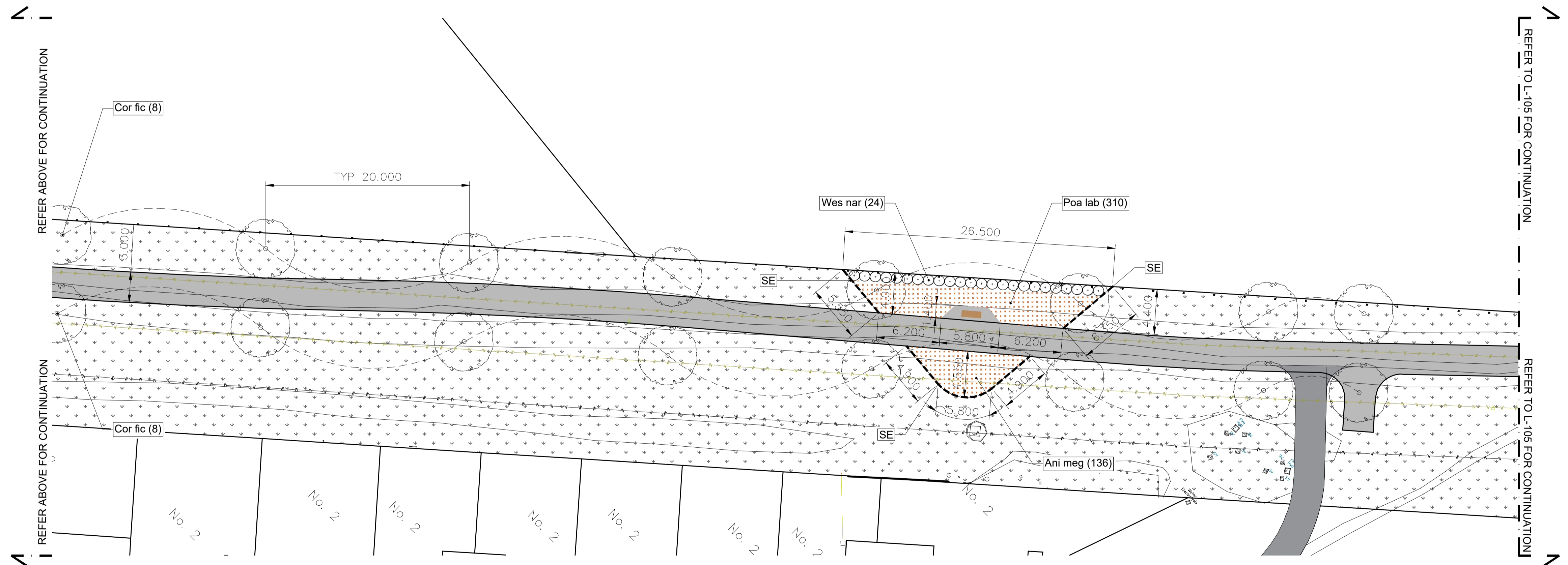
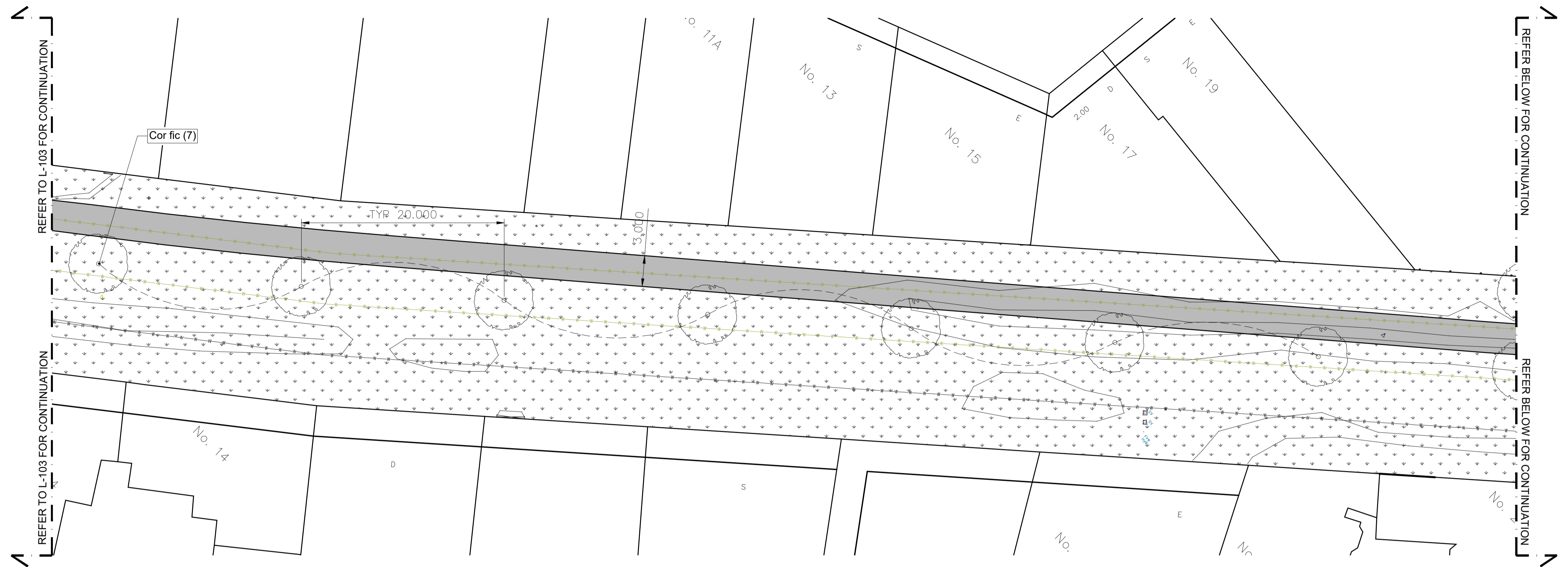
COMPACTED CRUSHED ROCK  
Refer to detail and specification




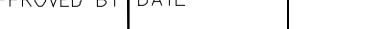
BEWARE OF UNDERGROUND SERVICES  
THE LOCATION OF UNDERGROUND SERVICES SHOWN ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL SERVICES ARE SHOWN. THE CONTRACTOR MUST VERIFY ALL SERVICES ON SITE PRIOR TO ANY EXCAVATION WORKS.

<div>SUITE 2, 2A GLOUCESTER AVENUE BERWICK, VICTORIA 3806 luka@designstable.com.au 0411 329 718 www.designstable.com.au ACN 628546789 ABN 77 628 346 789</div>	<div>CLIENT</div> <div> <b>City of Whittlesea</b></div>	PROJECT	PM: LJ	<div>NOTES:</div> <div>LANDSCAPE WORK INFORMATION</div> <div>1. Prior to commencement of any landscape works, please contact [insert name, landscape superintendent for the City of Whittlesea insert number]</div> <div>[insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection.</div> <div>2. The Contractor must verify all services on site prior to all excavation works.</div> <div>3. All dimensions are in millimetres unless otherwise noted.</div> <div>4. Do not scale from this drawing.</div> <div>5. Verify all dimensions on site prior to construction.</div>	REVISION DESCRIPTION		APPROVED BY DATE		<div> North SCALE 1:1000 @ A1</div>			
		TITLE	DESIGNED: LJ		P	Preliminary Pre-Tender Revision For Council Comment	LJ	13/03/2021				
		STATUS	CHECKED: BU		PT	Pre-Tender Revision	LJ	09/04/2021				
			AUTHORISED: BU		C	For Construction	LJ	20/04/2021				
						CLIENT REF: WCC_01/20	<div>SHEET No. 4 OF 6</div> <div>REV. P</div>					

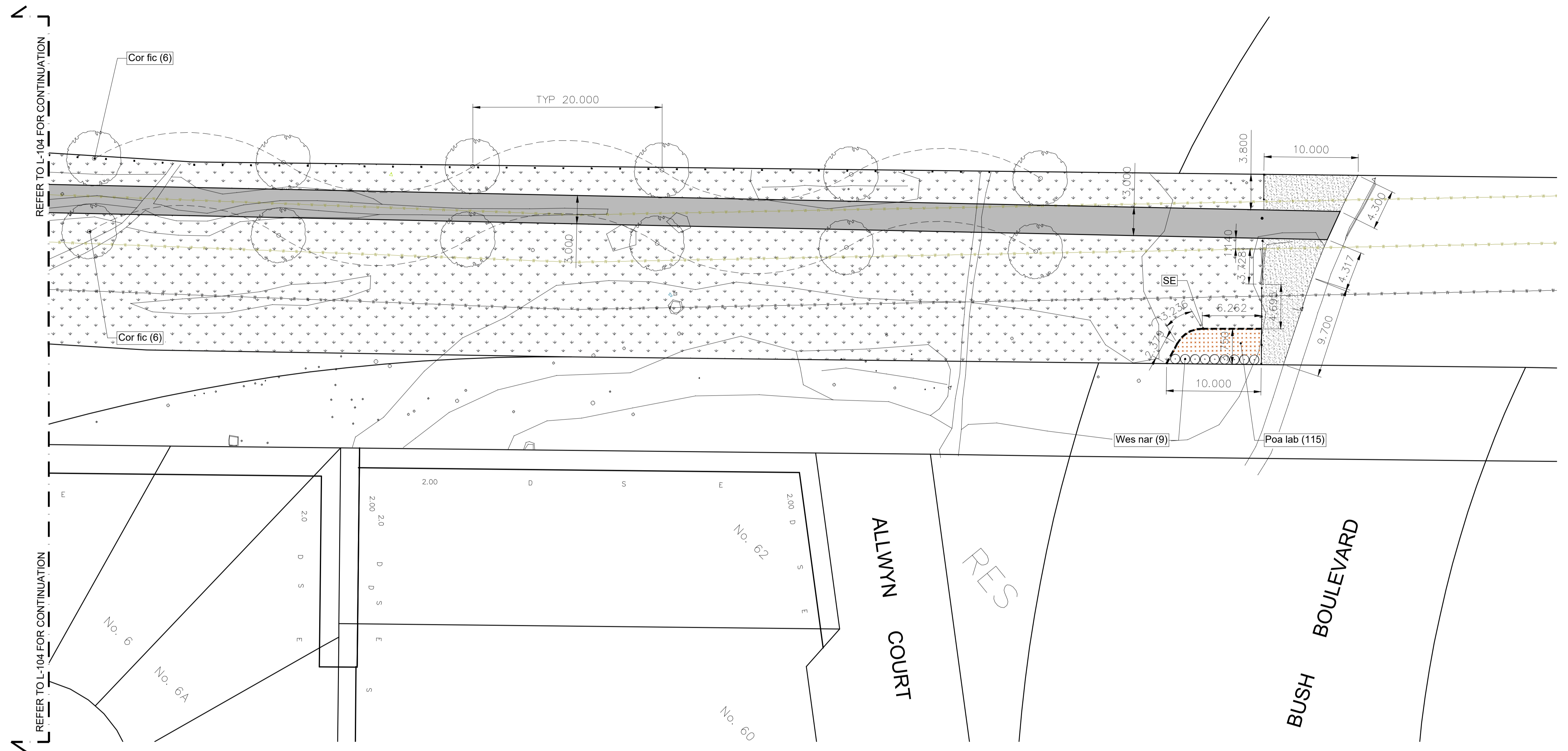
	<p><b>NEW TREE</b> Refer to Planting Schedule</p>
	<p><b>NEW SHRUBS, GRASSES &amp; GROUNDCOVERS</b> Refer to Planting Schedule</p>
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		TITLE LANDSCAPE PLAN	AUTHORISED: BU		P Preliminary Pre-Tender Revision For Council Comment	LJ 13/03/2021	
		CLIENT REF: WCU/01/20			PT Pre-Tender Revision	LJ 09/04/2021	
		STATUS CONSTRUCTION L - 104			C For Construction	LJ 29/04/2021	
		SHEET NO. 5 OF 8 REV. P			C1 For Construction Revision 1	LJ 28/05/2023	

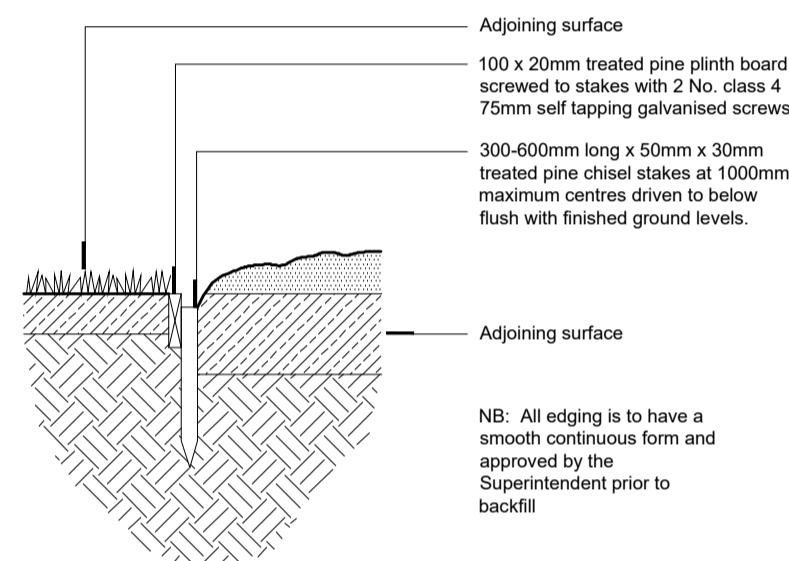
	<p><b>NEW TREE</b> Refer to Planting Schedule</p>
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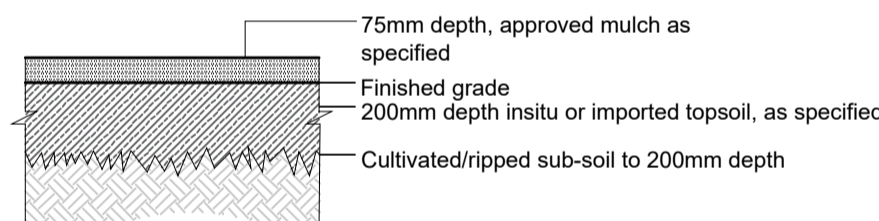
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SUITE 2, 24 GLOUCESTER AVENUE BERWICK, VICTORIA 3806 luke@designtable.com.au 0416 329 118 www.designtable.com.au ACN 629564399 ABN 77 628 346 789	 <b>City of Whittlesea</b>	CLIENT	PROJECT	PM: LJ	NOTES:	REVISION DESCRIPTION APPROVED BY DATE P Preliminary Pre-Tender Revision For Council Comment LJ 13/03/2021 PT Pre-Tender Revision LJ 09/04/2021 C For Construction LJ 20/04/2021 C1 For Construction Revision 1 LJ 28/05/2023	 North SCALE 1:1000 @ A1
			YAN YEAN PIPE TRACK STAGE 5 LANDSCAPE PACKAGE	DESIGNED: LJ	LANDSCAPE WORK INFORMATION 1. Prior to commencement of any landscape works, please contact [insert name, landscape superintendent for the City of Whittlesea insert number] [Insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract completion inspection and final handover inspection. 2. The Contractor must verify all services on site prior to all excavation works. 3. All dimensions are in millimetres unless otherwise noted. 4. Do not scale from this drawing. 5. Verify all dimensions on site prior to construction.		
			TITLE	CHECKED: BU			
			LANDSCAPE PLAN	AUTHORISED: BU			
		STATUS	CONSTRUCTION	L - 105	CLIENT REF: WCC-01/20		
					SHEET No. 3 OF 8		
					REV. 1 P		

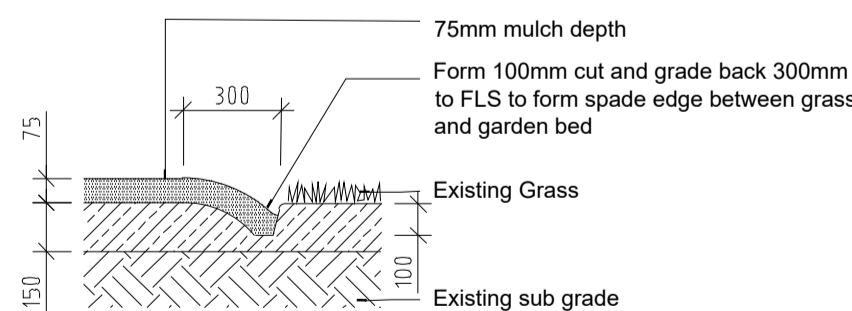
- 1) Trees shall have a well developed taper and be self supporting
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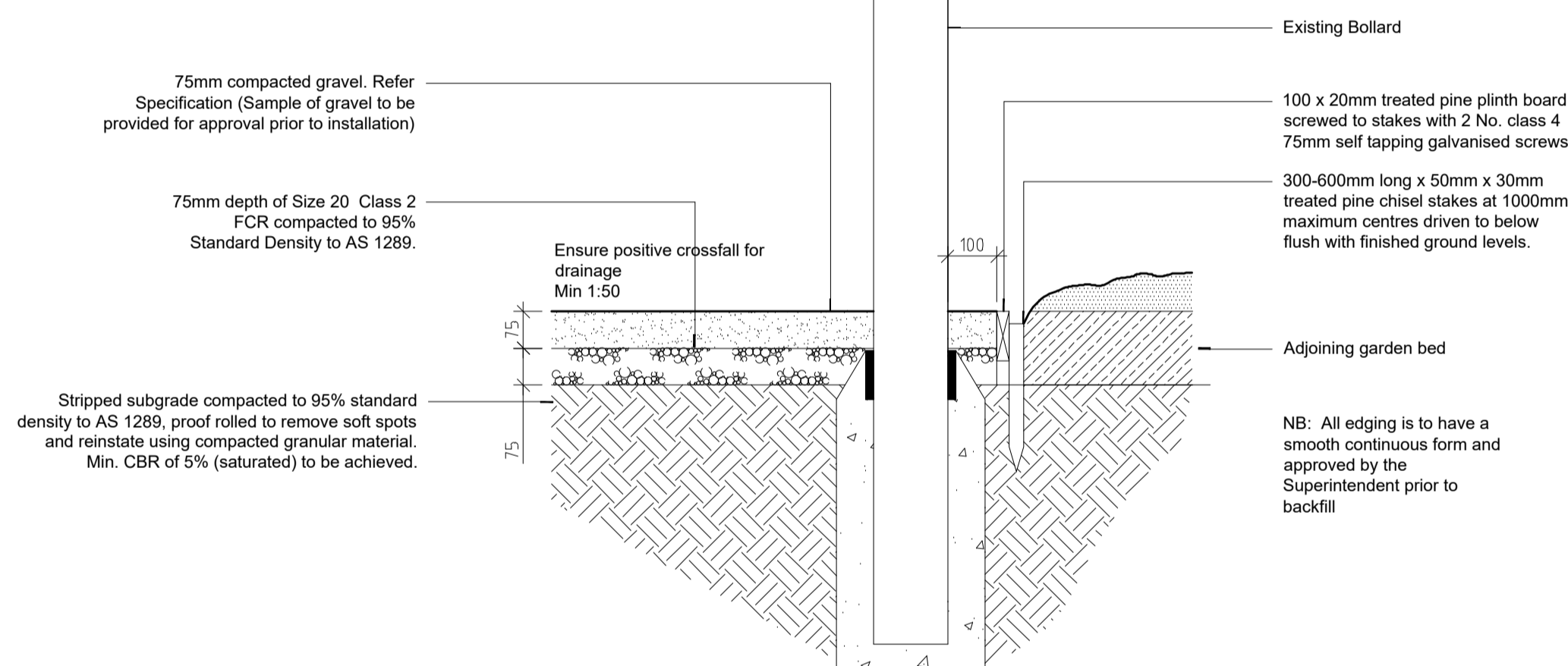
**LD1** **ADVANCED TREE - STANDARD DETAIL**  
SCALE 1:20



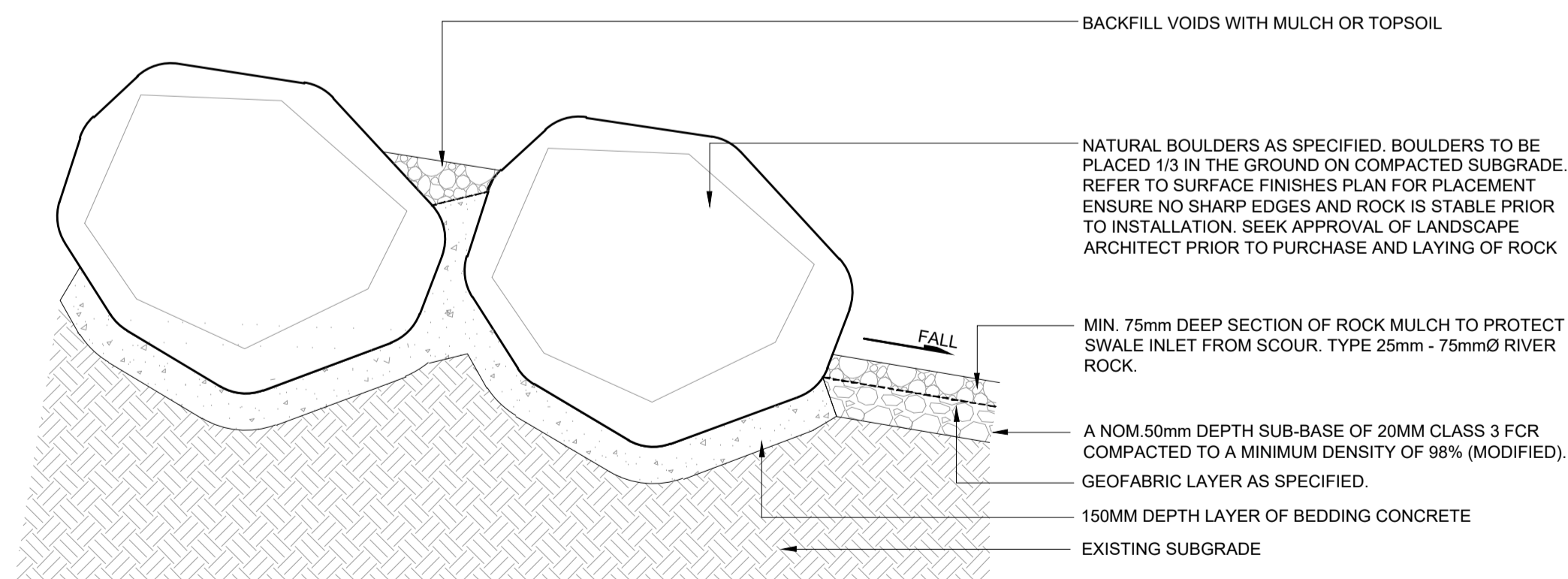
**LD2 TWO TIE STAKE ARRANGEMENT**  
SCALE 1:20




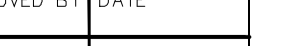
**LD5** **GARDEN BED MULCH- STANDARD DETAIL**  
SCALE 1:10



**LD8** **COMPACTED GRAVEL WITH TIMBER EDGE - STANDARD DETAIL**  
SCALE 1:20



**LD9** **ROCK BEACHING - STANDARD DETAIL**  
SCALE 1:20

<div>SUITE 2, 2A GLOUCESTER AVENUE BERWICK, VICTORIA 3806 enq@designforte.com.au 0414 329 118 www.designforte.com.au ACN 529164389 ABN 77 628 346 789</div>	<div><div>City of Whittlesea</div></div>	<div>PROJECT</div> <div>YAN YEAN PIPE TRACK LANDSCAPE PACKAGE</div>	<div>PM: LJ</div> <div>DESIGNED: LJ</div> <div>CHECKED: BU</div>	<div>NOTES:</div> <div>LANDSCAPE WORK INFORMATION</div> <div>1. Prior to commencement of any landscape works, please contact [Insert name, landscape superintendent for the City of Whittlesea insert number].</div> <div>[Insert name] will conduct pre-commencement meetings, scheduled inspections of landscape works at hold points in accordance with this contract, practical completion inspection and final handover inspection.</div> <div>2. The Contractor must verify all services on site prior to all excavation works.</div> <div>3. All dimensions are in millimetres unless otherwise noted.</div> <div>4. Do not scale from this drawing.</div> <div>5. Verify all dimensions on site prior to construction.</div>	<table><tr><th>REVISION</th><th>DESCRIPTION</th><th>APPROVED BY</th><th>DATE</th></tr><tr><td>P</td><td>Preliminary Pre-Tender Revision For Council Comment</td><td>LJ</td><td>23/07/2020</td></tr><tr><td>PT</td><td>Pre-Tender Revision</td><td>LJ</td><td>09/04/2021</td></tr><tr><td>C</td><td>For Construction</td><td>LJ</td><td>20/04/2021</td></tr><tr><td>C1</td><td>For Construction Revision 1</td><td>LJ</td><td>28/05/2023</td></tr></table>	REVISION	DESCRIPTION	APPROVED BY	DATE	P	Preliminary Pre-Tender Revision For Council Comment	LJ	23/07/2020	PT	Pre-Tender Revision	LJ	09/04/2021	C	For Construction	LJ	20/04/2021	C1	For Construction Revision 1	LJ	28/05/2023	<div><div>North</div></div> <div>SCALE 1:1000 @ A1</div>
		REVISION	DESCRIPTION		APPROVED BY	DATE																				
P	Preliminary Pre-Tender Revision For Council Comment	LJ	23/07/2020																							
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C	For Construction	LJ	20/04/2021																							
C1	For Construction Revision 1	LJ	28/05/2023																							
<div>TITLE</div> <div>LANDSCAPE DETAILS</div>	<div>CLIENT REF: WCC-01/20</div> <div>SHEET No. 1 7 OF 8</div> <div>REV P</div>	<div>STATUS</div> <div>CONSTRUCTION L - 14.1</div>																								

STAGE 5 PLANT SCHEDULE

SYM	BOTANICAL NAME	COMMON NAME	SPACING	HEIGHT X WIDTH AT MATURITY	MIN SUPPLY SIZE	QTY
TREES						
Euc man	<i>Eucalyptus mannifera</i> 'Little Spotty'	Dwarf Red Spotted Gum	As shown	7 x 5m	50L	
Cor fic	<i>Corymbia ficifolia</i>	Red Flowering Gum	As shown	12 x 8m	50L	67
					TOTAL	67
SHRUBS & GROUNDCOVERS						
Wes nar	<i>Westringia hybrid</i> 'WES01' PBR	Coastal Rosemary	1/m2	1-2 x 1-1.5m	140mm pot	64
Dia cae	<i>Dianella caerulea</i> 'Little Jess'	Little Jess Paroo Lily	4/m2	0.4 x 0.4m	140mm pot	1472
Poa lab	<i>Poa labillardieri</i> 'Eskdale'	Eskdale Tussock Grass	5/m2	0.6 x 0.5m	140mm pot	2841
					TOTAL	4377
PLANTING MIX - RAINGARDEN						
SHRUBS & GROUNDCOVERS						
Fes gla	<i>Festuca glauca</i>	Blue Fescue	6/m2	0.5 x 0.5	140mm pot	342
Car app	<i>Carex appressa</i>	Tall Sedge	6/m2	1 x 1 m	140mm pot	342
Iso nod	<i>Isolepsis nodosa</i>	Knobby Club Rush	6/m2	1 x 1.5	140mm pot	342
					TOTAL MIX	1026
					TOTAL SHRUBS	5470

INSTALLATION NOTES

A. SIGNAL CONTRACTOR

1. SUPPLY AND INSTALL NEW HARDWARE AS SHOWN USING LV LED LANTERNS.
2. SUPPLY AND INSTALL 1 NO. LV PUFFIN WALK DETECTOR ON PEDESTALS 2 AND 3.
3. SUPPLY AND INSTALL SIGNAL MAINS SUPPLY/METER CABINET AND CONNECT TO POINT OF SUPPLY.
4. SUPPLY AND INSTALL TELSTRA P2 PIT AND 1/20 CONDUIT WITHIN 3m OF THE CONTROLLER FOR TELSTRA CONNECTION.
5. SUPPLY AND INSTALL LV AUDIO TACTILE PEDESTRIAN DETECTORS (VARIABLE OUTPUT).
6. ARRANGE FOR INSTALLATION OF NEW CONTROLLER.

B. CIVIL CONTRACTOR

1. CONSTRUCT ROADWORKS AS SHOWN.
2. INSTALL 2 NO. DDA COMPLIANT PRAM CROSSINGS IN ACCORDANCE WITH AS 1428.
3. SUPPLY AND INSTALL TGS1's AS SHOWN IN ACCORDANCE WITH AS 1428.
4. LINEMARK AS SHOWN AND REMOVE ANY REDUNDANT MARKINGS.
5. SUPPLY AND INSTALL RRPM's AS SHOWN AND REMOVE ANY REDUNDANT MARKERS.
6. SUPPLY AND INSTALL ROAD SIGNS AS SHOWN AND REMOVE ANY REDUNDANT SIGNS.
7. SUPPLY AND INSTALL PUBLIC LIGHTING AND REMOVE ANY REDUNDANT POLES OR EQUIPMENT. SEE GENERAL NOTES.
8. ALL VESI PITS AND ASSOCIATED CONDUITS TO BE INSTALLED BY POWER COMPANY APPROVED PRE-QUALIFIED ELECTRICAL CONTRACTORS.
9. SUPPLY AND INSTALL PARKING SIGN POLE AND FACE AT P1, P2, P3 AND P4.

C. DEPARTMENT OF TRANSPORT

- (i) METROPOLITAN NORTH WEST REGION.
1. SUPPLY NEW LED COMPATIBLE ELV CONTROLLER (COUNCIL FUNDED).
  2. CONNECT CONTROLLER TO SCATS.

(ii) SIGNAL SERVICES - WEST.

1. PROGRAM NEW CONTROLLER.

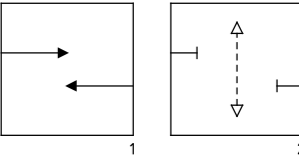
SIGN SCHEDULE

#2		R1-2
#4		D4-1-2(R)
#16		W5-29
#17		R2-14(L)
#18		D4-V108
#19		R7-1-4
#20		R7-4

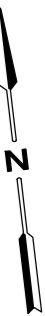
LANTERNS



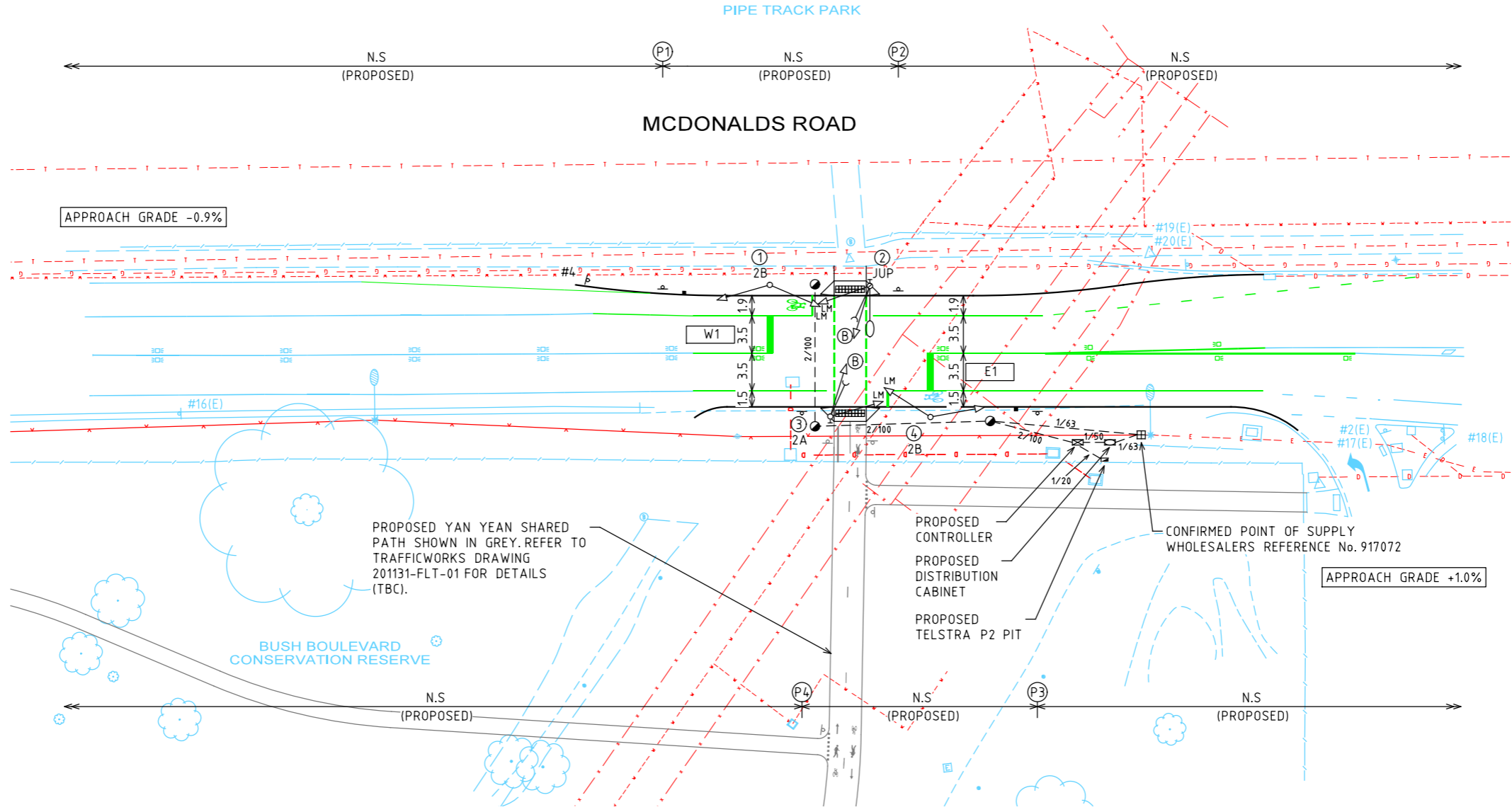
PHASING



(PUFFIN OPERATION)



MELWAY MAP 183 D11



NOTE

PROPOSED SIGNAL HARDWARE LOCATIONS ARE INDICATIVE ONLY  
THE ACTUAL LOCATION OF PROPOSED PEDESTALS, CONDUIT PITS, CONDUITS, ETC. SHALL BE DETERMINED ON SITE AT THE PRE-INSTALLATION MEETING

WARNING

BEWARE OF UNDERGROUND SERVICES  
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.



1st Floor 132 Upper Heidelberg Road IVANHOE VIC. 3079  
P.O. Box 417 IVANHOE VIC. 3079  
Tel (03) 9490 6900 Fax (03) 9490 5910 www.trafficworks.com.au  
TRAFFICWORKS No. 201131-TSP-20 -P2



**MCDONALDS ROAD BETWEEN  
OLEANDER DR & BUSH BLVD  
WHITTLESEA CITY  
PEDESTRIAN OPERATED SIGNALS  
(PUFFIN OPERATION)**

	PEDESTAL - EXISTING, NEW, JOINT USE		TRAFFIC SIGNAL CONTROLLER		SEWERAGE PIT		FENCE
	3 ASPECT LANTERN - 200mm, 300mm		CONDUIT WITH NUMBER/DUCT DIAMETER		FIRE - PLUG, HYDRANT		UNDERGROUND SEWER MAIN
	PEDESTRIAN PUSH BUTTON & LANTERN		POLE - TRAMWAY, ELECTRICITY		STOP VALVE		UNDERGROUND ELECTRICITY
	VEHICLE GROUP - ACTIVE, PROHIBITED		F.O. INTERNALLY ILLUMINATED SIGN - FIBRE OPTIC		GAS VALVE		UNDERGROUND GAS
	PERMITTED PEDESTRIAN MOVEMENT		N.R.T. NO RIGHT TURN		ELECTRICITY UNCLASSIFIED		UNDERGROUND WATER
	PROPOSED STREET LIGHT		G.W.T.P. GIVE WAY TO PEDESTRIANS		UTILITY UNCLASSIFIED		UNDERGROUND TELECOMMUNICATIONS
	EXISTING STREET LIGHT		N.S. NO STOPPING		EXISTING FEATURE		TELECOMMUNICATIONS - PIT, PILLAR
	DETECTOR LOOP - PROPOSED, EXISTING		PAVEMENT MARKER - RAISED, RAISED REFLECTIVE		D.S. DIRECTIONAL SIGN		TELECOMMUNICATIONS - PIT, PILLAR
					I.S. INFORMATION SIGN		TGS1 - WARNING, DIRECTIONAL

GENERAL NOTES

1. BASE INFORMATION FROM PEYTON WAITE PTY LTD SURVEY FILE 1152201v1.DGN.
2. ALL DIMENSIONS ARE TO FACE OF KERB UNLESS SHOWN OTHERWISE.
3. DECLARED ROAD - MCDONALDS ROAD (SPEED ZONE 60km/h)
4. PUBLIC LIGHTING (PUBLIC LIGHTING IN ACCORDANCE WITH CATEGORY V3 AS 1158.1.1)
- (i) PEDESTAL 2 TO BE 11m JUP, 12.5m MOUNTING HEIGHT, 3.0m OUTREACH BRACKET WITH 150W LED LUMINAIRE.

DESIGNED  
A ALEXANDROV OCT 2021











APPROVED  
E NATALIZIO OCT 2021

CAT:  
PROJ:  
FILE:

SCALE OF METRES  
HOR 0 5 10  
VER

FILE NO. SITE NO. SHEET NO. DRAWING NO. ISSUE  
VICROADS

## SIGN SCHEDULE

#2		R1-2	#22		R7-4
#15		R3-1	#23		D4-V108
#16		R8-2			
#17		R7-4			
#18		W1-1(L)			
#19		W1-1(R)			
#20		W5-29			
#21		R7-1-4			

BUSH BOULEVARD CONSERVATION RESERVE

PIPE TRACK PARK

MCDONALDS ROAD

EXISTING GUARD FENCE TERMINAL DAMAGED

BUSH BOULEVARD

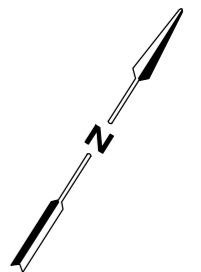
PROPOSED BUSH BLVD P.O.S WORKS.  
REFER TO TRAFFICWORKS DRAWING  
200803-RWK-50-52 FOR DETAILS

INSTALL REMOVABLE BOLLARDS AS SHOWN

PROPOSED MCDONALDS ROAD P.O.S  
WORKS.REFER TO TRAFFICWORKS DRAWING  
201131-TSP-01 FOR DETAILS (TBC).

BUSH BOULEVARD CONSERVATION RESERVE

BUSH BOULEVARD CONSERVATION RESERVE

PROPOSED BUSH BLVD P.O.S WORKS.  
REFER TO TRAFFICWORKS DRAWING  
200803-RWK-50-52 FOR DETAILSMELWAY MAP 183 C12-D12  
MILL PARK1st Floor 132 Upper Heidelberg Road IVANHOE VIC. 3079  
P.O. Box 417 IVANHOE VIC. 3079  
Tel (03) 9490 5900 Fax (03) 9490 5910 www.trafficworks.com.auCLIENT  
WHITTLESEA CITY COUNCIL**PRELIMINARY PLAN**  
FOR DISCUSSION PURPOSES ONLY  
SUBJECT TO CHANGE WITHOUT NOTIFICATION  
DATE OF ISSUE: 14/04/22**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
THE LOCATIONS OF UNDERGROUND SERVICES ARE  
APPROXIMATE ONLY AND THEIR EXACT POSITION  
SHOULD BE PROVEN ON SITE. NO GUARANTEE IS  
GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.**YAN YEAN PIPE TRACK BETWEEN  
BUSH BLVD AND MCDONALDS RD  
WHITTLESEA CITY****PATH FUNCTIONAL LAYOUT**

SHEET NO. DRAWING NO. 201131-FLT-01 ISSUE P4

## GENERAL NOTES

1. BASE INFORMATION FROM PEYTON WAITE SURVEY FILE 1152201v1.DGN.
2. ALL DIMENSIONS ARE TO FACE OF KERB UNLESS OTHERWISE SHOWN.

DESIGNED  
A ALEXANDROV AUG 2021APPROVED  
E NATALIZIO AUG 2021SCALE HOR 0 10 20  
of METRES VER14/04/2022 201131-FLT-01  
11:41:10 AM T:\2021 Projects\201131\Design\201131-FLT-01-PL.dgn

# Yan Yean Pipe Track VALVE HOUSE

DESIGN TABLE  
LANDSCAPE ARCHITECTURE & URBAN DESIGN








# Concept Plan

## LEGEND

1. Concrete paving extended to the perimeter of the tower, no separation from the tactile walls
2. Vertical steel fencing panels with rebated perspex panels for interpretive signage
3. Area in between the walls cleared and filled with gravel / concrete or planting
4. Interpretive signage incorporated into screens
5. Subtle change in concrete paving (e.g., by using exposed aggregate or salt rock finish) to create 'ripple' effect
6. Potential location for garden bed and bench seat responding to paving design

-  Proposed location for solar lights
-  Proposed seat
-  Proposed trees



Solar light



Exposed aggregate

# Sketches

## LEGEND

**1.** Concrete paving extended to the perimeter of the tower, no separation from the tactile walls

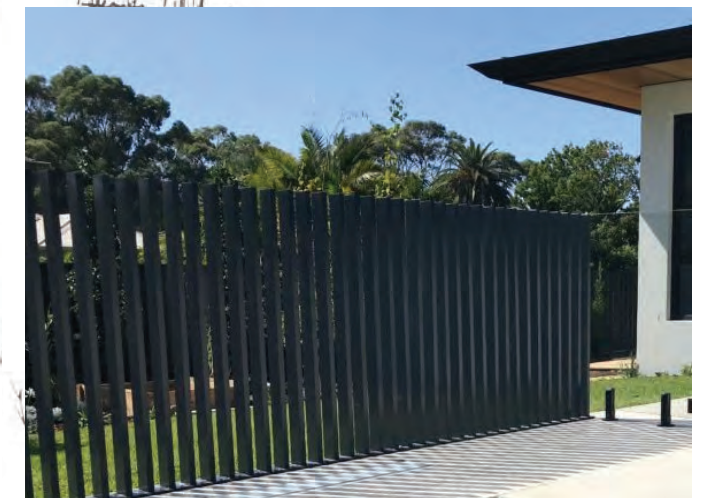
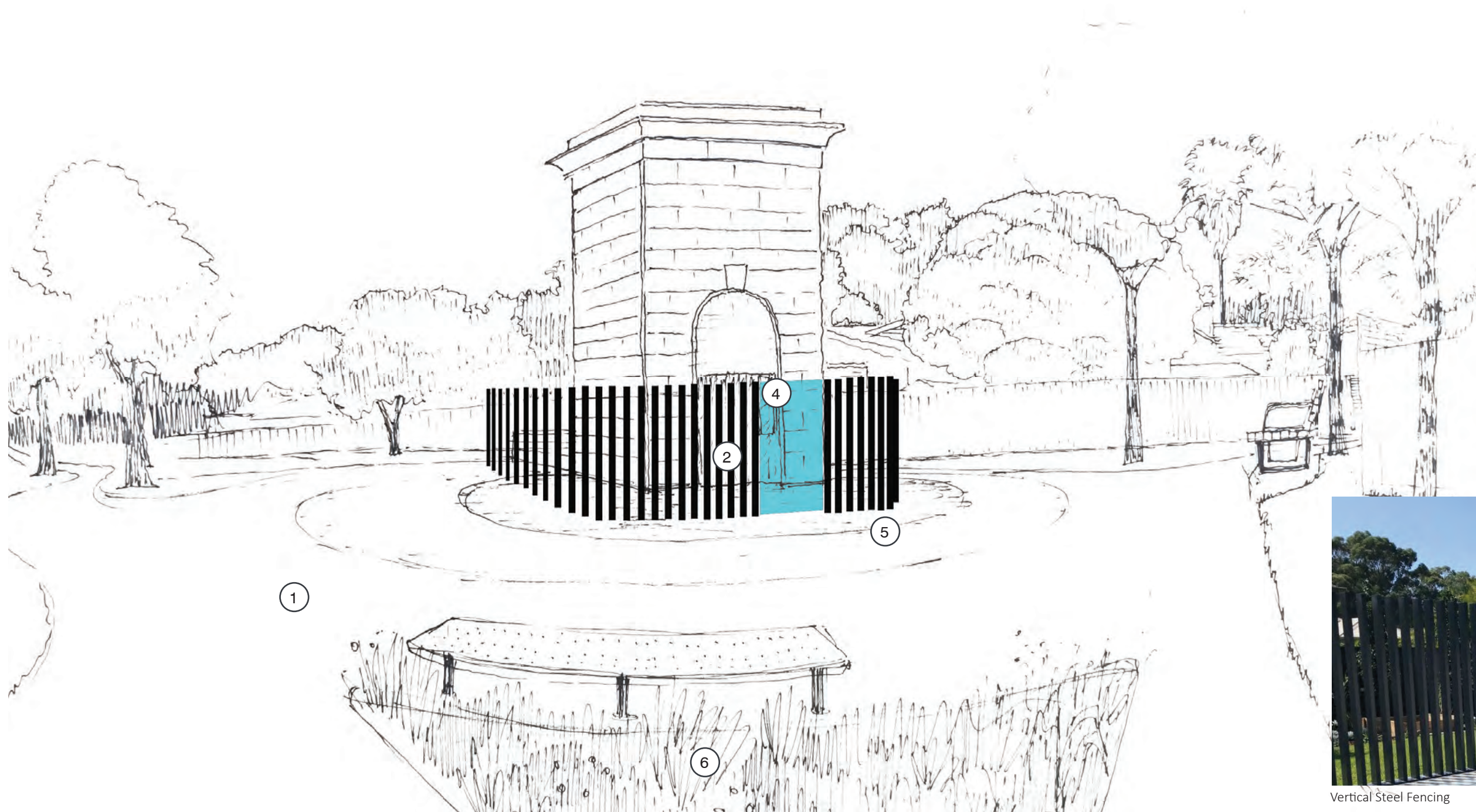
**2.** Vertical Steel fencing element to prevent access and reduce vandalism

**3.** Area in between the walls cleared and filled with gravel / concrete or planting

**4.** Interpretive signage incorporated into screens

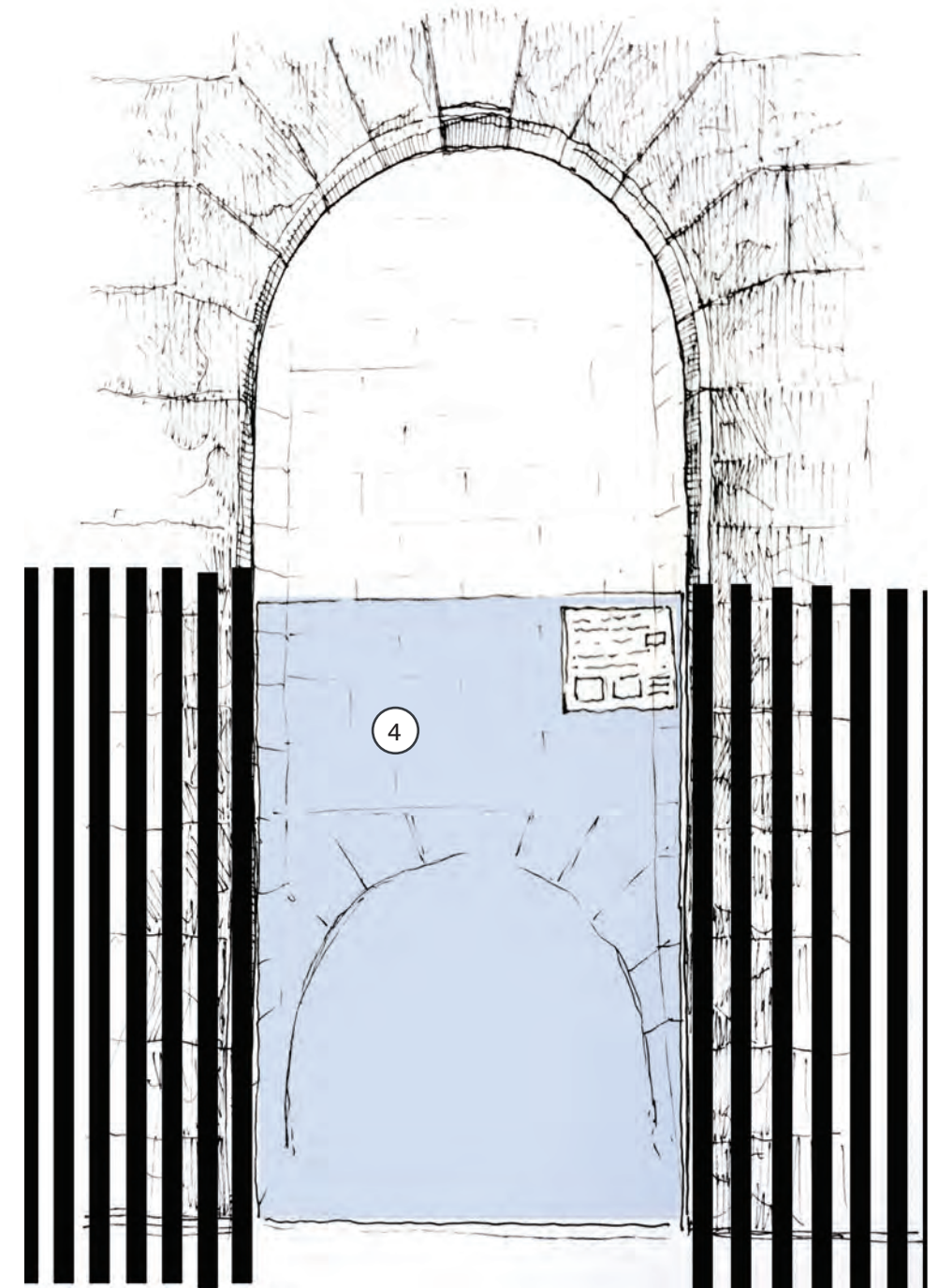
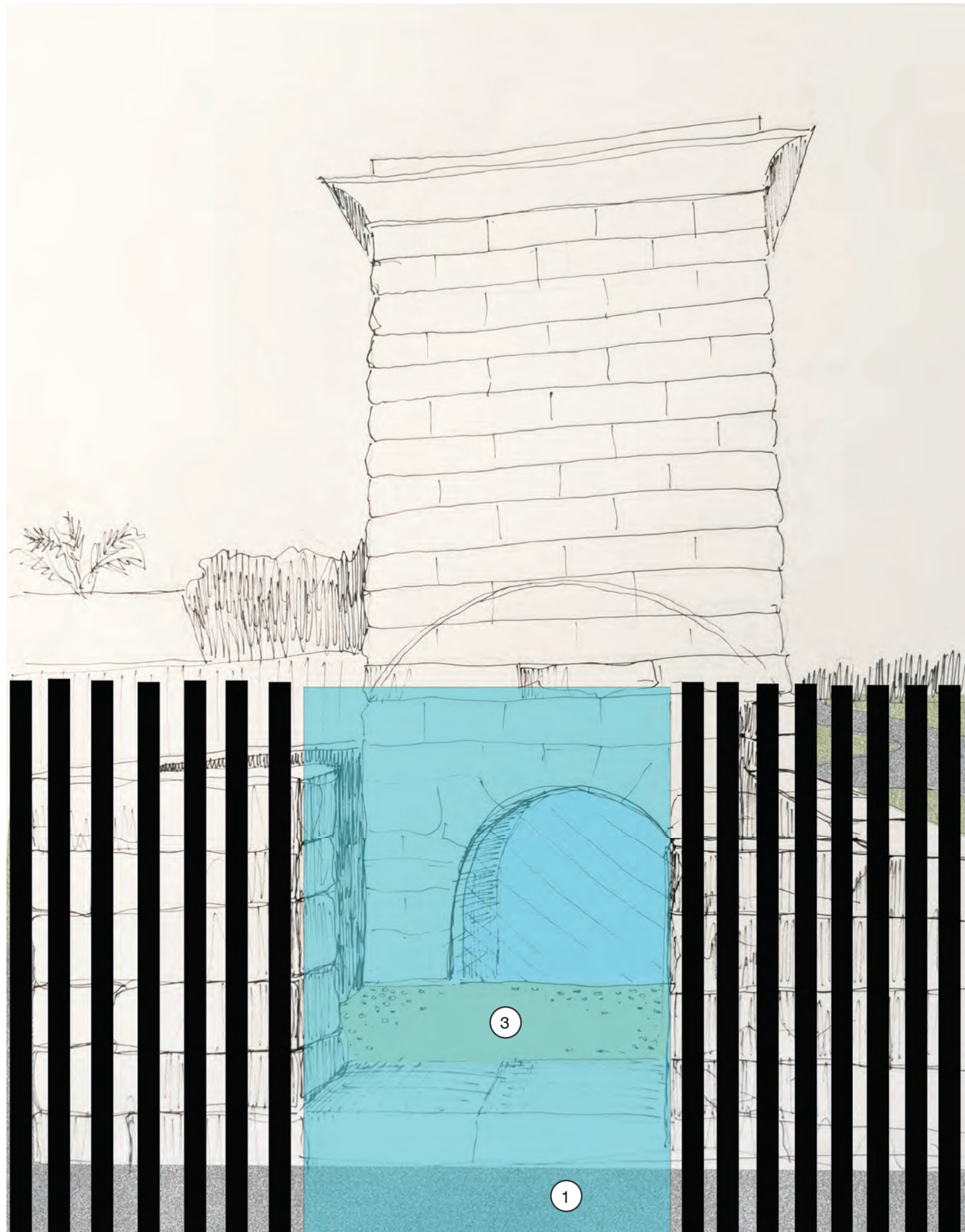
**5.** Subtle change in concrete paving (eg. by using exposed aggregate or salt rock finish) to create 'ripple' effect

**6.** Potential location for garden bed and bench seat responding to paving design



Vertical Steel Fencing

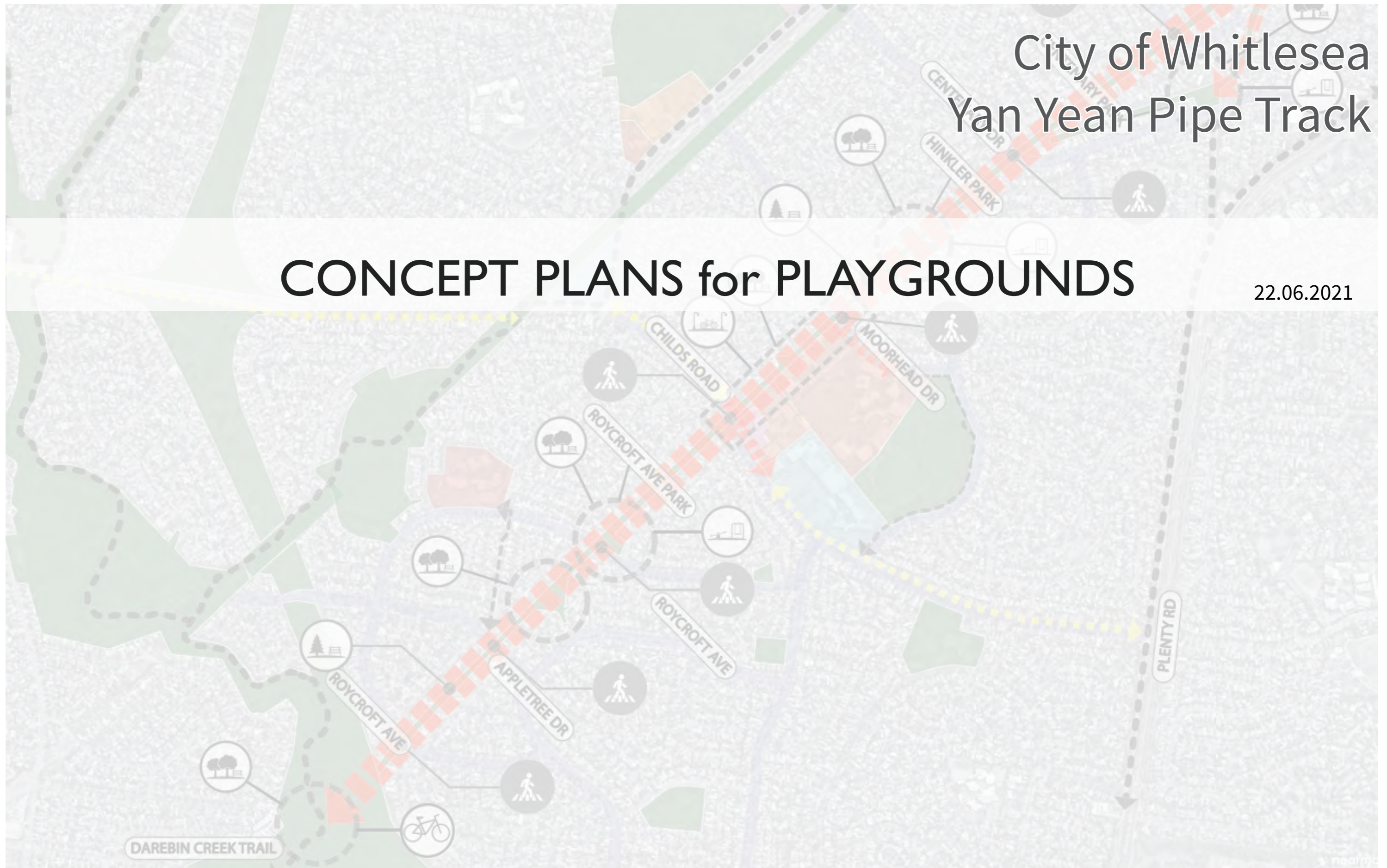
## Sketches



# City of Whittlesea Yan Yean Pipe Track

## CONCEPT PLANS for PLAYGROUNDS

22.06.2021



# HINKLER PARKCONCEPT PLAN



- 1 Exercise circuit on a rubber base. Proposed shade trees on the perimeter of the exercise area. Seating on both ends.
  - 2 Senior play zone, with large climbing net, accessible large basket swing and roundabout, linking to more junior section via wobbly bridge. Framed by seating logs and walls.
  - 3 Junior zone with multiple nature play opportunities on the edges of play area as well as medium sized play structure, junior swings and springers complementing nature play theme. Some rubber surfacing provided for access. Low seating walls on the edge with enough space for pram parking.
  - 4 Access path with seats and picnic setting, under shade trees
  - 5 Garden beds to provide buffer from existing property lines
  - 6 Connect to existing path
- ↔ Perspective view location

