

MOORABOOL PLANNING
SCHEME
Development Plan Approval in
accordance with Clause 43.04
of the Moorabool Planning
Scheme.

I certify that this document
forms part of the endorsed
Development Plan approved by
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TAVERNER STREET DEVELOPMENT PLAN FINAL (Rev E)

20-26 Taverner Street, Maddingley

November 2020



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Revision	Date	Comment
Draft A	3 February 2020	
Draft B	20 July 2020	comprehensive amendments based on RFI comments
Draft C	27 July 2020	minor amendments to text and plans
Draft D	14 October 2020	updated subdivision and additional Housing Design Guidelines, Boyes Cl cross section
Draft E	6 November 2020	updated Design Element 9 and Staging Table, update Boyes Cl cross section

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1. Introduction

The Taverner Street Development Plan (Development Plan) relates to five properties at 20-26 Taverner Street, Maddingley. Together, they form 10.55ha of land on the south side of the Werribee River that is zoned for residential development.

The development plan area has convenient access to the Bacchus Marsh Town Centre and is walking distance to the Railway Station. Local amenities include the sporting fields, tennis courts and children’s playground at Maddingley Park. The well-used path network along the Werribee River provides a picturesque setting for recreational walking and cycling.

This Development Plan identifies the potential for approximately 140 dwellings surrounded by an expanded Werribee River Corridor and a large open space precinct along Taverner Street that includes a heritage park with 150-year-old Osage Orange Trees. These new features will add to the amenity-rich area and deliver a unique lifestyle location for future residents.

The development plan area was rezoned in 2016 as part of planning scheme amendment C51 which related to the broader Bacchus Marsh Activity Centre. For this specific area, the amendment:

- Rezoned the development plan area from Farm Zone to General Residential Zone – Schedule 1,
- Introduced a Schedule 4 to the Development Plan Overlay,
- Introduced a Schedule 13 to the Design and Development Overlay, and
- Applied an Environmental Audit Overlay.

This Development Plan is the next stage of strategic planning intended to address the planning scheme requirements and ensure the five properties are developed in an orderly manner. It has been informed by the following background works and reports:

- Site Features and Levels Survey (Benchmark Land Surveyors)
- Geotechnical - Feasibility Assessment (Ground Science)
- Arboricultural Assessments (Homewood Consulting and ENSPEC)
- Flora and Fauna Assessment, Native Vegetation Impact Assessment and Management Plan (Practical Ecology)
- Preliminary Site Investigation (Atma Environmental)
- Remediation Action Plan (Atma Environmental)
- Civil Engineering Servicing Report (Cardno)
- Traffic and Transport Assessment (Cardno)
- Stormwater Management Plan (LDEng)
- Cultural Heritage Management Plan (Benchmark Heritage)

The Development Plan has been prepared by Urban Terrain on behalf of VM Builders Pty Ltd which owns 22, 24A and 26 Taverner Street. Property owners at 20 and 24 Taverner Street have provided consent to undertake background investigations on their properties associated with preparation of the plan.



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Figure 1 - Development Plan Area



2. Site Context

The development plan area is 10.55ha and located less than one kilometre south of the Bacchus Marsh town centre. It completes a broader residential precinct bound by the town centre to the north, Taverner Street to the south, Fisken Street to the east and Grant Street to the west.

The development plan area has an irregular shape due to the Werribee River which runs along its northern boundary. Fisken Street forms the eastern boundary of the development plan area and provides a direct connection north to Main Street. The southern boundary is formed by Taverner Street that connects to Grant Street and extends north to the Bacchus Marsh town centre and the primary concentration of local shops and services in the area. Boyes Close is a local access street that forms the western boundary.

The following land uses make up the surrounding area:

- The South McGrath Street Reserve is located along the north side of the Werribee River to provide a riparian zone between the river and residential development to the north. The river can be crossed at the pedestrian bridge at the northwest corner of the development plan area or crossing the vehicle bridge at the northeast corner. A gravel path meanders through the trees close to the bank of the river.
- A low-density residential area is located directly north of the South McGrath Street Reserve with a single large lot still being used as a market garden which is also zoned for future residential development.
- Watson's Bulk Logistics (WBL) is located east of Fisken Street. Grain storage facilities at WBL house wheat, canola and barley from a number of local

growers in the region. Trucks can access the facility from either Fisken Street or Taverner Street.

- Boyes Close acts as an interface between the development plan area and the residential precinct to the west. The precinct is made up of one and two storey, detached dwellings.
- The Maddingley Park Reserve is located directly southwest of the development plan area and extends all the way to Grant Street. It includes tennis courts, sporting fields and a children's playground.
- An area of vacant land in the Farm Zone is located just south of Taverner Street along Fisken Street with a light industrial area situated south of the vacant land. Moorabool Shire has recently acquired the vacant land to develop an indoor sports facility. Refer to Section 4 – Policy Context, for a zoning map.
- Bacchus Marsh Train Station sits directly south of Maddingley Park Reserve, about 400m from the subject site.
- Bacchus Marsh College is located along Grant Street just south of Taverner Street. Bacchus Marsh Grammar School is located about 1km southwest on South Maddingley Road.
- The Baccus Marsh Aquatic Centre is located on Grant Street, on the north side of the Werribee River.

These land uses are shown in Figure 2 on the following page.



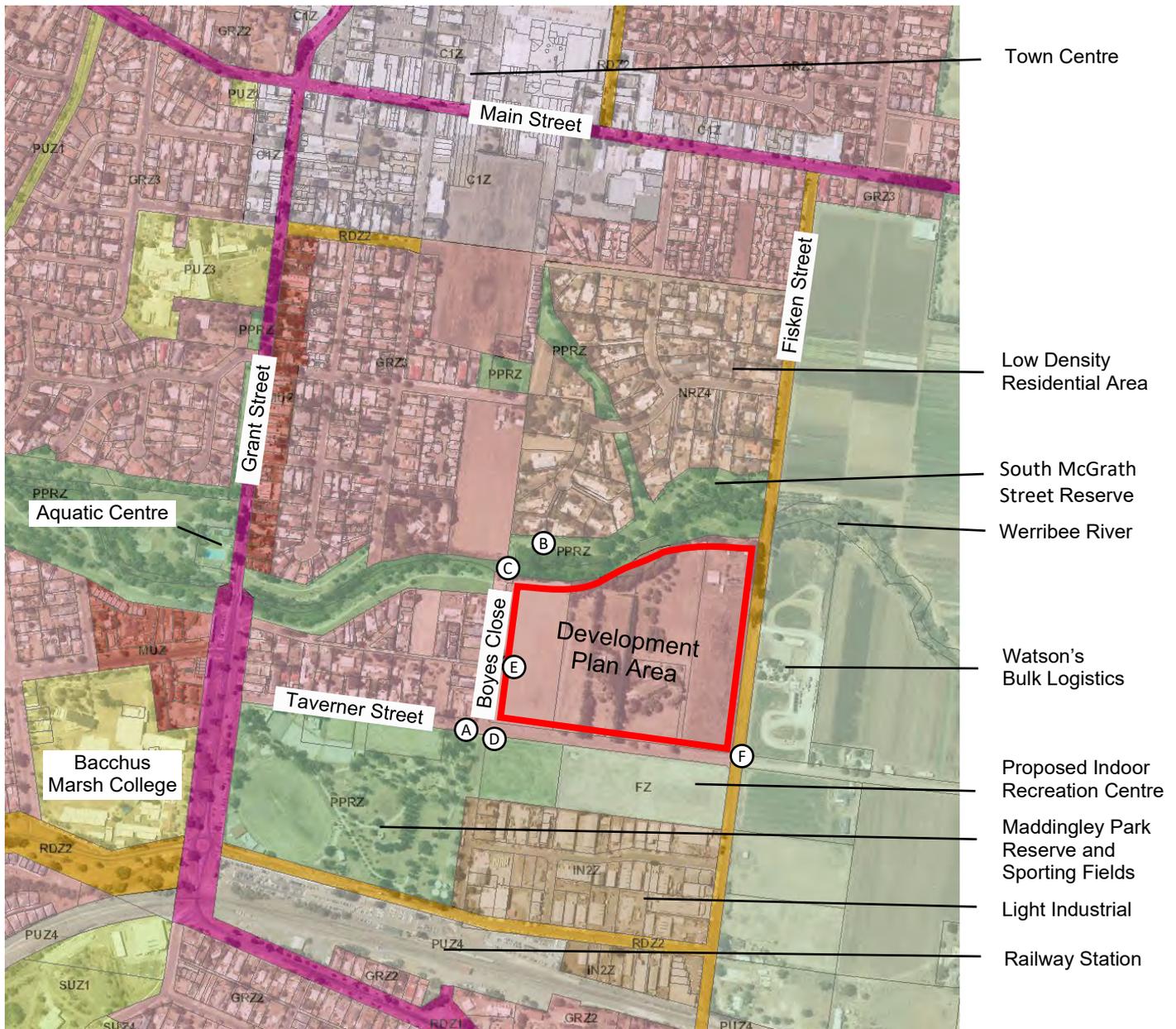


Figure 2 - Site Context

Letters on the plan refer to photo locations in Section 2.1.

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2.1. Site Context Photos

A - Maddingley Park Reserve



B - South McGrath Street Reserve along north side of Werribee River



C - Werribee River looking west



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D - Vacant land and industrial area south of Taverner Street



E - Residential subdivision to the west and Peelmans Lane



F - Watson's Bulk Logistics – east of Fiskin Street



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3. Site Description

The subject site is made up of five land holdings which were all former market gardens but have since become large residential properties with a number of dwellings, sheds and other structures. 22, 24 and 26 Taverner Street each contain an inhabited dwelling. 20 Taverner Street has no dwellings but does have several sheds. 24 A Taverner has no dwellings or structures. 26 Taverner Street has access from Fisken Street while the others have access from Taverner Street.

A unique feature of the development plan area is that it has a gradual downward slope towards the southeast corner, rather than towards the Werribee River. This results in a steep bank along much of the northern boundary.

Trees make up several prominent features of the development plan area. There are concentrated sections of trees along the Werribee River which include Osage Orange Trees and River Red Gums. The southern portion of 22 Taverner Street includes the heritage protected 'The Avenue' and 'The Windbreak' rows of Osage Orange Trees. The most prominent trees are three very large River Red Gums along Fisken Street standing at 17, 20 and 21 metres.

Letters on the plan below refer to Site Photos in Section 3.1 and 3.2.



Figure 3 - Site Aerial with Title Boundaries

Letters on Figure 3 relate to Site Photos in Sections 3.1 and 3.2

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3.1. Site Photos

G - Pedestrian bridge crossing the Werribee River at the northwest corner of the development plan area



H - View south across 20 Taverner Street



I - 'The Avenue' of Osage Orange Trees on 22 Taverner Street



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J - Osage Orange Tree 'The Avenue' and current entry to 22 Taverner Street



K - Osage Orange Tree Windbreak and entry to 24 Taverner Street



L - View northwest across 26 Taverner Street



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3.2. Road Network Photos

M - View south along Boyes Close



N - Trees along north side of Taverner Street



O - Taverner Street approach to Fiskin Street Intersection



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P - Taverner Street to the east of Boyes Close



Q - Fiskin Street looking north with large River Red Gums in the road reserve



R - Fiskin Street Bridge crossing the Werribee River to the northeast of the development plan area



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4. Policy Context

The *Moorabool Planning Scheme* includes relevant zones, overlays and local planning policies which are summarised below.

4.1. Local Planning Policy Framework

Clause 21.01 – Municipal Profile, Council Vision and Strategic Directions

Clause 21.01 outlines Council’s goals to provide a wide diversity of housing choices, including size of dwellings, in urban areas throughout the region.

Clause 21.02 – Settlement

Objective 1 of Clause 21.01 seeks to direct urban growth to identified growth areas in order to protect productive rural areas and achieve a more compact sustainable urban area. This policy highlights the need to implement the requirements of applicable Development Plan Overlays in these areas.

Clause 21.03 – Environment and Landscape Values

This clause highlights that Moorabool Council is committed to the protection of biodiversity and native vegetation, interested in protecting key areas of ecological significance and improving native vegetation conditions.

Clause 21.06 – Built Environment and Heritage

Clause 21.06 stipulates that the two Design and Development Overlays that apply to the development plan area, DDO2 and DDO13, must be considered in the development of land in this area.

Clause 21.07 – Housing

Objective 1 of Clause 21.07 outlines Council’s goal to locate new housing within close proximity to existing and/or planned transport corridors, activity centres and open space.

4.2. Zones

The development plan area falls within the General Residential Zone – Schedule 2 (GR22) which is applied to natural and greenfield residential growth areas. Under the General Residential Zone, a planning permit is required to subdivide land.

The purpose of the General Residential Zone is:

- To implement the State Planning Policy Framework and the Local Planning Policy Framework, including the Municipal Strategic Statement and local planning policies.
- To encourage development that respects the neighbourhood character of the area.
- To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.

The GR22 includes the existing residential subdivision west of Boyes Close and Taverner Street. Fisken Street is zoned Road Zone 2 making Moorabool Shire the road authority.

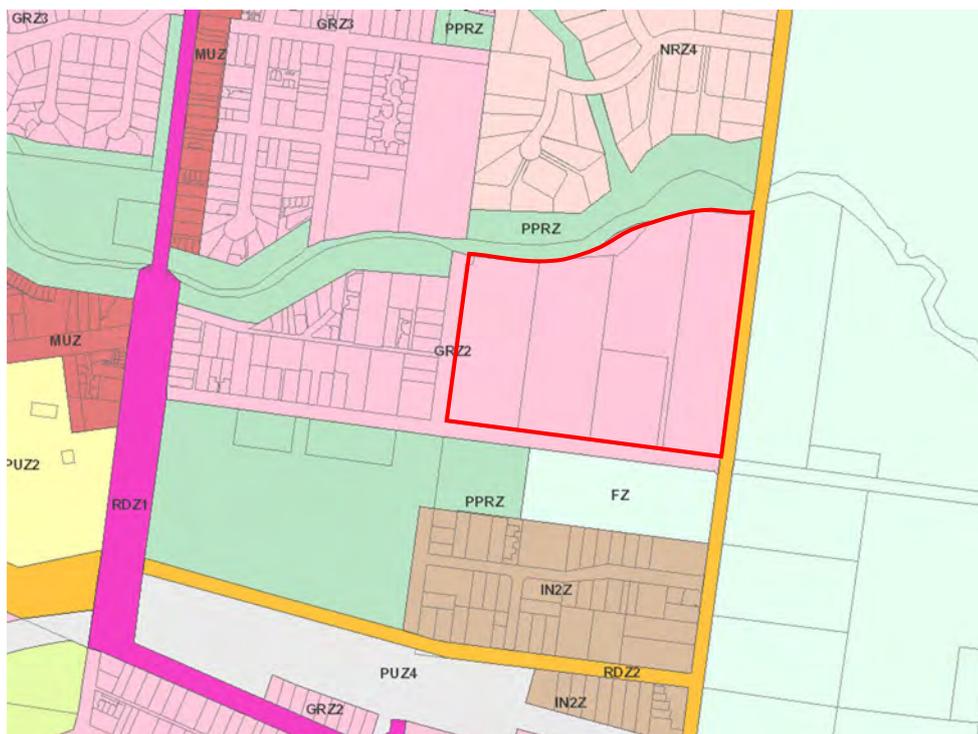


Figure 4 - Zone Map

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Clause 43.01 - Heritage Overlay (HO170)

Heritage Overlay 170 relates to 22 Taverner Street only and applies tree controls to the site. A permit is required for any subdivision of the property.

The *Heritage Overlay* identifies the Heritage Place as the Osage Orange Avenue and applies tree controls to 22 Taverner Street. It requires an assessment of any tree removal against the heritage overlay.



Figure 5- Heritage Overlay 170

Clause 42.01 - Environmental Significance Overlay – Schedule 2 and Schedule 8 (ESO2 and ESO8)

The purpose of this clause is to identify areas where the development of land may be affected by environmental constraints and to ensure the development is compatible with the environmental values of the area.

Schedule 2 relates to proclaimed waterway catchments including the Werribee River. It seeks to conserve flora and fauna habitats, protect waterways from increased surface runoff and provide for appropriate development in the surrounding area.

Schedule 8 relates to River Red Gums in the Bacchus Marsh Valley. It seeks to retain all hollow bearing trees, minimise disturbance to the Tree Protection Zones and support regeneration of River Red Gums. It identifies River Red Gums on Boyes Close, along Fiskin Street and along the Werribee River.



Figure 6 - Environmental Significance Overlay 2 and 8

Schedule 8 defines the Tree Protection Zone as being an area with a radius equal to the furthest point of the tree canopy from the centre of the trunk plus 5 metre. The

centre of the trunk is to be measured at the point where it meets the natural ground level.

Clause 43.02 - Design and Development Overlay – Schedule 13 (DDO13)

DDO13 relates specifically to the subject site and outlines Moorabool Council’s design objectives for this area. These include the following:

- To encourage a new mixed density residential neighbourhood that responds to the characteristics and context of the locality and is respectful to the historic Osage Orange Avenue and Windbreak.
- To encourage high quality, innovative and sustainable development that is contextually relevant, responds to the ‘country town’ character and protects the Osage Orange Avenue and Windbreak which is of historical significance for its association with orcharding in the Bacchus Marsh area.
- To ensure new residential development is oriented towards the Werribee River corridor to promote public safety in the public and private realm.
- To ensure residential development abutting Fiskin Street is set back so as to provide a buffer from nearby horticultural activities.
- To encourage increased density development oriented towards Boyes Close.
- To design an internal street network that provides permeable, accessible and safe neighbourhood system for pedestrians, cyclists and motor vehicles.

Further objectives related to subdivision of this site include:

- The subdivision of land must encourage passive surveillance opportunities of the Werribee River corridor and Boyes Close.
- The subdivision of land must provide for an active frontage along Taverner Street.
- The subdivision of land must ensure that property boundaries will not impact on the Osage Orange Avenue and Windbreak.

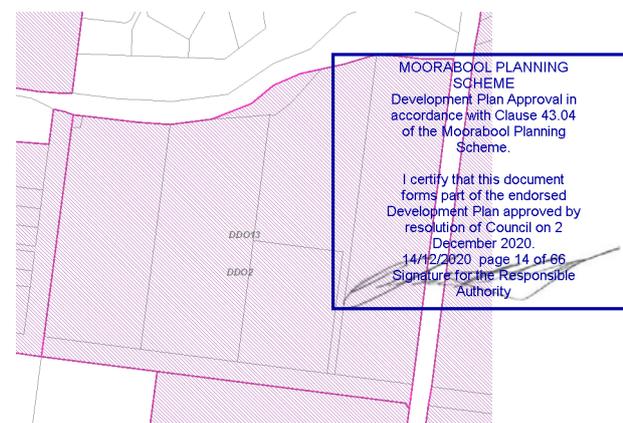


Figure 7 - Design and Development Overlay 13



Clause 43.04 – Development Plan Overlay – Schedule 4 (DPO4)

Clause 43.04 relates specifically to the subject site. It outlines Moorabool Council’s objectives to:

- Provide residential housing options in close walkable proximity to the Bacchus Marsh Railway Station.
- Incorporate important site features including the locally significant Osage Orange Avenue and Windbreak, and the Werribee River.



Figure 8 - Development Plan Overlay 4

Clause 45.03 – Environmental Audit Overlay

Clause 45.03 outlines the requirement for an environmental audit to be conducted on this site before a sensitive use (residential use, child care centre, pre-school centre or primary school) commences, or before the construction or carrying out of buildings and works in association with a sensitive use commences. Specifically:

- A certificate of environmental audit must be issued for the land in accordance with Part IXD of the *Environment Protection Act 1970*, or
- An environmental auditor appointed under the *Environment Protection Act 1970* must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.



Figure 9 - Environmental Audit Overlay

Proposed Land Subject to Inundation Overlay and Special Building Overlay (Amendment C91)

Moorabool Shire Council has prepared Amendment C91 to the Moorabool Planning Scheme, at the request of Melbourne Water as the relevant floodplain management authority. Amendment C91 seeks to apply the Land Subject to Inundation Overlay (LSIO) and the Special Building Overlay (SBO) to land affected by a 1 in 100 year flood event.

The purpose is to ensure that new development maintains the free passage and temporary storage of floodwaters, minimises flood damage, is compatible with the flood hazard and will not cause any significant rise in flood level or flow velocity.

All planning permit applications under the LSIO or SBO will be referred to Melbourne Water as a determining referral authority. Melbourne Water will assess development proposals and provide a referral response (including appropriate permit conditions) to Council.

The LSIO area covers the southern portion of the development plan area along the north side of Taverner Street.



Figure 10- Flood Modelling for LSIO Overlay

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4.4. Particular Provisions

The following provisions will need to be addressed at the planning permit stage and have therefore been considered while preparing this Development Plan.

Clause 52.17 – Native Vegetation

Clause 52.17 seeks to ensure that there is no net loss to biodiversity as a result of the removal, destruction or lopping of native vegetation. This is to be achieved by:

- Avoiding the removal, destruction or lopping of native vegetation.
- Minimising impacts from the removal, destruction or lopping of native vegetation that cannot be avoided.
- Providing an offset to compensate for the biodiversity impact if a permit is granted to remove, destroy or lop native vegetation.

Clause 53.01 – Public Open Space Contribution and Subdivision

Clause 53.01 highlights the requirement to provide public open space in the design of residential subdivisions.

Clause 53.18 – Stormwater Management and Urban Development

Clause 53.18 seeks to ensure that stormwater in urban development, including retention and reuse, is managed to mitigate the impacts of stormwater on the environment, property and public safety, and to provide cooling, local habitat and amenity benefits.

Stormwater management objectives for subdivision include the following:

- Minimise damage to properties and inconvenience to the public from stormwater.
- Ensure that the street operates adequately during major storm events and provides for public safety.
- Minimise increases in stormwater and protect the environmental values and physical characteristics of receiving waters from degradation by stormwater.
- Encourage stormwater management that maximises the retention and reuse of stormwater.
- Encourage stormwater management that contributes to cooling, local habitat improvements and provision of attractive and enjoyable spaces.

Clause 56.01 – Residential Subdivision

Clause 56.01 seeks to create liveable and sustainable neighbourhoods and urban places with character whilst achieving residential subdivision outcomes that appropriately respond to the local context. Clause 56.01 outlines detailed standards and objectives that must be considered in any application to subdivide land for residential development.

4.5. Open Space Framework 2041

The Bacchus Marsh & Ballan Open Space Framework 2041 includes the following objectives to be considered in the design and management of all new open space:

1. Be designed for maximum community benefit and consider all potential opportunities and activities to facilitate the development of the site (e.g. funding, community involvement and social engagement).
2. Provide quality and accessible open space for all residents.
3. Be a connected and safe network for all the community to use.
4. In existing areas of Bacchus Marsh & Ballan all residents should be within:
 - 400 metres of an area of open space.
 - new greenfield developments must provide publicly accessible open space within a 400m walkable catchment.
5. Reflect the landscape and Indigenous and European cultural heritage of Moorabool.
6. Identify and budget for future maintenance and staff resourcing requirements.





5. Site Features and Considerations

The following background research was undertaken in order to identify the opportunities and constraints presented by the development plan area:

- Site Features and Levels Survey (Benchmark Land Surveyors)
- Geotechnical Assessment (Ground Science)
- Arboicultural Assessments (Homewood Consulting and ENSPEC)
- Flora and Fauna Assessment, Native Vegetation Impact Assessment and Management Plan (Practical Ecology)
- Preliminary Site Investigation (Atma Environmental)
- Remediation Action Plan (Atma Environmental)
- Servicing Report (Cardno)
- Traffic Impact Assessment (Cardno)
- Stormwater Management Plan (LDEng)
- Cultural Heritage Management Plan (Benchmark Heritage)

The following sections provide a written summary of the development plan area's key features and background work conducted to inform the Development Plan. *Plan 1 – Site Features*, on the following page illustrates existing features within the development plan area and immediate surrounds.

5.1. Site Contours and Flooding

The development plan area slopes from its high point of 101.5m AHD in the northwest corner to the low point of 97.16m AHD in the southeast corner. This creates a unique scenario where the development plan area slopes away from the Werribee River and has flooding issues to the north and the south.

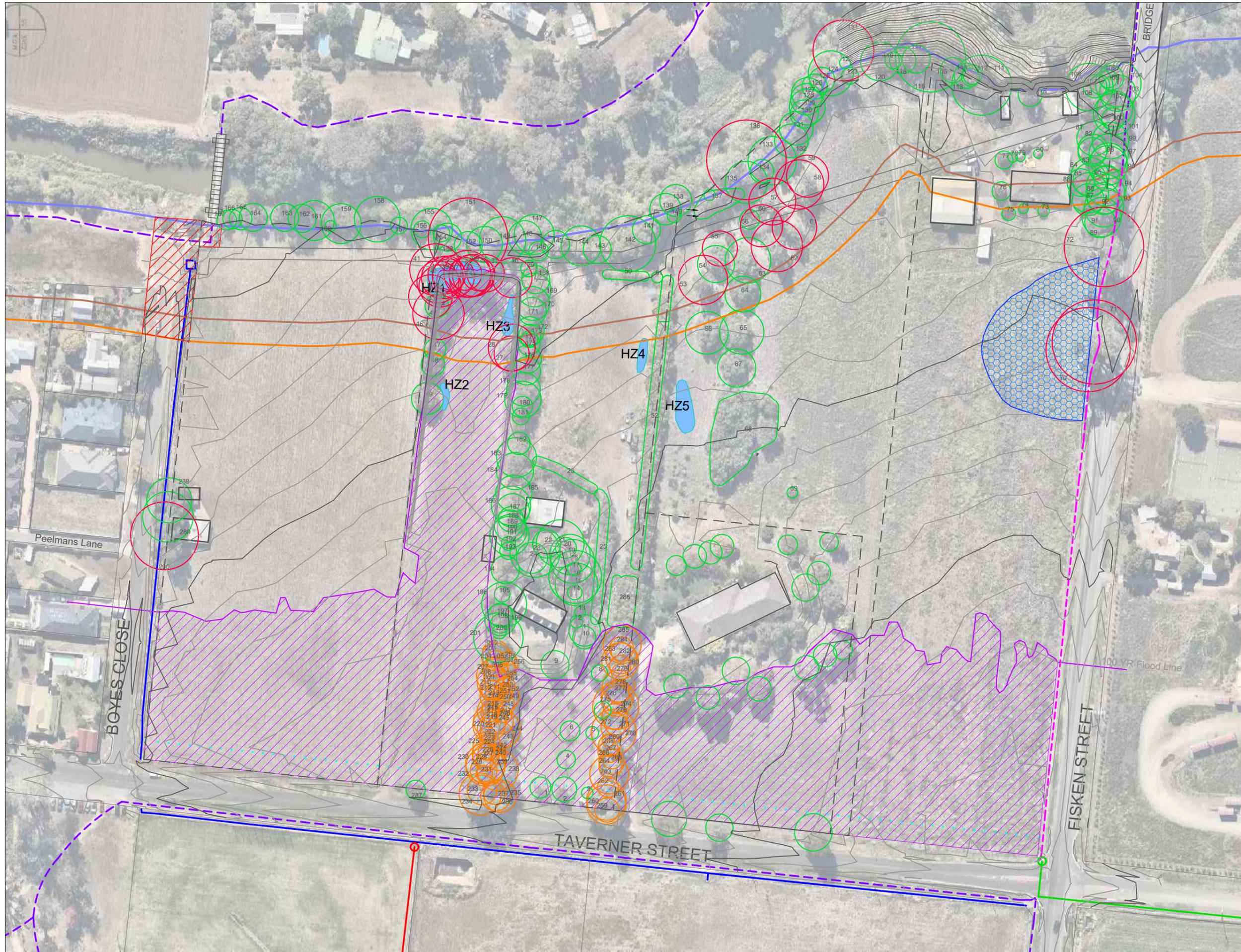
The primary flooding concern is to the south along Taverner Street. The applicable 1% AEP flood level is 100.64m AHD at southwest corner and 97.50m AHD at the southeast corner of the development plan area. Melbourne Water has prepared 1:100yr flood modelling for the area which has informed the proposed *Land Subject to Inundation Overlay*. Due to the potential for substantial flooding the southern portion of the site,

Melbourne Water has provided the following development guidelines:

- Habitable buildings within the development plan area must be constructed no lower than 600mm above the graded flood level as above.
- Non-habitable buildings of area between 20-40sqm (eg. garages sheds/ outbuildings) within the development plan area must be constructed no lower than the applicable flood level at the location as per the graded flood level.
- Development must be set back a minimum of 8.0 metres from the southern property boundary along Taverner Street. Minor earth filling required to raise service infrastructure such as a pump station is permitted to be within this setback.
- Private open spaces must be set at natural surface levels except minimal ramping up to garages.
- Any proposed development must also be kept outside of the northern floodplain (River side);
- Flood storage must be maintained within the property. Approval from Melbourne Water must be gained for any earth cut and fill within the property.
- Approval must be obtained from Melbourne Water for the final Stormwater Management Strategy. Drainage calculations must be provided as part of the report.
- Developers must enter into and comply with an agreement with Melbourne Water Corporation for the acceptance of surface and stormwater from the subject land directly or indirectly into Melbourne Water's drainage systems and waterways, the provision of drainage works and other matters in accordance with the statutory powers of Melbourne Water Corporation.
- The development's stormwater quality treatment must meet Best Practice Environmental Management targets for discharge into the Werribee River, to the satisfaction of Melbourne Water. The development's Stormwater Management Strategy must include detail for stormwater quality treatment, to the satisfaction of Council and Melbourne Water.



PLAN 1 - SITE FEATURES



- LEGEND**
- MW 100yr Flood Modeling
 - River Red Gum Regeneration
 - Habitat Zone
 - Road Reserve within River Corridor
 - Existing Title Boundary
 - Shared Path - existing, unsealed
 - Shared Path - to be removed
 - Open Irrigation Channel
 - Melbourne Water Floodway Setback 8m
 - Top of Bank - Melbourne Water
 - 40m Riparian Zone Buffer
 - 50m Riparian Zone Buffer
 - River Red Gum - TPZ
 - Heritage Osage Orange Tree - TPZ
 - Other Trees - TPZ
 - Pedestrian Bridge
 - Existing Dwelling or Building
 - Existing Stormwater Outfall
 - Existing Sewer

- Notes:**
1. This plan is based on a features and levels survey prepared in 2018.
 2. Information relating to the Environmental Audit and Cultural Heritage Management Plan is not included on this plan.
 3. Tree numbers relate to the Tree Assessment prepared by Homewood Consulting.

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5.2. Werribee River

The *Water Act of 1989* establishes Melbourne Water as the responsible authority regarding the health and management of regional waterways. As the development plan area is located adjacent to the Werribee River, Melbourne Water has conducted a review of the development site and provided the following comments:

- The property is next to the Werribee River (Upper) which has a Strahler Stream order of 5, therefore Melbourne Water’s Waterway Corridor Guidelines require a minimum 50m setback from the top of bank. This comprises of a 40m core riparian zone and a 10m vegetated buffer.
- The 50m setback must be adopted as it is a critical element in planning the development of this property. Melbourne Water may consider requesting the setback become an easement in its favour at a later subdivision stage.
- Shared paths must be located outside the core riparian zone.
- Any future development proposal must give adequate design consideration to the interface to the waterway corridor environs.
- Melbourne Water’s *Healthy Waterways Strategy* has identified this stretch of Werribee River as a ‘Priority Area’ for platypus. Future construction would need to take into consideration potential impacts on platypus, particularly during breeding/nesting periods.
- New developments are designed to ensure that walls and fences are largely screened from the waterway by shrubs and ground covers, and the skyline is largely formed by tree canopies.
- The bulk and visual impact of buildings as well as the impact of overshadowing of the waterway corridor needs to be considered as part of any development application.
- When development is visible from the waterway, it should be landscaped so that planting becomes the dominant visual component, making the development relatively unobtrusive.

5.3. Flora and Fauna

A *Flora and Fauna Assessment, Native Vegetation Impact Assessment and Management Plan* has been prepared by Practical Ecology which includes a *Native Vegetation Impact Assessment* and *Werribee River Corridor Management Plan*. Discussion of the *Werribee River Corridor Management Plan* is included in Section 6.2 of this document.

Vegetation on site was assessed for its categorisation according to the *Guidelines for the removal, destruction and lopping of native vegetation (DELWP 2017a)*, then its Ecological Vegetation Class and finally, quality, as determined by a Habitat Hectare assessment. The report identifies scattered River Red Gums and maps a total of 5 Habitat Zones shown in the figure below.

A summary of key flora and fauna identified on site includes:

- River Red Gums
- Osage Orange Trees - The Avenue, Windbreak and scattered
- Peppercorn Trees
- Wallaby Grass
- Various native birds
- Variety of native and non-native small mammals

The assessment does not identify any rare or threatened flora or fauna of state or national significance within the development plan area.

The assessment concludes that development within the development plan area is not likely to have a significant impact on species, nor any other matters of environmental significance protected under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The assessment highlights that the *Flora and Fauna Guarantee Act 1988* (FFG Act) does not apply to any listed fauna or fauna species occurring on private land, unless it is listed as critical habitat, which this site is not.

It should be noted that 24 Taverner Street was not assessed during the background work. Any application for development of this property will require further assessment.





5.4. River Red Gums

An arboricultural assessment has been prepared by Homewood Consulting and identified 32 River Red Gums. It provides an assessment of their health, structure, landscape contribution, useful life expectancy and arboricultural retention value.

Of the 32 River Red Gums assessed, 6 have been rated with a Very High retention value. These trees are all large, mature and likely to be remnant vegetation. Three of these River Red Gums are located along the Werribee River Corridor and three are located along Fiskin Street. Four of the six trees are located just outside of the boundaries of the subject site within either council road reserves or along the bank of the Werribee River Corridor.

All 32 trees are a significant component of the local landscape and provide an invaluable source of habitat. The trees are included in Schedule 8 of the Environmental Significance Overlay and they must be retained and protected as part of any development.

An Arboricultural Assessment identified 32 River Red Gums within the development plan area. The table below provides their identification numbers, canopy width and TPZs based on the ESO8.

Note that 24 Taverner Street was not surveyed by the Arborist and any future development of the site will require a detailed assessment.

ID No	Distance from trunk (m)	TPZ (m)
27	2.5	7.5
28	5	10
30	3.5	8.5
31	3	8
32	2	7
33	4	9
34	4	9
35	5	10
36	2	7
37	4	9
38	2	7
39	3	8
40	4	9
41	6	11
43	4	9
44	4	9
46	6	11
53	5.5	10.5
55	2.5	7.5
57	5	10
58	5.5	10.5
59	4	9
60	4	9
61	4.5	9.5
62	6	11
70	13	18
71	13	18
72	12	17
121	8	13
136	12	17
151	12	17
290	9.5	14.5

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5.5. Osage Orange Trees (including Heritage Trees)

Simons Farm was established and developed from the mid nineteenth century and influenced the local horticultural industry and township of Bacchus Marsh. The farm was the entire development plan area and included plantings of Osage Orange trees (*Maclura Pomifera*). Two prominent locations for these plantings are at the front of 22 Taverner Street and known as 'The Avenue' (Trees 202-268) and 'The Windbreak' (Trees 259-285).

Another row of Osage Orange trees runs north-south within 22 Taverner Street as an extension of 'The Avenue'. Osage Orange trees are present along the bank of the Werribee River, and in the northeast corner of 26 Taverner Street. 22 Taverner Street contains multiple plantings of semi-mature Osage Orange Trees. These are generally a single row of tightly spaced trees less than 6m in height.

The *Heritage Overlay* (HO170) applies tree controls to 22 Taverner Street and requires an assessment of any tree removal against the heritage overlay. The statement of significance for the Osage Orange trees only refers to 'The Avenue' and 'The Windbreak', though there are other Osage Orange trees on the property.

An assessment of the heritage Osage Orange trees onsite has determined that although many of these trees are individually in poor condition, there is an enhanced retention value due to their configuration as the 'Avenue and Windbreak'.

The *Development Plan Overlay (DPO4)* allows for a no more than one break in 'The Avenue' and 'The Windbreak' Heritage Trees.

The *Design and Development Overlay (DDO13)* encourages a new mixed density residential neighbourhood that responds to the characteristics and context of the locality and is respectful to the historic Osage Orange Avenue and Windbreak.

5.6. Existing Road Network

Taverner Street is classified as an Access Level 1 type road. It forms a two-way, two lane road with carriageway width of approximately 6.5m and a posted speed limit of 50km/hr. It has a seven-day average of 426vpd eastbound and 438vpd westbound.

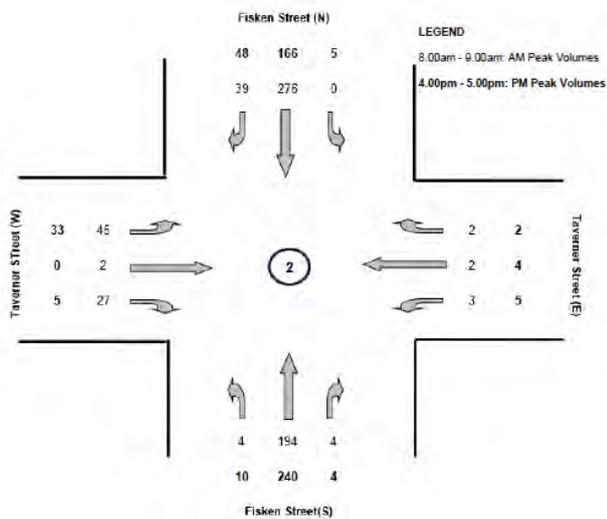
Fiskin Street is classified as a Trunk Connector in the *Moorabool Shire Council Road Management Plan*. It forms a two-way, two lane road with a carriageway width of approximately 7m flanked by 1m wide gravel shoulders and a speed limit of 60km/hr. It has a seven-day average of 1905 vehicles per day (vpd) northbound and 2261vpd southbound.

Boyes Close is a local road with a dead end. It is a two-way road with a carriageway width of approximately 5.5m and a default speed limit of 50km/hr.



A turning movement survey has been conducted at the Fiskin Street and Taverner Street Intersection which identified the peak hour turning movements as shown in Figure 11.

Figure 11 - Peak Hour Traffic Movements



5.7. Service Infrastructure

A Civil Engineering Servicing Report has been prepared by Cardno that identifies the following:

Drainage

There is an existing outfall drain at the southeast corner of the development plan area. It extends east along Taverner Street for approximately 400m then extends north along an unmade road reserve for approximately 200m before discharging into the Werribee River. The existing stormwater outfall does not have sufficient capacity to cater for the 1:100 year flows generated by the external catchment.

There is no opportunity to construct a new stormwater drain through the northern part of the development due to the required invert levels at the Werribee River. Therefore, duplication of the existing outfall drain will be required. Preliminary drainage computations indicate a pipe size requirement of 900mm diameter along Taverner Street and 1050mm diameter along the unmade road. The new outfall drains require a cover of approximately 1100mm.

Sewer

The sewer discharge point is the existing 150mm diameter sewer main located just south of 22 Taverner Street. It has an invert level of 97.00 ahd. Due to the topography, it is not possible to gravitate the eastern portion of the development to the legal point of discharge without using a significant volume of fill. Fill can be minimised by installing a sewerage pumping station in the southeast corner of the development plan area with a rising main connecting to the existing

discharge point. Western Water has provided 'in principle' support for this outcome.

Electricity

Fiskin Street and Boyes Close have overhead powerlines which can service the development plan area. An electrical substation will likely be required for the new development.

Potable Water

The development plan area is serviced by an existing DN100 diameter water main along Taverner Street, an existing DN150 diameter water main along Fiskin Street and an existing DN100 diameter water main along Boyes Close.

The existing DN100 diameter watermain along Boyes Close contains asbestos material and therefore any connection works must be undertaken in accordance with the current OHS (asbestos) regulations.

Recycled Water

Western Water has no existing recycled watermain within the Development Plan area.

Gas

There are existing gas mains along Fiskin Street and Boyes Close.

Telecommunications

There is a fixed line NBN service available within the vicinity of the development plan area. There are existing Telstra telecommunications cables along Taverner Street, Boyes Close and Fiskin Street.





5.8. Land Fragmentation

The development plan area consists of five titles owned by three landholders as shown in Figure 12. A developer currently owns 22, 24A and 26 Taverner Street which have shared boundaries across the northern portion of the development plan area. The three properties wrap around 24 Taverner Street which has a single storey dwelling occupied by its owners.

Given the extensive site constraints, including the low point of the development plan area being in the southeast corner, infrastructure for the development must be considered comprehensively and not based on title boundaries. This is particularly relevant for 24 Taverner Street which cannot be developed independently. It will rely heavily on infrastructure provision by the surrounding development.



Figure 12 - Land Ownership

5.9. Environmental Audit

As part of the Environmental Audit required for the development plan area, Atma Environmental has completed a Preliminary Site Inspection that identified potential sources of contamination including market gardens, existing/demolished structures, septic tanks, burn areas, burial pits and filling material (within the dam).

A detailed assessment of soil and groundwater was undertaken, and a Remediation Action Plan (RAP) was prepared. The RAP identifies the following onsite domains/features require removal to satisfy site auditing purposes:

- All surface solid inert waste.
- All anthropogenic inclusions within soil that would preclude the beneficial use of aesthetics (e.g. irrigation pipework, charcoal, concrete, brick pieces, etc.) to a maximum depth of 3m below ground surface.
- Endrin soil contamination 'hotspot' at TP81.
- All pesticide contaminated soil that may pose a human health or environmental risk to future receptors.

- TRH and benzo(a)pyrene soil contamination 'hotspot' at TP91.
- Remove waste at and around the in-ground drum at No. 26 (approx. location at and surrounding TP92).
- One abandoned septic tank and the associated pipework at No. 22.
- One active septic tank and the associated pipework at No 26.
- Fill/rubble in the homestead area of No. 22, including under dwelling and burial pits to the north (TP86) and south (TP83 & TP84) of the dwelling. Including potential burial pit/s to the north of shed at No. 22 (if present). Also include former swimming pool/cellar concrete at depth.
- All backfill in the in-filled dam at TP90, including friable asbestos soil contamination at the in-filled dam (TP90) at No. 26.
- All asbestos from within the top 3m of the soil profile (where present) must be removed.
- Below ground water tank at No. 20.
- Demolition and removal of all infrastructure/buildings (where possible).

Additionally, due to elevated concentrations of organochlorine pesticides (OCPs) across the development plan area, the raising of poultry and subsequent consumption of chicken eggs and meat should be precluded across the development plan area unless recommended management measures occur.

The RAP includes more details and a list of 10 Tasks as part of remedial works for the development plan area. Appendix E includes a plan showing the location of key items associated with the Environmental Audit and summarises required tasks.

Works associated with the Environmental Audit include demolition of several tenanted buildings. Therefore, these works are being deferred until after the Development Plan is approved. If these works are not completed prior to the application for a planning permit, they should be included as a condition of permit.

5.10. Geotechnical Assessment

Ground Science Pty Ltd was commissioned to conduct a geotechnical feasibility study of the development plan area. The study involved the excavation of 12 test pits at various locations as shown in the following figure.

The report outlines several key geotechnical considerations including:

- The potential for topsoil, considered too unstable to support structural roads, that may extend to relatively deep depths and require stripping.
- The potential for thick layers of sandy silt deposits, which are considered erodible and unstable, and

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may complicate the construction of footings or pavement.

- Workability of alluvial deposits may be poor during winter months with site trafficability in general likely to be poor during winter after stripping of topsoil.
- Earthworks, road boxing and construction may be complicated by difficulties in finding a suitable base for fill and the reuse of site won materials may have associated restrictions.

The report highlights that though the study has identified several geotechnical considerations as listed above, it is noted that good construction practice, appropriate site drainage/management measures and suitable engineering design of allotments and pavements can be adopted for the proposed development.

5.11. Cultural Heritage Management Plan

A Cultural Heritage Management Plan (CHMP) has been prepared by Benchmark Heritage Management in consultation with the Wathaurung. Assessment of the development plan area identified a Low Density Artefact Distribution (LDAD) across the development plan area consisting of eight stone artefacts located in 4 of the 84 shovel test pits. The CHMP identifies three Management Zones based on:

1. the Werribee River corridor
2. the central residential area and
3. the open space area in the south.

They are illustrated in the image below.



Figure 14 - CHMP Management Zones

The CHMP includes the following management Conditions:

Management Condition 1: Harm Permitted to the Aboriginal Cultural Heritage Place Taverner Street, Maddingley LDAD1 (7722-1199 [VAHR])

This Cultural Heritage Management Plan permits the proposed activity to harm the Aboriginal Cultural Heritage Place Taverner Street, Maddingley LDAD1 (7722-

1199 [VAHR]) subject to the management conditions detailed in Management Conditions 2-9.

Management Condition 2: Reburial of Cultural Material from Taverner Street, Maddingley LDAD1(7722-1199 [VAHR])

Aboriginal cultural material recovered/collected during the course of the assessment, salvage program or activity, must be reburied and the following must occur:

- The reburial location must be in the excavated location of Test Pit1 in the northwest of the Activity Area, and this location must be in an area which is protected from future development or disturbance.
- Once reburied, the reburial location must be recorded to sub-metre accuracy by a HA and be relocatable;
- Flagging tape should be laid within the hole, at a depth of 30cm above the reburied cultural material to identify that cultural material is buried below the flagging tape;
- A place record edit, and object collection form must be submitted to the VAHR, and a 'collection' component form must be completed by the HA and lodged with AV;
- Cultural material to be reburied must be placed in a durable container manufactured by WAC;
- A separate container is to be manufactured for each Aboriginal Place to be reburied;
- Where an Aboriginal Place is comprised of a large amount of cultural material it will be necessary to manufacture a number of containers to rebury the cultural material;
- The contents of the container must include the cultural material to be reburied, a catalogue of the cultural material to be reburied both on paper and on an archive quality storage medium, a copy of the relevant sections of the CHMP under which the reburial is being performed, and a handful of soil from the Aboriginal Place from which the cultural material originated;
- A smoking ceremony must be performed prior to the reburial of cultural material;
- The reburial must be attended by Wadawurrung representatives;
- The cost of the manufacture of the container, the analysis and preparation of the cultural material for reburial, smoking ceremony and Wadawurrung attendance at the reburial must be borne by the Sponsor.

In this instance the reburial of cultural material from Taverner Street, Maddingley LDAD1 (7722-1199[VAHR]) must occur within a period not exceeding six months from the completion of the activity. It is recommended that the reburial of cultural material occur at any location



within the Activity Area by mutual agreement between the Sponsor and the RAP. If no agreement is able to be reached regarding a reburial location the Sponsor and the RAP may agree to an alternative outcome such as the retention of the artefact by the Wadawurrung for educational purposes.

The reburial process must be carried out in accordance with the Wadawurrung standard procedure for reburial. Standard Procedure for the Reburial of Cultural Material. General Management Conditions

Management Condition 3: Restriction of Depth of Impact in the River Reserve – ‘Management Zone 1’.

The sub-surface testing in the river reserve has been undertaken on the basis of a maximum depth of impact for the construction of the pathway and park furniture as 500mm; therefore, the maximum depth for the construction of the pathway and park furniture must not, and is not permitted to, exceed 500mm in the river reserve.

Management Condition 4: Retention of Potentially Artefact Bearing Deposits within the Activity Area - ‘Management Zone 2’

Any deposits excavated or subject to ground disturbance in the residential section of Activity Area (20-24 Taverner Street) shown as ‘Management Zone 2’ must not be removed from the Activity Area and must be reinstated within the Activity Area post-construction. If, for some reason, any deposits excavated or subject to ground disturbance are not able to be retained in the Activity Area a meeting must be held with the Wathaurung Aboriginal Corporation, trading as Wadawurrung to agree on an alternative location for the deposits. The requirement to retain potentially artefact bearing deposits in the Activity does not include imported fill or soils that must be removed from the Activity Area for the purposes of compliance with the environmental audit.

Management Condition 5: Wetland Areas/Retarding Basins - ‘Management Zone 3’

The geotechnical investigation (see Appendix 10) and the complex assessment in the locations of the wetland areas/retarding basin indicate that the soils are shallow and contain compacted, hard clay sat shallow depths overlain by topsoils subject to annual soil improvement and ploughing. For the above reasons here is no requirement to retain the soils on-site in this section of the Activity Area—shown as ‘Management Zone3’.

Management Condition 6: Copy of the cultural heritage management plan

A hard copy of this approved Cultural Heritage Management Plan (management plan) must be held on site at all times during works for the activity.

Management Condition 7: Cultural heritage induction

A Cultural Heritage Induction must be conducted with all site workers/contractors involved in ground disturbing works by a heritage advisor and the Wathaurung Aboriginal Corporation (WAC) prior to, or at the commencement of, construction works. The cultural heritage induction must be conducted by a representative of the Registered Aboriginal Party (RAP)with the assistance of a heritage advisor.

All new personnel directly involved in construction works (i.e. site workers, contractors, sub-contractors) who have not previously been inducted as to cultural heritage for this project are to be inducted by the RAP, throughout the life of the project.

Awareness of the CHMP, management conditions and contingency plans must be incorporated into any job safety, tool box meetings, or Environmental Management Plan, and will be especially relevant for introducing the CHMP to new personnel working onsite alongside the RAP cultural heritage induction.

At least two weeks’ notice must be provided to the WAC when booking a representative to undertake the induction.

If a salvage is required, the salvage must be completed before the induction occurs. The purpose of the cultural heritage induction is to:

- describe and demonstrate the Aboriginal cultural heritage relevant to the activity area or the locality for personnel engaged in the construction of activity works
- create an awareness of Aboriginal cultural values, and
- inform personnel about the specific conditions of Part 1 of the management plan and the procedures set out for reporting any suspected Aboriginal cultural heritage that may be discovered or uncovered.

The cultural heritage induction will include:

- a brief history of the Aboriginal occupation of the activity area and broader region
- a summary of the assessments undertaken within the activity area during the preparation of the management plan
- specific details of all Aboriginal cultural heritage identified during the management plan assessments
- a summary of the conditions and contingency plans contained within the management plan, and
- a discussion of the compliance responsibilities of the Sponsor and all personnel involved in work within the activity area and the requirements of the Aboriginal Heritage Act 2006(Victoria).

This Cultural Heritage Induction must be organised and paid for by the Sponsor.





Management Condition 8: Protocol for handling sensitive information

With the exception of publicly available information, there shall be no communication or public release of information concerning Aboriginal cultural heritage without the written permission of the RAP. No onsite photographs or information concerning Aboriginal cultural heritage is to be circulated to the media or via social media without the written permission of the RAP.

Management Condition 9: RAP Compliance inspections

The WAC have determined that a series of three compliance inspections will be undertaken by WAC representatives during the activity in order to audit the works and ensure that the works comply with the management conditions and contingency plan contained within this CHMP. The representatives of the WAC must comply with all OH&S requirements of the activity area.

A minimum of three compliance inspections must occur throughout the lifetime of this activity. These inspections must occur at the following times:

- Before the commencement of works;
- During the activity works; and

- At the completion of all works within the activity area.

If Aboriginal cultural material is located during the compliance inspections, the contingency measures included in 2.3 must be enacted.

The WAC must be notified two weeks in advance before the required compliance inspections are to occur in order to book field representatives.

A WAC representative will conduct the inspections and complete a compliance checklist in Section 2.7 of the CHMP.

If the inspection reveals suspected non-compliance of the CHMP, then the procedure outlined in 2.6 of the CHMP will be initiated. If the inspection reveals a suspected breach of the Victorian Aboriginal Heritage Act 2006, then these actions must be reported to the WAC immediately and an Inspector maybe called out and/or a Stop Order.

This procedure must be organised and paid for by the site contractors and/or Sponsor.

Full details are outlined in the CHMP document including Contingency Conditions.





6. Urban Structure

The urban structure responds to the development plan area's opportunities and constraints to provide an efficient and functional development layout. In particular, the urban structure considers the stormwater management and sewer requirements of the development plan area within the context of the substantial 1:100 year flood area along Taverner Street. Other elements of the urban structure include:

- Retention of Heritage Osage Orange Trees within a Heritage Park. This includes the two rows of trees that form 'The Avenue' and a single row of trees that form 'The Windbreak'.
- Two drainage reserves with wetlands and onsite water retention to treat stormwater and to ensure water quality requirements are met before leaving the development plan area. The larger drainage reserve will be in the southeast corner and a smaller drainage reserve will be in the southwest corner.
- Orchard Road, an east-west local frontage road that runs along the north side of the drainage reserves and Heritage Park to cater for overland stormwater flows and provide a critical connection between the properties.
- An extensive shared path network that considers pedestrian and cycle movements through the residential area, within the open space network and to the railway station.
- Simons Lane, a local road with shared pedestrian and cycle path that runs north-south through the centre of the development plan area to link the Heritage Park with the Werribee River Corridor.
- An expansion of the Werribee River Corridor to provide a substantial riparian zone north of River Road. The design of the corridor has incorporated protection of the many River Red Gums and provides a shared path connection from Boyes Close to Fisken Street.
- A tree reserve at the eastern side of Fisken Street to protect the three very large River Red Gums that are a key visual landmark for the area.
- A tree reserve on the west side of Boyes Close to protect the single River Red Gum and two Peppercorn Trees that grow next to it.
- A superlot in the northeast corner of the development plan area that may be used for a childcare centre or medium density residential development.
- A primary entranceway to the development plan area from Fisken Street. The entry is located between two parcels of land designated for double fronted medium density dwellings.

More details in relation to the urban structure are provided in the following sections.

6.1. Local Road Network

The local road network responds to the Development Plan Overlay by providing:

- an internal road layout that follows a basic grid pattern and includes pedestrian and bicycle network along the Werribee River frontage
- a road to follow the Werribee River alignment between Fisken Street and Boyes Close
- minimal impact on the Osage Orange Avenue and Windbreak, including no more than one break in the Avenue and Windbreak.

The road network has been developed with consideration of:

- the benefits of rectangular residential blocks that can be subdivided to create standard housing lots for typical dwelling designs
- consideration of stormwater flows through the road network
- links between the river corridor and open space areas in the southern portion of the development
- staging and site access based on property boundaries and land ownership patterns.
- The land requirement for a future roundabout at Fisken Street and Taverner Street that will be required when the land south of Taverner Street is developed.

A *Traffic and Transport Assessment* prepared by Cardno has considered the road network in respect to traffic management, turning movements and general safety.

The assessment makes the following recommendations:

- Fully mountable splitter islands are provided along the River Road to improve the conspicuity of the priority movements at the intersections.
- A raised shared crossing is to be provided at the proposed shared path crossing on Orchard Road and River Road to ensure self-enforceable speeds and also to provide a safe crossing location for the shared path users. Implementation of a raised crossing will also discourage the likelihood of through traffic movements occurring between Fisken Street and Grant Street in future.
- A raised safety platform is to be provided at the entrance to the eastern residential area and super lot from Fisken Street. This will facilitate the pedestrian / bicycle movements along Fisken Street shared path and improve the conspicuity of the shared path to the driver.

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PLAN 2 - URBAN STRUCTURE



LEGEND

- Residential Lots <200m²
- Residential Lots 200-299m²
- Residential Lots 300-399m²
- Residential Lots 400-600m²
- Superlot
- Werribee River Corridor
- Tree Reserve
- Open Space
- Drainage Reserve
- Habitat Zone - Retained
- Arterial Road
- Local Road 16m
- Local Road with Shared Path 17.5m
- River Corridor Road 12.8m
- Park Frontage Road 14.5m
- Driveway Access
- Existing Title Boundary
- Indicative Lot Boundary
- New Shared Path 2.5m
- New Gravel Shared Path 2.5m
- Existing Shared Path
- Raised Path Crossing
- River Red Gum TPZ - To Be Retained
- Heritage Tree TPZ - To Be Retained
- Other Tree TPZ - To Be Retained
- Pedestrian Bridge - existing
- Future Roundabout
- Splay for Future Roundabout

- NOTES**
1. Residential lot boundaries and sizes are indicative only and subject to change.
 2. The Roundabout at the Fiskin Street and Taverner Street intersection is not required as part of this development. It will be required as part of development to the south of Taverner Street. Land to facilitate the future construction of the roundabout within the development plan area has been identified.

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- temporary court bowls are to be provided at the road ends between stages to allow vehicles (particularly service vehicles) to turn around at the end and drive out in forward direction.

Appendices A and B include details of road cross sections and functional layout plans for key intersections.

6.2. Werribee River Corridor Expansion

The extent of the Werribee River Corridor has been informed through a series of meetings with Melbourne Water. The alignment of the River Corridor Road has been varied from a consistent 50m setback. This is in response to the following considerations:

- Several pockets of River Red Gums where an increased setback was favourable.
- The urban design benefits of creating rectangular blocks for residential development.
- The bend in the Werribee River near Fisken Street that creates a narrow area of developable land.
- The requirements of the DPO to provide a shared path along the corridor. The shared path also encroaches into the core riparian zone in order to connect with Fisken Street.

Both the River Road and shared path alignment have been approved by Melbourne Water.

As part of their *Flora and Fauna Assessment, Practical Ecology* have prepared a *Werribee River Corridor Management Plan*. The plan provides a framework for the restoration of the Werribee River Corridor to ensure environmental values are effectively managed. It identifies broad principles for weed control, revegetation, and protection of this area. The report provides a summary of suitable native vegetation for planting within the river corridor. This information is to be incorporated into a detailed landscape plan for the corridor.

6.3. Heritage Park and Tree Reserves

The Heritage Park is located along the southern portion of the development plan area. It includes large open space areas and two tree reserves for the heritage protected Osage Orange Trees which form 'The Avenue' and 'The Windbreak'. Incorporating the tree reserves into a larger park will highlight their heritage value and provide additional amenity for future residents. The park will provide heritage information signage that will highlight the heritage values of the trees and history of the development plan area. The shared path network will provide connections between the neighbouring wetland reserves and make this a prominent feature along Taverner Street.

Impact on the heritage trees has been minimised by locating the Orchard Drive at the northern end of the tree reserves and only removing a small number of Osage

Orange Trees. The removal of these trees is required to accommodate the Orchard Drive and to provide a buffer area for the shared path.

Some of the retained trees are dead and or dying and may present a safety risk to the general public. They also produce large Osage Oranges which fall from the trees and can cause damage to people and property. Therefore, as part of any planning permit application, a Tree Management Plan should be prepared which addresses these concerns with respect to their heritage value. The Tree Management Plan will determine the size of the tree reserves.

The Development Plan Overlay Schedule 4 requires an assessment of any heritage tree removal against consideration of the Heritage Overlay. The large Heritage Park of approximately 1.2hectares allows for the majority of 'The Avenue' and 'Windbreak' to be retained. The DPO allows for the internal road network to create one break in these rows of trees. Orchard Drive results in a break at the northern end of the trees and has been aligned based on:

- The proposed Land Subject to Inundation Overlay and flood potential impacting the southern portion of the development plan area.

Stormwater management within the local road network.

- The need for onsite stormwater retention and water quality treatment.
- The required remediation works as part of the Environmental Audit at the northern side of the 'The Avenue'. This includes remediation due to asbestos, burn pits, a chicken coup, solid waste, buried bricks and suspected buried bricks in fill surrounding the existing dwelling.

The removal of some Osage Orange Trees at the northern end of these heritage features is required in response to the site's many constraints. Allowing a break for Orchard Drive is consistent with the *Development Plan Overlay Schedule 4*. The Heritage Park location along Taverner Street will features the most significant portion of the Heritage Trees. It will allow for the retained trees to be appropriately maintained into the future and remain as a prominent feature of the local area.

Appendix C includes Tree Reference Plans detailing which trees are to be retained and removed.

6.4. Residential Land and Dwelling Density

The urban structure has been designed to create efficient residential blocks that can be subdivided into rectangular lots. Where possible the design has maximised the number of lots that front north to the Werribee River and south to the drainage reserve and open space.

The residential blocks have considered the fragmented landownership within the development area as much as

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possible. Lot orientation is indicative, but the illustrated layout focuses on views to open space areas, passive surveillance and minimisation of crossovers to the shared path network.

The urban structure identifies a range of lot sizes including:

- small, low maintenance lots less than 200m²
- a range of rectangular lots from 200-400m² that will accommodate standard housing product
- some larger lots between 400-600m².

A number of double fronted townhouse lots are located at the interface with Fisken Street. These will front Fisken street with vehicle access coming from Orchard Drive and River Road to the west. These lots have been designed in response to many of the development plan area's challenges including the tree reserve to the north, land fragmentation, and the stormwater management strategy. They form a critical element to the design response across the development plan.

Preliminary design suggests the development will include approximately 140 dwellings within the development plan area. The superlot in the northeast corner may be used for a childcare centre or residential unit development. The detailed design of the subdivision and outcome for the superlot will determine the final dwelling yield.

6.5. Retention of River Red Gums

The development plan area contains 32 River Red Gums. All of these will be retained within the urban structure by incorporating them into the following reserves:

- Fisken Street Tree Reserve – this reserve will contain the 3 largest River Red Gums.
- Boyes Close Tree Reserve – this reserve will contain 1 River Redgum and 2 other trees within immediate proximity to it.
- Werribee River Corridor - this reserve will contain several pockets of River Red Gums and a few scattered trees. Three of these are larger trees near the escarpment and will assist in preventing erosion.

The *Flora and Fauna Assessment* identified several River Red Gum saplings near the large trees along Fisken Street. It is recommended that these are relocated to the Werribee River Corridor if feasible.

6.6. Native Vegetation

The Development Plan will require removal of three patches of native vegetation with a combined area of 0.021ha. The *Flora and Fauna Assessment, Native Vegetation Impact Assessment and Environmental Management Plan* prepared by Practical Ecology includes offset requirements for Habitat Zones 2, 4 and 5.

Habitat Zones 1 and 3 are both within the Werribee River Corridor and should be retained if possible. Habitat Zone 1 is 0.02ha of Red Gum Swamp located within the River Red Gums and will therefore be retained. Habitat Zone 3 is 0.006ha of Wallaby Grass and should be retained if possible. However, it is acknowledged that this patch is in an area with some trees that are to be removed and where Environmental Audit works are to occur. More detailed consideration of retaining Habitat Zone 3 will be required during the planning permit process and within the context of the environmental audit process.

Native Vegetation Impact Assessment and Offsets

The proposed Development Plan takes significant steps to avoid removal of native vegetation and minimise the impacts of removal. These include:

- Avoiding clearing of native vegetation by locating the entire development outside of the Werribee River Corridor
- Avoiding unnecessary removal of any large trees within the Werribee River Corridor
- Minimising impacts on large trees by reducing the development footprint where it occurs within any Tree Protection Zone of Large Trees
- Retaining all River Red Gums within the Werribee River Corridor and the development footprint
- Minimising impacts through the preparation of a Werribee River Corridor Management Plan to guide revegetation and habitat management.

The offsets that are required to account for vegetation loss on site are to be achieved by creating third party offsets off-site. The required offsets are available from multiple brokers, evidence of which is provided in the quote in Appendix 5 of the Flora and Fauna Assessment.

6.7. Stormwater Management

A *Stormwater Management Plan* is included in Appendix F. The plan splits the development plan area into two catchments. The larger catchment is the eastern portion of the development plan area and includes 22, 24, 24A and 26 Taverner Street. This area will be graded toward the southeast corner and Drainage Reserve A.

The smaller catchment is contained within 20 Taverner Street. It is graded to flow toward Drainage Reserve B in the southwest corner.

Both drainage reserves will include onsite retarding, to keep stormwater flows to predevelopment levels, and wetlands to treat the stormwater before reaching the outfall location at the intersection of Fisken Street and Taverner Street. The existing outfall runs east along the south side of the Taverner Street road reserve and then north within the unmade road reserve that connects to the Werribee River.

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6.8. Shared Path Network

An existing shared path network in the local area will be enhanced by new shared paths. These works include construction of:

- a new shared path to replace the existing gravel path along Fiskin Street from Taverner Street to the Tree Reserve. The existing gravel path should be removed from the east side of the River Red Gums considering it crosses the Tree Protection Zones. A new path is to be provided on the west side of the Tree Reserve, outside of the Tree Protection Zone where possible. The path will cross the driveway access to the superlot and connect to the shared path in the Werribee River Corridor.
- a new shared path on the north side of the Taverner Street road reserve. This detailed design of this path will need to consider the existing trees within the road reserve and the Osage Orange trees on 22 Taverner Street.
- a new shared path along the north side of the Drainage Reserves and Heritage Park that connects Fiskin Street to Boyes Close. This path can be integrated into the access tracks for either wetland as part of the detailed landscape design. The path design will need to consider the road interface at the north side of the Heritage Park where there may be a ground level differences resolved with either grading or a retaining wall.
- new shared path links running north-south through the Heritage Park.
- a new shared path within the Werribee River Corridor that is generally located outside the 40m riparian zone. Exceptions to the 40m setback will be required to connect to the existing path to Fiskin Street. The indicative layout on the plan has been approved by Melbourne Water but will be subject to detailed design.
- a new shared path running north-south through the centre of the development plan as part of the Simons Lane cross section. This will connect the Heritage Park to the Werribee River Corridor.

- a new shared path along the east side of Boyes Close that connects Maddingley Park to the pedestrian bridge crossing of the Werribee River. This path will need to consider encroachment into the Tree Protection Zone for the River Redgum in the Tree Reserve.
- Six new raised crossings are proposed as part of the shared path network. The include two along Taverner Street, two along Simons Lane and two along Fiskin Street.
- Way finding signage will be provided at key locations along the shared path network. The locations are shown on *Plan 3 - Key Design Elements*.

6.9. Northeast Superlot

An irregular shaped superlot has been included in the northeast corner between River Road and the Werribee River Corridor. The superlot responds to the small area of developable land at this location created by the bend in the Werribee River.

This superlot is appropriate for a medium density unit development or a childcare centre. Both uses provide opportunity for passive surveillance of the Werribee River Corridor. The superlot is provided direct access form Fiskin Street by a small area of road reserve between the Tree Reserve and the Werribee River Corridor. This road reserve will allow for the raised crossing associated with the Fiskin Street shared path.

It is Melbourne Water’s preference that development of the superlot incorporates open space within the northern portion to increase the separation between any built form and the Werribee River. Development of this site will be subject to a separate permit application and details of the design can be addressed at that time.





7. Key Design Elements

Plan 3 – Key Design Elements, can be found on the following page. It highlights specific locations within the urban structure that require detailed design consideration as well as raised path crossings and wayfinding signage.

Each of the elements on Plan 3 are listed below with a description and relevant design guidelines where appropriate.

Raised Path Crossings and Wayfinding Signage

Four raised path crossings are identified at key locations of the shared path network. They will improve the shared path network and work as traffic management devices.

Wayfinding signage is to be provided at key locations along the shared path network. Signage is to include direction and distance to:

- major destinations and nearby facilities such as retail centre, sports ground and recreation reserves
- public toilets and drinking water.

Element 1 – Interface with Boyes Close

This area has a number of design challenges based on existing features that are inconsistent across the length of the road. These include:

- the irrigation channel that sits at varying distances from the east side of the road reserve.
- the overhead powerlines with power poles located just east of the irrigation channel.
- the existing trees which are to be retained in a tree reserve and have tree protection zones (TPZs) that extend into the road reserve.

Design of Boyes Close should include:

- dwelling setback of 6m to Boyes Close.
- replacement of the irrigation channel with underground irrigation pipe within the road reserve to the satisfaction of Southern Rural Water.
- a shared path on the east side of the road that connects Maddingley Park to the pedestrian bridge over the Werribee River.
- Timber post and rail fencing on the south side of the Tree Reserve only. The shared path between the Tree Reserve and the carriageway is to be gravel as it is within the TPZ of the existing trees.
- dwelling setbacks of 6m on the east side of the road.

Appendix A includes a cross section for the Boyes Close road reserve.

Element 2 – Heritage Park Interface with Orchard Drive

Land to the north of the Heritage Park will require fill to raise it above the 1:100yr flood level and so that Orchard

Drive can accommodate overland stormwater flows heading to Drainage Reserve A. At the same time, the area around the retained Osage Orange Trees will need to remain at the existing ground level. Therefore, a retaining wall may be required on the south side of the road reserve to allow for the changed surface level. Alternatively, some fill may be used on the south side of the road to provide a gradual transition to the natural surface level at the base of the retained trees.

The shared path network has an intersection at this location and must be designed with consideration for the transition or retaining wall. The outcome will be subject to detailed engineering design and the proposed surface levels of Orchard Drive.

The shared path crosses the east-west road at this location. A raised shared path crossing is required here which will prioritise the walking and cycling movements and act as a traffic management device

Element 3 and 4 – The Avenue and Windbreak Heritage Trees

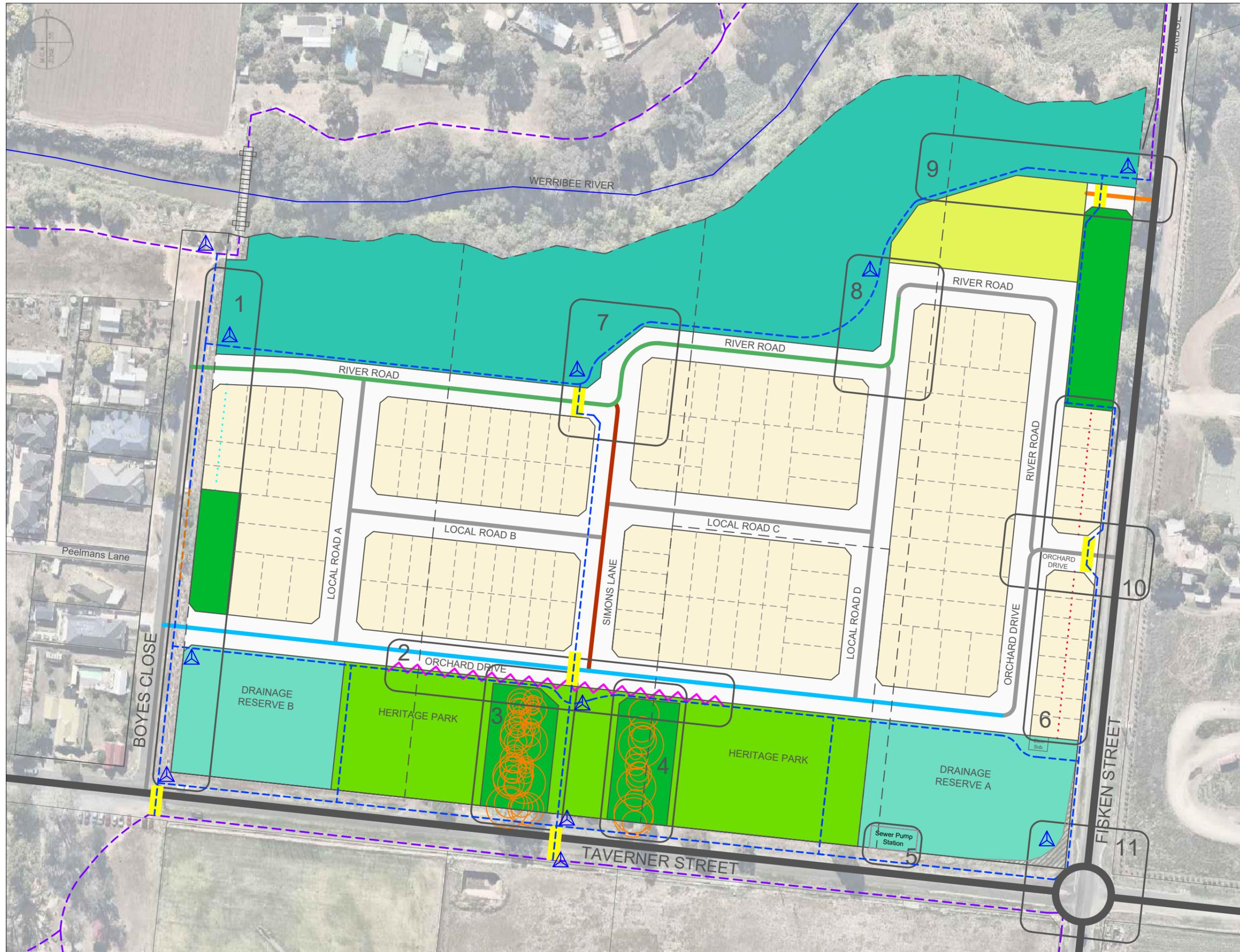
The urban structure has been designed to retain ‘The Avenue’ and ‘The Windbreak’ within a Heritage Park along Taverner Street. While the trees are in varying condition, when considered as groups, and managed as such, they are considered worthy of retention and will be a major landscape feature within the development.

Based on assessments during the preparation of the Development Plan, the following design criteria have been identified:

- A Tree Management Plan is to be prepared for ‘The Avenue’ and ‘The Windbreak’ that identifies those trees which are to be retained and removed, a works program to ensure the conservation and restoration of the trees and the appropriate Tree Protection Zones to be applied.
- The trees must be retained on Council land as a reserve to ensure appropriate long-term management and protection under a single manager.
- The view from Taverner Street through ‘The Avenue’ must be retained and enhanced through tree management.
- Arboricultural maintenance is required to address the existing structural and maintenance issues.
- Crown reduction pruning is required to reduce the overall height of the taller trees and to reduce the likelihood of future canopy failures.
- Vehicle exclusion barriers must be provided at either side of ‘The Avenue’.
- The potential to create a path for pedestrians within ‘The Avenue’ should be considered as part of the Tree Management Plan and final Landscape Plan for



PLAN 3 - KEY DESIGN ELEMENTS



- LEGEND**
- Residential Lots
 - Superlot
 - Werribee River Corridor
 - Tree Reserve
 - Heritage Tree Reserve
 - Wetland Reserve
 - Arterial Road
 - Indicative Lot Boundary
 - New Shared Path 2.5m
 - New Gravel Shared Path 2.5m
 - Existing Shared Path
 - Way Finding Signage
 - Retaining Wall or Graded Transition
 - Dwelling Setback - 9m
 - Dwelling Setback - 6m
 - Pedestrian Bridge - existing
 - Splay for Future Roundabout

ELEMENT 12
General Housing Design Guidelines
apply to the residential lots.

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the park. A visual relationship between 'The Avenue' planting and the 'The Windbreak' should be retained.

- Two east-west gravel paths should be provided within each row of heritage trees to allow for pedestrian passage and maintenance.
- A Heritage Interpretation Plan should be prepared by a suitably qualified consultant, which adheres to the guidance set out in the *Australia ICOMOS Practice Note 'Interpretation' (Version 1, November 2013)*. The plan should tell the story of the local area and the significance of the protected trees. Information should be incorporated into an informational sign board within the Heritage Park.

Element 5 – Sewer Pump Station

A preliminary location for the sewer pump station has been identified along Taverner Street due to its accessibility and distance from residential lots. Much of the pump station will be located below ground. However, any components that are visible should include design elements to integrate them into the surrounding wetland area and streetscape. This should be in the form of screening or landscaping utilising materials, colours and plant species taken from the immediate surrounds.

Element 6 – Double Fronted Townhouses along Fiskin Street

The urban structure results in two narrow strips of residential land positioned between Fiskin Street and Orhcard Drive/River Road. These two parcels are intended for dwellings that have vehicle and pedestrian access from the west and with the main dwelling frontage and pedestrian access from Fiskin Street.

The *Design and Development Overlay* requires that these dwellings:

- are set back no less than 9m from Fiskin Street
- are orientated towards Fiskin Street
- have a wall height along Fiskin Street that does not exceed 7m from natural ground level

The depth of these land parcels will be just over 20m and will have design constraints. Design of this area should include the following design elements:

- Lots should be at least 8.5m wide
- Lots immediately adjacent to the local entry road should be 11.5m wide to allow for 8.5m dwellings and 3m corner splays
- Dwellings must be located on the western side of the lots with vehicle access from the west and front entry facing Fiskin Street
- No setback from the Orchard Drive/River Road r reserve is required
- Dwellings should be setback 9m from Fiskin Street to allow for the ground level to transition from

existing sealed road level to a height 600mm above the 1:100yr flood level

- Front verandahs and balconies at the ground and first level may extend 2.4m into the front setback
- Private open space may be provided as balconies off of living areas that are a minimum of 8m².
- The western elevation of dwellings must include articulated built form including a balcony at the upper level
- Front fencing along Fiskin Street should be semitransparent and limited to 1.2m in height
- Fencing on the western boundary should be semitransparent and limited to 1.2m
- lots bounding public areas, such as northernmost and southernmost in each group to include passive surveillance of paths, tree reserves or roads, by including windows in walls overlooking these spaces
- East facing facades must include sound attenuation measures including double glazed windows to lessen the impact of the industrial uses to the east
- Dwellings should include ground level windows and doors to habitable rooms on the east and west elevation

Element 7 – Local Intersection A

Element 7 of the urban structure is the intersection of the 17.5m Simons Lane with the shared path and the 12.8m River Road. A functional layout of this intersection is provided in Appendix B to illustrate the preferred design outcome. This area is to include:

- Raised shared path crossing of River Road
- Wayfinding signage for the path network on the north side of River Road

Element 8 – Local Intersection B

Element 8 of the urban structure is the intersection of River Road and Local Road. A functional layout of this intersection is provided in Appendix B to illustrate the preferred design outcome. This area is to include wayfinding signage at the northern end of Local Road D.





Element 9 – Superlot Interface with Werribee River and Fisken Street

The superlot may be developed as a childcare centre or residential units. Both require a separate permit application.

If the superlot is used for a childcare centre:

- Vehicle and pedestrian access can be from Fisken Street and River Road. The Fisken St access should allow for a raised path crossing.
- Open space areas should be activated towards the Werribee River and the shared path, provide passive surveillance and reduce the dominance of built form from the river corridor.
- Activation of the River Road site frontage through provision of an alternative entrance, windows, outdoor areas, transparent fencing and varied building form.

If the superlot is used for residential units:

Vehicle and pedestrian access can be from River Road and a rear lane with direct access from Fisken Street. The Fisken Street access should be a road reserve and allow for a raised shared path crossing.

Residential units adjacent to the Werribee river corridor and shared path must provide passive surveillance and activation of these areas.

Appropriate responses should include:

- Frontages should be oriented and activated towards open space
- Direct access from dwellings to the river shared path

Residential units must be integrated into the surrounding development physically and visually. Appropriate responses should include:

- Permeable pedestrian networks
- Units arranged as clusters rather than one contiguous group
- Limiting crossovers to River Road, with car parking accessed from a rear lane
- High quality design, landscaping and landscape design with a focus on interface areas

Element 10 – Primary Site Access Intersection

The primary site access will be from Fisken Street. Most vehicle movements will be to and from the north as Fisken Street provides a direct connection to the Bacchus Marsh Town Centre. The traffic assessment by Cardno has concluded that no significant intersection treatment is required at this location to accommodate the anticipated vehicle turning movements.

Immediately to the west of the primary access to the development plan area is an internal intersection of River Road and Orchard Drive. The short distance between these intersections has been considered and priority has been given to the Orchard Drive as it provides access to a greater number of residential lots. Providing this priority movement in the road network will reduce the amount of queuing at this location as traffic waits to turn north or south after entering the development plan area.

The proposed shared path along Fisken Street should take the form of a raised crossing at the intersection to improve the conspicuity of the shared path to the drivers.

A concept design for this intersection has been provide in Appendix B.





Element 11 – Future Roundabout

The Fisken Street and Taverner Street intersection will not need to be upgraded due the development associated with this plan. However, development of the proposed indoor sports facility directly south of Taverner Street will require upgrade to a roundabout. Cardno has provided a concept plan for the future roundabout that will accommodate B-double heavy vehicles. This plan is provided in Appendix B.

The land required for the roundabout that is within the development plan area is illustrated in the urban structure. Design of any retarding basin or wetland in proximity to the intersection must consider this future land requirement.

Element 12 – General Housing Design Guidelines

- Street trees should be planted at 8m intervals, where possible, to maximise shade, cover and continuity of canopy cover.
- Front setbacks should be landscaped to compliment the streetscape and at least one advanced canopy tree be planted within the front setback where practical. This may not be practical for higher density townhouse lots.
- Hard paving (driveways, paths and carparking) should not visually dominate the front setback or negatively impact on existing trees, with large expanses of concrete to be avoided.
- Fencing height or transparency should allow for a visual relationship between the street and landscaping within a front yard to setback and communal areas. Front Fencing height should not exceed 1.2 metres where no other constraints on fencing apply
- Side fencing within the front setback (between dwelling frontage and front property boundary) and visible from the street, should not dominate the streetscape and be consistent with the height of the front fence on the site,
- Garages should not present as a dominant element of a dwelling when viewed from the street.
- Where appropriate, garages may be located and accessed from the rear or side of the lot.
- At least one habitable room at the ground floor of a dwelling should be located fronting the street to encourage interaction with the public realm.
- For corner sites, the dwelling on a corner should be orientated to the primary frontage whilst also addressing the secondary street frontage through large windows and design elements.
- Dwellings should actively address and engage with the street promoting a strong relationship between

the public and private realm, and passive surveillance of the street.

- Architectural elements that promote interaction between the private and public realm such as porches, balconies, bay windows, pergolas, verandas should be included in the design of the dwelling/s.
- Where appropriate, eaves should be incorporated into the design of dwellings to provide shade, articulation and visual interest to the dwellings.
- Front doors of a dwelling should be visible from the street, where possible, and include covered verandas or porticos to highlight and provide shelter to the entry.
- Where front doors of a dwelling are positioned away from the street, they should have a clearly defined path from the street, particularly in multi dwelling developments.
- Where a string of dwellings is proposed to front a street, a suite of architectural elements and materials should be used to reduce the appearance of bulk, differentiate individual dwellings whilst maintaining a consistent architectural thread throughout.
- This can be managed through staggering of the facades, varying setbacks, varying materials, articulation, setbacks of a second storey or gaps in the built form at regular intervals.
- Contemporary architecture is encouraged and can define a new style for streetscapes that lack a defined character or architectural era. Dwellings that present exemplary high quality contemporary architectural design and respond to these guidelines should be assessed primarily on the contribution they make in terms of architectural quality, interest, innovation and sustainability.
- Where brick render is proposed, large areas should be broken with the introduction of feature elements and varying materials.
- All garage doors, gutters, rain head overflows and down pipe profiles or treatments should complement the overall design of the dwelling.





8. Infrastructure and Staging

The Development Plan has considered the fragmented landholdings within the development site and the process has included correspondence with all landholders.

Due to stormwater catchments and sewerage requirements, 20 Taverner Street can be developed independently of 22-26 Taverner Street. However, the Development Plan anticipates some level of cooperation between the owner of 22, 24A and 26 Taverner Street and the owner of 24 Taverner Street. This relates to:

- Drainage Reserve A and associated infrastructure required at the southern end of 26 Taverner Street which will also cater for 24 Taverner Street.
- Stormwater from 22 Taverner Street which is intended to flow east along Orchard Drive, across 24 Taverner Street to Drainage Reserve A.
- Local Road C on 24A Taverner Street which is required to access lots on 24 Taverner Street.
- Local Road D on 24 Taverner Street which is required to access lots on 26 Taverner Street.
- Development on 24 Taverner Street which will have no road access until a connection is provided via 26 Taverner Street..
- Creation of a Tree Reserve for the heritage trees on the boundary of 22 and 24 Taverner Street.

If cooperation does not occur, changes to the Development Plan may be considered to facilitate early stages of development.

8.1. Key Infrastructure Requirements

A *Stormwater Management Strategy* has been prepared for the development plan area which identifies two catchments. Catchment A is made up of 20 Taverner Street and Catchment B is made up of 22-26 Taverner Street.



Figure 13 - SWMS Catchment A and B

A separate drainage reserve is provided for each catchment which has been sized to cater for on-site retention to limit outfall flows to predevelopment levels and wetland components to treat the water before reaching the outfall.

Both drainage assets will connect to the existing drainage outfall at the Taverner Street and Fiskien Street intersection. The existing outfall extends east along the south side of the Taverner Street road reserve and then north to the Werribee River within an unmade road reserve.

A sewer pumping station and rising main will be required in the southeast portion of the development plan area in order to pump sewerage back up to the discharge location south of the Heritage Park. The use of a sewer pump station for most of Stages 1, 2 and 3 will reduce the amount of fill required across the development area.





8.2. Indicative Staging

Plan 4 - Staging and Infrastructure, shows indicative staging based on preliminary consideration of the infrastructure requirements and land fragmentation within the development plan area. The ultimate staging will be dependent on detailed engineering design and negotiations between landholders. Therefore, the staging detail in this section relates mostly to the infrastructure requirements associated with identified parcels of the development.

The Infrastructure and Staging Table outlines each stage and infrastructure that should be provided as part of each stage.

STAGE 1

Stage 1 includes most of 26 Taverner Street, all of 24A Taverner Street and the northern portion of 22 Taverner Street. These properties are owned by the same developer.

This stage includes most of the critical infrastructure required to commence any development within the development plan area. This includes the primary entry from Fisken Street, the retarding basin and wetland in the southeast corner, a sewer pumping station and rising main along Taverner Street.

Full development of 26 Taverner Street cannot be achieved as part of Stage 1 unless there is cooperation with 24 Taverner Street. Local Road D is located on 24 Taverner Street and is required for:

- Vehicle access to 5 lots on 26 Taverner Street
- Stormwater flows from development on 22 and 24A Taverner Street which need to reach the drainage reserve on 26 Taverner Street.
- Sewerage pipe for development on 22 and 24A Taverner Street which need to reach the pump station on 26 Taverner Street.

Local Road C includes 1.5m of the road reserve on 24 Taverner Street. This is the footpath component of the cross section and can be developed whenever 24 Taverner Street is developed as part of Stage 3.

Ideally, cooperation between 24 Taverner Street and 26 Taverner Street will facilitate the development of Local Road D on 24 Taverner Street as part of Stage 1. However, this plan has provided staging if this cooperation is not achieved.

STAGE 2

Stage 2 is located on 22 Taverner Street. It will rely on the infrastructure delivered by Stage 1 development. The major consideration for this stage is the stormwater drainage and sewer alignment that is planned within Orchard Drive that crosses Stage 3.

Stage 2 development will require:

- a sewer connection between the residential area and the proposed pump station on 26 Taverner Street.
- a temporary open drainage channel across 24 Taverner Street.

Both of these infrastructure items can be provided in the Orchard Drive alignment if cooperation with 24 Taverner Street can be achieved. Alternative design solutions can also be explored.

Stage 2 will include delivery of the Heritage Park with Osage Orange Trees in the tree reserve that crosses the boundary into 24 Taverner Street. Therefore, the eastern portion of the Tree Reserve may not be implemented until development of Stage 3.

STAGE 3

Stage 3 is in different ownership than Stages 1 and 2. This stage relies on the infrastructure being delivered by Stages 1 and 2 of the development including:

- vehicle access from Fisken Street,
- sewer pump station and rising main,
- drainage reserve with wetland and on-site retarding.

Development of Stage 3 will provide the shared path on the south side of Local Road C and facilitate the development of the final 5 lots on 26 Taverner Street. The heritage tree reserve and heritage park will be completed as part of this stage.

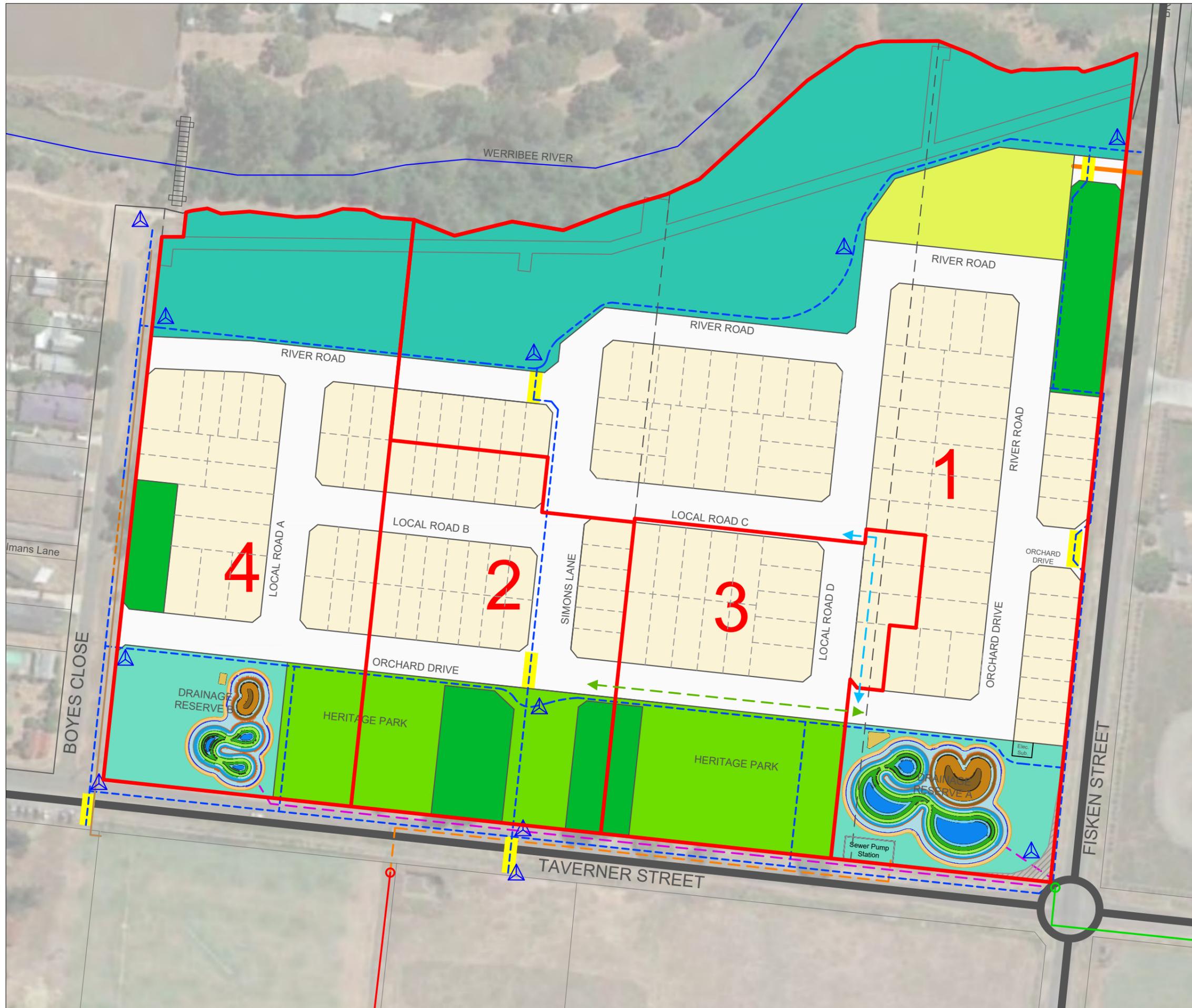
STAGE 4

Stage 4 is in separate ownership. It includes its own drainage reserve in the southwest corner of the development plan area and its own access from Boyes Close. A stormwater drain along Taverner Street will be required to connect the drainage reserve to the outfall location near Fisken Street.

The final staging of the development plan area will depend on coordination between landholders and more detailed design and planning at the planning permit stage. Variations to the urban structure and staging must be considered at the permit stage to facilitate development of the area.



PLAN 4 - INFRASTRUCTURE AND STAGING



- LEGEND**
- Stage Boundary
 - Existing Sewer
 - Proposed Sewer - Rising Main
 - Existing Stormwater Outfall
 - Proposed Wetland Drainage Pipe
 - Irrigation Channel Replaced with Pipe
 - Sewer Pump Station
 - ↔ Other Infrastructure For Stage 1
 - ↔ Other Infrastructure For Stage 2
 - Existing Title Boundary
 - New Shared Path
 - New Gravel Shared Path
 - Raised Path Crossing
 - ▲ Way Finding Signage
 - Future Roundabout
 - Splay for Future Roundabout

- NOTES**
1. Stage boundaries are indicative and subject to detailed design.
 2. Existing title boundaries are aligned with stage boundaries and road reserves in some locations. Refer to Plan 1 Site Features to confirm title boundaries.
 3. This plan illustrates key infrastructure related to the indicative development staging. It does not show all infrastructure requirements.
 4. Detailed location and sizing of all infrastructure to be determined during the planning permit and functional layout planning processes.
 5. 'Other infrastructure' required for Stage 1 includes:
 - an underground sewer connection between Local Road C and the pump station.
 - a temporary open drainage channel or temporary pipe between Local Road C and the drainage reserve.
 Alternatively, Local Road D could be constructed on 24 Taverner Street as part of Stage 1.
 6. 'Other infrastructure' required for Stage 2 includes:
 - an underground sewer connecting Stage 2 to the pump station
 - a temporary open drainage channel across 24 Taverner Street until Orchard Drive is constructed.
 7. Refer to Section 8 - Infrastructure and Staging and the Infrastructure and Staging table in the Taverner Street Development Plan for more detail.

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Infrastructure and Staging Table

Stage	Description	Key Infrastructure Requirements	Considerations
1	Most of 26 Taverner St All of 24A Taverner St Northern Portion of 22 Taverner St	<ul style="list-style-type: none"> • Primary Site Access – new intersection for Orchard Drive at Fisken Street . • Tree Reserve for the River Red Gums along Fisken Street. • Urbanised verge on west side of Fisken Street. • Shared path along west side of Fisken Street from Taverner Street to the Tree Reserve, around outside of Tree Reserve and back to Fisken Street. • Retarding basin and water quality treatment in Drainage Reserve A . • Sewer pump station and rising main to the discharge point south of 22 Taverner Street. • Landscaping and shared path in the Werribee River Corridor. • Direct driveway access to the superlot from Fisken Street. • Shared path network within Stage 1 area and interface with surrounding roads. • One raised path crossing of the River Road at the end of Simons Lane. • Wayfinding signage at Taverner and Fisken Street and three locations along the Werribee River. • Construction of the northern side of Taverner Street consistent with IDM. 	<ul style="list-style-type: none"> • A number of lots located on 26 and 24A Taverner Street require vehicle access from Local Road D located on 24 Taverner Street. Stormwater and sewer infrastructure will ultimately be required with in the road reserve. If this road is not constructed as part of Stage 1, temporary infrastructure may be required to service the northwest portion of Stage 1. This will delay the development of several lots which could otherwise be part of Stage 1.
2	Southern Portion of 22 Taverner St	<ul style="list-style-type: none"> • Infrastructure delivered as part of Stage 1 including internal road network, retarding basin and water quality treatment asset in Drainage Reserve A, sewer pumping station and rising main. • Heritage Park with tree reserves and heritage signage/information. • Shared path connecting the Heritage park to the Werribee River Corridor. • Shared path network within Taverner Street road reserve connecting 26 Taverner Street to 22 Taverner Street shared path network. • A raised path crossing at Taverner Street and Orchard Drive. • Landscaping and shared path in the Werribee River Corridor. • Wayfinding signage at Taverner Street (x2) and Orchard Drive. • Construction of a temporary drainage infrastructure across 24 Taverner Street to allow stormwater from Stage 2 to reach Drainage Reserve A. • Construction of sewer infrastructure connecting Stage 2 development with the pump station. This may be required across 24 Taverner Street. • Two Tree Reserves for the Osage Orange Trees. • Construction of the northern side of Taverner Street consistent with IDM. 	<ul style="list-style-type: none"> • If the sewer and stormwater connections across 24 Taverner Street cannot be achieved, grading of the development plan area to utilise Drainage Reserve B in the southwest corner can be considered <div data-bbox="1664 927 1973 1185" style="border: 1px solid blue; padding: 5px; margin-top: 10px;"> <p style="text-align: center;">MOORABOOL PLANNING SCHEME Development Plan Approval in accordance with Clause 43.04 of the Moorabool Planning Scheme.</p> <p style="text-align: center;">I certify that this document forms part of the endorsed Development Plan approved by resolution of Council on 2 December 2020. 14/12/2020 page 39 of 66 Signature for the Responsible Authority</p> </div>
3	24 Taverner St Small portion of 26 Taverner St	<ul style="list-style-type: none"> • Infrastructure delivered as part of Stage 1 including internal road network, retarding basin and water quality treatment asset in Drainage Reserve A, sewer pumping station and rising main. • Eastern side of the Tree Reserve for the Osage Orange Trees. • Shared path connection between Orchard Drive and Taverner Street. • Construction of the northern side of Taverner Street consistent with IDM. 	<ul style="list-style-type: none"> • Development of 24 Taverner is not possible until key infrastructure is provided on 26 Taverner Street. • A portion of 26 Taverner Street cannot be developed until some infrastructure is provided within 24 Taverner Street.



4	20 Taverner Street	<ul style="list-style-type: none">• Retarding Basin and water quality treatment asset in Drainage Reserve B.• Shared path network within Stage boundary and interface with surrounding roads.• Tree Reserve along Boyes Close.• Urbanisation of the East side of Boyes Close with shared path from Taverner St to the Werribee River.• Western portion of the Heritage Park.• Landscaping and shared path in the Werribee River Corridor.• Raised path crossing across Taverner St.• Wayfinding signage at 4 locations along Boyes Close• Construction of the northern side of Taverner Street consistent with IDM.	<ul style="list-style-type: none">• 20 Taverner Street can be developed independently of other properties within the Development Plan.
---	--------------------	---	--

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9. Landscape Concept Plan

A *Landscape Concept Plan* has been prepared by John Patrick Landscape Architects. It provides an overarching concept for the development plan area to ensure consistency between stages and development by different owners by providing guidance on how open space reserves, road reserves, and tree reserves should be landscaped and fenced.

The Landscape Plan emphasises how the Development Plan is consistent with the objectives of the Bacchus Marsh & Ballan Open Space Framework by utilising the shared path network to connect the Werribee River Corridor to the new open space areas to the south. The new open space areas highlight the unique heritage values of the area and transition to the proposed indoor sports facility and Maddingley Park Reserve and Sporting Fields.

Street Trees

The *Landscape Concept Plan* focuses on the use of three types of native trees to line the street network.

Melia Azederach 'Elite' (Elite White Cedar) are a smaller tree appropriate for the local access streets and areas with smaller residential lots.

Eucalyptus Melliodora (Yellow Box) are a larger statement tree and have been used along the northern side of the wetlands and Heritage Park. They have also been used on the east and west boundary of this open space precinct.

Eucalyptus Viminalis SSP. Viminalis (Manna Gum) are a larger statement tree and have been selected to line the Werribee River Corridor and provide a prominent delineation between the urban development and the core riparian zone.

The east side of Taverner Street already has 3 large established trees of varying types within the road reserve in front of 24 Taverner Street. A range of other trees can be selected by Moorabool Council for planting on the north side of Taverner Street.

Tree Reserves

The *Landscape Concept Plan* addresses the tree reserve on Fiskin Street and Boyes Close, both of which have River Red Gums along the property boundary and Tree Protection Zones that extend well into the road reserves.

The Fiskin Street Tree Reserve is to have new wood chip mulch under the TPZs with new native grasses planted in the rest of the reserves. New timber post and rail fencing is required along the boundary of the reserve where the tree management plan considers it appropriate.

The Boyes Close Reserve has overhead powerlines and the irrigation channel within the TPZ of the River Red Gum. The TPZs are to have new wood chip mulch within the TPZs and surrounded by new native grasses. The new timber post and rail fence is required along the southern

reserve boundary but may not be appropriate in the western side as the TPZ encroaches into the road zone. This can be addressed as part of a Tree Management Plan for this reserve.

Drainage Reserve and Heritage Park

The open space precinct at the south of the development plan area will include a range of tree planting within the wetland area which are to be determined as part of detailed design of the wetlands.

The Heritage Park is to be mainly new hydroseeded lawn areas for passive recreation between the wetlands and the Heritage Osage Orange Trees.

The concept plan relies on the primary shared path network that extends through the precinct but also highlights the need for local connections between the Heritage Trees. Two east-west gravel paths are proposed within both 'The Avenue' and 'The Windbreak'. A New Timber Post and Rail Fence is to be provided around the Heritage Trees with openings for the paths and to allow passage for pedestrians and maintenance staff. The location of these paths and fencing should be considered as part of the Tree Management Plan to be prepared for the Heritage Osage Orange Trees.

Timber bollards with 1.5m spacing are to be provided around the perimeter of the wetlands and the Heritage Park to prevent vehicle access. These have been illustrated in the relevant road cross sections.

Werribee River Corridor

The Werribee River Corridor includes the vegetated buffer and core riparian zone for the Werribee River. Prior to any development, and when functional design detail is available, a detailed landscape plan will be required for this area. The detailed landscape plan should include:

- timber bollards along the edge of the corridor to act as a vehicle exclusion barrier
- a 10m vegetated buffer along the southern boundary of the corridor with trees and a shared path
- works outlined within Practical Ecology's Flora and Fauna assessment, Native Vegetation Assessment and Environmental Management Plan
- any requirements of Melbourne Water or Moorabool Shire Council
- plants listed by Moorabool Shire's, Bacchus Marsh Native Plant List and Melbourne Water's, Healthy Waterways Visions - Vegetation Species 23CVU. Plants that appear on both lists are in the following table.





TREES	
Botanical Name	Common Name
Acacia dealbata	Silver Wattle
Acacia melanoxylon	Blackwood
Allocasuarina littoralis	Black Sheoke
Bursaria spinosa ssp. Spinosa	Sweet Bursaria
Eucalyptus ovata var. ovata	Swamp Gum
Eucalyptus rubida	Candlebark
Eucalyptus viminalis ssp. Viminalis	Manna Gum

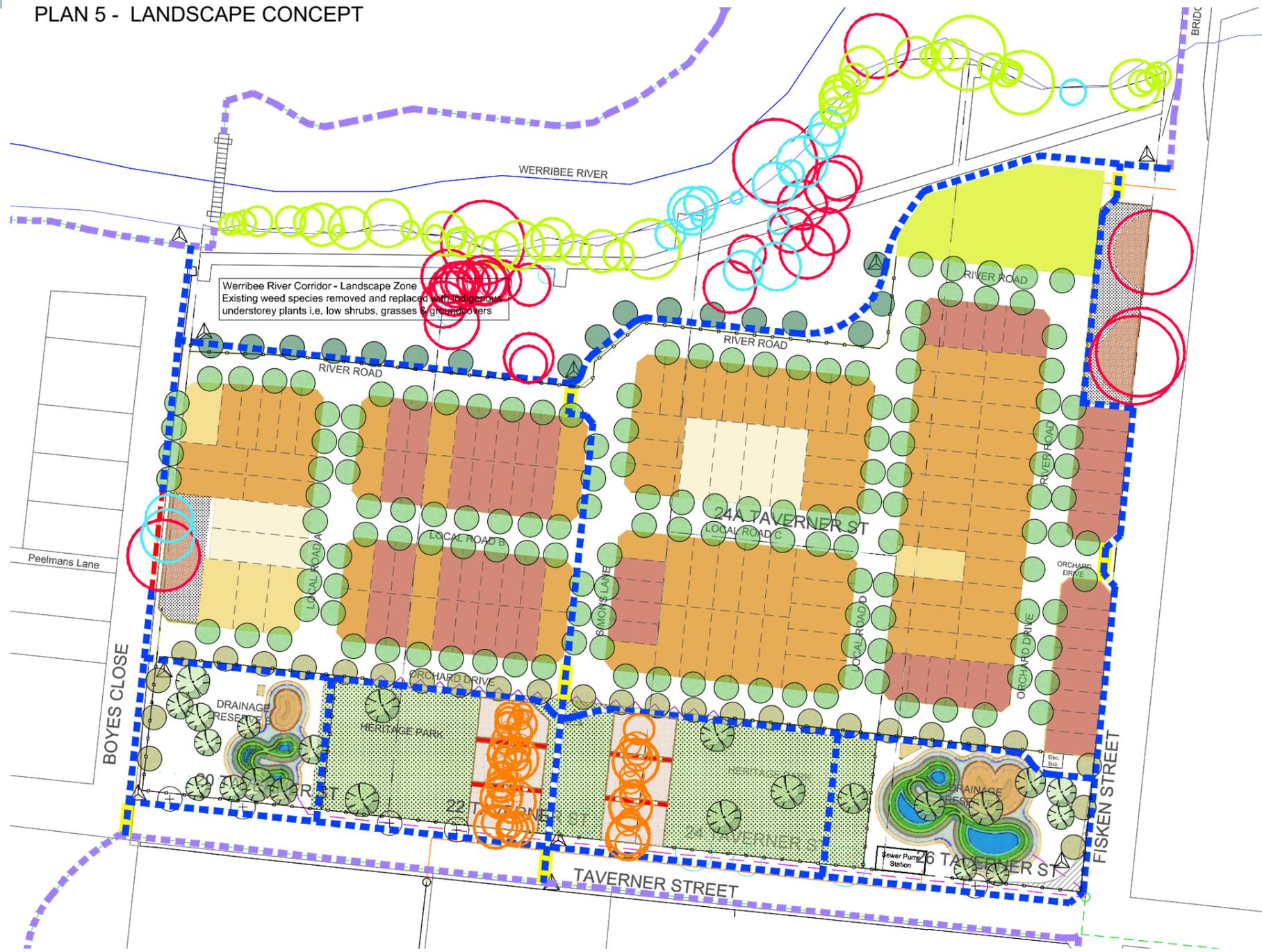
SHRUBS	
Botanical Name	Common Name
Banksia marginata	Silver Banksia
Cassinia longifolia	Shiny Cassinia
Leptospermum continentale	Prickly Tea-tree
Leptospermum myrsinoides	Heath Tea-tree
Muehlenbeckia florulenta	Tangled Lignum
Ozothamnus ferrugineus	Tree-Everlasting

GRASSES AND SEDGES	
Botanical Name	Common Name
Austrodanthonia racemosa var. racemose	Striped Wallaby-grass
Austrodanthonia pilosa	Velvet Wallaby-grass
Austrodanthonia laevis	Smooth Wallaby-grass
Carex appressa	Tall Sedge
Ficinia nodosa	Knobby Club-sedge
Juncus pallidus	Pale Rush
Juncus sarophorus	Broom Rush
Lepidosperma laterale	Variable Sword-sedge
Lomandra longifolia ssp. longifolia	Spiny-headed Mat-rush
Microlaena stipoides var. stipoides	Weeping Grass
Phragmites australis	Common Reed
Poa labillardierei var. labillardierei	Common Tussock-grass
Themeda triandra	Kangaroo Grass
Xanthorrhoea minor ssp. Lutea	Small Grass-tree

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PLAN 5 - LANDSCAPE CONCEPT



- Existing River Red Gum TPZ - To Be Retained
- Existing River Corridor Tree TPZ - To Be Retained
- Existing Tree TPZ - To Be Retained
- Existing Heritage Tree TPZ - To Be Retained
- New Wetland Tree - Native trees to later selection
- New Street Tree - MELIA AZEDERACH 'Elite' ('Elite White Cedar')
- New Street Tree - EUCALYPTOS MELLIODORA (Yellow Box)
- New Street Tree - EUCALYPTUS VIMINALIS SSP. VIMINALIS (Manna Gum)
- New Taverner Road Reserve Tree - To Council Selection
- New Shared Path - 2.5m
- New Shared Gravel Path - 2.5m
- Existing Shared Path
- Raised Path Crossing
- New Native Grasses plantings within Tree Reserve
Taxa selection to later detailed design
- New Hydroseeded Lawn Areas within Heritage Reserve
Seed Mix to Council Approval
- New Wood Chip Mulched Areas in Tree Reserves
Weeds & Lawn removed by hand prior to installing mulch
- New Timber Post & Rail Fence to Tree Reserves - 0.9m H
- New Timber Bollards to Werribee River Corridor, Wetlands & Heritage Reserves - @ 1.5m spacings
- New Wetlands to Civil Design & Authority Approvals - Swales & Basins to be planted with native plants tolerant of occasional inundation



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Landscape Development Plan
1:1000 @A1 1:2000 @A3

LANDSCAPE GUIDELINES

- HERITAGE RESERVE**
- Existing Heritage trees to be retained and protected with perimeter timber post & rail fencing.
 - Reserves to be cleared of weeds and lawn by hand and mulch installed to reduce competition for moisture from weeds and other vegetation.
 - Openings in fencing to allow passage for pedestrians and maintenance staff.
- RIVER RED GUM RESERVES**
- River Red Gum Reserves in Boyes Close & Fiskin Street site are to be fenced to using timber post & rail fencing along road frontages and by paling fencing to lot boundaries.
 - Reserves to be cleared of weeds and lawn by hand and mulch installed to the extent of individual tree's TPZ.
 - Remaining areas within reserve to be planted with a mix of native species grasses and groundcovers.
 - Remove existing gravel path opposite Red Gum Reserve in Fiskin Street and relocate to within Reserve. Path to be outside of TPZ's.
- DRAINAGE RESERVE**
- To detailed Civil design.
 - Drainage Swales & Basins to be planted with native species plants tolerant of occasional inundation.
 - Native species tree planting to perimeters.
 - Screening of Pump Station with native species shrubs & grasses.
- WERRIBEE RIVER CORRIDOR**
- Timber bollards between River Corridor and road reserve.
 - Shared 2.5m wide path within the vegetated buffer.
 - Remove any weed species and replace with indigenous vegetation as per recommendations in Practical Ecology's 'Flora & Fauna Assessment, Native Vegetation Impact Assessment & Environmental Management Plan, 20-26, Taverner Street, Maddingley.
 - A Detailed Landscape Plan will be prepared for this area. It will specify plant species that are approved by Moorabool Shire and by Melbourne Water.
- STREETSCAPES**
- Plant new native species street trees within grassed naturestrips for all internal roads.
 - Plant new street trees within Taverner Street road reserve where space permits. Species selection to Council nomination.



TIMBER POST AND RAIL FENCING EXAMPLE OF MAN MADE WETLAND (ARTIST IMPRESSION) WERRIBEE RIVER NORTH OF SITE THE HERITAGE AVENUE

REVISION	DATE	BY
A To Coucil Requests	27/07/2020	BM

NOT FOR CONSTRUCTION

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CLIENT
Tavener Street Development

PROJECT
TAVENER STREET
20-26 Taverner Street,
Maddingley, VIC

DRAWING
Landscape Development Plan
for Town Planning

SCALE	DATE	DRAWN	CHECKED	JOB NO	DWG NO
1:2000 @A3	27/07/2020	KW	BM	19-854	LDP 01A





10. Permit Conditions

The following is a list of issues and items that must be addressed as a condition of permit for the relevant property within the Development Plan Area.

CONDITIONS OF PERMIT

1. Any permit for 22 Taverner Street must have a condition in relation to the heritage Osage Orange Trees that form 'The Avenue' and 'The Windbreak' requiring:
 - a. an updated statement of significance and heritage curtilage,
 - b. a tree management plan that addresses maintenance prior to handover that is in line with the recommendations of the ENSPEC report
 - c. installation of interpretive signage.
2. A Tree Management Plan must be prepared in relation to any retained trees within the development area.
3. In relation to any properties that include sections of the Werribee River Corridor, an expanded Werribee River Corridor Management Plan must be submitted that:
 - a. Addresses all of the Taverner Street Development Plan land within the Werribee River Corridor.
 - b. Provides guidance for how the Landscape Plan should consider the incorporation of this area into the open space network of the development plan area.
 - c. Provides specific detail relating to the recommended number of each species for revegetation, density of plantings, and location of the species.
4. Before a sensitive use (residential use, childcare centre, pre-school centre or primary school) commences or before the construction or carrying out of buildings and works in association with a sensitive use commences, either:
 - a. A certificate of environmental audit must be issued for the land in accordance with Part IXD of the Environment Protection Act 1970, or
 - b. An environmental auditor appointed under the Environment Protection Act 1970 must make a statement in accordance with Part IXD of that Act that the environmental conditions of the land are suitable for the sensitive use.
5. Prior to commencement of any works associated with a permit, a Site Environmental Management Plan (SEMP) must be prepared approved by the responsible authority.
6. Prior to commencement of any works, plans for the sewer pump station must be provided that illustrate how any components of the pump station that are visible will be screened. The plans should include design elements to integrate them into the surrounding wetland area and streetscape. This should be in the form of screening or landscaping utilising materials, colours and plant species taken from the immediate surrounds. The plans must be approved by the responsible authority.
7. Prior to Statement of Compliance for any Stage of development that includes the southern open space on 22 Taverner Street must include heritage information signage that highlights the heritage values of the Osage Orange Trees and the history of the development plan area. The information and detail of the signage must be approved by the responsible authority.
8. Prior to commencement of any works associated with a permit, an updated Flora and Fauna Assessment that assesses the development plan area in the spring must be undertaken to confirm that there has been no significant change to the flora and fauna values.
9. Prior to commencement of any works associated with the Werribee River Corridor, a detailed Landscape Plan must be approved by the responsible authority. The Landscape Plan will address:
 - a. the issues outlined in the Werribee River Corridor Management Plan
 - b. All planting, shared paths, furniture, and lighting within the Werribee River Corridor.
10. All open space reserves created as part of any subdivision, including landscaping, heritage trees and drainage assets, must be maintained to the satisfaction of the Responsible Authority for a period including two summers before the Council takes over maintenance responsibilities.

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14/12/2020 page 44 of 66
Signed: [Signature]
Responsible Authority



Appendix A - Road Cross Sections

Boyes Close

Fisken Street

Taverner Street

Simons Lane - Local Road with Shared Path – 17.5m

Local Road – 16m

Orchard Drive - Park Frontage Road – 14.5m

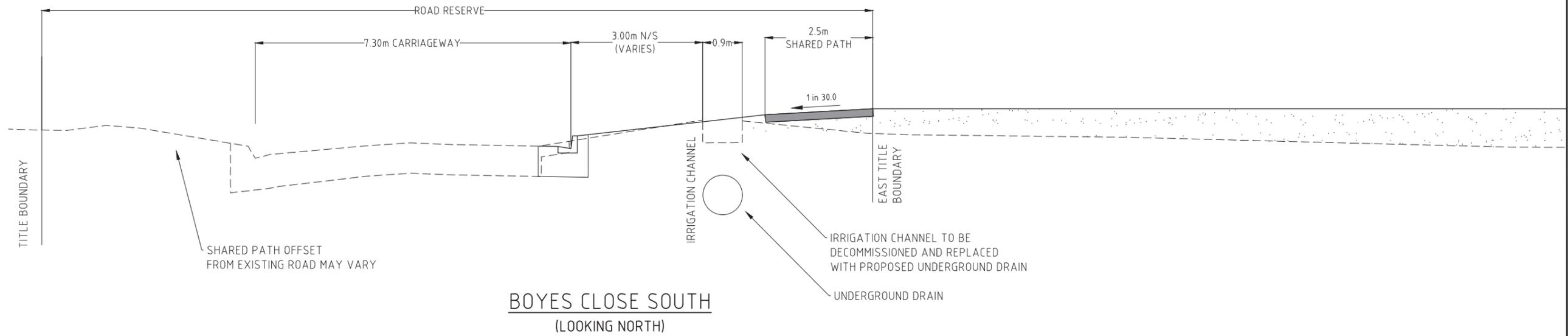
River Road – 12.8m

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LEGEND	
—	PROPOSED NEW ITEMS
- - -	EXISTING INFRASTRUCTURE

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REV	DATE	REVISION	APP'D	ISSUE	DATE	ISSUE	APP'D
	03	29.10.20		PRELIMINARY ISSUE			AK
	02	17.07.20		PRELIMINARY ISSUE			JL
	01	22.01.20		PRELIMINARY ISSUE			JL

DESIGNED	A. KUMAR	DATE	29.01.2020
DRAWN	A. DEJONG	SCALE	NTS
CHECKED	-	SHEET SIZE	A1
APPROVED	-	MELWAY	42 A10
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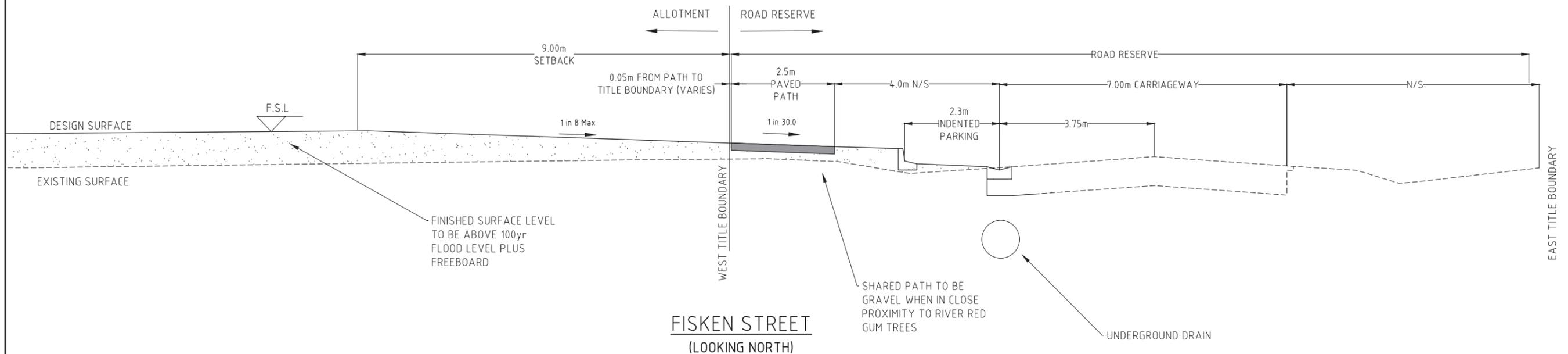
CLIENT
TAVERNER STREET
 DEVELOPMENT PLAN

PROJECT
EXTERNAL CROSS SECTIONS
 20-26 TAVERNER STREET
 MADDINGLEY VIC 3340
 MOORABOOL SHIRE COUNCIL

CIVIL DRAWING					
DRAWING TITLE BOYES CLOSE CROSS SECTION					
TGM DRAWING NUMBER 17902-201	CLIENT DRAWING NUMBER	SHEET 4	OF 4	REV 03	ISSUE

LEGEND	
——	PROPOSED NEW ITEMS
----	EXISTING INFRASTRUCTURE

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FISKIN STREET
(LOOKING NORTH)

REV	DATE	REVISION	APP'D	ISSUE	DATE	ISSUE	APP'D
02	17.07.20	PRELIMINARY ISSUE	JL				
01	22.01.20	PRELIMINARY ISSUE	JL				

DESIGNED	A. KUMAR	DATE	29.01.2020
DRAWN	A. DE JONG	SCALE	NTS
CHECKED	-	SHEET SIZE	A1
APPROVED	-	MELWAY	42 A10

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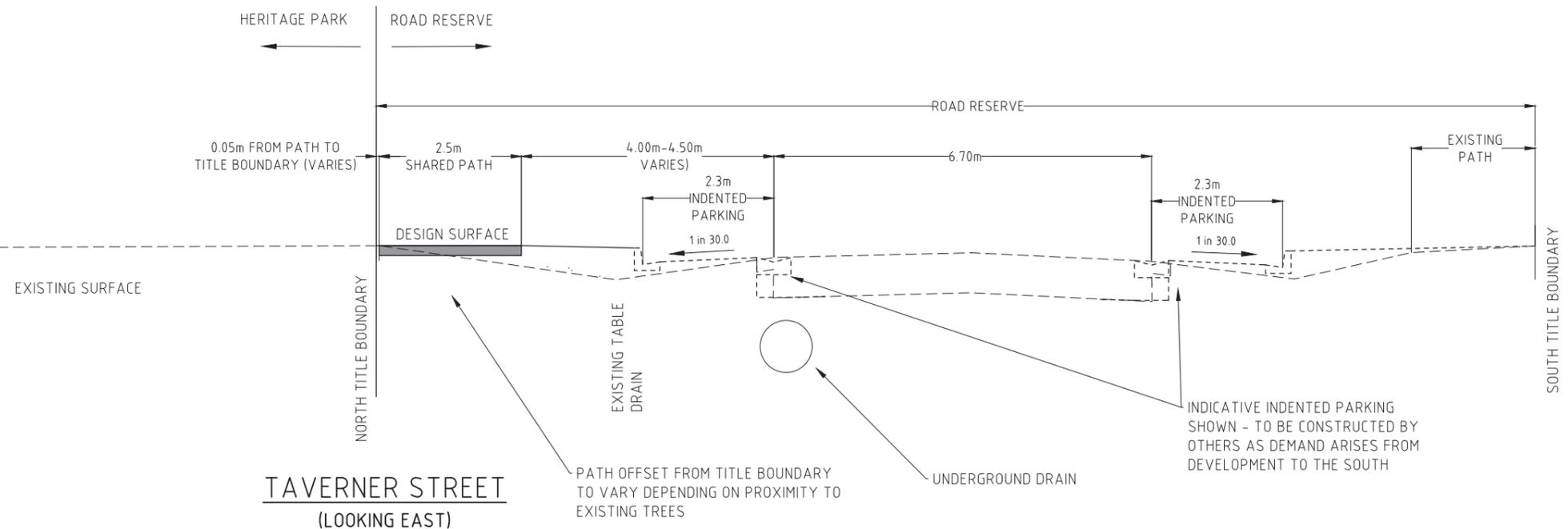
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PROJECT
EXTERNAL CROSS SECTIONS
 20-26 TAVERNER STREET
 MADDINGLEY VIC 3340
 MOORABOOL SHIRE COUNCIL

CIVIL DRAWING					
DRAWING TITLE FISKIN STREET CROSS SECTION					
TGM DRAWING NUMBER 17902-201	CLIENT DRAWING NUMBER	SHEET 3	OF 4	REV 02	ISSUE

LEGEND	
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- - -	EXISTING INFRASTRUCTURE

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TAVERNER STREET
(LOOKING EAST)

REV	DATE	REVISION	APP'D	ISSUE	DATE	ISSUE	APP'D
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01	22.01.20	PRELIMINARY ISSUE	JL				

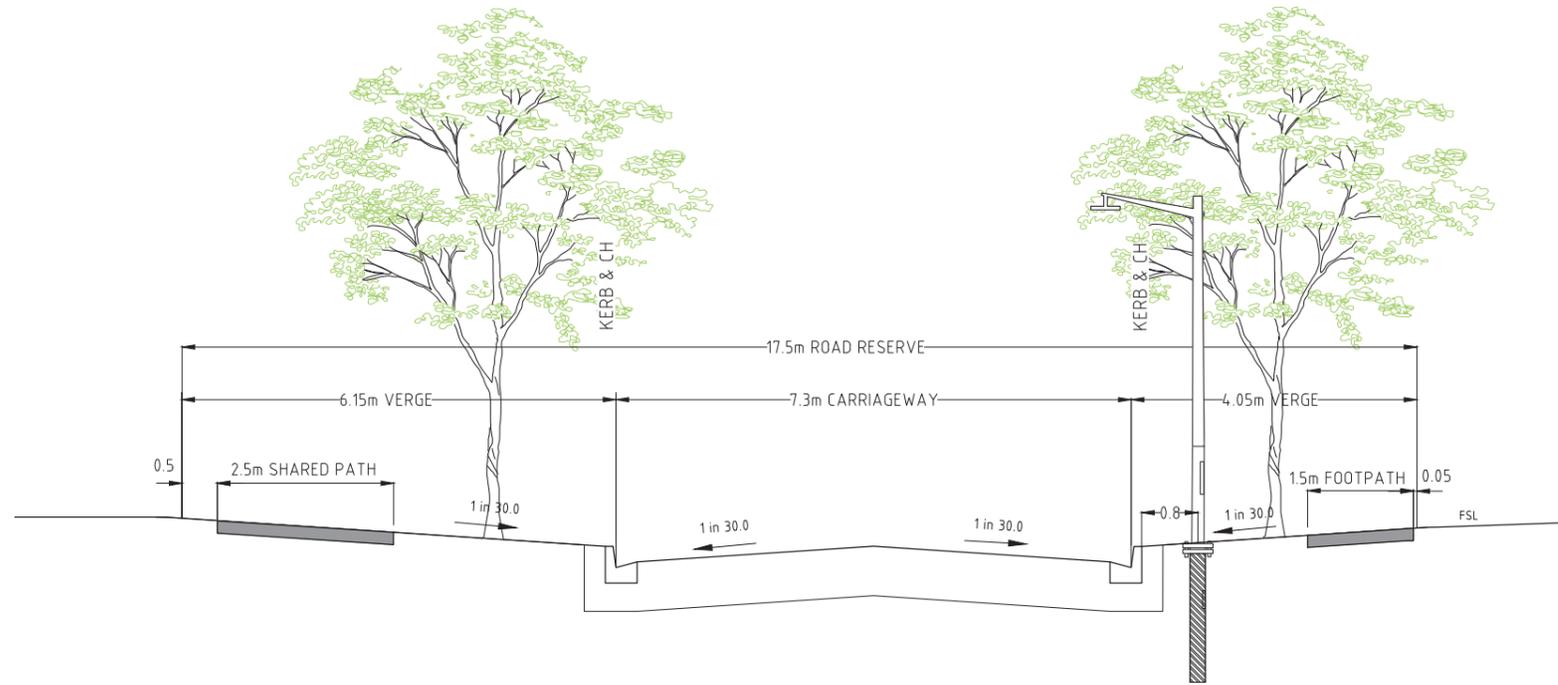
DESIGNED	A. KUMAR	DATE	29.01.2020
DRAWN	A. DEJONG	SCALE	NTS
CHECKED	-	SHEET SIZE	A1
APPROVED	-	MELWAY	42 A10

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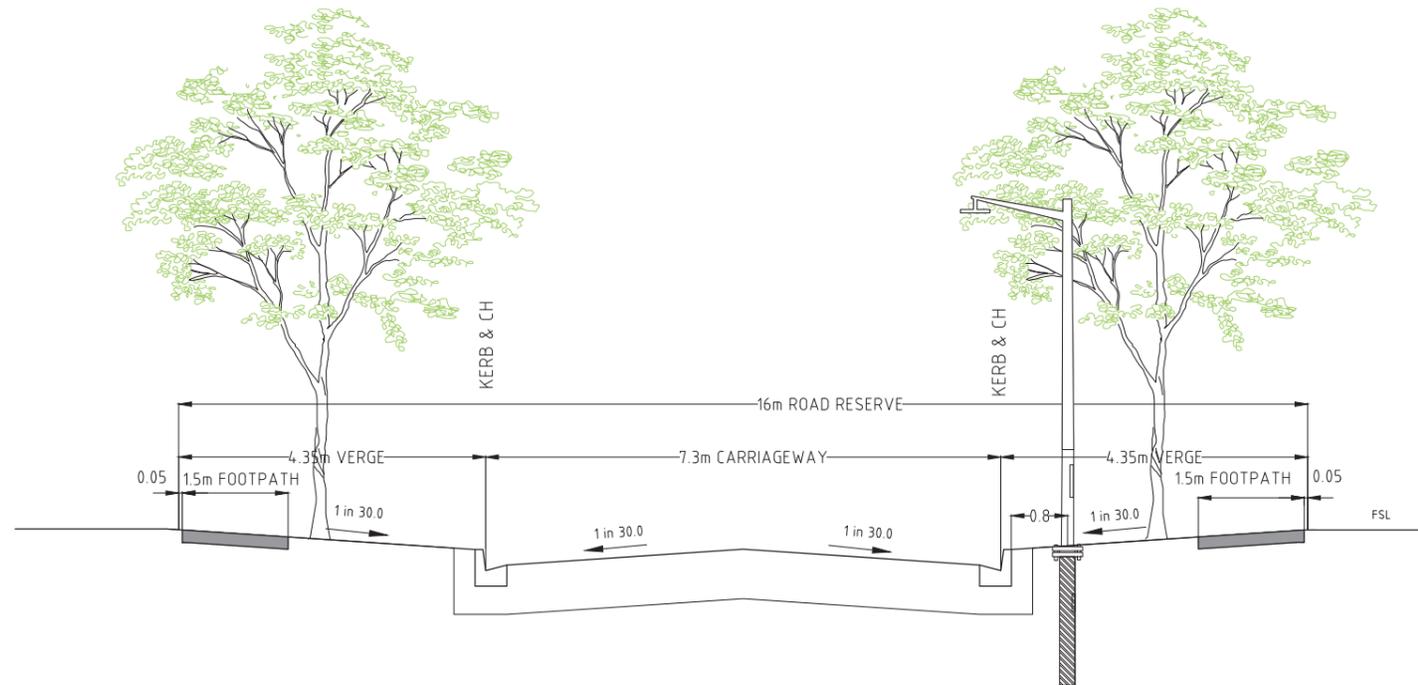
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EXTERNAL CROSS SECTIONS
 20-26 TAVERNER STREET
 MADDINGLEY VIC 3340
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CIVIL DRAWING				
DRAWING TITLE TAVERNER STREET CROSS SECTION				
TGM DRAWING NUMBER 17902-201	CLIENT DRAWING NUMBER	SHEET 2	OF 4	REV 02



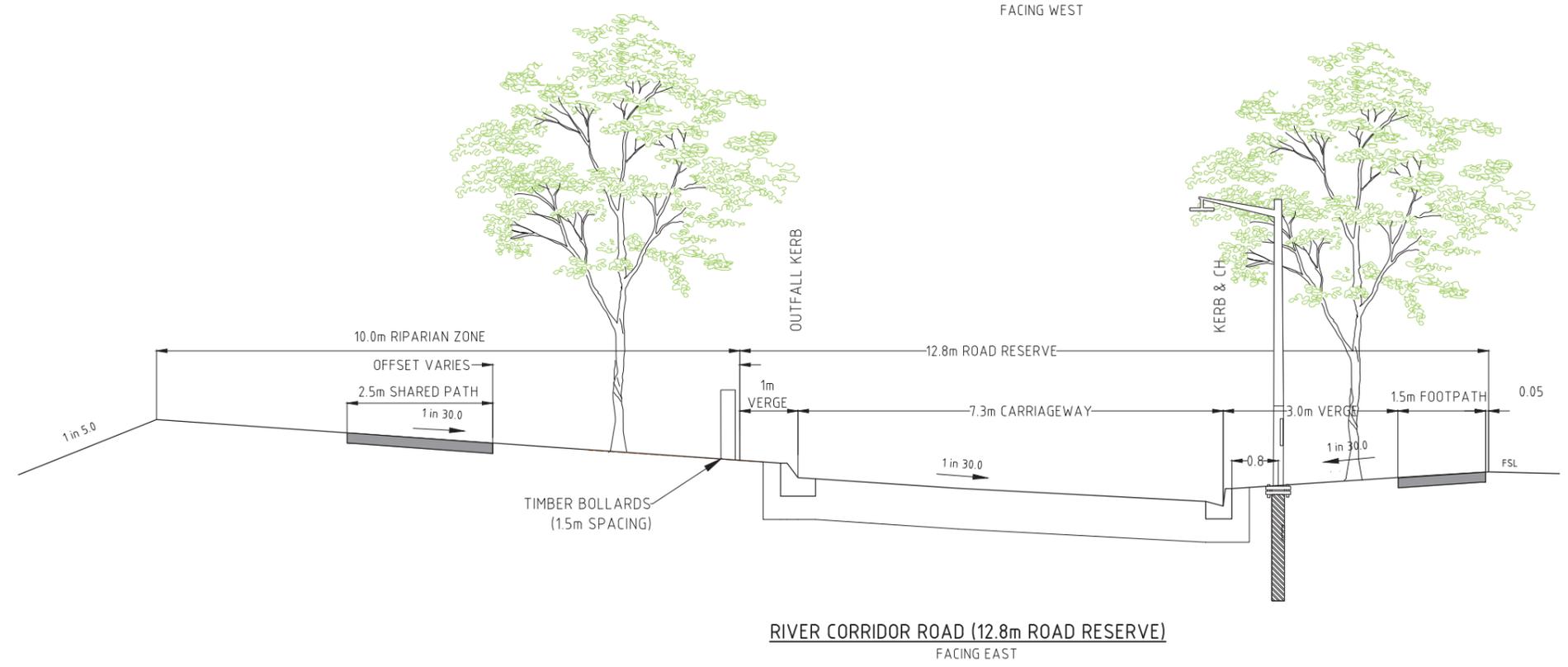
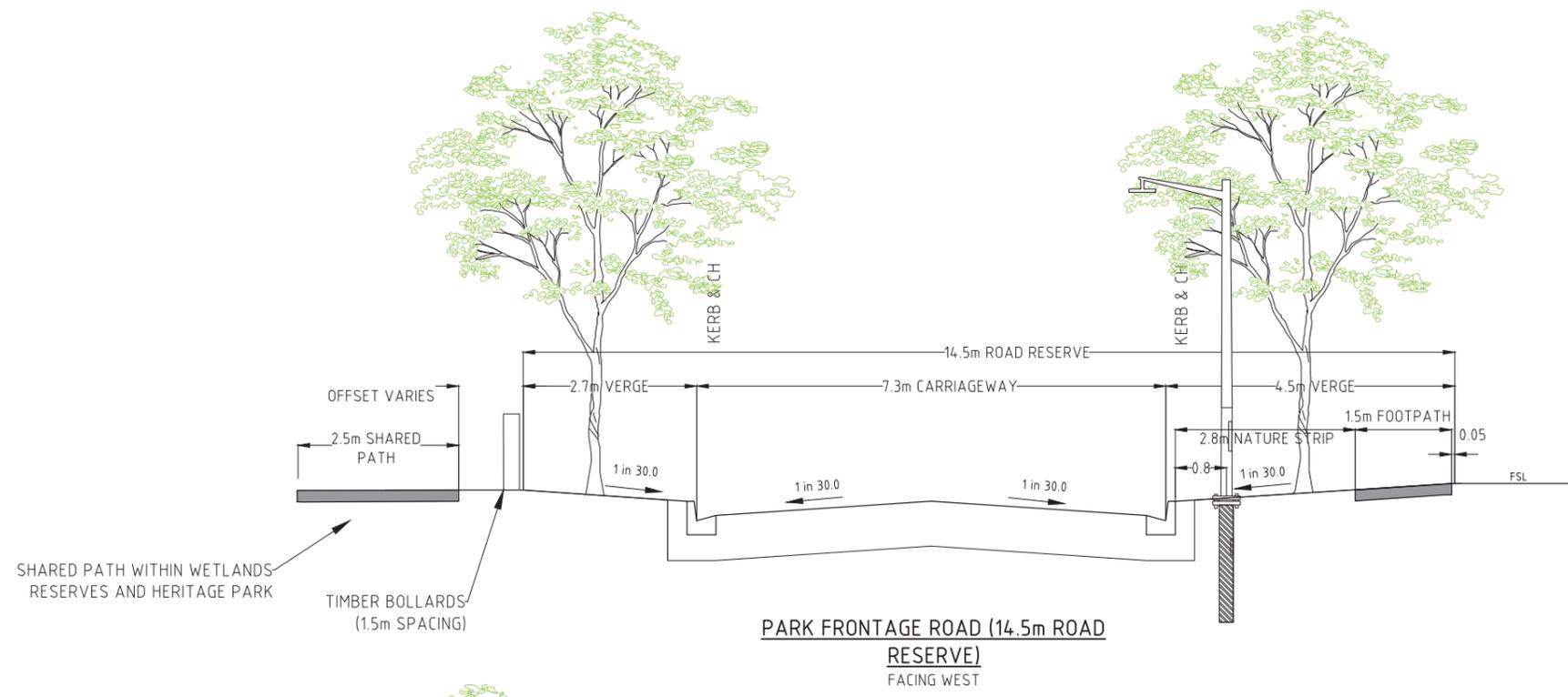
LOCAL ROAD WITH SHARED PATH (17.5m ROAD RESERVE)



LOCAL ROAD (16m ROAD RESERVE)

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Appendix B - Functional Intersection Designs

Overall Functional Concept

Boyes Close and Taverner Street Intersection

Taverner Street Raised Crossing at 22 Taverner Street

Design Element 11 - Taverner Street and Fisken Street Roundabout

Design Element 10 - Fisken Street and Primary Site Access

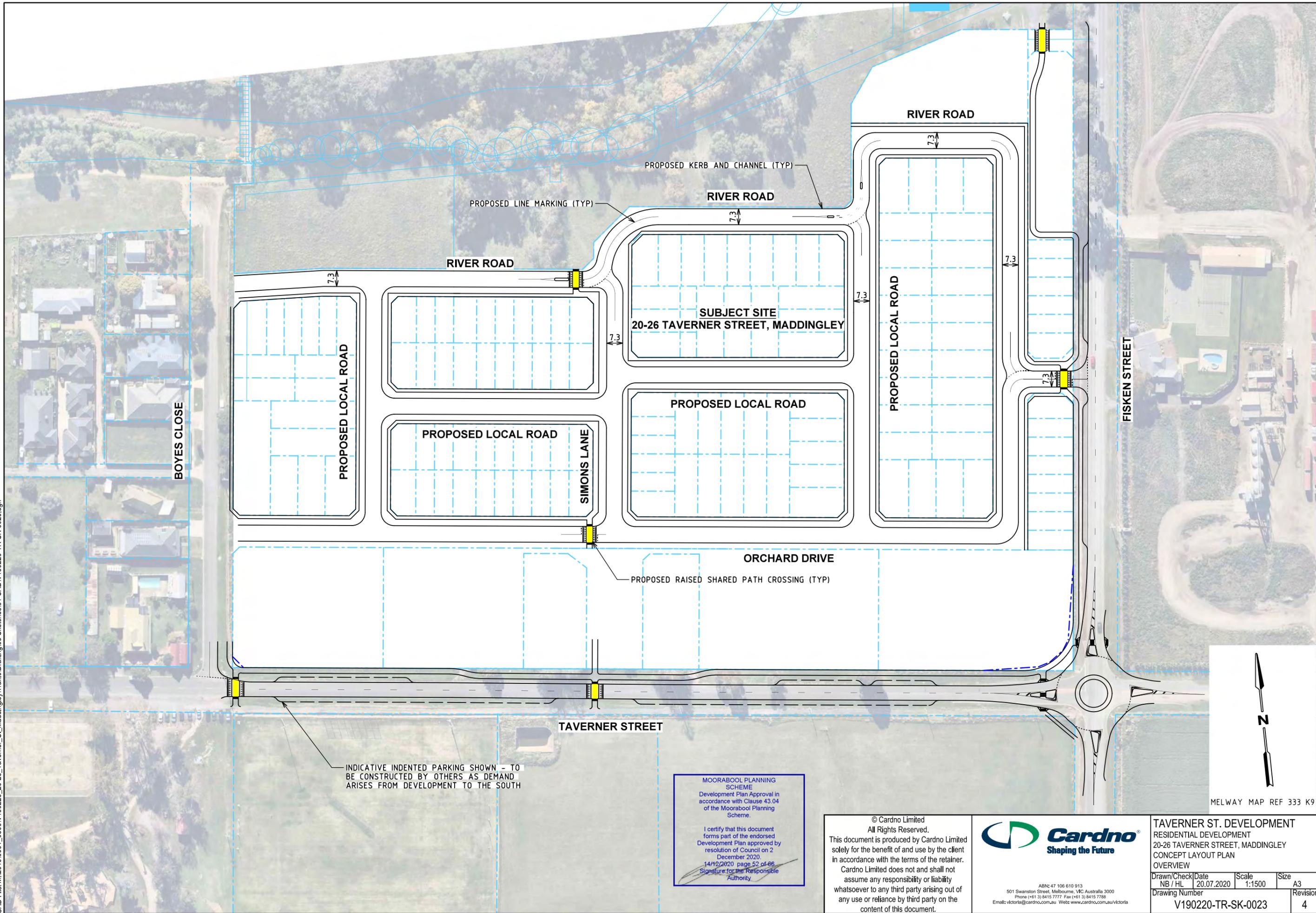
Design Element 9 - Fisken Street Raised Crossing near the Superlot

Raised Crossing at Simons Lane

Design Element 7 - Intersection

Design Element 8 - Intersection





INDICATIVE INDENTED PARKING SHOWN - TO BE CONSTRUCTED BY OTHERS AS DEMAND ARISES FROM DEVELOPMENT TO THE SOUTH

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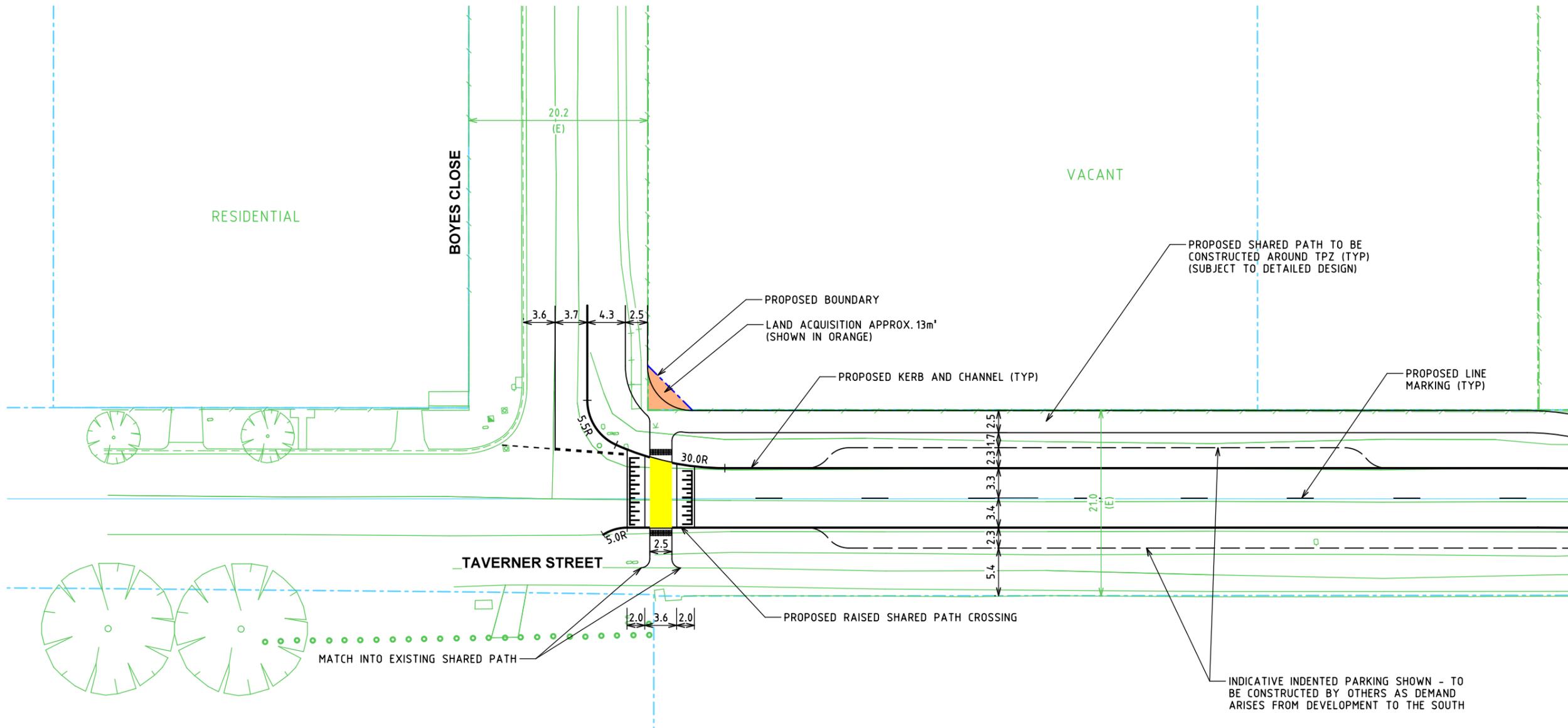
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TAVERNER ST. DEVELOPMENT RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY CONCEPT LAYOUT PLAN OVERVIEW			
Drawn/Check	Date	Scale	Size
NB / HL	20.07.2020	1:1500	A3
Drawing Number			Revision
V190220-TR-SK-0023			4

MELWAY MAP REF 333 K9



FOR CONTINUATION SEE CARDNO DRAWING V190220-TR-DG-2502

MOORABOOL PLANNING SCHEME
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4	30.10.2020	CLIENT COMMENTS	NB	KC
3	30.09.2020	CLIENT COMMENTS	AB	HL
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3. LOCAL ROAD - TAVERNER STREET (SPEED ZONE 50KM/H) - BOYES CLOSE (SPEED ZONE 50KM/H)
4. INSTALL ALL SIGNS AND LINE MARK IN ACCORDANCE WITH AUSTRROADS GUIDE TO TRAFFIC MANAGEMENT VOLUME 10, AS 1742 AND RELEVANT VICROADS SUPPLEMENTS AND REMOVE ALL REDUNDANT SIGNS.

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Designed	N. BATRA
Checked	S. MCKENZIE
Authorised	H. LAI

Client	TAVERNER STREET DEVELOPMENTS
Project	RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY MOORABOOL SHIRE COUNCIL
Title	FUNCTIONAL LAYOUT PLAN

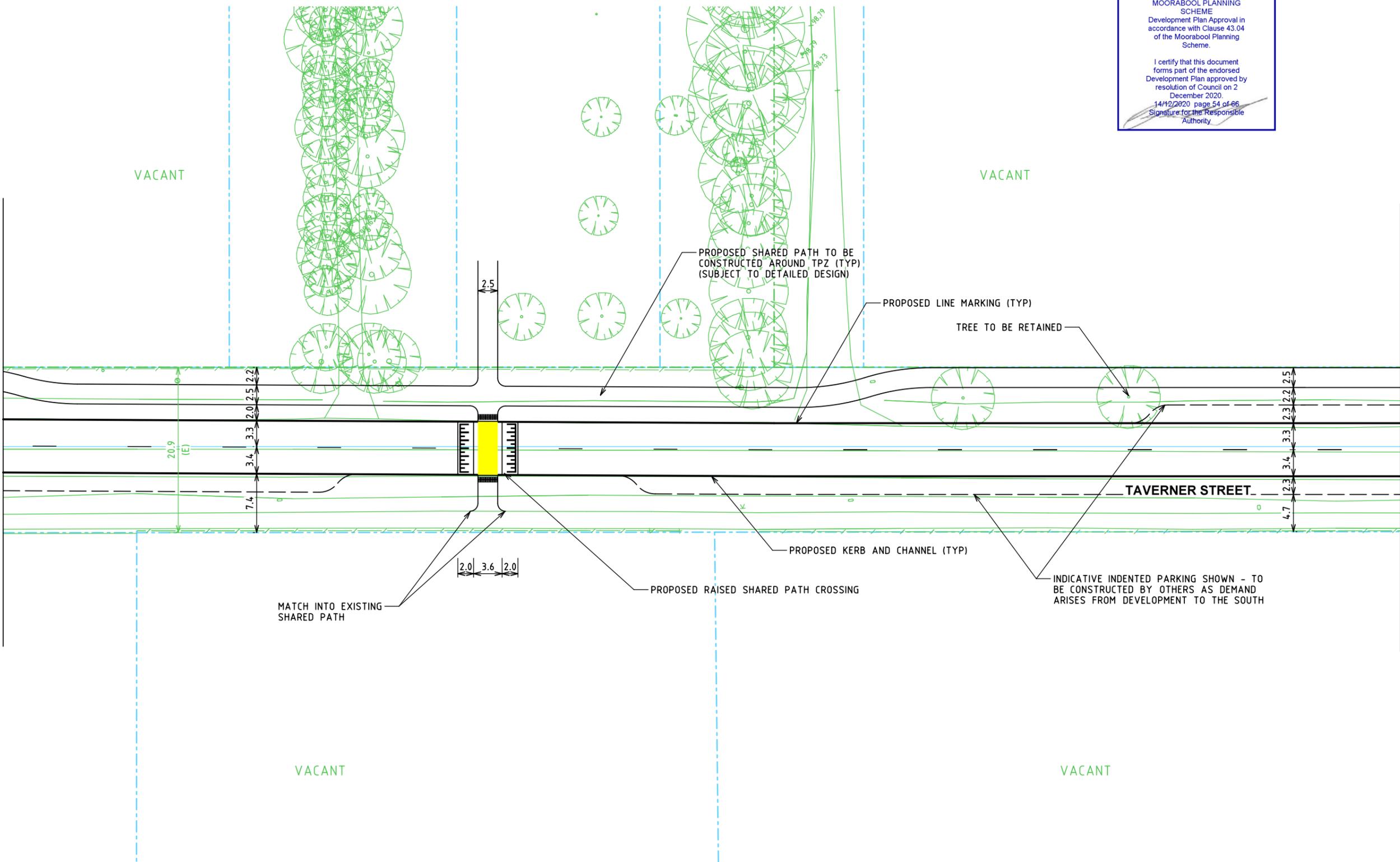
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20.9 (E)

7.4

3.4

3.3

2.0

2.5

2.2

2.0 3.6 2.0

2.5

2.3

2.2

2.5

3.3

3.4

2.3

4.7

MATCH INTO EXISTING SHARED PATH

PROPOSED RAISED SHARED PATH CROSSING

PROPOSED KERB AND CHANNEL (TYP)

PROPOSED SHARED PATH TO BE CONSTRUCTED AROUND TPZ (TYP) (SUBJECT TO DETAILED DESIGN)

PROPOSED LINE MARKING (TYP)

TREE TO BE RETAINED

INDICATIVE INDENTED PARKING SHOWN - TO BE CONSTRUCTED BY OTHERS AS DEMAND ARISES FROM DEVELOPMENT TO THE SOUTH



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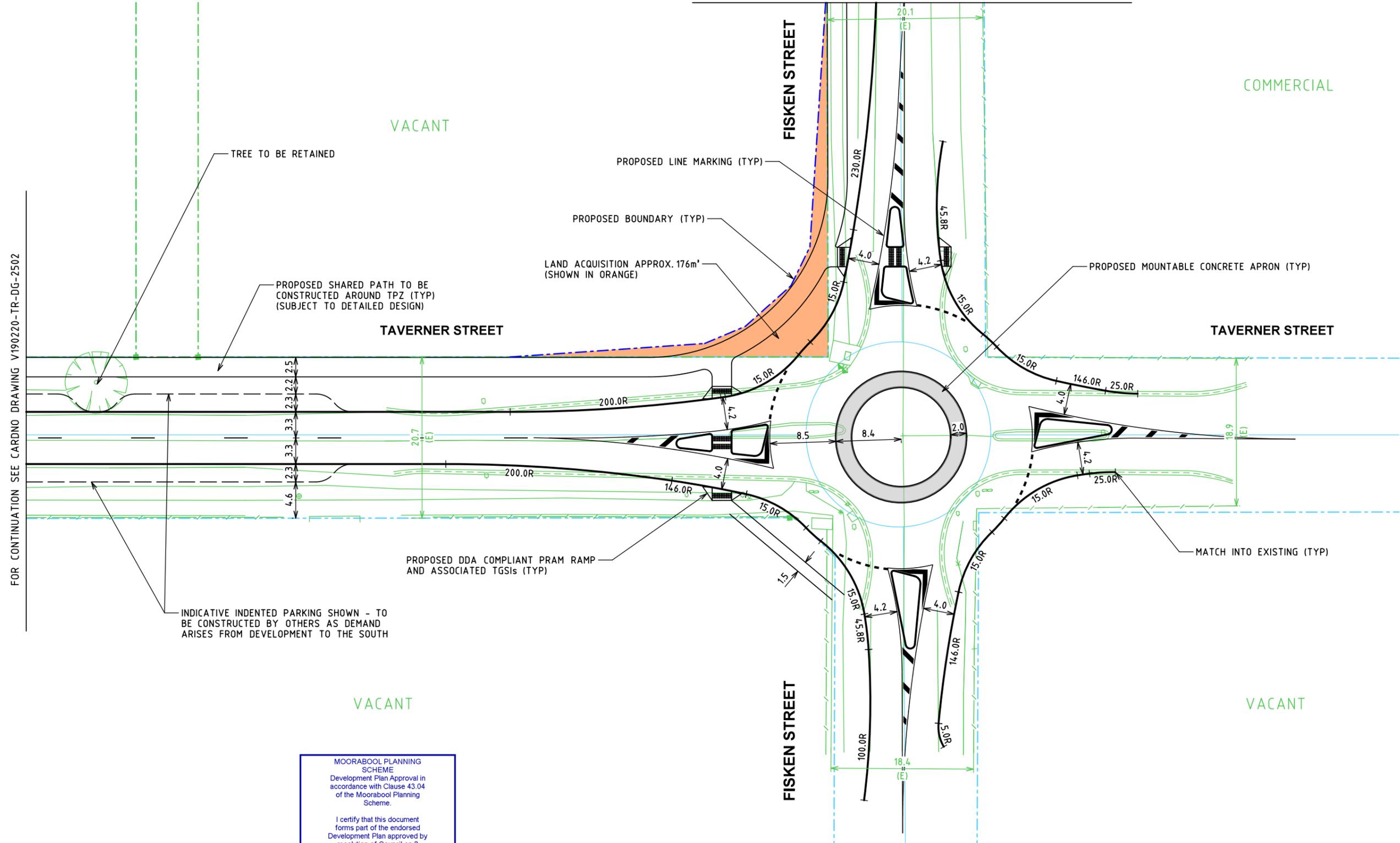
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Client	TAVERNER STREET DEVELOPMENTS
Project	RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY MOORABOOL SHIRE COUNCIL
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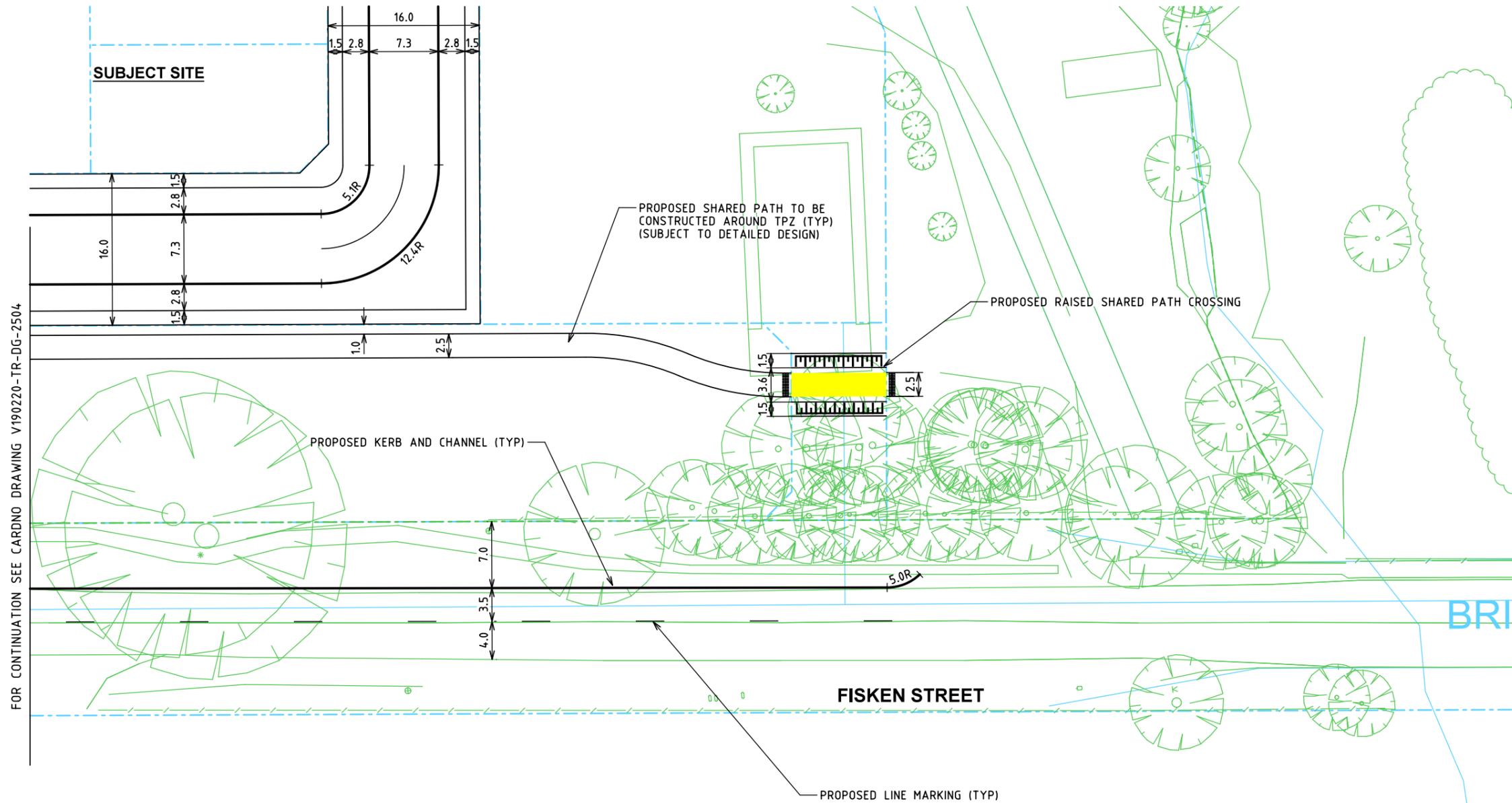
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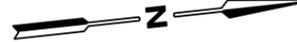
Client	TAVERNER STREET DEVELOPMENTS
Project	RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY MOORABOOL SHIRE COUNCIL
Title	FUNCTIONAL LAYOUT PLAN

Status	PRELIMINARY NOT TO BE USED FOR CONSTRUCTION PURPOSES
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Revision	3



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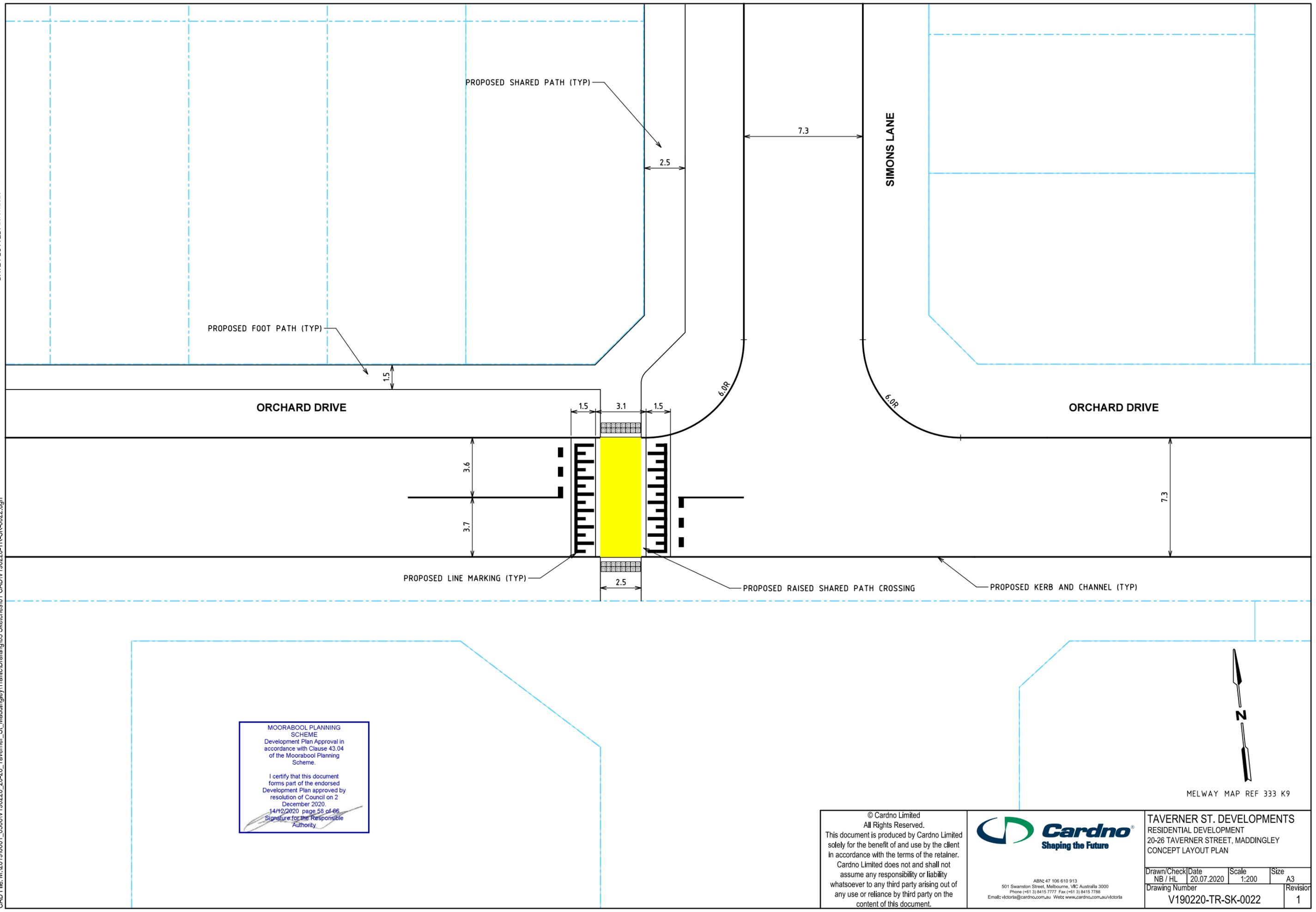
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Project	RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY MOORABOOL SHIRE COUNCIL
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Drawing Number	V190220-TR-DG-2505	Size	A3
Revision			2

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DATE PLOTTED: 20/07/2020 5:43:17 PM
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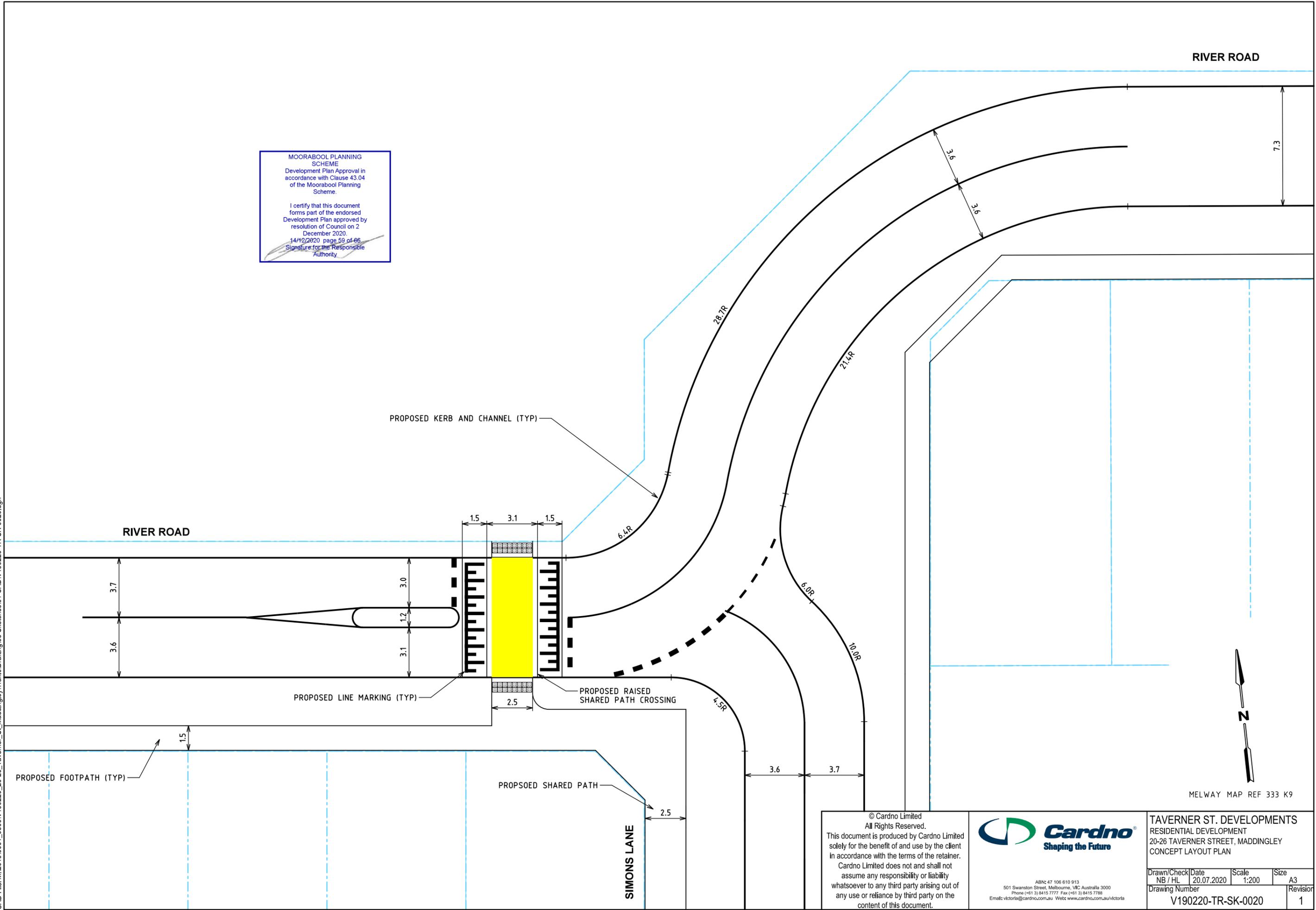
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TAVERNER ST. DEVELOPMENTS RESIDENTIAL DEVELOPMENT 20-26 TAVERNER STREET, MADDINGLEY CONCEPT LAYOUT PLAN			
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NB / HL	20.07.2020	1:200	A3
Drawing Number			Revision
V190220-TR-SK-0022			1

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TAVERNER ST. DEVELOPMENTS
 RESIDENTIAL DEVELOPMENT
 20-26 TAVERNER STREET, MADDINGLEY
 CONCEPT LAYOUT PLAN

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V190220-TR-SK-0020			1

RIVER ROAD

7.3

10.0R

5.7R

PROPOSED KERB AND CHANNEL (TYP)

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PROPOSED LINE MARKING (TYP)

3.2 0.8 3.3

RIVER ROAD

3.6
3.7

3.2
0.8
3.3

8.0R

10.0R

PROPOSED LOCAL ROAD

4.5R

PROPOSED FOOT PATH (TYP)

3.7 3.6



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TAVERNER ST. DEVELOPMENTS
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 20-26 TAVERNER STREET, MADDINGLEY
 CONCEPT LAYOUT PLAN

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NB / HL	20.07.2020	1:200	A3
Drawing Number			Revision
V190220-TR-SK-0021			1



Appendix C - Tree Reference Plans

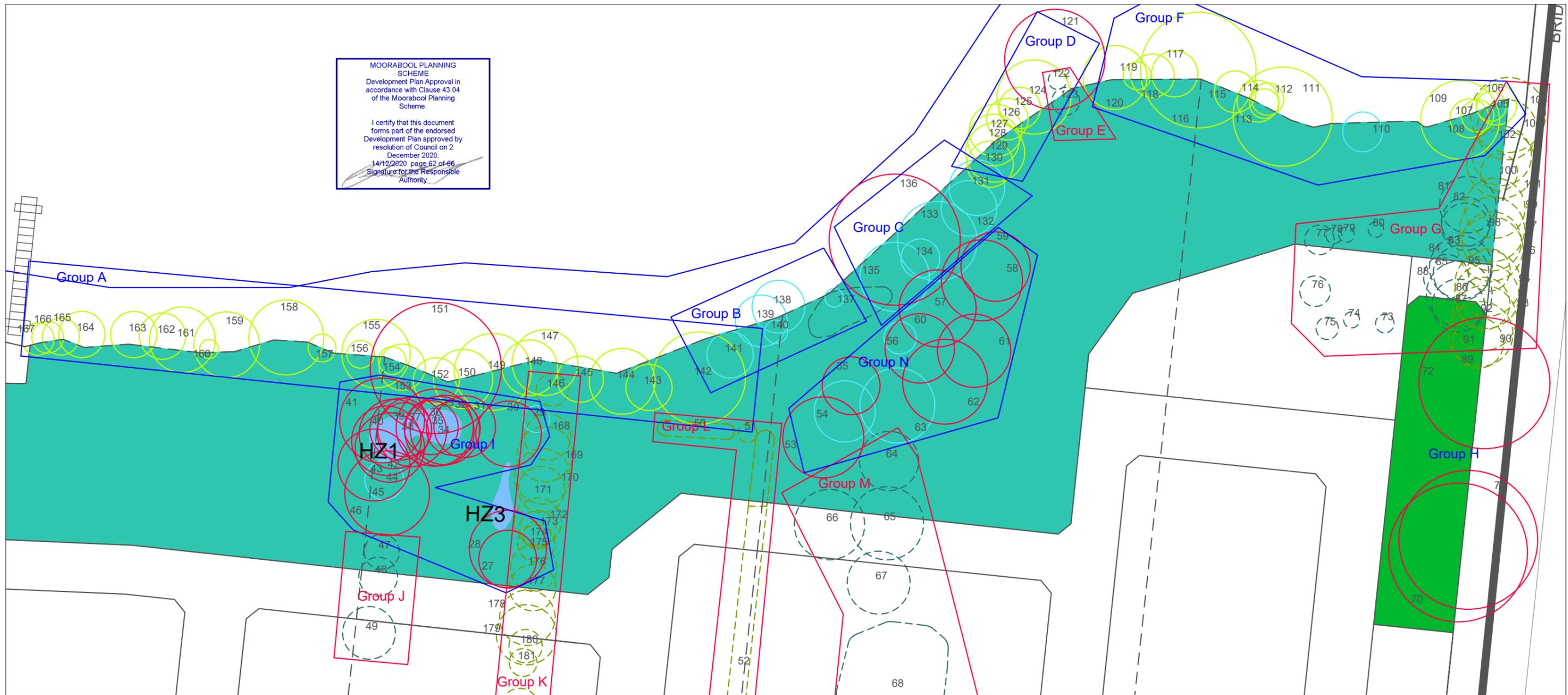
Tree Reference Plan (North)

Tree Reference Plan (South)

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TREE REFERENCE PLAN (NORTH)



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TREES TO BE RETAINED (Blue Groups)

- | | |
|-----------------------------|---|
| GROUP A - Trees 142-167 | Mostly Osage Orange Trees and 1 River Red Gum |
| GROUP B - Trees 137-141 | A range of exotic species within the embankment |
| GROUP C - Trees 131-136 | Exotic Peppercorn Trees and 1 River Red Gum |
| GROUP D - Trees 121,124-130 | Osage Orange Trees in the embankment and 1 River Red Gum |
| GROUP F - Trees 109-120 | Mostly Osage Orange Trees in the embankment and one Peppercorn Tree |
| GROUP H - Trees 70-72 | Three large River Red Gum trees within Fiskien Street Road Reserve |
| GROUP I - Trees 27-47 | Mostly River Red Gums associated with Habitat Zone 1 and several exotic species |
| GROUP N - Trees 53-63 | Mostly small River Red Gums with several Peppercorn Trees |

TREES TO BE REMOVED (Red Groups)

- | | |
|------------------------------|---|
| GROUP E - Trees 122-123 | Two small Peppercorn Trees encroaching on a River Red Gum |
| GROUP G - Trees 73-104 | Osage Orange Trees and other exotic trees in poor condition |
| GROUP J - Trees 47-49 | Two exotic Peppercorn Trees |
| GROUP K - Trees 146, 168-201 | Osage Orange Avenue Extension (not Heritage Listed) and 1 Olive Tree |
| GROUP L - Trees 50-52 | Rows of tightly spaced Osage Orange Trees (not Heritage Listed) and plum tree |
| GROUP M - Trees 64-69 | Exotic Peppercorn Trees |

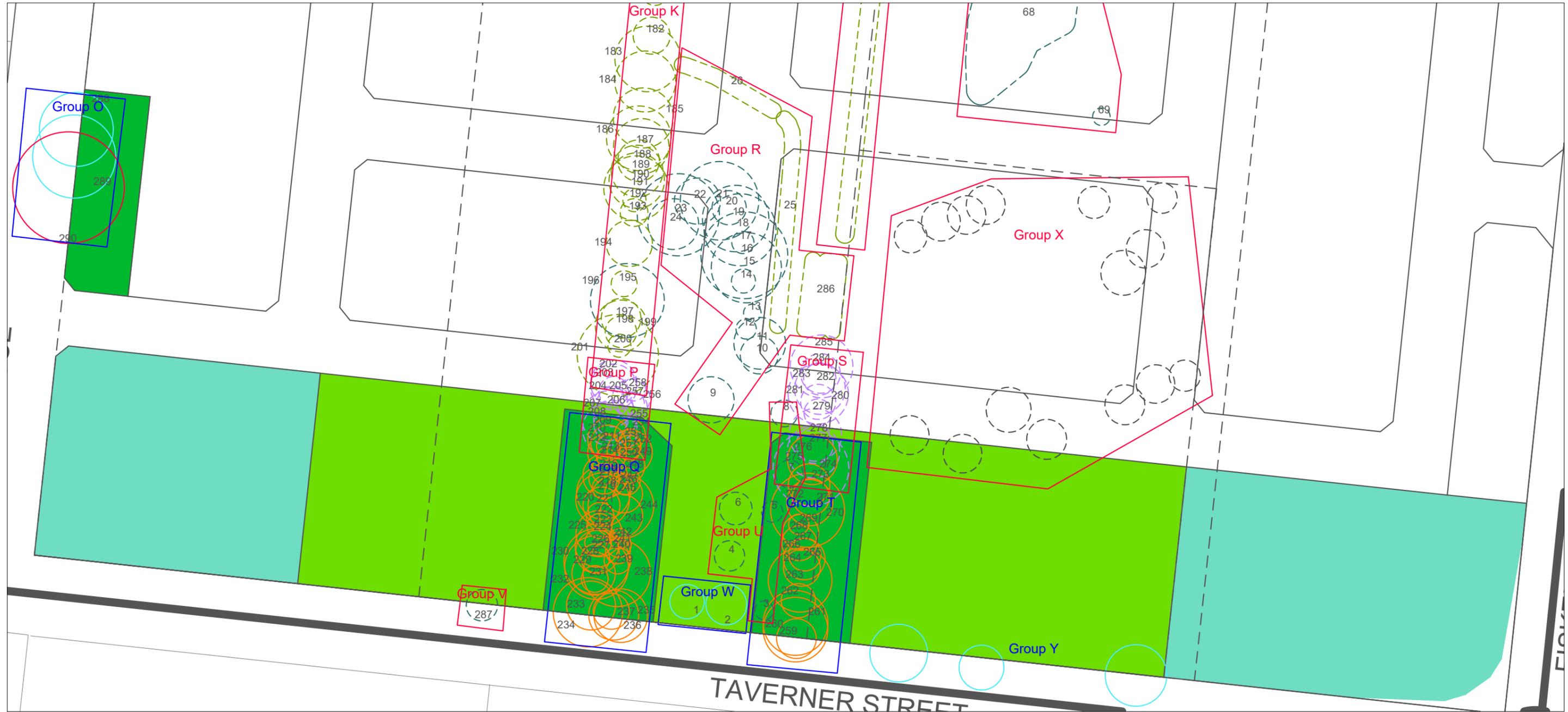
LEGEND

- | | |
|--|---|
| | Werrabee River Corridor |
| | Tree Reserve |
| | Open Space |
| | Wetland Reserve |
| | Arterial Road |
| | River Red Gum TPZ - Retained |
| | Osage Orange Heritage Tree TPZ - Retained |
| | Osage Orange Tree - Retained |
| | Other Tree TPZ - Retained |
| | Osage Orange Heritage Tree - To Be Removed |
| | Osage Orange Tree - To Be Removed |
| | Other Tree - To Be Removed |
| | Other Tree - To Be Removed (no detailed assessment) |

NOTES

1. This plan is to be read in conjunction with the Arboricultural Assessment prepared by Homewood Consulting Pty Ltd which includes detailed tree numbers, assessments and Tree Protection Zones.
2. This plan identifies trees to be retained and trees to be removed based on the Development Plan. Further consideration of some trees may be required when more detail is provided at the Planning Permit Stage.
3. Osage Orange Trees in Group Q and Group T will require a more detailed assessment and management plan as part of any planning permit application or as a condition of any permit.
4. Trees on 24 Taverner Street have only been assessed from a distance as no property access was provided at time of assessment. No significant native vegetation was identified.

TREE REFERENCE PLAN (SOUTH)



TREES TO BE RETAINED (Blue Groups)

- GROUP O - Trees 288-290 2 Peppercorn Trees and 1 River Red Gum in the Boyes Close Road Reserve
- GROUP Q - Trees 210-254 Osage Orange Trees - Heritage Avenue
- GROUP W - Trees 1-2 Two exotic Chestnut Trees
- GROUP T - Trees 259-273 Osage Orange Trees - Heritage Windbreak
- GROUP Y - Other Trees Three large trees within the Taverner Street Road Reserve

TREES TO BE REMOVED (Red Groups)

- GROUP K - Trees 146, 168-201 Osage Orange Avenue Extension (not Heritage Listed) and 1 Olive Tree
- GROUP P - Trees 202-208,255-258 Osage Orange Trees - Heritage 'The Avenue'
- GROUP V - Tree 287 Single tree on boundary
- GROUP R - Trees 9-26,286 Exotic and native trees and tight rows of Osage Orange Trees (not Heritage Listed)
- GROUP S - Trees 274-285 Osage Orange Trees - Heritage 'The Windbreak'
- GROUP U - Trees 3-8 Small, mostly exotic species
- GROUP X - Other Trees 24 Taverner St - no detailed assessment

LEGEND

- Werrabee River Corridor
- Tree Reserve
- Open Space
- Wetland Reserve
- Arterial Road
- River Red Gum TPZ - Retained
- Osage Orange Heritage Tree TPZ - Retained
- Osage Orange Tree - Retained
- Other Tree TPZ - Retained
- Osage Orange Heritage Tree - To Be Removed
- Osage Orange Tree - To Be Removed
- Other Tree - To Be Removed
- Other Tree - To Be Removed (no detailed assessment)

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14/12/2020 page 63 of 86
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NOTES

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2. This plan identifies trees to be retained and trees to be removed based on the Development Plan. Further consideration of some trees may be required when more detail is provided at the permit stage or when a Tree Management Plan is prepared.
3. Osage Orange Trees in Group Q and Group T will require a more detailed assessment and management plan as part of any planning permit application or as a condition of any permit.
4. Trees on 24 Taverner Street have only been assessed from a distance as no property access was provided at time of

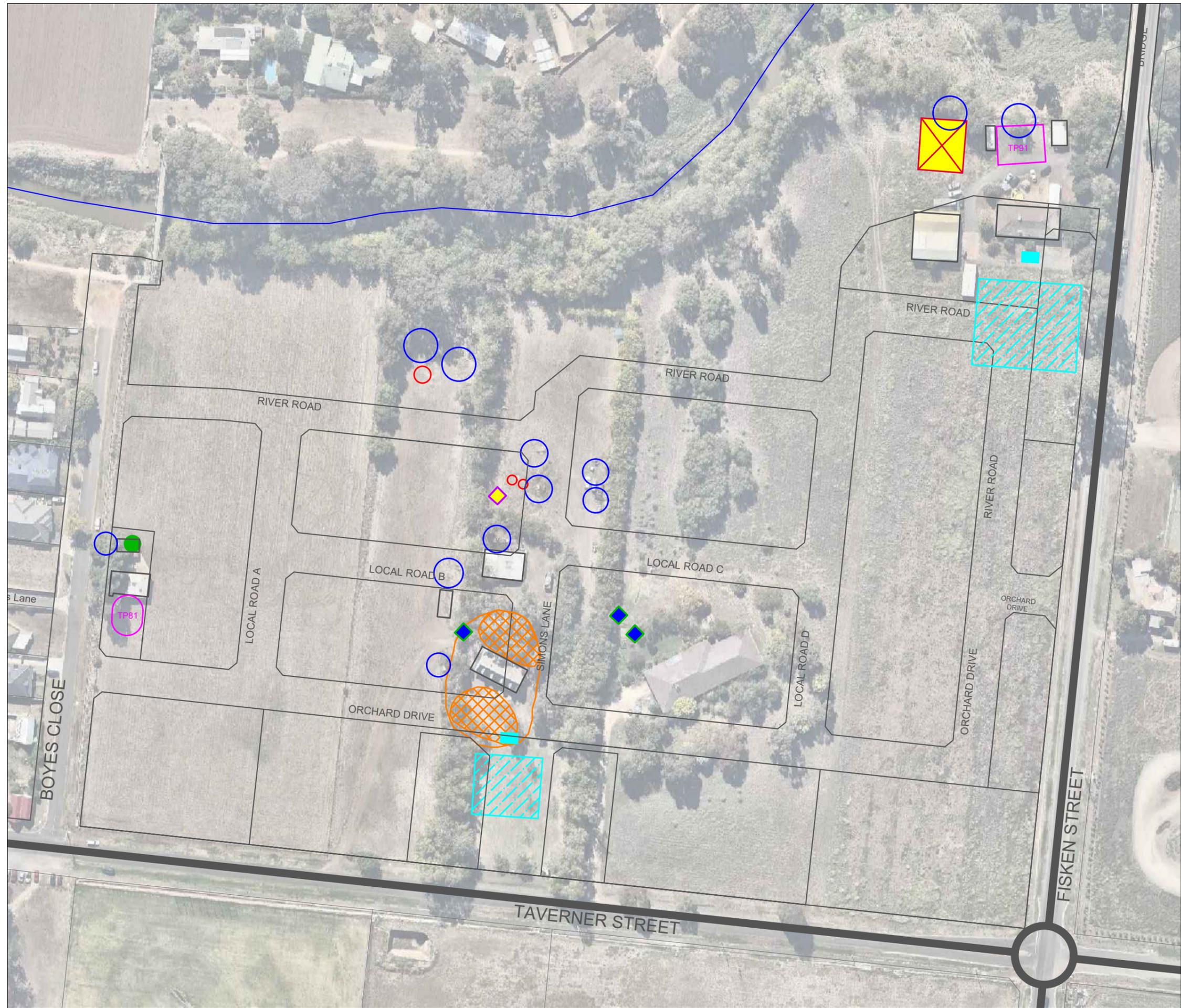


Appendix D - Environmental Audit Works

MOORABOOL PLANNING
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- LEGEND**
- Building - to be removed
 - Septic Tank
 - Septic Tank Validation Area
 - Dam with Asbestos
 - Contamination Hot Spot
 - Solid Waste - to be removed
 - Burn Pit
 - Water Tank Validation Area
 - Buried Bricks
 - Suspected Buried Bricks
 - Suspected Asbestos
 - Chicken Coup

- ENVIRONMENTAL AUDIT WORKS BY PROPERTY**
- 20 TAVERNER STREET**
- Remove Sheds
 - Remove solid waste at rear of shed and beneath 2 sheds with soil analysis
 - Remove Water Tank (below ground)
 - Excavate contamination hotspot TP81 (approx. 50m²)
- 22 TAVERNER STREET**
- Remove dwelling and shed
 - Remove rubble and fill including buried bricks surrounding the dwelling and suspected buried bricks from beneath the dwelling (extent unknown, approx. 2000m²)
 - Remove solid waste beneath 2 burn areas with soil analysis
 - Remove solid waste beneath chicken coup with soil analysis
 - Remove solid waste beneath shed with soil analysis
 - Remove solid waste beneath greenhouse remains with soil analysis
 - Remove abandoned Septic Tank, associated pipework, and surrounding soils
 - Remove fill and rubble around dwelling
 - Walkover by qualified asbestos removalist and occupational hygienist to remove any suspect asbestos and provide Clearance Certificate
- 24 TAVERNER STREET**
- Remove solid waste beneath 2 chicken coups with soil analysis
- 24 A TAVERNER STREET**
- No works required
- 26 TAVERNER STREET**
- Remove solid waste beneath 3 sheds with soil analysis
 - Remove solid waste beneath the inground drum with soil analysis
 - Excavate contamination hotspot TP91 (approx. 150m²)
 - Potential removal of dwelling based on septic tank (or other identified option)
 - Remove active septic tank, associated pipework, and surrounding soils
 - Remove contaminated soils from infilled dam by Class A Licensed Asbestos Removalist (approx. 1000m³)

More details in relation to these works are outlined in the 10 Tasks in the Remedial Action Plan prepared by Atma Environmental.



Appendix E - Supporting Reports

The following reports have been prepared as part of the Development Plan. They are available as separate documents.

Atma, *Preliminary Site Investigation: 20-26 Taverner Street, Maddingley, VIC*, prepared by Jared Hammett, 20 July 2018, Report Reference: 1646 Maddingley.

Atma, *Remediation Action Plan: 20-26 Taverner Street, Maddingley, VIC*, prepared by Jared Hammett, 12 November 2019, Report Reference: 1646 Maddingley.

Benchmark Heritage Management, *Proposed Residential Subdivision Cultural Heritage Management Plan: Desktop, Standard and Complex Assessments*, prepared by John Young and Matthew Barker, 29 August 2019, AV Management Plan Number: 15953.

Cardno, *Civil Engineering Servicing Report*, prepared by Anil Kumar, 18 December 2019, Report Reference: V191346.

Cardno, *Traffic and Transport Assessment*, prepared by Sarini Dissanayake, Joshua Hiscock, Kaitlin Chuo and Herman Lai, 14 October 2020, Report Reference: V190220.

LDEng, *Stormwater Management Plan*, prepared by James Barker, October 2020, Report Reference: 129000.

ENSPEC, *Review of Heritage Osage Orange Trees*, prepared by Craig Hinton, 22 January 2019.

Ground Science, *Feasibility Study (Geotechnical)*, prepared by Gee Singh, 19 September 2018, Report Reference: G3794.1 AA.

Homewood Consulting, *Preliminary Tree Assessment*, prepared by Megan Brittingham and Emma Barrett, 16 July 2020, Report Reference: 3423.

Practical Ecology, *Flora and Fauna Assessment, Native Vegetation Impact Assessment and Management Plan*, prepared by Michelle Patrick and Emma Loboda, January 2020, Project Number: VMB2652.

