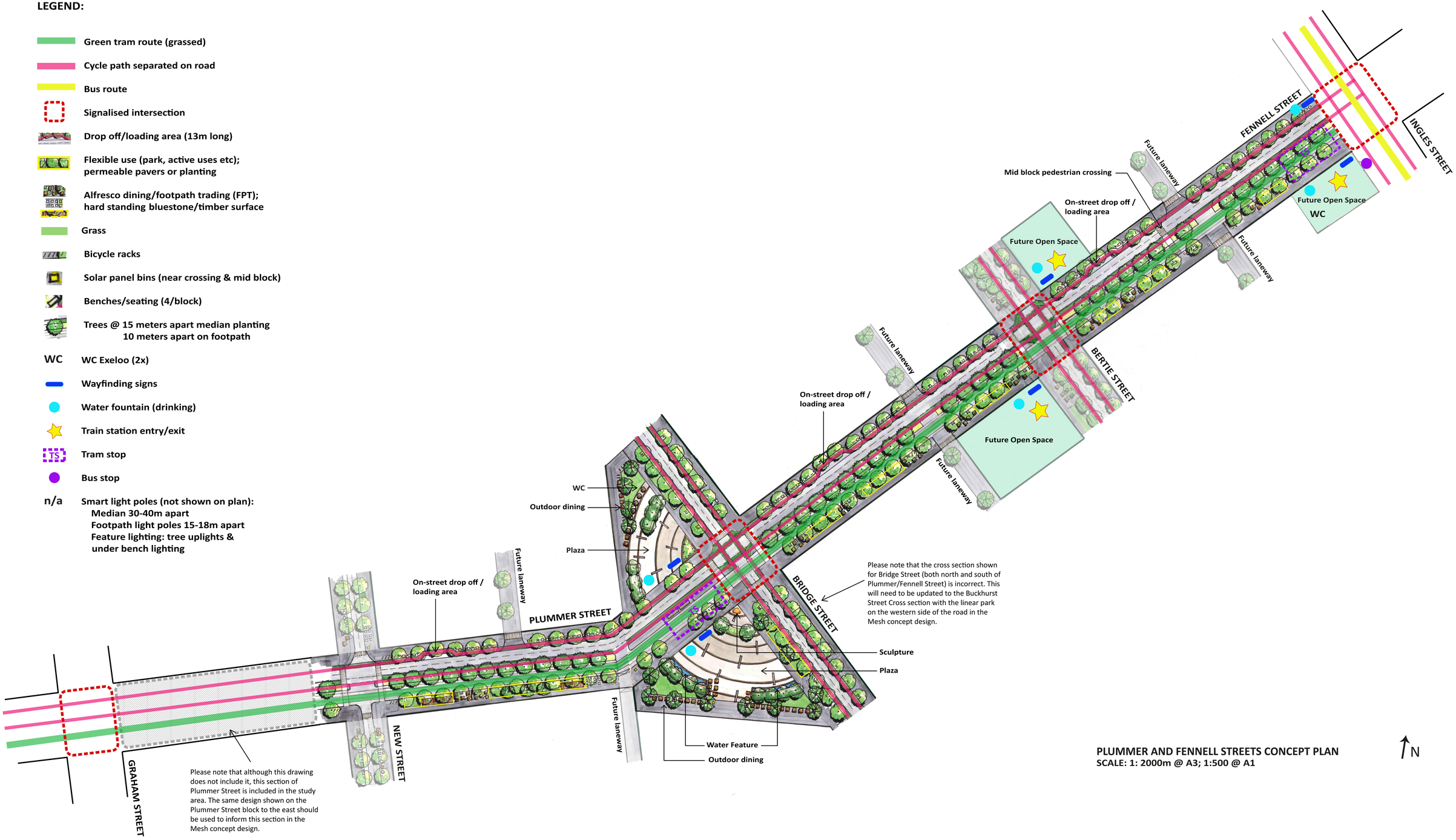
APPENDIX 1 - COUNCIL CROSS-SECTIONS AND CASE STUDY TWO CONCEPT PLANS

LEGEND:

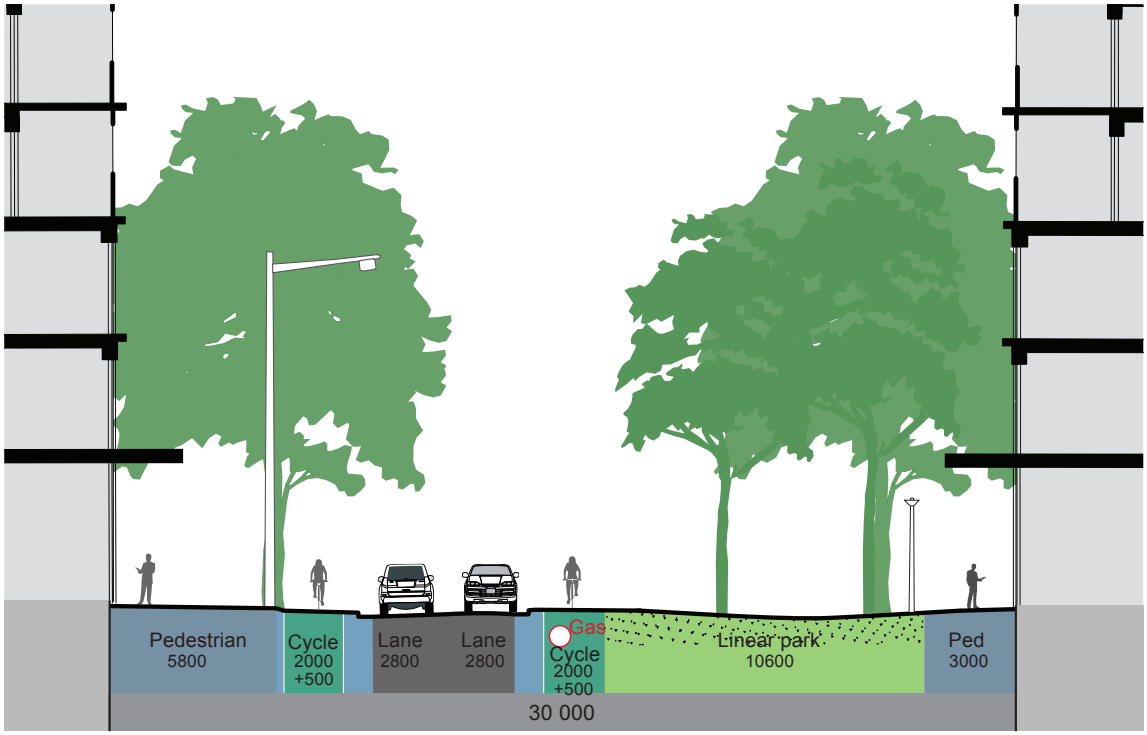
- Green tram route (grassed)
- Cycle path separated on road
- Bus route
- Signalised intersection
- Drop off/loading area (13m long)
- Flexible use (park, active uses etc); permeable pavers or planting
- Alfresco dining/footpath trading (FPT); hard standing bluestone/timber surface
- Grass
- Bicycle racks
- Solar panel bins (near crossing & mid block)
- Benches/seating (4/block)
- Trees @ 15 meters apart median planting
  10 meters apart on footpath
- WC — WC Exeloo (2x)
- Wayfinding signs
- Water fountain (drinking)
- Train station entry/exit
- TS — Tram stop
- Bus stop
- n/a — Smart light poles (not shown on plan):
  Median 30-40m apart
  Footpath light poles 15-18m apart
  Feature lighting: tree uplights & under bench lighting



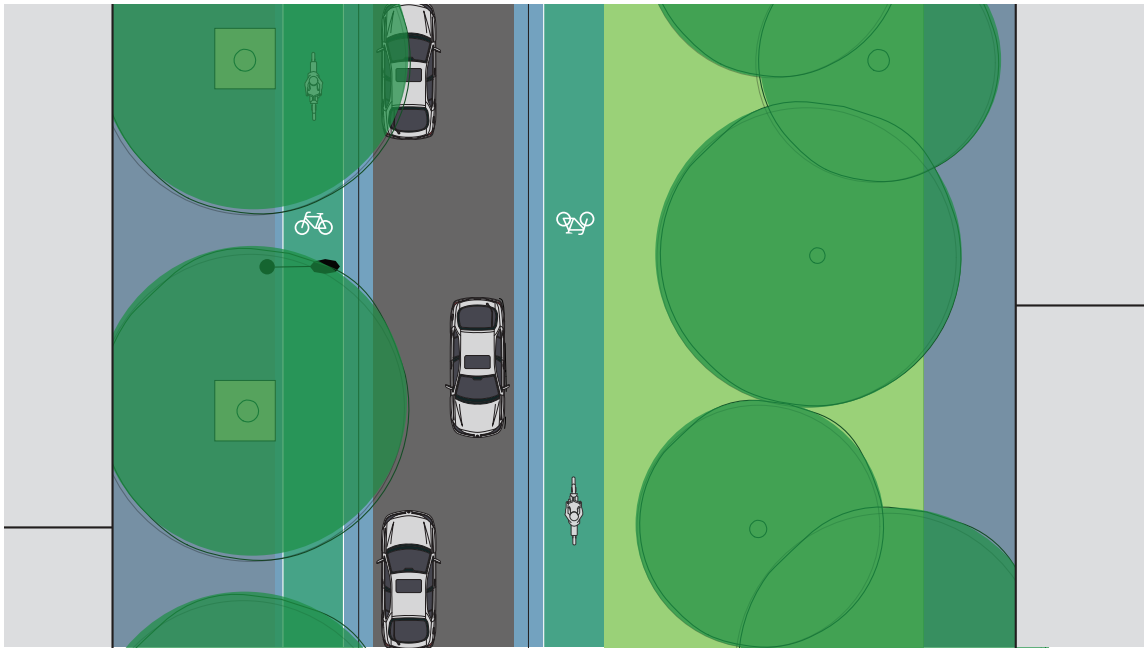
PLUMMER AND FENNELL STREETS CONCEPT PLAN
SCALE: 1: 2000m @ A3; 1:500 @ A1

N

5.10 Buckhurst Street

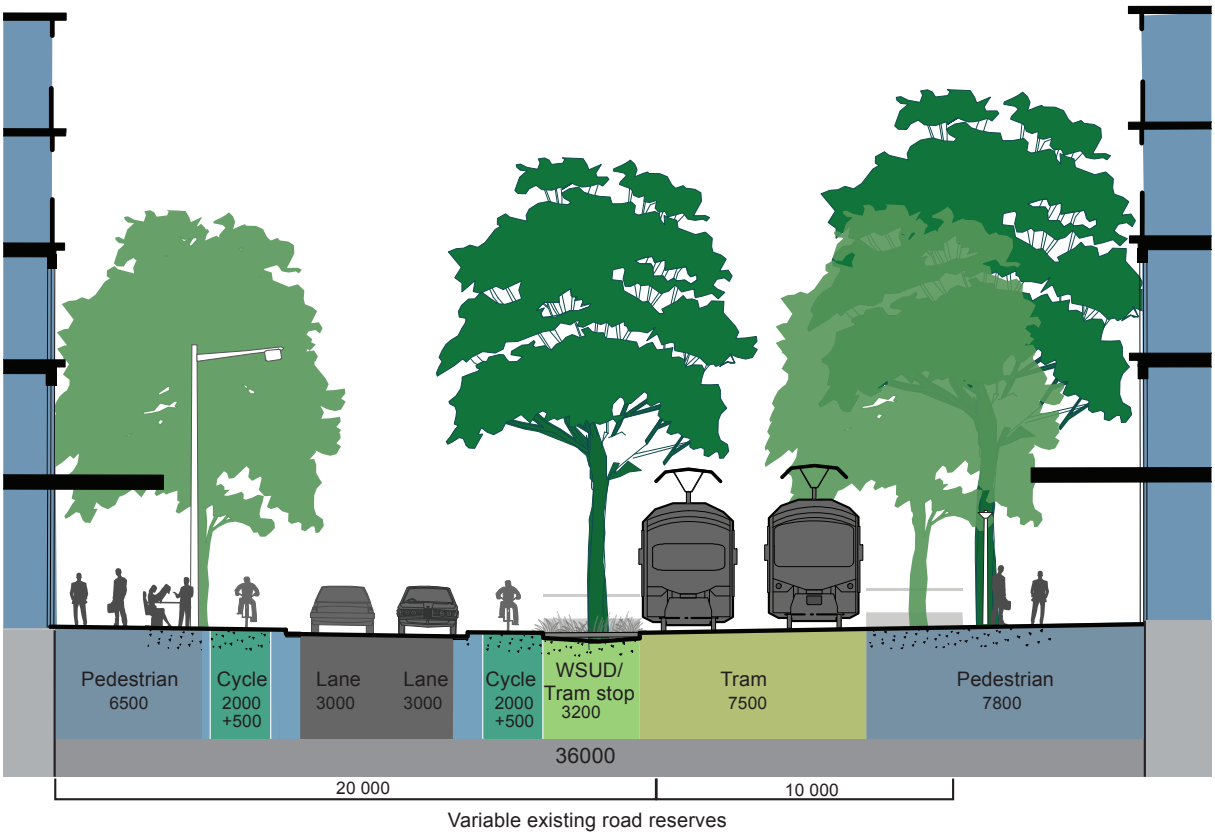


Typical profile



Typical plan

5.18 Plummer Street / Fennell Street



Option 2 - Typical profile

5.18 Plummer Street / Fennell Street

Existing conditions

- Asphalt carriageway in average condition.
- Wide asphalt footpaths and nature strips with some healthy plane trees and many elms in decline.
- Unattractive overhead power lines.
- Variable road reserve between 20 and 30 metres.

Vision

Plummer and Fennell Streets will be widened to cater for the needs of the civic boulevard. It is envisioned as a tree lined street prioritising public transport, pedestrians and cyclists. A civic spine will be created allowing for a range of programmes encouraging pedestrians to linger and socialise.

Maximum allowable building heights along the street are 12 or 18 storeys.

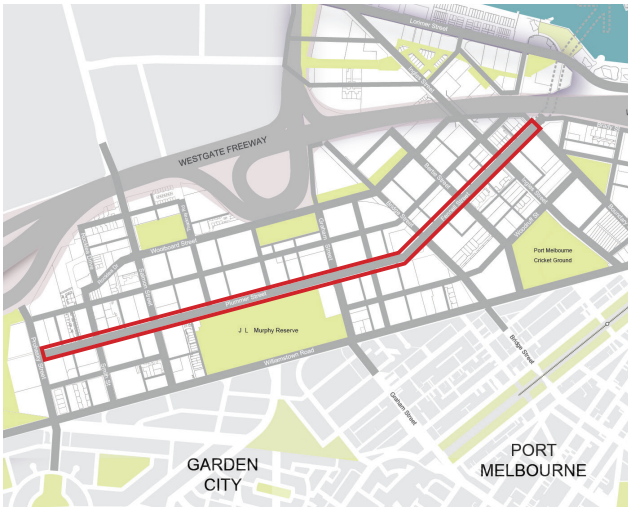
Priority pedestrian and cycle routes are accommodated through generous footpaths and separated cycle paths.

Large canopy trees and integrated WSUD treatments ensure the street will have a shady green character.

An asymmetrical profile enables efficient staged development.

Desired outcomes

- Road widening to a consistent 36m profile, providing for future tram route
- High level of provision for pedestrians, cyclists and public transport while retaining a traffic function.
- Provide large canopy trees.
- Underground power lines and improve public lighting.
- Develop WSUD solutions where possible in the road and footpath especially where they can support better tree growth.



- Encourage provision of weather protection.
- Enhance the interface with JL Murphy Reserve.
- Parking and vehicle crossovers are discouraged
- Functional layout at intersections still need to be developed and tested.

Materials

- Sawn bluestone kerbs and channels and footpath pavements. Permeable bluestone in tree zone.
- WSUD integrated into road profile
- Trees established within trenches of structural soil.
- Improved pedestrian and street lighting

Tree species

Long Term Planting Strategy

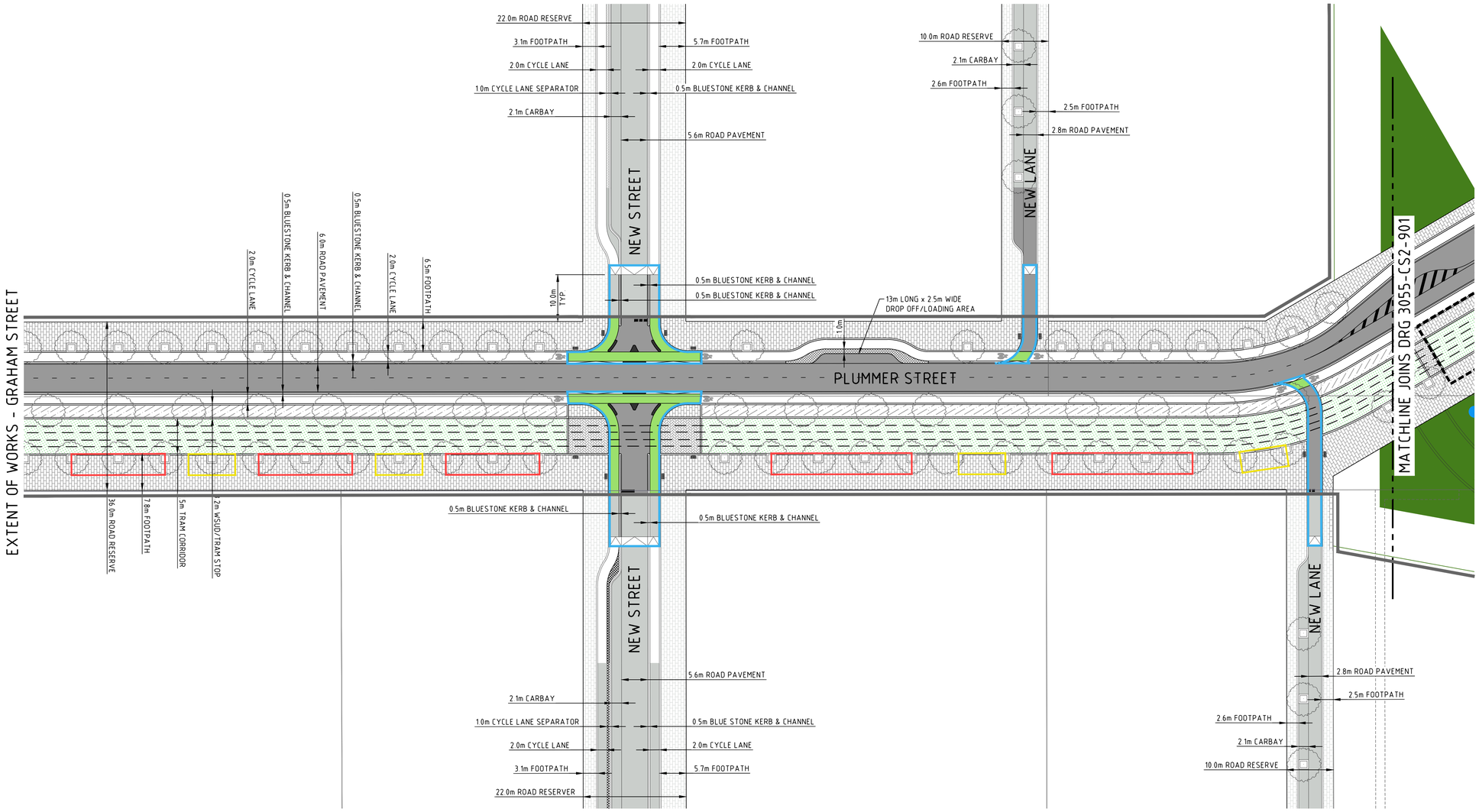
Footpath (North): Medium deciduous

Footpath (South): Plane Trees

Park Edge: Large deciduous

Median: Plane Trees

For a list of species, refer *4.2 Urban forest - Species palette*



LEGEND

- STUDY AREA
- EXISTING LOT BOUNDARY
- TACTILE PAVERS
- TRAM LINE
- RAISED INETERSECTION
- STREET TREE
- BLACK ASPHALT
- CYCLE LANE
- PEDESTRIAN ZONE (FLEXIBLE USE)
- CYCLE LANE SEPARATION
- MOUNTABLE ISLAND
- TRAM CORRIDOR/LINEAR PARK
- WSUP/LOW PLANTING
- FUTURE OPEN SPACE
- TRAM STOP
- FLEXIBLE USE (PARK, ACTIVE USES ETC) PERMEABLE PAVERS OR PLANTING
- ALFRESCO DINING/FOOTPATH TRADING (FPT) HARDSTANDING BLUESTONE/TIMBER SURFACE
- WC — WC EXELOO (2x)
- WATER FOUNTAIN (DRINKNIG)
- TRAFFIC CONTROL DEVICE

0m 10 20 30m
1:500

REV	DATE	DRN	CKD	APP	AMENDMENT
4	11.01.18	CPM			AMENDED TO COUNCIL COMMENTS
3	15.11.17	CPM	KL		AMENDED TO COUNCIL COMMENTS
2	11.10.17	CPM	KL		PLANS MODIFIED AS PER COUNCIL COMMENTS
1	20.09.17	CPM	KL		ISSUED FOR REVIEW AND COMMENT

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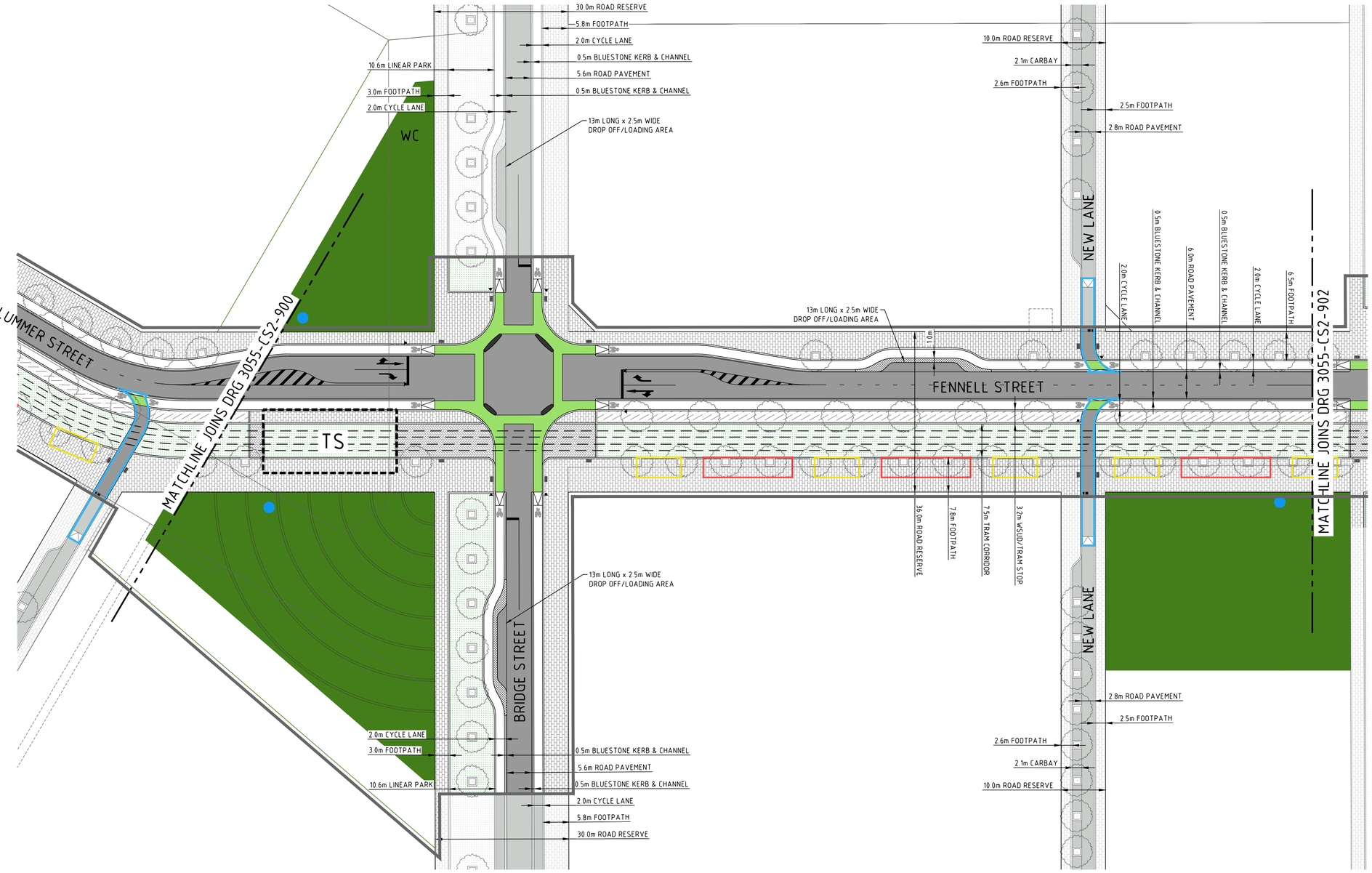
E melbourne@cosweb.com.au

CLIENT: CITY OF PORT PHILLIP
APPROVED: CHECK PRINT
DESIGNED: CPM
SCALE: 1:500
PROJECT: FISHERMANS BEND - CASE STUDY TWO
TITLE: CONCEPTUAL FUNCTIONAL LAYOUT PLAN SHEET 1 OF 3
PP No.: N/A
DRAWING No.: 3055-CS2-900
REVISION: 4
ORIGINAL SIZE: A1



LEGEND

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- EXISTING LOT BOUNDARY
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- TRAM LINE
- RAISED INETERSECTION
- STREET TREE
- BLACK ASPHALT
- CYCLE LANE
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0m 10 20 30m
1:500

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PROJECT: FISHERMANS BEND - CASE STUDY TWO

TITLE: CONCEPTUAL FUNCTIONAL LAYOUT PLAN SHEET 2 OF 3

APPROVED: CHECK PRINT

DESIGNED: CPM

SCALE: 1:500

PP No.: N/A

DRAWING No.: 3055-CS2-901

REVISION: 4

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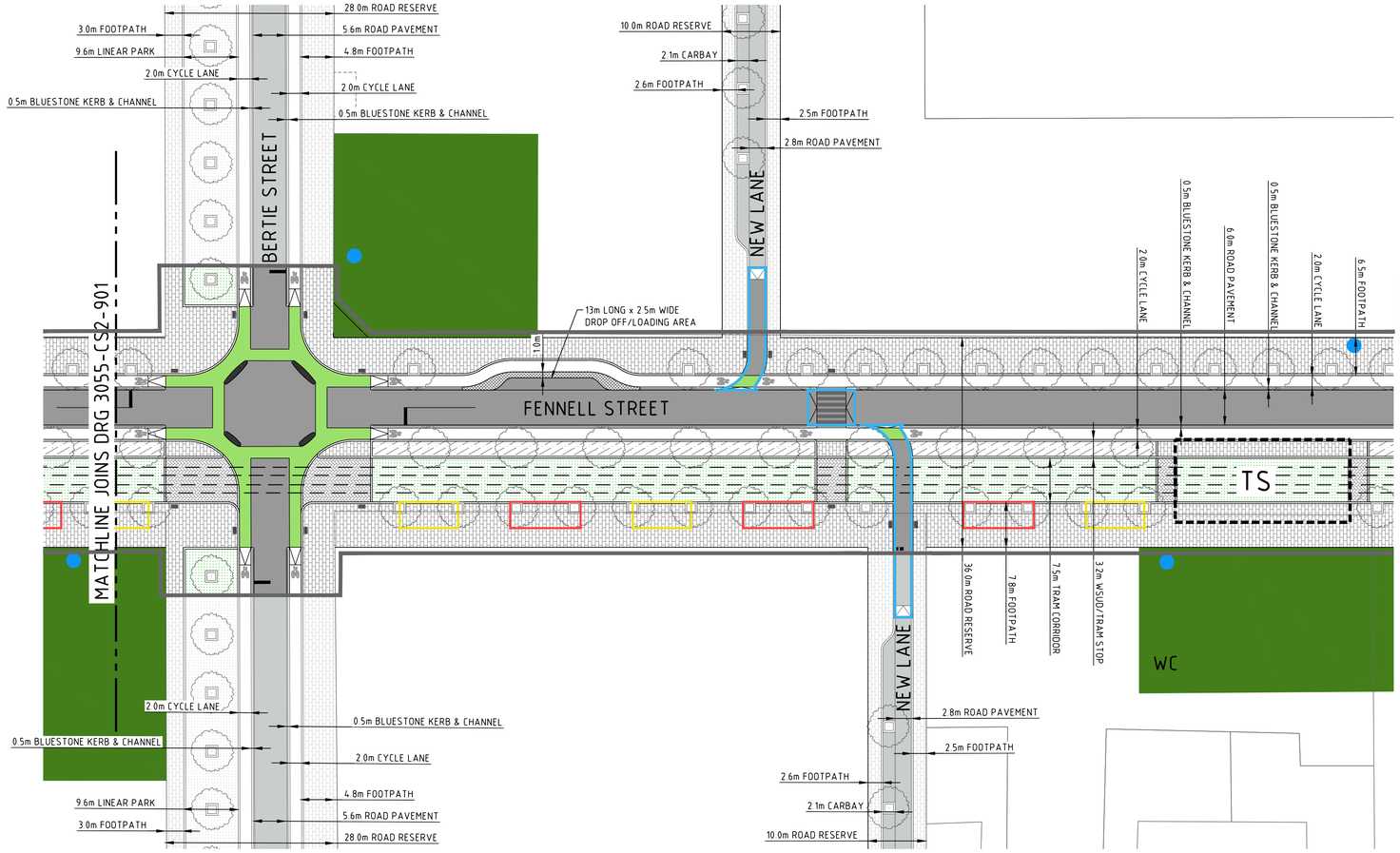

LEGEND

- STUDY AREA
- EXISTING LOT BOUNDARY
- TACTILE PAVERS
- TRAM LINE
- RAISED INETERSECTION
- STREET TREE
- BLACK ASPHALT
- CYCLE LANE
- PEDESTRIAN ZONE (FLEXIBLE USE)
- CYCLE LANE SEPARATION
- MOUNTABLE ISLAND
- TRAM CORRIDOR/LINEAR PARK
- WSUP/LOW PLANTING
- FUTURE OPEN SPACE
- TRAM STOP
- FLEXIBLE USE (PARK, ACTIVE USES ETC) PERMEABLE PAVERS OR PLANTING
- ALFRESCO DINING/FOOTPATH TRADING (FPT) HARDSTANDING BLUESTONE/TIMBER SURFACE
- WC — WC EXELOO (2x)
- WATER FOUNTAIN (DRINKNIG)
- TRAFFIC CONTROL DEVICE

0m 10 20 30m
1:500

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SCALE: 1:500

PROJECT: FISHERMANS BEND - CASE STUDY TWO

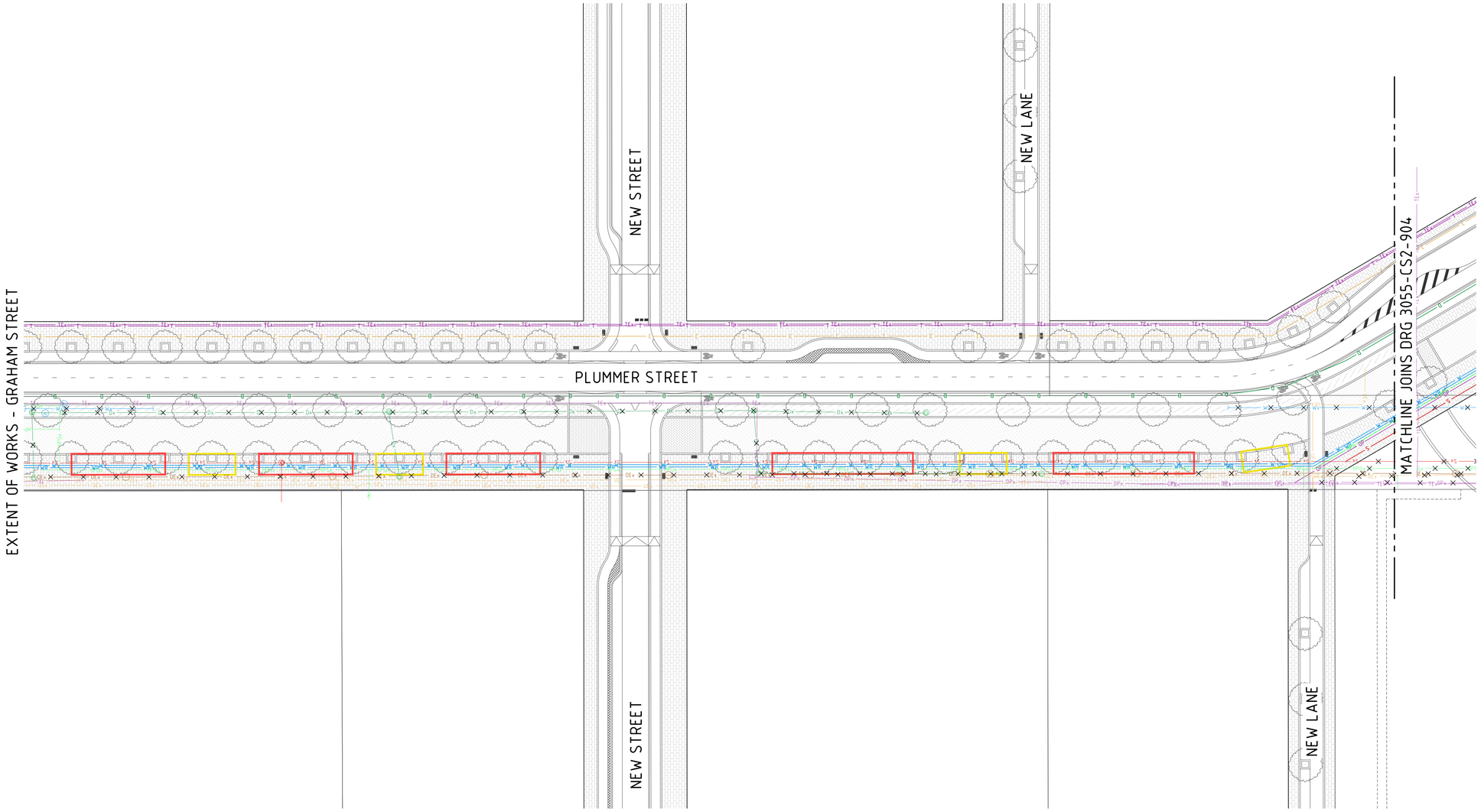
TITLE: CONCEPTUAL FUNCTIONAL LAYOUT PLAN SHEET 3 OF 3

PP No.: N/A

DRAWING No.: 3055-CS2-902

REVISION: 4

ORIGINAL SIZE: A1



LEGEND

- SERVICES TO BE REMOVED (TYPICAL)
- PROPOSED SEWER AND ACCESS CHAMBER
- EXISTING GRAVITY SEWER AND ACCESS CHAMBER
- PROPOSED STORMWATER DRAINAGE
- EXISTING STORMWATER DRAINAGE AND PIT (UNDEFINED)
- PROPOSED WATER MAIN
- PROPOSED RECYCLED WATER MAIN
- EXISTING WATER MAIN
- PROPOSED HP GAS MAIN
- EXISTING HP GAS MAIN
- PROPOSED OPTUS
- EXISTING OPTUS
- PROPOSED TELSTRA
- EXISTING TELSTRA
- PROPOSED COMMUNICATIONS CONDUIT
- PROPOSED BELOW GROUND HV/LV POWER CABLE
- EXISTING BELOW GROUND HV/LV POWER CABLE
- EXISTING ABOVE GROUND HV/LV POWER LINES (WITH AERIAL COMMUNICATION CABLE)
- STREET TREE
- PEDESTRIAN ZONE (FLEXIBLE USE)
- TRAM CORRIDOR/LINEAR PARK
- WSUP/LOW PLANTING

0m 10 20 30m
1:500

REV	DATE	DRN	CKD	APP	AMENDMENT
3	11.01.18	CPM			AMENDED TO COUNCIL COMMENTS
2	22.11.17	CPM	KL		AMENDED TO COUNCIL COMMENTS
1	02.10.17	CPM	KL		ISSUED FOR REVIEW AND COMMENT

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PROJECT: FISHERMANS BEND - CASE STUDY TWO
TITLE: CONCEPTUAL FUNCTIONAL UTILITIES PLAN SHEET 1 OF 3
PP No.: N/A
DRAWING No.: 3055-CS2-903
REVISION: 3
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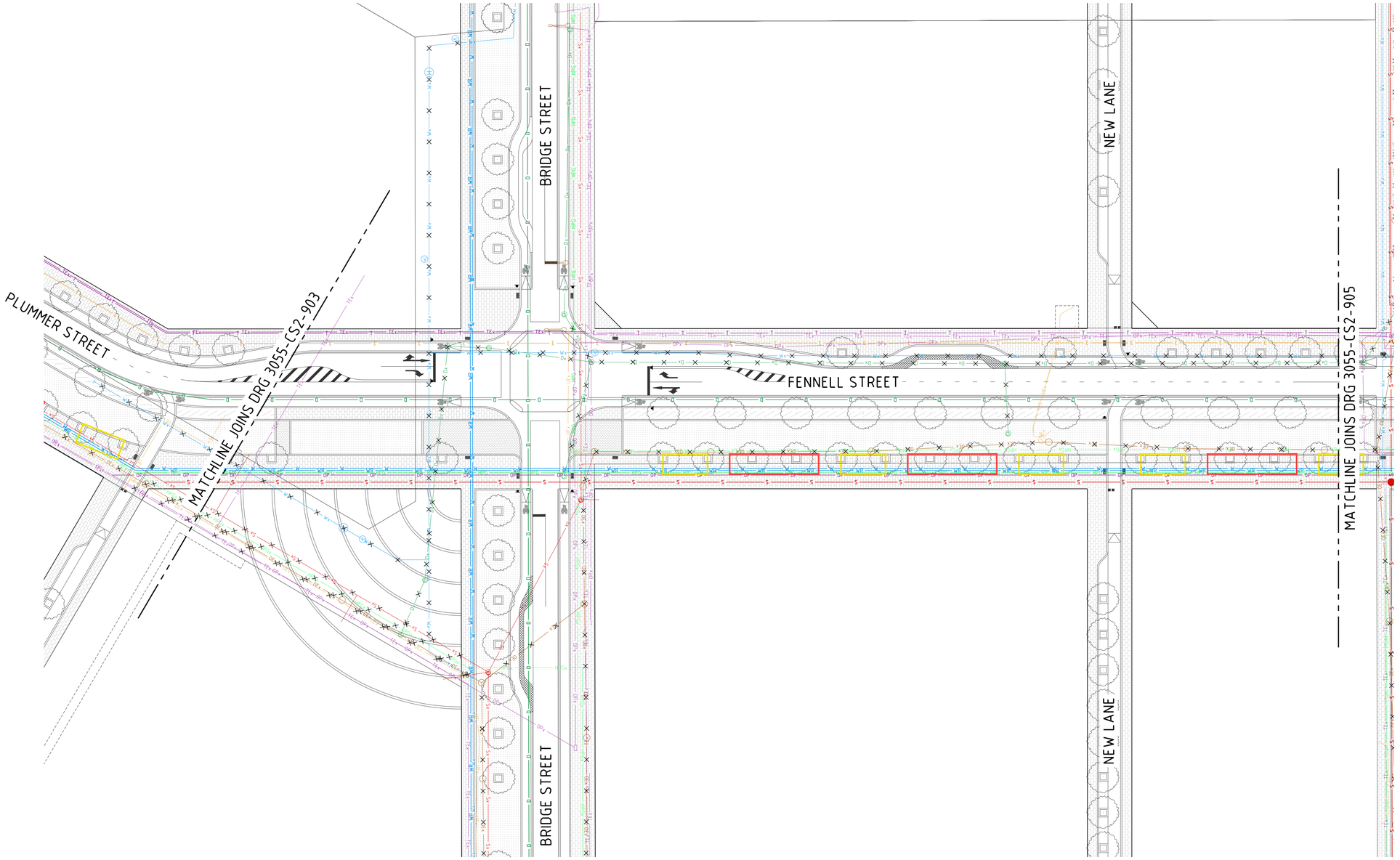

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0m 10 20 30m
1:500

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PROJECT: FISHERMANS BEND - CASE STUDY TWO
TITLE: CONCEPTUAL FUNCTIONAL UTILITIES PLAN SHEET 2 OF 3
PP No.: N/A
DRAWING No.: 3055-CS2-904
REVISION: 3
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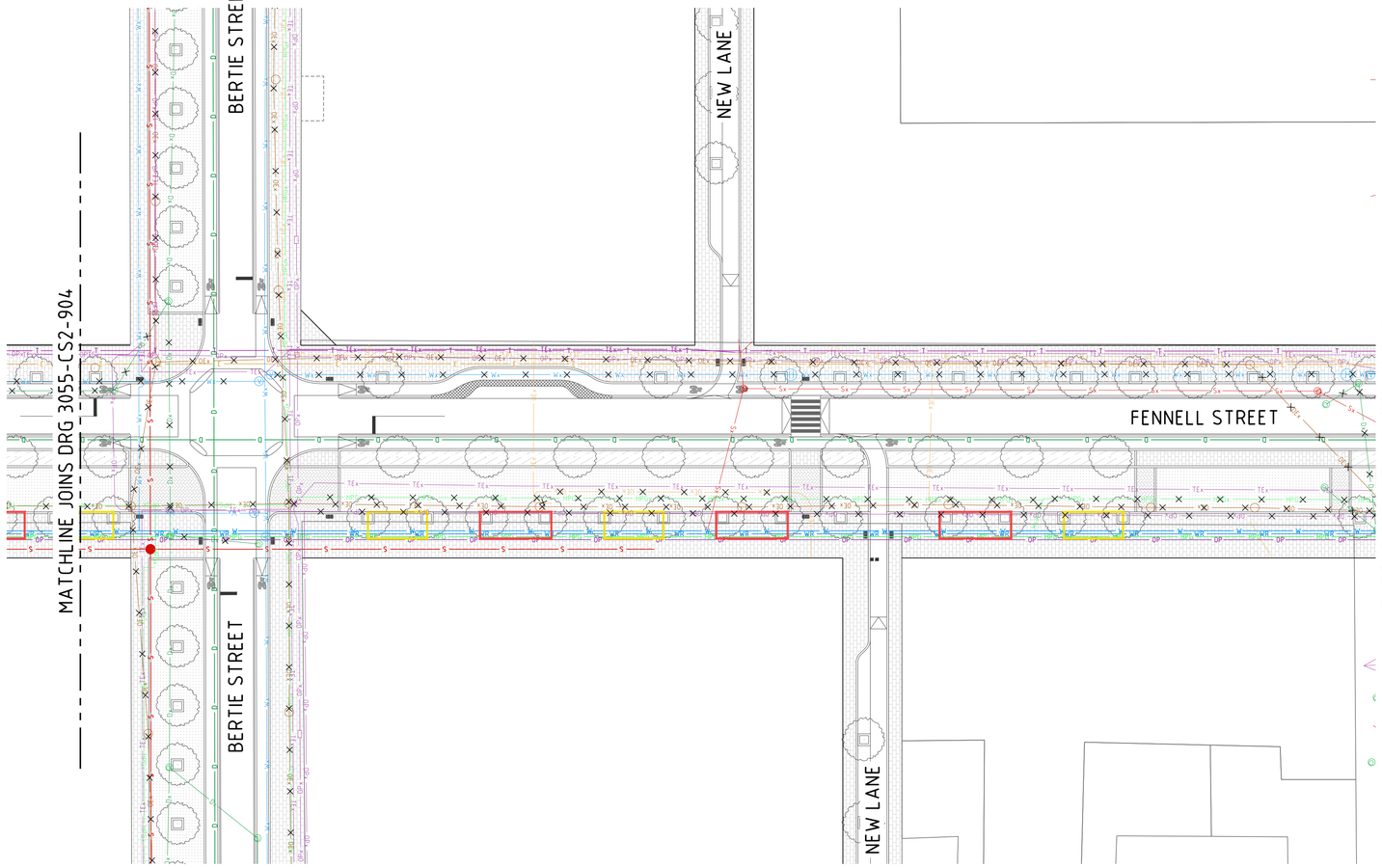

LEGEND

- SERVICES TO BE REMOVED (TYPICAL)
- PROPOSED SEWER AND ACCESS CHAMBER
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0m 10 20 30m
1:500

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PROJECT: FISHERMANS BEND - CASE STUDY TWO
TITLE: CONCEPTUAL FUNCTIONAL UTILITIES PLAN SHEET 3 OF 3
PP No.: N/A
DRAWING No.: 3055-CS2-905
REVISION: 3
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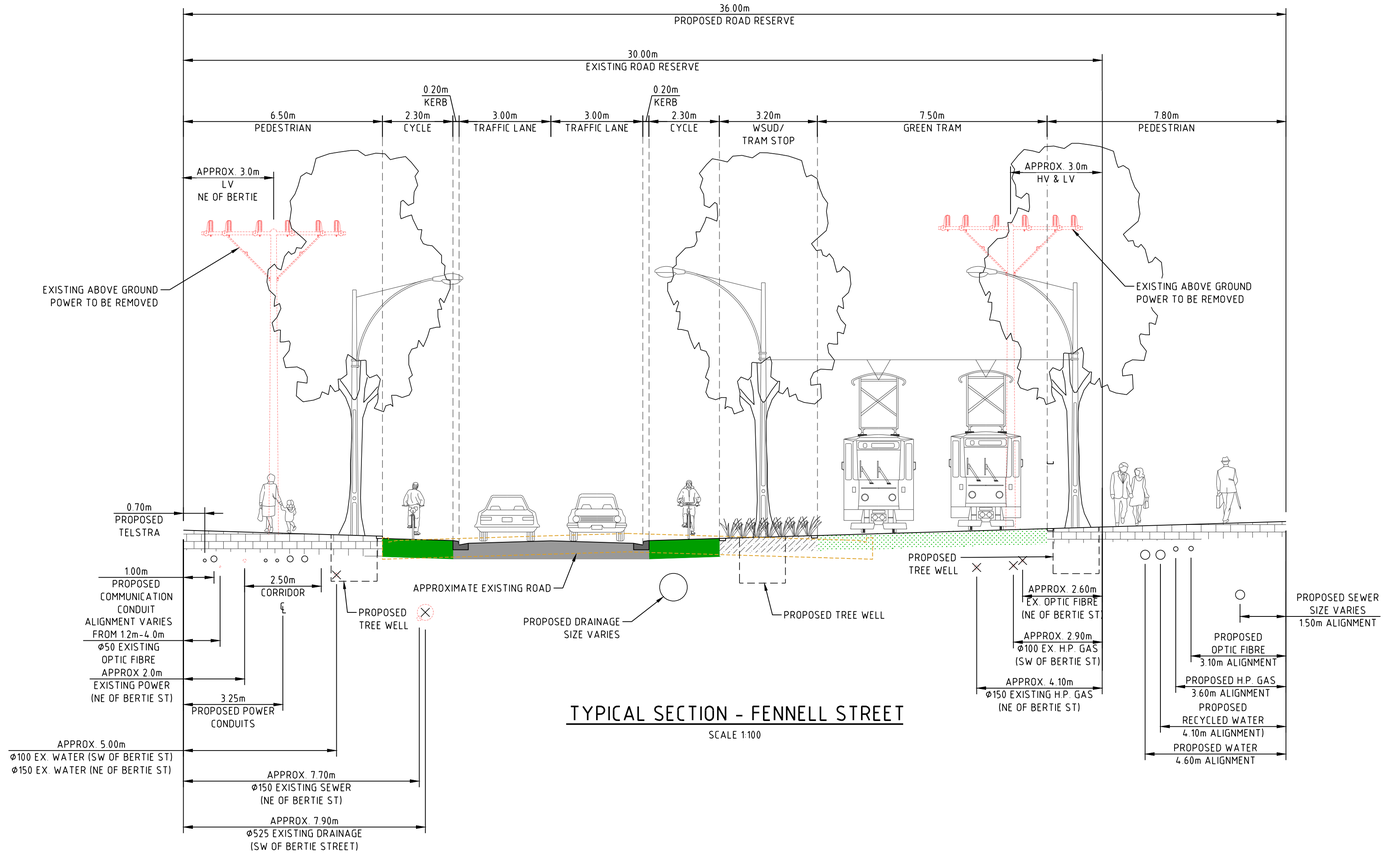
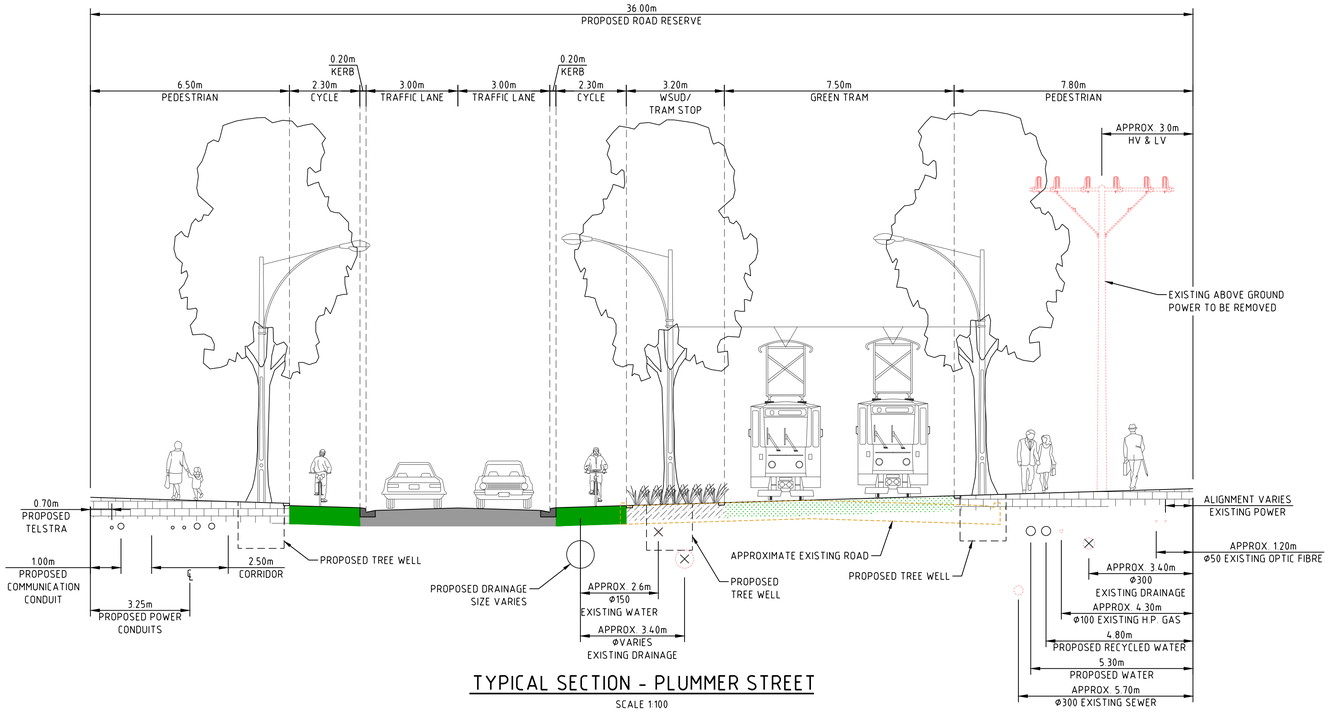


TYPICAL SECTION - FENNELL STREET

SCALE 1:100



TYPICAL SECTION - PLUMMER STREET

SCALE 1:100

0m 2 4 6m
1:100

REV	DATE	DRN	CKD	APP	AMENDMENT
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DESIGNED: CPM

SCALE: 1:100

PROJECT: FISHERMANS BEND - CASE STUDY TWO

TITLE: TYPICAL CROSS SECTION FENNELL & PLUMMER STREET - SERVICES

PP No.: N/A

DRAWING No.: 3055-CS2-907

REVISION: 4

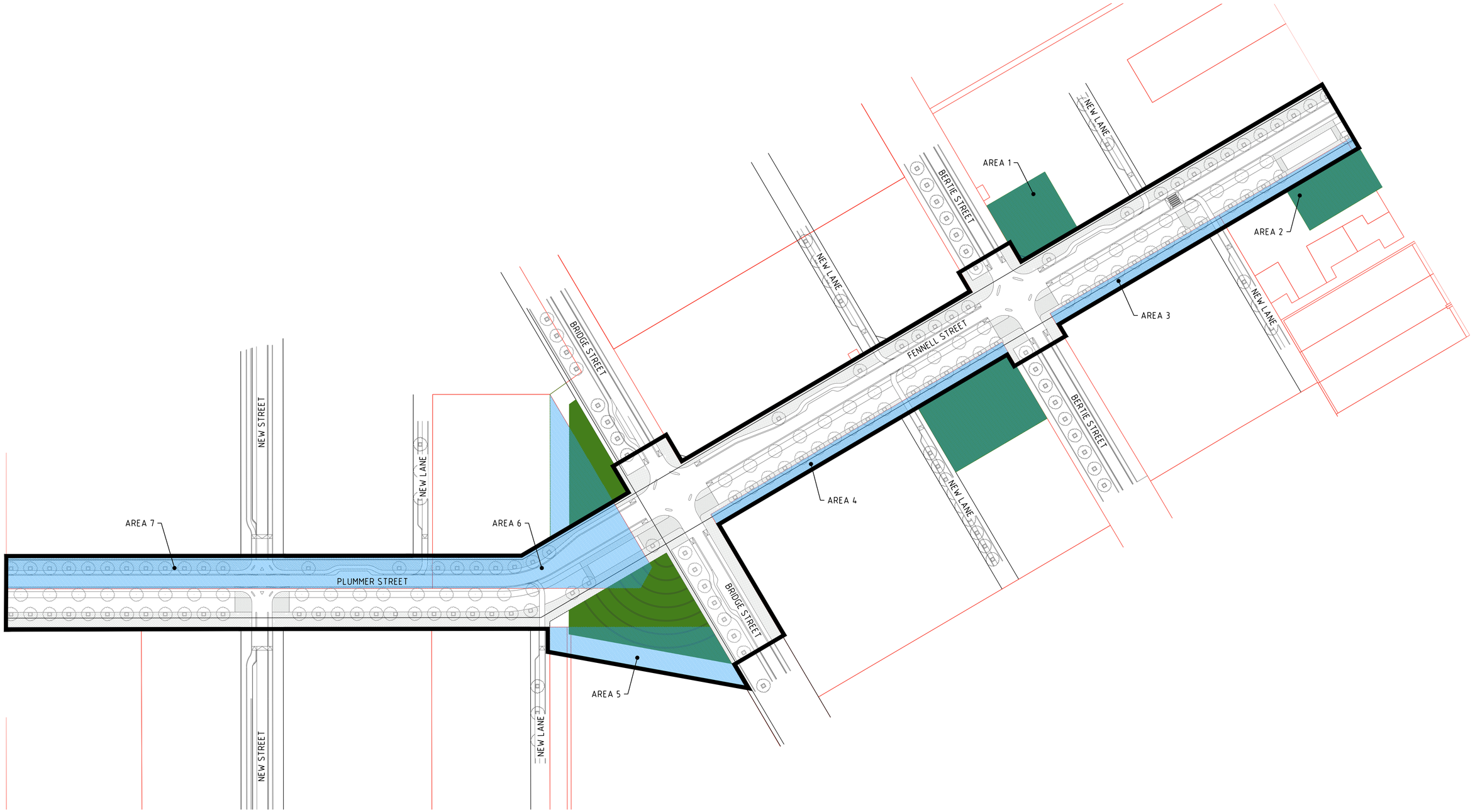
ORIGINAL SIZE: A1

LEGEND

- EXISTING CADASTRAL
- PROPOSED CADASTRAL
- STUDY AREA
- REQUIRED ACQUISITION FOR STREETSCAPE
- FUTURE OPEN SPACE

LAND ACQUISITION AREAS

AREA No.	ADDRESS	ROAD WIDENING	OPEN SPACE
1	43 FENNELL STREET	0m^2	1469m^2
2	247-251 INGLES STREET (STRATA TITLED PROPERTY)	457m^2	1259m^2
3	38 FENNELL STREET	610m^2	0m^2
4	61 BERTIE STREET	1016m^2	2376m^2
5	299 BRIDGE STREET	0m^2	1997m^2
6	577 PLUMMER STREET	2559m^2	1395m^2
7	520-533 PLUMMER STREET	3540m^2	0m^2



0m 20 40 60m
1:1000

REV	DATE	DRN	CKD	APP	AMENDMENT
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SCALE: 1:1000
PROJECT: FISHERMANS BEND - CASE STUDY TWO
TITLE: LAND ACQUISITION PLAN
PP No.: N/A
DRAWING No.: 3055-CS2-908
REVISION: 2
ORIGINAL SIZE: A1

APPENDIX 2 - COUNCIL CASE STUDY ONE DESIGN SPECIFICATIONS AND PROPOSED PLANNING CONTROLS

Case Study 1: Montague Sport and Recreation Hub

Montague Sport and Recreation Hub

- Community infrastructure in Fishermans Bend is proposed to be delivered through community infrastructure hubs, through two delivery models:
    - Community hub as a stand alone facility
    - Community hub within a larger mixed use development
- The Montague Sport and Recreation Hub will comprise an indoor multipurpose stadium with supporting infrastructure, youth services and multipurpose community rooms.
- A Sport and Recreation Hub is defined as *'An efficient and innovative model for sport and recreation facilities; co-locating physical activities with related community and health based services' i*n the Fishermans Bend Community Infrastructure Plan (CIP).
- The guiding principles for Sport and Recreation Hubs (from Fishermans Bend CIP) are:
    - Co-location of recreation hubs with open spaces where it is possible.
    - Providing multipurpose courts to accommodate various type of informal and formal sport. This will be achieved by using synthetic and/or hybrid surfaces,
    - Building the courts to the larger netball court dimensions to maximize the flexibility and number of sporting codes that can be played in single court spaces.

Site Context

- The subject site for the case study is located at 80 Munro Street, which is bounded by Montague Street, Munro Street and Johnson Street. The size of the site is 9,709 sqm.
- The site is in the core area of Montague and the hub will service the Montague precinct (the area bounded by The Westgate Fwy, City Road, Boundary Street and Johnson Street.
- The future activity centres in the Montague precinct will be located along the length of Normanby Road and Buckhurst Street.
- Montague North Park, a proposed Neighbourhood Park (future public open space) is located on the north-east corner of Montague Street / Munro Street, opposite the subject site. This will provide informal and opportunistic recreation, relaxation and play. It is proposed to include seating, walking paths and small playground, and potentially outdoor multi-purpose courts. Our preference is to create a clear relationship/design integration of the community facility (particularly youth services) with this open space.
- The site is located in an area with a maximum building height limit of 20-24 storeys. The 24 storey height limit applies to all properties/street blocks directly north of the subject site, and 20 storeys applies to the sites/street blocks directly to the south of the subject site.
- Public transport access to the site includes:
    - Bus route 235 (Montague Street)
    - 109 Light Rail (Montague Street stop)

Hub Community Facilities and Proposed Uses

The Montague Sport and Recreation Hub includes the community facilities and proposed uses outlined in the table below.

Community facility (within hub)	**Uses**
Indoor multipurpose stadium (4 courts)	Netball, basketball, futsal, volleyball, badminton
Multipurpose Community Room 1	Youth services
Multipurpose Community Room 2	Sport and wellbeing services
Large Multipurpose Room	Gymnastics, dance, table tennis, fitness classes

Design Specifications

The Design specifications for the Montague Sport and Recreation Hub are outlined in the two tables below. The first table includes the Design Specifications for the hub, which apply to both development models. The second table includes additional considerations for the Community hub within a larger mixed use development model.

Montague Sport and Recreation Hub – Design Specifications (both development models)

Element	Spatial requirements	Additional requirements	Data source
Multipurpose Indoor Stadium			
Indoor courts (classified as sub-regional facility)	• The estimated building footprint for an indoor four court stadium is 5,500sqm.	• Please note that this is an estimated floorspaces only and the design exercise will confirm the total floorspace requirements.	*Darebin multi-sport stadium project options report, 2015*
	4 indoor courts are required. <u>Dimensions:</u> • Court dimensions (per court): 30.50m long; 15.25m wide • Court run-off dimensions (per court): 3.05m on all sidelines and baselines; 3.65m between courts (clear of all obstructions) <u>Areas / floorspace:</u> • Area of each court (excluding run-off dimensions) = 465.125sqm • Area of 2 courts, including run-off dimensions = 1,473.15sqm • Area of 4 courts, including run-off dimensions = 2,856.63sqm <u>Floor to ceiling height:</u> • Minimum 8.3m *(Netball Vic)*, up to 11m *(Ferrars Plans)*. At least 2-3 storeys will ensure that basketball rings can be stored in roof. *Note – The above dimensions include the court and run-off surfaces only, and must be obstacle free.*	• The preferred arrangement is for all 4 courts to be located on the same level. Large competitions (basketball, netball, badminton, volleyball) rely on multiple court venues. 4 courts together will also ensure a larger, more flexible space, which can be used for other activities (e.g. as a large performance space etc.). • *NOTE: If it is looking like 4 sites will not fit on the site, please let CoPP officers know, so that we can make a decision on whether the hub should be over two levels, or if another site would be better.* • Courts must be at least 2 side by side (to qualify for competitive netball grant). • Sprung timber flooring. • Courts are to be multi-lined to provide for multiple sports. • Courts do not necessarily need access to natural light. • Where there is access to natural light, courts should be oriented north-south where possible to minimise the effects of the suns glare. • There are no specific requirements for sound proofing, however consideration will be required as how to reduce sound spill from the courts and how to contain any sound from the surrounding site such as road noise.	*Netball Victoria Facility Manual (classified as Sub- Regional Facility)* *Netball Victoria Compliance Fact Sheet*

		• Air conditioning will need to be suitable for range of uses. <u>Construction standard:</u> • Courts: Netball Victoria compliance standards. • Slip resistance: Most relevant Australian Standard (i.e. AS 4663:2013 Slip Resistance). • Indoor lighting: AS 2560.2.2-1986 (Guide to Sports Lighting – Part 2.2 – Lighting of Multipurpose Indoor Sports Centres).	
*Supporting requirements for indoor courts only (these facilities **must not** be shared with other uses)*	<u>Team benches:</u> • Option 1 - Minimum 2 per court, 6m in length each • Option 2 – Tiered seating with 2 x 3m length benches • Both options require minimum space of 0.915m wide for wheelchair access/standing • Benches to accommodate minimum 10 people each <u>Officials benches:</u> • Minimum 1 per court, 1.2 metres in length each; • Plus minimum space of 0.915 metres wide for wheelchair access/standing • Benches to accommodate minimum 2 people each <u>Spectator seating:</u> • Bench seating or suitable seating to accommodate 30 – 50 spectators per court <u>Player amenities:</u> • Minimum 2 areas for 4 courts • Minimum 20sqm each area • Minimum 2 showers, 3 toilets, 3 hand basins each area <u>Player change rooms:</u> • Minimum 2 change rooms for 4 courts • Minimum 25sqm each change room (based on 20 players using a room at the one time). <u>Umpire change rooms and amenities:</u> • Minimum 2 unisex rooms • Minimum 10sqm each room	• These facilities cannot be shared with any other uses within the hub.	*Netball Victoria Facilities Manual*

	• Minimum 1 shower, 1 toilet, 1 hand basin in each room <u>Umpire duty room:</u> • 1 room • Minimum 20sqm		
*Supporting requirements for indoor courts that **can** be integrated and/or shared by community uses*	<u>Public toilets:</u> • 2 rooms for 4 courts • Minimum 12sqm each room • Minimum 2 toilets, 2 hand basins in each room <u>Accessible toilet:</u> • 1 unisex room • Minimum 8m^2 • Minimum 1 toilet, 1 hand basin, 1 shower, 1 baby change table <u>First aid room:</u> • 1 first aid room • Minimum 25m^2 <u>Administration office:</u> • 1 office • Minimum 20m^2 *(Netball Vic)* or 36m^2 *(Ferrars St Plans)* <u>Tournament office:</u> • 1 office • Minimum 15m^2 <u>Kiosk/Café with commercial kitchen:</u> • 1 kiosk including commercial kitchen. • Minimum 20sqm *(Netball Vic)* or 35sqm (*Ferrars St Plans).* • Minimum 50sqm for commercial kitchen (please note that commercial kitchen is a nice to have, however if it does not fit could be excluded). <u>Multipurpose/function room:</u> • Minimum 40sqm with kitchenette/bar (please note that commercial kitchen is a nice to have, however if it does not fit could be excluded). <u>Storage:</u> • Minimum 25sqm *(Netball Vic)* or 30m^2 (*CIPT/collaborations)* or 48m^2 *(Ferrars Plans).* • Cleaning/maintenance room.	• These aspects can be integrated with and shared with other hub uses. <u>Kiosk/Café & Commercial Kitchen</u> • Kiosk/café should help to activate the Montague Street and/or Munro Street frontage (which will be a nicer street for alfresco dining) and be integrated with the foyer space. • This facility should be able to be accessed independently of the rest of the hub (likely to be leased to an independent operator). • The kiosk/café will likely be accessed by general resident/worker population as well as people using the hub and therefore a strong street presence is required/encouraged. • The Commercial Kitchen should be a flexible space that could be shared between a private operator/hire for community groups/functions, and could be integrated with the Kiosk/Café. There are examples of where leases have been structured to enable this outcome.	*Netball Victoria Facilities Manual*
Multipurpose Rooms			

Multipurpose Community Room 1 (Youth Services)	• Multipurpose Community Room - minimum size 250sqm (including 20sqm kitchenette and 30sqm storage). This size caters for 100+ people. • Small meeting / private consulting room minimum size 35sqm.	• Dedicated room for youth services. • The design should support a range of activities for young people, including potential use for music gigs, exhibitions, groups and gatherings. (*CoPP Youth Places Report 2014*). • Youth services also generally require access to smaller meeting rooms /or private consulting rooms. Such a space is important for conducting confidential counselling/ referral services for young people. • It is important for young people to feel a sense of 'ownership' over the spaces that they use. Consideration should be given to youth friendly design principles. This could include the purchase of youth friendly furniture or orientating the youth / multipurpose room to the open space across the road. • This space should have a visible and accessible street frontage.	*CoPP requirements*
Multipurpose Community Room 2 (Sport and wellbeing services)	• Minimum size 190sqm (including 10sqm kitchenette and 10sqm storage). This size caters for 50-99 people.	• Multipurpose space should be able to be divided into 2 separate spaces using operable walls.	*CoPP requirements*
Large Multipurpose Room (Gymnastics, dance, table tennis, fitness classes)	• Minimum size 250sqm (including 20sqm kitchenette and 30sqm storage). This size caters for 100+ people.	• Multipurpose space should be able to be divided into 2 separate spaces using operable walls.	*CoPP requirements*
Additional requirements / considerations			
Hub location within site		• The design of the building should ensure a positive relationship between the hub and the surrounding buildings, particularly the public open space opposite. • The building must have excellent public exposure, particularly to Montague Street and be considered in the round.	*CoPP requirements*

		• Key civic space: The building must be open and inviting and provide a core community space in the area. • Synergies between different uses are to be explored as potential sources of design drivers. • Innovation is highly encouraged in the planning, design and functionality of these buildings.	
Entry Foyer	• Generous and inviting entrance foyer with reception area (celling height not less than 3.5m and preferable higher). Located in close proximity to spaces to be used after-hours (such as multipurpose spaces). • Entry air-lock (minimum 3.6m x 3.6m internal dimension).	• Secure and highly visible pedestrian entry from Montague Street, separate to commercial/residential entry. • The building entry needs to provide good access (direct and safe) to public transport and on-site parking.	*Ferrars Street Design Guidelines*
Access and car parking	• Car parking, car share, motorcycle and bike parking spaces to be provided as per Table 3. • Accessible car spaces and a pick up/drop off area (to accommodate 2 school busses at a time) is to be provided on the street, adjacent to the car park entry.	• Vehicle access is to be from Munro Street or Johnson Street. It must not be from Montague Street. • All car parking is to be provided within the podium/lower levels, not in the basement or at grade. • Refer to Table 3 for additional design requirements.	*CoPP requirements*
Utilisation data	• Considerations for design of uses, access and traffic.	<u>Recreation Facility</u> • Peak periods include 4pm-10pm (school night) and 8am-10pm on weekends • Generally not busy during the day <u>Community Facility</u> • Peak periods include weekdays 9am-5pm and weekday evenings <u>Youth Services</u> • Peak periods include weekday evenings	*CoPP Sport and Recreation & Community Health & Service Planning teams*
Outdoor space	• While there is no specific requirement for outdoor space for the community infrastructure hub, it would be highly desirable to provide outdoor space on-site. Rooftop spaces can also be considered.		*CoPP requirements*

Additional Requirements for the Community Hub within a Larger Mixed Use Development

Element	**Requirement**
Building typology	Podium / tower building typology, nothing that a single building and single typology may not be appropriate across the whole site.

Mix of uses and location within building	The total floorspace for the building must not exceed 59,224sqm (6.1 times the size of the site). The Sport and Recreation Hub component may exceed this total floorspace, if it is still within the building height.
	
	<u>Ground Floor:</u>
	• Montague Sport & Recreation Community Hub. Some of the hub facilities may be located on the 1st floor, if necessary. If this is the case, the preference would be for more 'active' community uses (such as youth services) to be located on the ground floor.
	• If there is additional space, commercial space for not-for profits, residential uses or convenience uses could also be considered at the ground floor.
	• Consider the possibility of having more than one kiosk/café to ensure activation of Montague and Munro Streets – i.e. one that services the sports hall (never great places) and an option for something a little more interesting.
	
	<u>Upper levels:</u>
	• Upper levels to comprise a mix of commercial and residential uses (potentially a tower for each use):
	• Commercial floorspace must be a minimum of 17,476sqm (1.8 times the size of the site).
	  o Commercial floorspace is the gross floor area (the area above ground of all buildings on a site, including all encolosed areas, services, lifts, car stackers and covered balconies. Voids associated with lifts, car stackers and similar service elements should be considered as multiple floors of the same height as adjacent floors or 3.0m if there is no adjacent floor).
	  o Floor Areas of common service areas shared by commercial/non-residential to commercial within the building.
	  o The Montague Sport and Recreation Hub and any other floorspace for Not-for-profits or community uses can count towards the commercial floorspace, if desired/required.
	• The total residential floorspace must not exceed 41,748sqm (4.3 times the site size).
	  o This is the gross floor area (see definition above).
	  o Gross Floor Area of common areas shared by other uses should be calculated based on the proportion of residential use to other uses within the building.
	• Car parking is to be located within the podium/lower levels, not in a basement.
	• Consider how less sensitive uses can provide a buffer against noise generating areas.

Additional access and car parking requirements	• Secure and highly visible pedestrian entry from Montague Street, separate to commercial/residential entry. • Preference for car parking for the hub to be distinguishable from the car parking for the residential/commercial uses.
Dwelling size and mix	• 22% 1 bedroom (minimum 50sqm) • 50% 2 bedroom (minimum 70sqm) • 28% 3 bedroom (minimum 110sqm) • Residential dwelling density must not be more than 387 dwellings per hectare (based on an average dwelling size of 77sqm).

Communal open space	• Communal open space for all uses is encouraged. • Encourage vertical and roof top greening to contribute to biodiversity outcomes

Planning requirements

In addition to the hub design specifications above, the table below includes an outline of the additional planning requirements for the site. These apply to both development models.

Element	**Requirement**
Floor to ceiling height	<u>Minimum floor to ceiling height:</u> • Ground Floor: 4m • Commercial uses/Podium levels / car parking levels: 3.8m • Residential uses: 2.7m • Recreation component: 8.3m -11m (noted here, but not a planning scheme requirement)
Building height	• Maximum 24 storeys
Streetwall height	• Maximum of 6 storeys (23m). This applies to all street frontages (Montague Street, Munro Street, Johnson Street).
Upper level setbacks	• 10m above the street wall • If multiple towers on a single site, 20m between towers.
Pedestrian connection	• If possible, a through block link for pedestrian access should be provided through the site, preferably connecting the linear open space off Johnson Street to a central location on Montague Street, opposite the Montague North Park. This does not need to be open to the sky, or publicly accessible at all times and could be within the building (the preference is for the sports hub not to be separate buildings, whereas the resi/commercial could be a separate building).
Active street frontages / pedestrian entry	• All street frontages are to be activated with mixed-use and commercial/non-residential uses with at least 60% visual permeability achieved along ground level street frontages and spill-over spaces encouraged onto the street where possible. • Building entry and internal circulation areas and level changes within development should provide universal access to all residential and non-residential uses within buildings; encourage use of stairs rather than lifts and provide a clearly articulated circulation path through the development.
Car parking, car share, motorcycle and bike parking	<u>Car parking rates:</u> • Office / Place of Assembly / Restricted retail premises / Retail Premises - 1 car space to each 100sqm of gross floor area • Dwelling – 0.5 car parks to each dwelling <u>Motorcycle parking rates:</u> • 1 motorcycle parking space for every 100 car spaces. <u>Car share rates:</u> • 1 car share space per 60 car parking spaces. • Located in areas that allow for easy public access from the street. <u>Car parking design:</u> • Minimum floor to ceiling height of 3.8m

	• Car parking must be located within a building, sleeved by active uses to a minimum depth of 10m and not visible from the street. • Integrate car parking into the building and incorporate quality doors. • Maximise natural ventilation, consistent with providing active frontages • If car lifts, turntables and stackers are proposed, ensure these do not result in cars queuing on the street. • Include the provision of internal queuing and minimise the need for cars to queue on the street. • Ensure layout and design of car parking facilitates temporal sharing of car parking spaces between different uses with different peak demand patterns. • Design car parking areas to include provision for future conversion of car parking to alternate employment generating uses. • Make provision for easily accessible short term temporary parking and drop-off/pick up zones. • Car parking areas should be subdivided as common property (not individual titles) to be managed by the body corporate and leased to property owners. • The design and layout of car parking areas within development should: o retain car parking within a single or consolidated title managed by owners corporation o facilitate temporal sharing of car parking spaces between different uses with different peak demand patterns o include provision for future conversion of car parking to alternative employment generating uses. <u>Bicycle parking rates:</u> • Residential development: minimum 1 bicycle parking space per dwelling and 1 visitor bicycle space per 10 dwellings • Non-residential development: minimum 1 bicycle parking space per 50sqm of non-residential floorspace and 1 visitor bicycle space per 1,000sqm of net non-residential floor area. <u>Bicycle parking design:</u> • Bike parking within development should: o be provided in a convenient location readily accessible from the main building entrance (non-vehicle), o have safe pathways /provided to / from it (i.e. minimise conflict with vehicles), o be secure and well-lit, o include a range of rack types to enable all user abilities (.the majority of bike racks to be floor mounted rather than wall mounted), o consolidated in one location. • All bike parking should comply with the Australian Standards (AS 2890.3:2015.) and seek to achieve best practice in its design for residential and non-residential buildings, with reference to AustRoads guidelines for design and installation of bike parking facilities (AP-R527-1 2016) • End of trip facilities should be designed to meet the following requirements: o Publicly accessible bike parking rails should be within 30m of popular destinations and bike parking enclosures should be located within 70m of a building entrance or elevator. o Bike parking should meet peak period demand and account for growth in demand in the medium term.

	○ Bicycle parking facilities should be located in areas with good passive surveillance and good lighting. ○ Workplaces should provide showers, lockers, and drying space to encourage active lifestyles in their workforce.
Adaptable buildings	• Car parking areas within a podium or at the lower levels of the building should have level floors (except for ramps) and a floor-to-ceiling height not less than 3.8 metres and should make provision for future conversion of car parking areas to alternative uses. • Buildings should be designed with: ○ Minimum floor to floor heights at ground level of 4.0m and of lower levels of 3.8m (all levels within the podium) to accommodate commercial uses and provide for future adaptation or conversion of use. ○ Flexible and adaptable internal layouts and floor plates with minimal load bearing walls to maximize flexibility for retail or commercial refits.
Services	• Consolidate services within sites and within buildings, and limit the amount of services (bin enclosures, loading, services rooms, substations) facing streets. Externally accessible services or substations should be visually integrated into the façade design.
Sustainability	• Minimum 4 Star Green Star as built rating, with a preference for 5 Star Green Star as built rating (if possible). • 20% improvement on current National Construction Code energy efficiency standards building envelope energy efficiency and for lighting and building services energy efficiency. • Residential Development: average 7 star NaTHERS rating for each building. • Facades exposed to summer sun should have an albedo not exceeding 0.7 units. • 70% of the site in plan view should comprise building or landscaping elements that reduce the impact of the urban height island effect including vegetation, green roofs, water bodies, roof materials, shade structures of hard scaping materials with high solar reflectivity index. • Podium and rooftop open space should include provision for green roofs and green walls and deep planters for canopy trees to maximise shading from summer solstice sun. • Maximise opportunity for on-site renewable energy generation – including solar, wind, or other technology as appropriate to the site conditions. • Include opportunities for on-site energy storage to respond to peak demand. • Include infrastructure to facilitate future connection to a precinct-wide or locally distributed energy supply. • Development must include best practice waste management consistent with the Fishermans Bend Wate and Resource Recovery Strategy and the Fishermans Bend Guidelines for Waste Management Plans including: ○ Optimised waste storage and efficient collection methods ○ Waste compacters ○ Separation of recycling and co-mingled waste, and other waste streams ○ Combined commercial and residential waste storage ○ Sharing storage or collections with adjacent developments. ○ Separate collection for recycling, hard waste, and food and green waste and on-site composting. ○ Future opportunities for waste management innovation.

Water Management	• Minimum floor level of 3.0 metres AHD or 0.3 metres above the local overland flow flood level, whichever is higher. • Level changes required between street level and elevated ground level should be integrated into the design of the buildings to maintain good physical and visual connection between the street and internal ground spaces. • Development must install a third pipe to supply non-potable uses including toilet flushing to all properties and commercial spaces, irrigation and laundry. The connection point must be agreed by South East Water to ensure future connection to a recycled water supply. • Development must install individual meters for potable and recycled water (to the satisfaction of South East Water). • Rainwater must be captured from 100% of suitable roof harvesting areas and retained in a rainwater tank with a capacity of 0.5 cubic metres for every 10sqm of catchment area. • Rainwater tanks must be fitted with a South East Water approved first flush device, meter, tank discharge control and water treatment with associated power and telecommunications equipment. • Rainwater captured from suitable harvesting areas must be re-used for toiled flushing, laundry and irrigation, or as a last option, controlled release. • Development and public realm layout and design must integrated at least best practice Water Sensitive Urban Design to facilitate rainwater harvesting, stormwater harvesting and water recycling within the site.
Design Measures	• Development should: o Integrate a strong architectural narrative into the design of the building/sand landscape. o Provide contemporary interpretations of industrial built form, pre-existing subdivision or development patterns, and social history through architecture and landscape design. o Strongly consider the adaptive reuse of existing buildings. • Buildings should include: o A consistent and coherent architectural language, including variation in built form, typologies, and materials as appropriate o Diverse dwelling typologies (not just 1, 2 or 3 bedroom apartments where appropriate a diversity of dwelling types on a site) o Carefully curated composition of architectural forms that create a strong sense of rhythm, grain and diversity with particular emphasis on the street interface and skyline. o Variation in massing, building height, and roof forms and staggering or offsetting of tower footprints where there are multiple towers. o For large sites with multiple buildings, incorporate a range of built form typologies to create an ensemble of diverse built form and design languages. • The materials palette should: o A material pallete that reflects the industrial context and history of the site, where relevant. o Ensure material use for facades correlates with the massing strategy to reinforce a strong, fine grain building base and light weight, slender tower profile where applicable. • Building materials should be selected with regard to potential impacts of reflectivity of development along main roads and should not exceed

	15% perpendicular reflectivity, measured at 90 degrees to the façade surface. • Buildings should not create blank facades. • Building faces on shared boundaries should be finished or treated to provide visual interest until the abutting site is developed. This should incorporate public art rather than decorative architectural effects, including contemporary interpretations of Aboriginal and non-Aboriginal heritage/culture where possible. • Building should be designed to: o Integrate or visually screen plant, air-conditioning units and other service equipment within the design of the building o Locate service spaces and cupboards internally within a building.
Interpretation of Aboriginal and non-Aboriginal Heritage and Culture	• Development, including the design of open space / landscape should: o Include interpretive design celebrating both non-aboriginal and Aboriginal heritage and culture. o Conserve and integrate heritage buildings on the site into the development in a respectful way. o Provide contemporary interpretations of industrial built form, pre-existing subdivision or development patterns, and social history through architecture and landscape design. o Retain or re-use character (non-listed) industrial building elements where these can contribute to the narrative of the development.
Other requirements	• Towers must be designed to mitigate wind impacts at street levels and communal open spaces. • Any requirements due to the site's proximity to Freeway (Noise levels, vibrations, air-borne emissions, traffic, light spill or glare). • Apartments must comply with *Better Apartment Standards*
Landscaping	• Wall, façade and roof greening should be located and designed to be maintained to enable planting to thrive with adequate light and water and reflect local micro-climatic conditions • Landscaping should integrate water sensitive urban design and be designed to enable sustainable management of all landscape components. • Landscaping should incorporate opportunities for productive landscaping including edible gardens, apiary where appropriate.
Smart Cities	• The building should be future proofed for technology, through: o Embedding 'smart' technology into the design, function and operation of public realm, buildings and services. o Integrating 'smart' management and design of energy, water, and waste infrastructure that supports efficient use of resources. o Making integrated provision for the delivery of high speed data networks

Cost Plan Requirements

- This information will be provided prior to the commencement of Stage 3, hopefully within the next couple of weeks.

APPENDIX 3 - CASE STUDY ONE, OPTION 1 STAND ALONE - FLOOR SPACE BREAKDOWN

Case Study One - Option 1 Stand Alone floor space breakdown for the Sport & Recreation Centre

Ground Floor	**m2**
Youth multipurpose room	250
Meeting/ consulting room	35
Accessible Toilet	8
Public Toilet (male)	12
Public Toilet (female)	12
Kiosk/café	35
Commercial Kitchen	50
Multipurpose/ function room	40
Entry and foyer	406
lift/stairs/ circulation	418
Additional meeting space fronting Munro Street	320
Car park - 82 car spaces, 1 shared parking space, 1 motorcycle parking and 130 bike parks	3136
TOTAL	**4722**

First Floor	
4 indoor playing courts	2946
Spectator Seating, circulation, team and officials benches	835
Storage	48
Umpire Change rooms	10
Umpire amenities	10
Umpire Duty Room	20
Player amenities (female)	20
Player change rooms (female)	25
Player amenities (male)	20
Player change rooms (male)	25
First aid room	25
Administration office	36
Tournament office	15
lift/stairs/ circulation space	687
TOTAL	**4722**

Second Floor	
Multipurpose room 2	190
Large multipurpose room	250
lift/stairs/ circulation space	501
TOTAL	**941**

TOTAL ALL FLOORS	**10385**

APPENDIX 4 - CASE STUDY ONE, OPTION 2 MIXED USE – FLOOR SPACE BREAKDOWN

Montague Development Site

Podium/ tower	Level	Car Parking			Commercial floor space m2	Residential		Total floor space m2
		floor space m2		No. of parks		Floor space m2	No. of dwellings	
		Commercial	Residential					
Podium	Ground floor	1,490		43	993			2,483
Podium	1		3,186	91				3,186
Podium	2		3,186	91				3,186
Podium	3				1,956	1,230		3,186
Podium	4					3,186	36	3,186
Podium	5					3,186	36	3,186
Tower	6					1,416	16	1,416
Tower	7					1,416	16	1,416
Tower	8					1,416	16	1,416
Tower	9					1,416	16	1,416
Tower	10					1,416	16	1,416
Tower	11					1,416	16	1,416
Tower	12					1,416	16	1,416
Tower	13					1,416	16	1,416
Tower	14					1,416	16	1,416
Tower	15					1,416	16	1,416
Tower	16					1,416	16	1,416
Tower	17					1,416	16	1,416
Tower	18					1,416	16	1,416
Tower	19					1,416	16	1,416
TOTAL		**1,490.00**	**6,372.00**	**224.57**	**2,949.00**	**27,426.00**	**294.34**	**38,237.00**

Munro Development Site

Podium/ tower	Level	Car Parking			Commercial floor space m2	Residential		Total floor space m2
		floor space m2		No. of parks		Floor space m2	No. of dwellings	
		Commercial	Residenital					
Podium	Ground floor	753		22	1,757			2,510
Podium	1		2,510	72				2,510
Podium	2		2,510	72				2,510
Podium	3					2,510	28	2,510
Podium	4					2,510	28	2,510
Podium	5					2,510	28	2,510
Tower	6					828	9	828
Tower	7					828	9	828
Tower	8					828	9	828
Tower	9					828	9	828
Tower	10					828	9	828
Tower	11					828	9	828
Tower	12					828	9	828
Tower	13					828	9	828
Tower	14					828	9	828
TOTAL		**753.00**	**5,020.00**	**164.94**	**1,757.00**	**14,982.00**	**168.34**	**22,512.00**

TOTAL across Montague and Munro	**2,243.00**	**11,392.00**	**389.51**	**4,706.00**	**42,408.00**	**462.67**	**60,749**
TOTAL commercial							6,949
TOTAL Sport and Recreation Centre							10,956
TOTAL Commerical and Sport and Recreation Centre							**17,905**
TOTAL Residential							**53,800**
Minimum Commercial FAR							**17,476**
Maximum Residential FAR							41,749
Residential FAU (110m2 for every 100m2 of community)							12,052
Maximum Residential FAR & FAU							**53,800**
Excess Commercial floor space							**429**
Excess Residential floor space							**(0)**