



CITY of PERTH

Lord Mayor and Councillors,

NOTICE IS HEREBY GIVEN that the next meeting of the **Works and Urban Development Committee** will be held in Committee Room 1, Ninth Floor, Council House, 27 St Georges Terrace, Perth on **Tuesday, 1 March 2016 at 5.30pm.**

Yours faithfully

MARTIN MILEHAM
CHIEF EXECUTIVE OFFICER

25 February 2016

Committee Members:

Members:

Cr Limnios (Presiding Member)
The Lord Mayor
Cr McEvoy

1st Deputy:

Cr Harley

2nd Deputy:

Cr Chen

EMERGENCY GUIDE

Council House, 27 St Georges Terrace, Perth



CITY of PERTH

The City of Perth values the health and safety of its employees, tenants, contractors and visitors. The guide is designed for all occupants to be aware of the emergency procedures in place to help make an evacuation of the building safe and easy.

BUILDING ALARMS

Alert Alarm and Evacuation Alarm.

ALERT ALARM

beep beep beep

All Wardens to respond.

Other staff and visitors should remain where they are.

EVACUATION ALARM/PROCEDURES

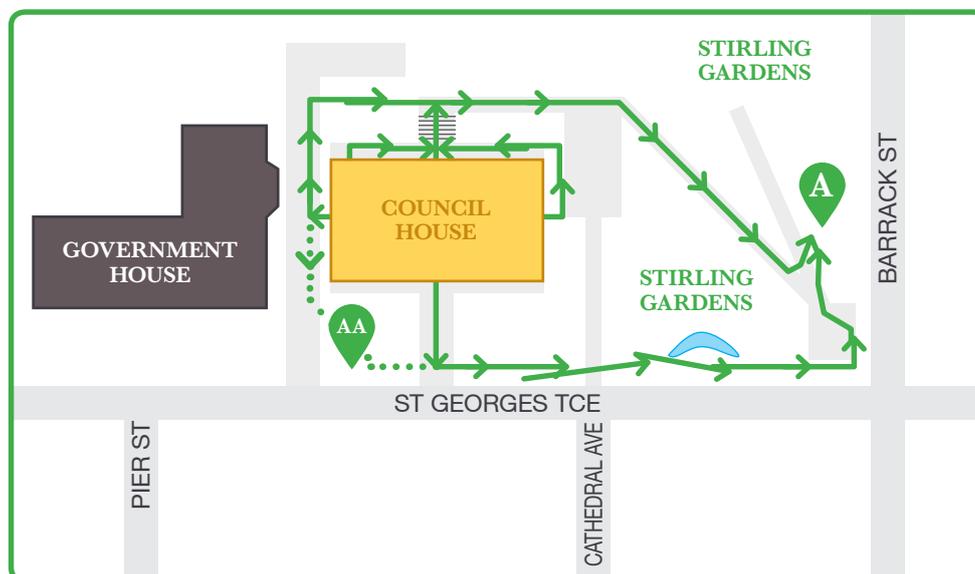
whoop whoop whoop

On hearing the Evacuation Alarm or on being instructed to evacuate:

1. Move to the floor assembly area as directed by your Warden.
2. People with impaired mobility (those who cannot use the stairs unaided) should report to the Floor Warden who will arrange for their safe evacuation.
3. When instructed to evacuate leave by the emergency exits. **Do not use the lifts.**
4. Remain calm. Move quietly and calmly to the assembly area in **Stirling Gardens** as shown on the map below. Visitors must remain in the company of City of Perth staff members at all times.
5. After hours, evacuate by the nearest emergency exit. **Do not use the lifts.**



EVACUATION ASSEMBLY AREA



Assembly Area

Alternate Assembly Area

WORKS AND URBAN DEVELOPMENT COMMITTEE

Established: 17 May 2005 (Members appointed 22 October 2015)

Members:	1st Deputy:	2nd Deputy:
Cr Limnios (Presiding Member) The Lord Mayor Cr McEvoy	Cr Harley	Cr Chen

Quorum: Two

Expiry: October 2017

TERMS OF REFERENCE: OCM 24/11/15

To oversee and make recommendations to the Council on matters related to:

1. works required to construct, upgrade and maintain streets, footpaths, thoroughfares and other public places, including streetscape upgrades, landscaping initiatives and directional signage and graffiti;
2. design, construction and upgrading of parks, reserves, recreational and civic amenities and facilities and Council owned buildings, excluding Council House, the Perth Town Hall, City of Perth Public Lending Library and the Perth Concert Hall;
3. oversight of the implementation of the Lighting Strategy;
4. waste management.

This meeting is not open to members of the public

**WORKS AND URBAN DEVELOPMENT
COMMITTEE
1 MARCH 2016**

ORDER OF BUSINESS

- 1. Declaration of Opening**
- 2. Apologies and Members on Leave of Absence**
- 3. Confirmation of Minutes – 9 February 2016**
- 4. Correspondence**
- 5. Disclosure of Members' Interests**
- 6. Reports**
- 7. Motions of which Previous Notice has been Given**
- 8. General Business**
 - 8.1. Responses to General Business from a Previous Meeting**
 - 8.2. New General Business**

Nil
- 9. Items for Consideration at a Future Meeting**

Outstanding Reports:

 - Northbridge Piazza Screening Wall – Detailed Costings for Enhancement (Raised 18/08/14, update provided 10/02/15 and updated by CEO 18/08/15).
- 10. Closure**

INDEX OF REPORTS

Item	Description	Page
1	WELLINGTON STREET ENHANCEMENT – WORKS, STAGE 2B	1
2	NORTHBRIDGE PIAZZA – SCREENING WALL ENHANCEMENT	6
3	IMPACT ON RESIDENTIAL AMENITY DUE TO RECREATIONAL ACTIVITIES IN MOUNT STREET, CLIFF STREET, BELLEVUE TERRACE AND JACOB'S LADDER	10

ITEM NO: 1

WELLINGTON STREET ENHANCEMENT – WORKS, STAGE 2B

RECOMMENDATION: (APPROVAL)

That Council:

- 1. approves to accept an offer and preliminary estimate from the Metropolitan Redevelopment Authority (MRA) to undertake the works representing a new contract between the City of Perth and the MRA to build the granite footpath and associated works on the north side of Wellington Street, between Prince Lane and William Street for \$2,560,000 (excluding GST);***
- 2. authorises the Chief Executive Officer to negotiate and enter into an agreement with the MRA to execute the works above, based on their letter dated 23 December 2015.***

BACKGROUND:

FILE REFERENCE:	P1028418
REPORTING UNIT:	Construction
RESPONSIBLE DIRECTORATE:	Construction and Maintenance
DATE:	12 February 2016
MAP / SCHEDULE:	Schedule 1 – Extent of works in Wellington Street Schedule 2 – MRA Offer Schedule 3 – Quantity Surveyor Estimate

On 26 June 2008, the City of Perth and the State Government signed the Link Project Implementation Deed that provided the framework for funding and implementing various works associated with lowering the railway, west of the Horseshoe Bridge. A key aspect of this agreement is the City funding enhancement works to Wellington Street, as follows:

- Stage 1 (between Elder and Little Milligan Street)
- Stage 2 (between Little Milligan and William Street)

Stage 1 was completed within budget and six months ahead of schedule. Since June 2012, the City's Project Team has been working closely with the Metropolitan Redevelopment Authority (MRA) and various state government agencies in developing detailed plans for the remainder for Wellington Street, in particular, Stage 2 between Little Milligan Street and William Street.

In order to support future development within the Perth City Link (PCL) project, the MRA is required to undertake major scheme service infrastructure upgrades. The first stage of these infrastructure upgrades along Wellington Street (Stage 2A), between Milligan and King Streets, was completed in December 2014. Major services installed as part of these works include power, gas, sewer, stormwater drainage and telecommunications.

In June 2014, the Council accepted an offer from the MRA to construct the Phase 1 of Stage 2A – essentially, the granite paved areas on the north side of Wellington Street, representing the interface between the private and public realm. Phase 1 was successfully completed within budget and program. The 51 metre long section of the footpath in front of sites KS1 and KS2 was approved in 2015 and the outcome has been similarly successful.

Scheme service installation works by MRA are required for the remainder of Wellington Street (Stage 2B, between Prince Lane and William Street). The City of Perth is also required to deliver streetscape upgrade works (barring the Yagan Square frontage) along Wellington Street as part of its commitment to the Perth City Link project. Yagan Square frontage is an extension of this project and will be executed by MRA as part of the PCL works, paid for by the City from the Stage 2B budget. The streetscape works are programmed to be undertaken upon completion of each of the MRA's staged scheme service installation works.

The Stage 2B Wellington Street scheme service works were originally programmed to commence late in 2016 following completion of the underground Busport by the Public Transport Authority (PTA). With the introduction of the Wellington Street Entrance Tunnel, opportunities were investigated to advance and align the Stage 2B Western Power infrastructure works to occur concurrently with the tunnel works.

This was based on achieving operational, programming and cost efficiencies, in particular reducing the overall duration of works in Wellington Street to minimise impact on the public.

The City subsequently received from the MRA an estimated price to complete the service installation and granite paving works to the balance of the northern footpath and carriageway of Wellington Street, from Prince Lane to Williams Street intersection. Originally planned to be constructed by the City, this work would not have commenced until mid-financial year (FY) 2016/17. An opportunity now exists to start the works in May 2016.

LEGISLATION / STRATEGIC PLAN / POLICY:

**Integrated Planning
and Reporting
Framework
Implications**

Corporate Business Plan

Council Four Year Priorities: Major Strategic Investments

S1 Ensure that major developments effectively integrate into the City with minimal disruption and risk

DETAILS:

Design Details

Detailed design was completed by City Design Unit (CDU) and Plan E in 2014, with detail documentation being completed this year. The design is based on the previously approved masterplan with construction details, materials and quality consistent with Stage 1 and 2A Works (from the front of Perth Arena through to Prince Lane, Northern side). The 'palette' of streetscape elements for the Stage 2 works includes:

- new granite kerbing to all footpaths;
- new granite paving on concrete base;
- new 'low speed' bi-directional cycle path;
- new Northern carriageway road surface;
- new street furniture;
- new street tree planting.

All services will be installed simultaneously with those required by the MRA developments. The works form part of a continuous street frontage between the start of the Public Footpath to the kerb, including the Northern carriageway finish and the median as indicated on the attached plan. It is noted that the median island at that section will also be constructed by the MRA, with PTA funding.

Overall Project Sequencing

The sequencing of all works in Wellington Street as part of the Link Agreement indicates that Stage 2B Northern section, east of Prince Lane, is currently programmed to be constructed from May 2016 through to completion during FY2016/17. Despite works commencing this financial year, payment to the MRA is due at the end of the project, in FY2016/17.

Proposed Reprogramming

The potential benefits of bringing this section of the works forward to be included with the MRA scheme services works schedule are considered to include:

- 1. Traffic Management** Perth traffic has readjusted to the works in Wellington Street and it would be advantageous to retain the current systems and expertise to assist with the streetscape works on the north side.
- 2. Timing** Works would be completed on the north side by mid-FY 2016/17. The time taken for project completion is expected to be less, due to the lack of multiple contractors on site simultaneously. This would bring practical completion forward by approximately six months from the current programme.

Start of works to the southern side and median strip in Wellington Street would be expedited.

3. Reduced Costs There are potential reduced costs in the region of \$370,000 in constructing the north side of the works by the MRA which has contractors already mobilised, specifically due to escalation, traffic management, project management fees and synergies of combined works.

4. Public Safety Access and egress to Wellington Street and the Bus Port will be secured for pedestrians and cyclists sooner.

5. Risk Mitigation Construction risks will be carried by MRA as part of their works.

Contractor responsibility, speed of construction and safety are risk to be borne by the City of Perth should MRA and the City of Perth works occur concurrently.

FINANCIAL IMPLICATIONS:

ACCOUNT NO:	CW1801
BUDGET ITEM:	Wellington Street – Stage 2B: Prince Lane to William Street - Streetscape Enhancement
BUDGET PAGE NUMBER:	17
BUDGETED AMOUNT FY 2015/16:	\$ 250,000
PROPOSED BUDGET AMOUNT FY 2016/17:	\$4,000,000
FY2016/17 - ROLLOVER FROM CW 1113	\$ 100,000
FY2016/17 - ROLLOVER FROM CW 1781	\$ 42,000
FY2016/17 – ROLLOVER FROM CW1646	\$ 189,000
PROPOSED BUDGET AMOUNT FY2017/18:	\$2,000,000
AMOUNT SPENT TO DATE:	\$ 75,365
BALANCE:	\$6,505,635
TOTAL PROPOSED COST:	\$2,660,000 (being MRA’s preliminary estimate, plus City of Perth costs)
BALANCE - COP WORKS AND COSTS:	\$3,845,635

The current budget in FY2015/16 (CW 1801) will require a carry forward of unspent capital funding, estimated at \$110,000, into 2016/17.

All figures quoted in this report are exclusive of GST.

Cost Plan for Phase 2B Northern side

The project team has received a preliminary estimate of \$2,560,000 (excluding City of Perth costs) from the MRA (Schedule 2) for construction of Phase 2B Northern side based on the detailed documentation prepared. The City subsequently engaged

an independent Quantity Surveyor to prepare a cost estimate (Schedule 3) based on the same documentation in order to assist with assessment of the MRA estimate. This indicated a cost of \$3,022,000, excluding some COP expenses.

The offer from the MRA indicated that the costs to the City are less than first envisioned. Additional costs associated with the City constructing the works late in 2016/17, re-establishing traffic management, contractor re-mobilisation and temporary lighting would be in the order of \$362,000.

Stage 2B (Prince Lane to William Street)

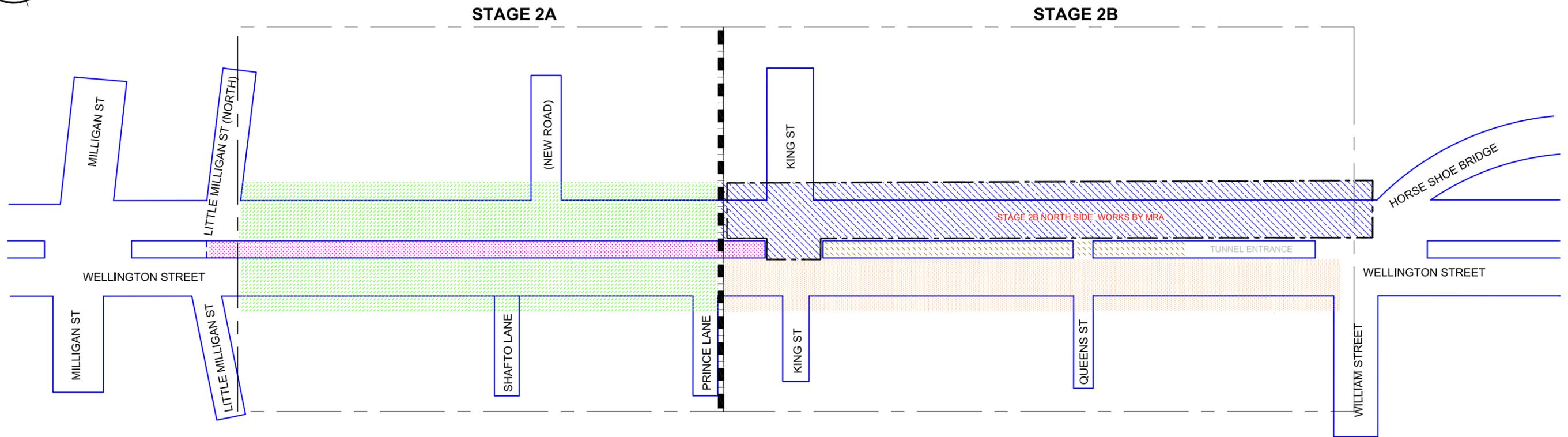
Wellington Street Stage 2B has a total current budget of \$6,250,000 and work is scheduled for FY 2016/17/18. Additionally, \$331,000 relating to savings from the Stage 2A works, will be included in the budget.

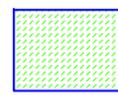
COMMENTS:

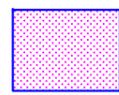
Under an agreement with the State Government regarding the implementation of the City Link Project, the City of Perth is responsible for specific service and enhancement works to Wellington Street, within a limited program.

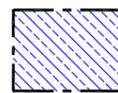
The City has an opportunity to implement the balance of the Northern side works to Wellington Street ahead of schedule with reduced risk and substantial cost benefits by accepting the offer from the MRA.

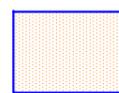
Additionally, this proposal brings benefits of pedestrian and cyclist safety, with less disruption due to traffic management changes in Wellington Street.

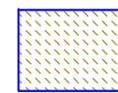


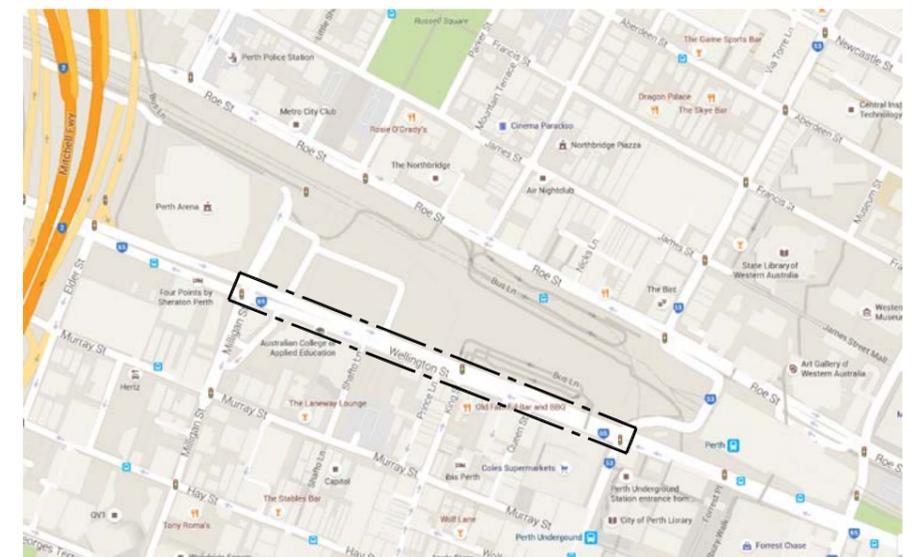
 STAGE 2A - COMPLETED
(PHASE 1 & 2 + KS1/KS2)

 STAGE 2A - PHASE 3
(250m Long)

 STAGE 2B - NORTHERN
SIDE (260m Long)

 STAGE 2B - SOUTHERN SIDE
(250m Long)

 STAGE 2B - MEDIAN ISLAND + PTA TUNNEL
(195M LONG)



PROPOSED CONSTRUCTION STAGING PLAN FOR WELLINGTON STREET - STAGE 2 PROJECT



23 December 2015

Mr Gary Stevenson PSM
 Chief Executive Officer
 City of Perth
 GPO Box C120
 Perth WA 6839

Our Ref: MRA-02651 / 533473

Dear Gary

PERTH CITY LINK – STAGE 2B WELLINGTON STREET AND STAGE 3 QUEEN STREET WORKS

The MRA has released a tender for its Stage 2B Wellington Street and Stage 3 Queen Street scheme service works. These works include the delivery of major scheme service infrastructure upgrades to support future development lots within the project. It is expected that the MRA will nominate a preferred contractor in March 2016, with works to commence from May 2016.

Following from discussions between representatives from the City of Perth and MRA, at the request of the City of Perth, the MRA has also included the City's Wellington Street landscape enhancement scope of works within its tender as priced options to be undertaken as separable portions:

- Wellington Street northern verge landscape works (Prince Lane to William Street);
- Wellington Street median island landscape works (King Street to William Street); and
- Wellington Street northern carriageway construction (Prince Lane to William Street).

The MRA's appointed Quantity Surveyor has prepared a pre tender estimate for the City's scope of works, inclusive of construction costs, contingency, consultant fees (project management, quantity surveyor, engineering and superintendent fees) and the MRA's administration fee. The estimate is currently \$2,560,000 (excluding GST).

Once the preferred contractor is nominated, the MRA will liaise with the City to confirm the tendered price of the preferred contractor and to seek the City's final confirmation to proceed. However, in the interim, the MRA requires confirmation that the City has adequate approved budget provisions for this scope of works during the 2016/17 financial year.

It is expected that the MRA's delivery of these works for the City would follow the same terms and conditions as those agreed for the most recent Perth City Link Stage 2A works package recently delivered by the MRA on behalf of the City and the MRA also requests the City's confirmation of this.

If the City has any queries in relation to this matter and wishes to discuss this further please contact Director Operations Richard Jeffcote on 6557 0700.

I look forward to your return confirmations.

Yours sincerely

A handwritten signature in black ink, appearing to be 'K Kinsella', written in a cursive style.

Kieran Kinsella
Chief Executive Officer

**WELLINGTON STREET ENHANCEMENT – STAGE 2B
(King Street to William Street)**

INDICATIVE COST ESTIMATE

For

City of Perth

Prepared by:
Rider Levett Bucknall WA Pty Ltd
Level 9, 160 St Georges Terrace
PERTH WA 6000

ABN 85 067 958 418
Tel +61 8 9421 1230
Fax +61 8 9322 7592

www.rlb.com

February 2016

CONTENTS

1	Introduction	1
2	Basis of Cost Estimate	1
3	Cost Estimate Summary	3

FIGURES

Figure 1 – Cost Estimate Summary

APPENDICES

Appendix A – Cost Estimate

Rev	Originator	Approved	Authorised	Date
Final	Steven Harrison	Alistair Aitken	Alistair Aitken	15 th February 2016
Draft	Steven Harrison	Alistair Aitken	Alistair Aitken	28 th January 2016

1 Introduction

Rider Levett Bucknall (RLB) was appointed by the City of Perth to provide cost estimating services for the proposed Wellington Street Enhancement – Stage 2B project.

2 Basis of Estimate

2.1 Design Information

The following design information was provided to RLB for this report:

- King Street to William Street
 - Drawings referenced 0506106 (all revision D) L0-101, L3-101,102,103,104,105, L4-101,102,103,104,105, L6-101, L7-101,102,103,104.

2.2 Assumptions

The following assumptions and factors have been considered and included within this estimate:

- The scope of works for this estimate is limited to those works north of the pedestrian pavement kerb line.
- The construction duration has been assumed at between 3 – 4 months.
- The estimate assumes that the works will be carried out in a continuous manner.
- The scope of works will require some limited works (i.e. crossovers and at junction with existing works) to be carried out at weekends and/or nights to minimise disruption to road users and to provide for safe working.
- Excavation within the proximity of existing services will require care and allowances have been included in the estimate for hand-digging and spotters where appropriate.
- The works will be competitively tendered on a construct only basis.
- The estimate is based upon current rates at January 2016.

2 Basis of Estimate (continued)

2.3 Exclusions

The following items are excluded from the estimate:

- Roadworks and median strips to Wellington Street (south of kerb line to pedestrian pavement).
- Stormwater drainage (no details provided).
- Street lighting (no details provided).
- New road signage and road pavement markings – by MRWA.
- Street furniture including bollards, seating, ticket machines and the like.
- Removal of existing light poles.
- Traffic signals.
- Relocation and/or lowering of existing services, utilities and drains.
- Water reticulation to new landscaping.
- Vibration and movement monitoring of existing services.
- CCTV monitoring systems.
- Latent ground conditions including rock, unknown services and contaminated ground.
- Escalation.
- Goods and Services Tax.

3 Cost Estimate Summary

3.1 Estimate Summary

The construction cost estimate for these works is **\$3,023,000** (excluding GST). A summary of the estimate is contained in Figure 1 below:

Location			Total Cost
KING ST TO WILLIAM ST			\$1,956,000
ESTIMATED NET COST			\$1,956,000
MARGINS & ADJUSTMENTS			
Preliminaries	18%		\$352,000
Builders Margin	5%		\$116,000
CONSTRUCTION COST SUB-TOTAL			\$2,424,000
Contingencies	10%		\$242,000
Professional fees	8%		\$213,000
City of Perth project costs	5%		\$144,000
Escalation			Excl.
Goods and Services Tax			Excl.
ESTIMATED TOTAL COST			\$3,023,000

Figure 1 - Cost Estimate Summary

Please refer to Appendix A for a detailed breakdown of the estimate.

ITEM NO: 2

NORTHBRIDGE PIAZZA – SCREENING WALL ENHANCEMENT

RECOMMENDATION:

(APPROVAL)

That Council:

- 1. approves the installation of a modular vertical garden system to enhance the existing Northbridge Piazza screening wall at a cost of \$60,000 (ex GST); and***
- 2. notes that the installation of the vertical garden is scheduled to be completed by 30 June 2016.***

BACKGROUND:

As part of the Northbridge Piazza development (2008), a free-standing screening wall to support planting was constructed on the eastern boundary of the site, with the intent:

- to provide a soft edge in a challenging environment;
- to screen the adjacent building until such time as it is redeveloped; and
- to improve the definition and scale of the public square (as the existing building at this edge is of low scale).

A report on the screening wall, its presentation and on-going maintenance practices was provided to Council on the **18 March 2014**. It was advised that site conditions, water restrictions and vandalism have limited plant growth in the screen.

On 10 February 2015, the Works and Urban Development Committee requested that options be provided for interventions to enhance the wall.

FILE REFERENCE:	P1020971
REPORTING UNIT:	Co-ordination & Design
RESPONSIBLE DIRECTORATE:	Planning & Development
DATE:	09 February 2016
MAP / SCHEDULE:	Schedule 4 - Illustration & Cost Estimate

LEGISLATION / STRATEGIC PLAN / POLICY:

Integrated Planning and Reporting Framework Implications

Corporate Business Plan

Council Four Year Priorities:

S16 Increase accessibility to green networks in the city

Strategic Community Plan

Council Four Year Priorities: Healthy and Active in Perth

A city with a well-integrated built and green natural environment in which people and families choose a lifestyle that enhances their physical and mental health and take part in arts, cultural and local community events.

DETAILS:

Existing Site Conditions & Constraints

Plant growth on the Northbridge Piazza screening wall is limited by:

- a westerly aspect exposing the plants to the extreme summer heat and burning of foliage;
- irrigation restrictions of two days per week during summer and a total sprinkler ban in the winter months;
- containers near ground level being subject to regular vandalism; and
- high evaporation rate due to radiant heat of the surrounding hardscape.

The Marketing and Events Unit has fixed shade cloth panels to the screen to facilitate artistic digital projections during seasonal events. It is recommended that this function continue, however it is proposed that the individual panels are replaced with a large single screen which can be installed temporarily for events and removed when not in use.

Noting the above, the following options were explored to enhance the existing wall:

Option 1: Retain current planting but increase soil volume

The Bougainvillea currently growing in containers within the screen wall have generally grown well albeit slowly and still have some way to go before they reach their full growth potential. To promote better growth, the plastic planters contained within the stainless steel planter boxes could be exchanged for slightly larger custom made pots to increase the soil volume available to the plants. Selecting this option accepts that in time the Bougainvillea will grow to cover the screen and no further intervention is required.

Option 2: Vertical Garden

This option proposes a modular vertical garden system be fixed to the existing screen panels without planter boxes.

To provide optimal conditions for success, the vertical garden will be implemented with the following features:

- West Australian / Australian native species suited to full-sun exposure, e.g. *Eremophila glabra*, *Ficinia nodosa*;
- high quality soil media with wetting agents;
- water retention mats;
- an efficient drip irrigation system; and
- specialised maintenance by an experienced contractor, with replacement plants grown off-site ready to replace any failing plants.

In addition, the existing plants in planter boxes will be replaced with another species which will be trained to trail down the mesh box and is expected to provide better overall plant coverage.

While there has been some recent research in to growing vertical gardens locally, the industry technology is in its infancy. Additionally, the barrier imposed by water restrictions is unresolved: the Water Corporation has advised that until all other water-saving techniques have been tested an exemption will not be considered.

This option also requires an ongoing commitment to engage specialised maintenance to ensure its success which needs to be budgeted accordingly.

FINANCIAL IMPLICATIONS:

The vertical garden system will be assembled off site and installed in situ to minimise disruption to local business and events held at the Piazza. The cost estimate includes all materials, plants, soil, framing and labour to install the modular vertical garden system:

Item	Cost
Removal of existing planting and installation of replacement plants	\$6,000
Supply and installation of vertical garden boxes	\$20,000
Delivery and installation including access equipment	\$14,000
Modifications of the existing irrigation system	\$4,000
Contingency and project management	\$16,000
Total	\$60,000

A budget of \$60,000 to implement the vertical garden has been established in the February 2016 review based on identified surplus funds or cancelling an existing project / program.

The Parks Unit have budgets to undertake the ongoing maintenance of the vertical garden.

All figures quoted in this report are exclusive of GST.

COMMENTS:

The city's 'urban forest' is comprised of trees and other vegetation within both the public and private realm such as the Northbridge Piazza screening wall. An intervention of some form is needed to improve the presentation and function of the existing wall.

It is recommended that the vertical garden option be approved and implemented as it presents an opportunity for the City to demonstrate innovation by leading the development of a water-wise vertical garden appropriate for our unique climate.

This research would be a valuable investment, with the knowledge and experience gained promoting and providing leadership in the development of future vertical gardens within the City. It also shows our commitment to green infrastructure and the development of the City's urban forest.

Installation of the vertical garden system is programmed to be completed within 3 weeks, prior to the 30 June 2016, with a focus during the construction period on minimising disruption to pedestrians, businesses and events held at the Piazza.

A communications plan will be developed to ensure that all stakeholders are adequately notified of works and to deal with any specific needs around access requirements during the works.



Existing Screening Wall



Example Vertical Garden using Australian native plants (east-facing)
City of Subiaco library, corner Rokeby and Bagot Roads



Proposed Vertical Garden (west-facing)
Cost Estimate: \$60,000, with a maintenance cost of \$4,500 per annum

Screening Wall Enhancement

Northbridge Piazza

FEBRUARY 2016

ITEM NO: 3

IMPACT ON RESIDENTIAL AMENITY DUE TO RECREATIONAL ACTIVITIES IN MOUNT STREET, CLIFF STREET, BELLEVUE TERRACE AND JACOB'S LADDER

RECOMMENDATION:

(APPROVAL)

That Council:

- 1. receives an update on the status of the Council Resolutions endorsed on 1 September 2015 as detailed in Schedule 5;***
- 2. receives the results of the stakeholder consultation on the Cliff Street Streetscape Alterations – Concept Plan as detailed in Schedule 7;***
- 3. notes that the proposed Cliff Street streetscape alterations will not be implemented due to lack of stakeholder support;***
- 4. approves stakeholder consultation on the proposed amendments to on-street parking as a six month trial in the Mount Street Designated Locality, refer Schedule 9 as defined in the City's Policies 22.6, Fig 5:***
 - 4.1 change parking ticket restrictions from 8.00am – 6.00pm to 8.00am – 8.00pm;***
 - 4.2 change some on-street parking in close proximity to Mount/Cliff Street intersection from its current 2 or 3 hour restriction to ½ hour restriction;***
- 5. receives the results of the stakeholder consultation on the proposed parking changes at the next Works and Urban Development Committee.***

BACKGROUND:

FILE REFERENCE:	P1032337
REPORTING UNIT:	Co-ordination & Design
RESPONSIBLE DIRECTORATE:	Planning and Development
DATE:	16 February 2016
MAP / SCHEDULE:	Schedule 5 – Council Resolutions - Status Update Schedule 6 – Cliff Street Streetscape Alterations Schedule 7 – Stakeholder Consultation – Results Schedule 8 – Mount Street – Options Report Schedule 9 – Proposed Parking Changes

A report regarding the impact on residential amenity due to recreational activities in the Mount Street/Cliff Street area was presented to Council on **1 September 2015** in response to on-going complaints received by the City from local residents. Council endorsed the following resolutions:

- “1. *acknowledge that there are adverse amenity impacts to residents in Cliff Street, Mount Street and Bellevue Terrace due to the popularity to Jacob’s Ladder and Mount Street for public use;*
2. *endorses the following actions:*
 - 2.1 *increase regular patrolling and escalating application of Local Laws against the offending users for enforceable offences;*
 - 2.2 *undertaking recurrent awareness campaigns to encourage users to respect amenity for residents (including amended signage);*
 - 2.3 *installing mobile Wi-Fi CCTV and align remote surveillance to patrolling and enforcement by Rangers and WA Police;*
 - 2.4 *amending the City of Perth jogging/walking promotional materials to discourage organised users;*
 - 2.5 *immediately investigating and consulting with affected residents on Cliff Street streetscape alterations to create an interface buffer on the east side and constrain available area for users;*
 - 2.6 *immediately investigating and consulting on Mount Street median landscaping to constrain area for users;*
 - 2.7 *immediately engaging cycling clubs and actively discourage informal criterium and time trial activities in Mount Street and requests Officers to investigate potential traffic calming on the northern side of Mount Street to discourage groups of cyclists from using Mount Street as an informal criterium space;*
3. *that the request by residents to introduce residents only parking in Mount Street, Cliff Street and Bellevue Terrace between 6.30pm and 8.00am, be*

referred back to the Works and Urban Development Committee for further consideration;

4. *requests Officers to undertake a review within 6 months of the initiatives outlined in part 2 above to assess whether they have been successful in addressing residents' concerns, and that a report of the review be provided to Council."*

This report provides a brief update on the status of these Council Resolutions. It also provides a summary of the recent stakeholder consultation on the Cliff Street Streetscape Alterations – Concept Plan and includes a proposal to manage on-street parking in Mount and Cliff Street.

LEGISLATION / STRATEGIC PLAN / POLICY:

Legislation Section 3.50 of the *Local Government Act 1995* Part 2 of the *Local Government (Functions and General) Regulations 1996*

Integrated Planning and Reporting Framework Implications	Corporate Business Plan Council Four Year Priorities: Living in Perth S9 Promote and facilitate CBD living 9.1 Review and manage the interface between the growing residential population and the City of Perth.
---	--

DETAILS:

Council Resolutions – Status Update

The City has been implementing a number of initiatives to improve the environment for residents in Cliff and Mount Street.

An update on the status of each of the Council Resolutions that were endorsed on 1 September 2015 is attached as Schedule 5.

Proposed Cliff Street Streetscape Alterations – Stakeholder Consultation

A concept plan was developed for Cliff Street to create an interface buffer on the eastern side and constrain the available area for users. See attached Schedule 6. The proposed changes include:

- Removal of the footpath on the eastern side of Cliff Street.
- Removal of the 5 car parking bays on the eastern side of Cliff Street.
- Kerb extended to create a new verge planted with small shrubs and Jacaranda trees in the eastern side of Cliff Street.
- Widened footpath on the western side of Cliff Street.
- New pedestrian ramps at the Cliff Street and Mount Street intersection.

The proposal was sent to 445 residential addresses on Cliff Street, Mount Street, Bellevue Terrace and Mounts Bay Road on the 12 January 2016. The consultation period closed at 2pm, 5 February 2016.

Thirty-six (36) formal responses were received and are collated in Schedule 7. The following table provides a summary breakdown of the feedback:

Stakeholder Comment	No.	City's Response
Support for the proposal	15	Noted.
Not supportive – the main concerns raised were in relation to the removal of the existing on-street parking bays.	18	The proposed removal of the parking allows for 'greening' of the street environment as well as creating a buffer to residential properties.
Other – did not state for or against the proposal or were only partially supportive.	3	Noted.

Schedule 7 provides a full account of stakeholder comments.

Mount Street – Investigate Potential for Traffic Calming

The following options have been investigated to slow cycling speeds on Mount Street and to create a safer road environment for all road users and local residents:

1. Horizontal Traffic Calming – by staggering the parking on the northern side of Mount Street, to create a “zig-zag” effect.
2. Vertical Traffic Calming – by placing flat top speed tables on the northern side of Mount Street.
3. Dedicated Cycle Lane – providing a dedicated cycle lane to effectively reduce the width of Mount Street.

Refer Schedule 8.

Given the steep (12 – 15%) gradient of Mount Street all 3 options presented unacceptable safety and usability issues. An alternative option for an Integrated Cycle Route requiring minimal infrastructure which still visually narrows the road without the safety concerns is recommended. This option:

- Aligns with the City of Perth Cycle Plan 2029
- Requires minimal construction costs and is easy to implement
- Has no loss of on-street parking
- Encourages slower speeds for both cyclists and vehicles
- Aligns with best practice bicycle facility design that incline

Subject to Main Roads WA this Integrated Cycle Route option is scheduled to be implemented before 30 June 2016.

Managing On-Street Parking in Mount and Cliff Street

It became apparent during the recent consultation on the Cliff Street streetscape alterations that parking was a key issue for stakeholders. Options available for managing on-street parking in Mount and Cliff Streets have been assessed in response to some of the issues raised by residents; namely, reduced parking availability in the afternoon peak (after 4.00pm-5.00pm). It is recommended that consideration be given to the following changes to on-street parking;

1. Change parking ticket restrictions within the Mount Street Designated Locality (as defined in COP Policy 22.6, Fig. 5), from 8.00am-6.00pm (existing) to 8.00am-8.00pm (proposed). A plan of the Locality is attached (Schedule 9).
2. Change some on-street parking in close proximity to the Mount/Cliff Street intersection from its current 2 or 3 hour restriction to a 1/2 hour restriction (exact parking spaces to be changed to 1/2 hour restriction are to be determined, but are likely to include 12-20 bays).

These changes are intended to;

- Discourage non-compliance, as parking restrictions will be in place later in to the evening.
- More appropriately charge for car parking in the area, given the high demand for parking after 6.00pm.
- Increase the availability of parking throughout the day by encouraging higher turnover (via the ½ hour restriction bays).

Residents will continue to have access to the on-street parking permit scheme, which specifies that:

- One parking permit can be issued to any dwelling within the Mount Street designated locality;
- The parking permit is to have a four hour time restriction during business hours, and unrestricted at other times; and
- Residential dwellings that do not have any off-street parking allocated to them, are eligible for one parking permit without any time restriction.

As these changes represent a departure from City of Perth Policies 22.6 (*Resident On-Street Parking Policy*) and 22.9 (*On-Street Parking*) stakeholder consultation would be required, the results of which would be presented to the next Works and Urban Development meeting for consideration.

Depending on the results of the consultation, the trial could be implemented for a period of six months commencing in April 2016, after which time the benefits, costs and other implications will be assessed and next steps can be determined.

FINANCIAL IMPLICATIONS:

The estimated cost of implementing the proposed Cliff Street streetscape alterations is \$149,276 (ex GST). Given that the majority of stakeholders did not support the proposal, these funds will be used to implement other measures such as changes to the on-street parking.

COMMENTS:

Council Resolutions – Status Update

A review of the initiatives will be undertaken to assess whether they have been successful in addressing residents' concerns, and a report of the review will be provided to a future Council meeting.

Proposed Cliff Street Streetscape Alterations – Stakeholder Consultation

The proposed Cliff Street streetscape alterations will not be implemented due to lack of stakeholder support.

Mount Street – Investigate Potential for Traffic Calming

It is recommended that the option of an Integrated Cycle Route be considered and implemented as part of the City's Cycle Plan 2029 Implementation Program by 30 June 2016. This would comprise of cycle markings on the carriageway as well as "SLOW" markings and "Share the Road" signs subject to Main Roads WA approval.

Managing On-Street Parking in Mount and Cliff Street

In response to parking issues experienced recently in Mount and Cliff Streets, issues which were reiterated through the results of recent public consultation on the proposed Cliff Street Streetscape Alterations, options have been developed to improve on street parking availability for residents.

The results of the stakeholder consultation on the proposal parking changes will be presented at the next Works and Urban Development Committee with the trial scheduled to commence from April 2016.

COUNCIL RESOLUTIONS 1 SEPTEMBER 2015 - UPDATE

Resolution	Comment	Status
<p>2.1 increasing regular patrolling and escalating application of local laws against offending users for enforceable offences.</p>	<ul style="list-style-type: none"> Rangers have increased frequency of visits to Mount Street per day (both on foot and also mobile) to 2-3 times per day. Rangers will continue to liaise with Surveillance Centre off CCTV issues that arise. 	
<p>2.2 undertaking recurrent awareness campaigns to encourage users to respect amenity for residents (including amended signage)</p>	<ul style="list-style-type: none"> New signage was installed in Cliff and Mount Street on 22 January 2016. Social media content will be used to provide information about the use of Jacob's Ladder and promote the City's free group fitness sessions at Northbridge Piazza. These campaigns will be on-going. 	<p>On-going</p>
<p>2.3 installing mobile Wi-Fi CCTV and align remote surveillance to patrolling and enforcement by Rangers and WA Police</p>	<ul style="list-style-type: none"> Wi-Fi CCTV has been installed and images will be transmitted to the City of Perth Surveillance Centre. 	
<p>2.4 amending the City of Perth jogging/walking promotional materials to discourage organised users;</p>	<ul style="list-style-type: none"> City of Perth promotional information has been removed from the website 	
<p>2.5 immediately investigating and consulting with affected residents on Cliff Street streetscape alterations to create an interface buffer on the east side and constrain available area for users;</p>	<ul style="list-style-type: none"> Public consultation closed 2pm Friday 5 February 2016. A total of 36 responses were received. These responses are tabled in Schedule 7. 	
<p>2.6 immediately investigating and consulting on Mount Street median landscaping to constrain area for users;</p>	<ul style="list-style-type: none"> A landscape proposal for the whole of the Mount Street median will be prepared in conjunction with the proposed traffic calming treatments. 	<p>In Progress</p>

<p><i>2.7 immediately engaging cycling clubs and actively discourage informal criterium and time trial activities in Mount Street and requests Officers to investigate potential traffic calming on the northern side of Mount Street to discourage groups of cyclists from using Mount Street as an informal criterium space;</i></p>	<ul style="list-style-type: none"> • Westcycle and Bicycling Western Australia have been contacted regarding cycle activity in Mount Street. The City will continue its ongoing engagement with the following key state and public stakeholders within the cycling community regarding cycling issues and, in particular, the promotion of safe cycling in the city: <ul style="list-style-type: none"> - Department of Transport Cycling and Urban Strategies Team - Main Roads WA Pedestrian and Cycling Coordinator - West Cycle - peak body for competitive cycling in WA - Bicycling Western Australia • Investigations of suitable traffic calming treatments for Mount Street have been undertaken. Refer Schedule 8. 	
<p><i>3.0 that the request by residents to introduce residents only parking in Mount Street, Cliff Street and Bellevue Terrace between 6.30pm and 8.00am, be referred back to the Works and Urban Development Committee for further consideration</i></p>	<ul style="list-style-type: none"> • Officers have assessed the options available for managing on-street parking in Mount and Cliff Streets in response to some of the issues raised by residents; namely, reduced parking availability in the afternoon peak (after 4-5pm). It is recommended that stakeholder consultation be undertaken on the proposed amendments to on-street parking as a 6 month trial. Refer Schedule 9. 	<p>In Progress</p>



- ① Path removed and kerb extended to create planted verge with Jacaranda street trees
- ② Access to residence
- ③ Existing crossover retained
- ④ Footpath widened
- ⑤ New pedestrian ramp
- ⑥ 5 metre road carriageway



CLIFF STREET - Planted Verge Proposal

Jacobs Ladder to Mount Street

Concept Plan - 1:250 @ A3

January 2016

CLIFF STREET STREETScape ALTERATIONS - CONCEPT PLAN - STAKEHOLDER CONSULTATION

TRIM REF	DATE RECEIVED	Resident/business	COMMENTS
		FULLY SUPPORTIVE	
12520/16	27/01/2016	Resident Mount Street	Suggests more signage in the area to inform groups are not permitted but individuals are welcome.
12524/16	27/01/2016	Resident	Suggests more monitoring of illegal parking along Cliff and Mount Street.
12831/16	27/01/2016	Resident Mount Street	Happy with proposal as set out.
15055/16	25/01/2016	Resident Mount Street	Thanked the City and commented that the area always looks nice. Comment about sprinklers on Bellevue Terrace watering the street.
12656/16	27/01/2016	Resident Mount Street	Suggests that the Jacaranda trees will continue the current character on the northern end of Cliff Street.
12652/16	27/01/2016	Resident Mount Street	Agrees with comment above.
12674/16	27/01/2016	Resident Bellevue Tce	Supportive of alterations. Has a problem with fitness groups in Cliff Street and Mount Street
12210/16	12/01/2016	Resident Mount Street	Supportive but believes the plan will not stop the over use and excessive parking from people out of area. Suggests introducing residents only parking.
12838/16	27/01/2016	Resident Bellevue	Believes the removal of car parking will shift parking congestion onto Bellevue Terrace. Supports outdoor activities but the roads to be managed so that residential amenity and visitors needs are accommodated.
13485/16	28/01/2016	Resident Mount Street	Happy to see Council do something positive in reducing traffic. Suggested Council replace the box trees in Mount Street with Jacaranda Trees.
15615/16	1/02/2016	Resident Mount Street	Wants to know if the streetscape alterations are part of a larger plan for the area.
12703/16	27/01/2016	Resident Mount Street	Wants resident only parking for Mount Street
12693/16	27/01/2016	Resident Mount Street	Believes the verges outside 69, 66 and 64 Mount Street need to be restored.
18891/16	5/02/2016	Resident Cliff Street	Suggests a shaded area on the west side of Cliff Street by Jacob's Ladder. Comments that people sit on the east side of Cliff Street (residential side) due to them seeking shade.
19481/16	8/02/2016	Resident Cliff Street	Suggests that verge outside apartment building be improved as it damaged.
		NOT SUPPORTIVE	
12666/16	27/01/2016	Resident Cliff Street	Supportive of removing car parks in Cliff Street. However, wants them to be resident only car parks and closed to normal vehicles.

12649/16	27/01/2016	Resident	Against removal of footpath on eastern side. In favour of removing 5 car parking bays. Against extension of kerb. Against widening of footpath on western side of Cliff Street as it is an unnecessary expense as 30cm could be gained by trimming the shrubs.
9441/16	20/01/2016	Resident Mount Street	Comment on letter mentioning improvements to Mount Street but nothing in the document suggesting any improvements. Suggests an overall plan for the entire area. Removal of parking bays on Cliff St will increase traffic and parking measures on Mount Street. Makes suggestions such as resident only parking, tolls for Jacob's Ladder, speed controls for cyclists, and closing mount street bridge to cyclists
12509/16	27/12/2016	Resident Bellevue Terrace	Against proposed changes, feels plan to improve and deter activity in Cliff Street will do nothing. Against footpath widened, Comments that the viewing platform is unchanged and will remain as an exercise area. Comments that the proposed changes were to be in consultation with "concerned or affected" residents before any drawings done or distributed to other residents as promised by City's CEO. Against sending the plan to other residents in the area.
12780/16	27/01/2016	Resident Mount Street	Against changes, concerned over removal of parking bays as these are not only used by people visiting Jacob's ladder. Likes idea of more green space but believes this will be used by people after exercising at Jacob's ladder
12233/16	25/01/2016	Resident	Suggests proposed changes will not discourage exercise groups. Against removing parking bays - believes this will be too expensive for cosmetic reasons. General Concerns about "aggressive cyclists" and people utilising road, footpath, lawns for exercising. believes no amount of landscaping and money will change this. Does not mind fitness users but believes groups should be removed. Does not want the City to waste money.
16001/16	2/02/2016	Resident Cliff Street	Believes proposal will not address issues exercise issues in Cliff Street. Believes restricting access by making local streets resident only parking outside business hours. Believes streetscape changes that make the area less attractive to "long term lingering" would help address issues.
15996/16	2/02/2016	Resident Mount Street	Believes proposal will not accomplish much. Suggests a larger scale solution needs to be found to address the ongoing issues. Believes until a range of solutions are found that limiting access to Cliff Street, Mount Street and Bellevue Terrace outside business hours by way of resident only parking.
14998/16	1/02/2016	Resident	Believes the only long term solution to the issues in the area is too remove Jacob's Ladder altogether.
17611/16	4/02/2016	Resident Mount Street	Believes the proposal is not a practical solution to the affected residents, believes planting trees in that section of Cliff Street will damage adjacent properties.
15972/16	2/02/2016	Resident Mount Street	Not supportive of discouraging people to exercise. Believes having activity around the streets increases resident safety, as well as supporting local businesses. Believes if people are pushed away from the area, it will become a destination for graffiti vandals.
14275/16	20/01/2016	Resident Mount Street	Does not want car park bays removed. Believes that the beautifying of the street should come after more car parking bays are created.

12779/16	20/01/2016	Resident Mount Street	Believes that the residents complaining believe they are more important than other residents. Believes that if the City tried to exclude some of its residents for the benefit of a few is undemocratic. The removal of 5 car parking space will inconvenience a lot of people outnumbering those who complain.
12698/16	27/01/2016	Resident Bellevue Terrace	Believes that car parking will cause more congestion on Mount Street and Bellevue Terrace. Wants resident only parking in Mount Street and Bellevue Terrace. Does not like the idea of removing the footpath on the east side of Cliff Street to the West side as people will have to cross the road twice to get to Jacob's Ladder.
12689/16	27/01/2016	Resident	Believes community members should be encouraged to continue fitness activities in the area. Believes the area houses many conservative (in nature) older, and selfish people whose inability to exercise means that nobody else is allowed to. These residents often make the most noise and hopes they do not sway City of Perth policy. Believes commercial fitness groups should be restricted. Cliff Street streetscape alterations will only exacerbate issues by reducing parking in the area. Believes public transport should be encouraged and more public transport infrastructure. Believes apartment developers in the area should be required to provide more on site parking.
12645/16	27/01/2016	Resident Mount Street	Against planting of Jacaranda Trees. Against the widening of the footpath of Cliff Street. Did not comment on the pedestrian ramps as they were unsure what this consisted of.
19702/16	8/02/2016	Resident Mount Street	Does not think money should spent in an affluent area such as Mount Street and Cliff Street.
20684/16	9/02/2016	Resident Mount Street	Believes the proposal enhances the private amenity of the exceedingly wealthy and influential people on Cliff Street but exacerbates the issues facing the rest of the residents. Complaint regarding lack of car parking for residents.
		OTHER	
12508/16	27/01/2016	Resident Mount Street	Supported planting of trees, renovating of the area, and installing pedestrian ramps but against the removal of parking bays. Commented on personal enjoyment of having people on the street to watch and it is nicer than being on a quiet deserted street.
19483/16	5/02/2016	Resident	Does not state for or against proposal. Complained about noise from exercisers at Jacobs Ladder. Comments that the ladder is used 24hr and have encountered anti social behaviour, drunkenness, urinating etc. Explained that they had signed a petition to have the exercise equipment at the bottom of Jacob's Ladder removed.
18917/16	5/02/2016	Resident	Does not state whether for or against. Suggests more restrictions to the cyclists, joggers/runners. Comments that cyclists ride against traffic. Pedestrian ramps are for pedestrians only not runners. Grass verge is for beauty and nature, not for being tramped on. Suggest the footbridge at the end of Mount Street be pedestrian only and cyclists should dismount. Suggests reducing the noise of helicopters, sirens etc. especially at night.



MOUNT STREET

OPTIONS REPORT

To overview options for slowing cycling speeds

21 January 2016

TRANSPORT UNIT
DEVELOPMENT
CITY OF PERTH

CONTENTS

1. Introduction & Background	4
2. Existing Situation	5
3. Options Assessment	5
4. Preferred Option.....	6
5. Conclusions & Recommendation	6
Attachment 1: Option 1 – Integrated Cycle Route.....	7
Attachment 2: Option 2 – Traffic Adjacent Cycle Lane.....	8
Attachment 3: Option 3 – Kerb Side Cycle Lane.....	9

1. Introduction & Background

This Report has been developed to provide an overview of traffic calming options for the northern side of Mount Street in West Perth. The purpose of the design intervention is to slow cycling speeds and to create a safer road environment for all road users and local residents.

There is a history of complaints from local residents with regard to disturbances attributed to fitness activity occurring in the area surrounding and including Cliff Street and Mount Street in West Perth.

In June 2015, a meeting was held between senior level Council representatives and eight residents regarding their concerns. In response, the CEO presented a seven point plan to address the issues raised, primarily aimed at deterring or constraining the use of the area.

This resulted in a report to Council and at its meeting on 1 September 2015, Council endorsed the series of actions (item 387/15). Of particular relevance to cycling was action 2.7 which reads:

“immediately engaging cycling clubs and actively discourage informal criterium and time trial activities in Mount Street and requests Officers to investigate potential traffic calming on the northern side of Mount Street to discourage groups of cyclists from using Mount Street as an informal criterium space.”

Following this meeting, a report was submitted by the Co-ordination and Design Unit (CDU) to the Executive Leadership Group (ELG) on 7 December 2015. This report considered a range of options for the Cliff Street and Mount Street area regarding leisure usage. In relation to traffic calming for Mount Street, three suggestions were offered:

1. Horizontal Traffic Calming – by staggering the parking on the northern side of Mount Street, to create a “zig-zag” effect.
2. Vertical Traffic Calming – by placing flat top speed tables on the northern side of Mount Street.
3. Dedicated Cycle Lane – providing a dedicated cycle lane to effectively reduce the width of Mount Street.

ELG recommended that the 3rd suggestion of a dedicated cycle lane be further considered. This report considers this option.

2. Existing Situation

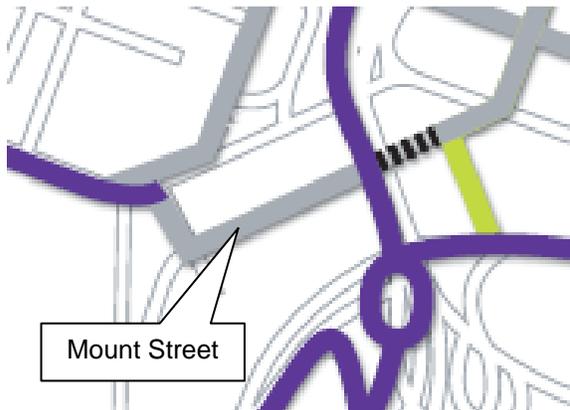
Mount Street is mostly a residential street located in West Perth, with some business activity at the most eastern end. The street has a 50 km/hr speed limit and is identified as an access road under the Metropolitan Road Hierarchy.

Mount Street is 280 metres in length with a steep gradient from Cliff Street down to the footbridge/cycle overpass. The street has a wide landscaped central median and vehicles circulate clockwise around this to access properties.

Kerbside parking is currently provided on both sides of the street between driveways. The area is also a designated locality under the City of Perth's Residential Parking Policy 22.6, whereby residents can apply for permits to park on-street.

Main Roads Western Australia (MRWA) crash statistics indicate that only one crash involving a cyclist and a car has occurred in Mount Street since 2010.

The City of Perth Cycle Plan 2029 designates Mount Street as an Integrated Cycle Route (grey on the image below).



The Integrated Cycle Route for Mount Street, and for Cliff Street were scheduled to be undertaken in the 2014/15 financial year, at a cost of \$5,000 each but were not completed.

3. Options Assessment

Discussion within the Transport Unit took place on 8 January 2016 regarding the merits and viability of a dedicated cycle lane option. These discussions took into consideration the need to provide a running lane for traffic; a parking lane; a cycle lane and a buffer zone between the cycle lane and adjacent traffic/parking lane.

The existing road width is generally 6.2 metres comprising a traffic lane of 4.1 metres and a parking lane of 2.1 metres. There are potential options of having a traffic lane of 3.0 metres and a parking lane of 2.1 metres which leaves space for a cycle lane and buffer zone of 1.1 metres.

Clearly, this is a very narrow facility which is unlikely to be used by many cyclists, and is likely to create a safety issue for those cyclists wishing to use it given the proximity of car doors and reduced conspicuity. Additionally, the maintenance of such a dedicated facility, if placed between the parking lane and kerb, would be difficult and relatively expensive.

Cross sections and commentary for two dedicated cycle lane options are shown at Figure 2 and 3. The Transport Unit considers both of these options to be against best practice design given the context of Mount Street.

The safety and usability aspects of providing a dedicated cycle lane could be improved by removing part of the median and widening the road to accommodate a buffer zone. However, this is considered to be excessive and outside of the scope of the project.

It was agreed that other options which visually narrow Mount Street would be considered as an alternative to a dedicated cycle route.

4. Preferred Option

Attachment 1 shows the requisite road markings and signing for an Integrated Cycle Route option. This comprises cycle markings on the carriageway as well as “SLOW” markings. “Share the Road” signs would also be placed

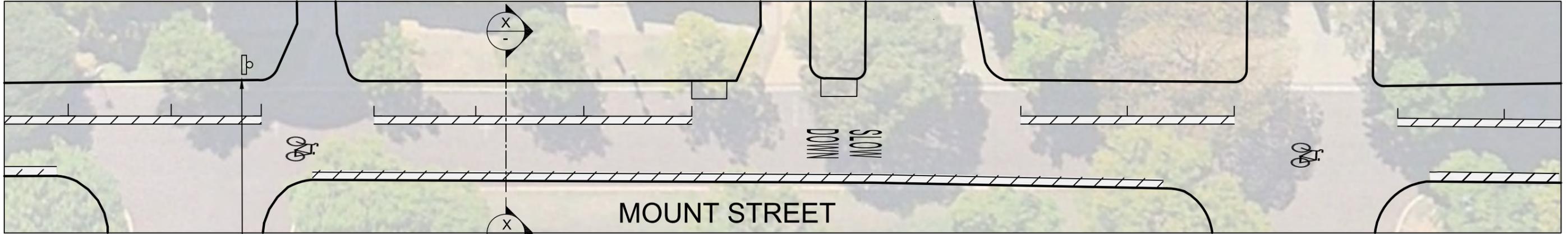
Markings for buffer zones for the nearside and offside would be submitted for MRWA approval. This would provide a visual narrowing effect.

5. Conclusions & Recommendation

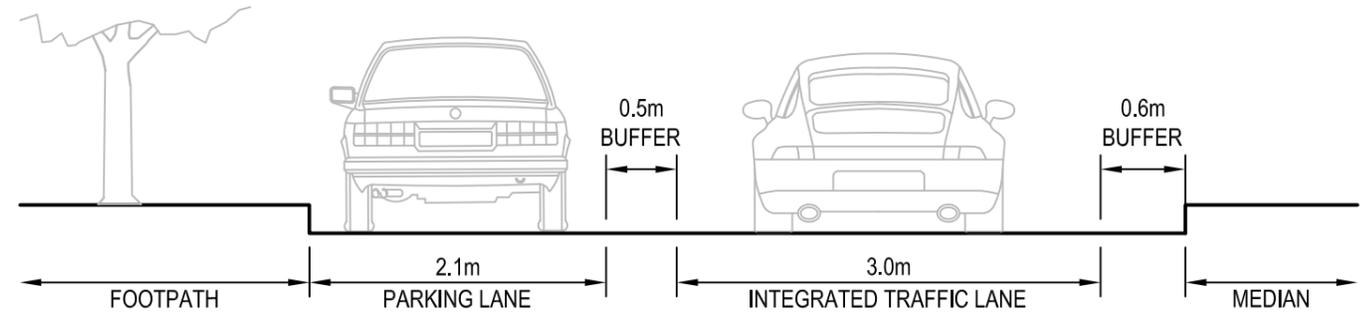
It is concluded that a dedicated cycle lane is not technically feasible without widening the road. There are safety risks to cyclists as the buffer zone between car doors and cyclists would be considerable less than recommended

It is recommended that the option of an Integrated Cycle Route be considered and implemented as part of the Cycle Plan 2029 Implementation Program in the current financial year.

OPTION 1

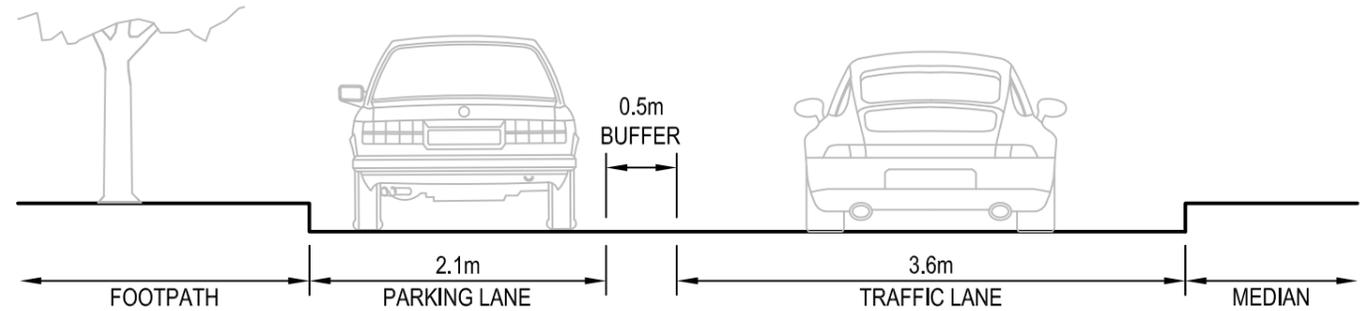


NOTE: SUBJECT TO MAIN ROADS WA APPROVAL



SECTION X - OPTION 1: INTEGRATED CYCLE ROUTE (RECOMMENDED)

SCALE 1:50



SECTION X - EXISTING SITUATION

SCALE 1:50

Option 1: Integrated Cycling Route	
PROS	CONS
Aligns with the City of Perth Cycle Plan 2029	
Minimal construction costs & easy implementation	
No loss of parking	
No civil works required	
Encourages slower speeds for both cyclists & vehicles	
Aligns with best practice bicycle design	



THIS DWG & DESIGN IS SUBJECT TO COPYRIGHT AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT. CONTRACTORS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. REPORT ALL DISCREPANCIES TO PROJECT MANAGER PRIOR TO CONSTRUCTION. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DRAWINGS.



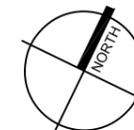
CITY of PERTH

COUNCIL HOUSE,
27-29 ST. GEORGE'S TERRACE, PERTH.

SRI RANJAN - PRINCIPAL ENG,
COORDINATION & DESIGN

ERICA BARRENGER - MANAGER,
COORDINATION & DESIGN

DESIGNED --
TRAFFIC ENG. --
PROJECT MGR. G. Rodoreda
SENIOR ENG. S. Ranjan
DRAWN S. Wilson
DATE 15/01/2016
SCALE AS SHOWN
CO-ORD SYS. MGA 50 / AHD



**MOUNT ST - WEST PERTH
BICYCLE TREATMENT
OPTION 1 - RECOMMENDED
INTEGRATED CYCLE ROUTE**

DRAWING STATUS
ISSUED FOR INFORMATION
CAD REF: 16001-MOUNT-CO-OPTION-1.dwg

DWG SET No.	DISPLN	DWG TYPE	SHEET No.	REV.
16001	C - CO - 01		1	1
FOLDER: H:\CAD\1_DR\1_PUB\MOUNT\1 A3				

REV	DATE	REVISION DETAILS	DWN	APP.
1	15/01/2016	DESIGN ITERATION 1	S.Wilson	--

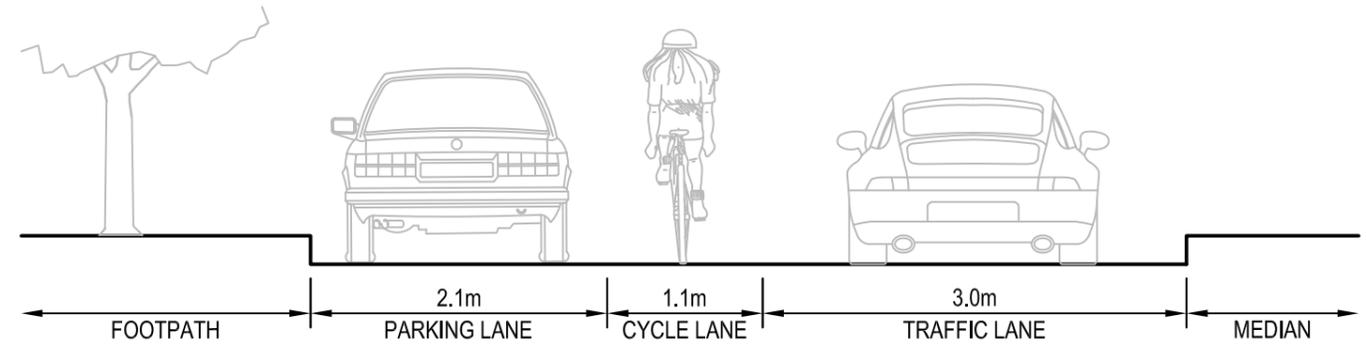
OPTION 2a



NOTE: SUBJECT TO MAIN ROADS WA APPROVAL

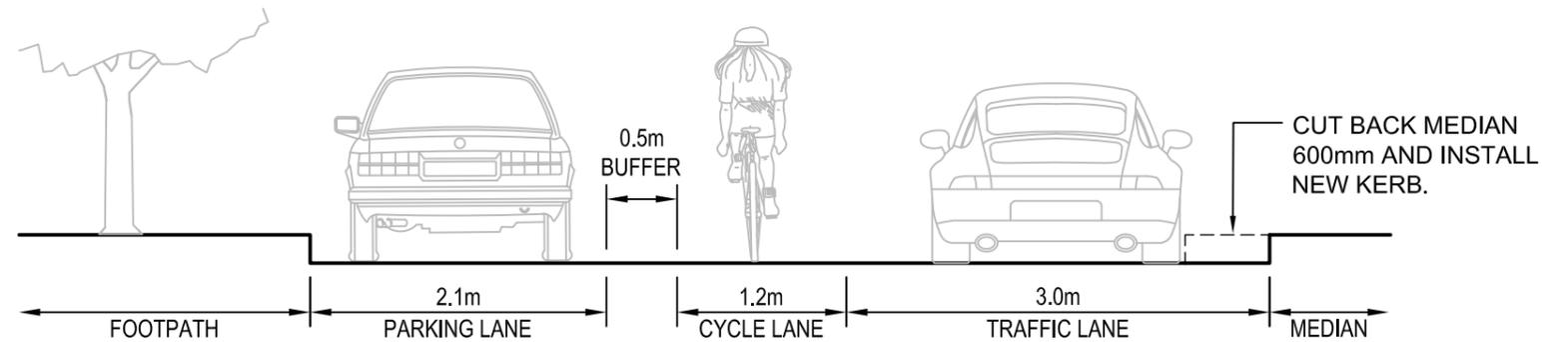
----- INDICATES KERB CUT BACK WIDTH REQUIRED TO ACHIEVE OPTION 2b

Option 2: City cycle lane with 1.1m cycle lane south of the parking lane	
PROS	CONS
Provides a designated space for cyclists	Does not align with the City of Perth Cycle Plan 2029
	Places cyclists in the driver's side "car door" zone which is very unsafe, particularly given the steep gradient.
	An adequate buffer between the parking lane and cycle lane cannot be provided within the existing road way unless on-street parking is removed or the kerb is modified, both of which are considered excessive [see note 1].
	High speed cycling is not deterred through the provision of a cycle lane.
	Increases the number of potential conflict points and limits visibility of cyclists by vehicles exiting driveways (and vice versa).
	The cycle lane is unlikely to be used by cyclists due to the potential safety implications of the infrastructure.
	Against best practice bicycle design
<p><i>Note 1: An additional 600mm would be required in order to provide a cycle lane facility with an adequate width and buffer. Main Roads WA approval is unlikely without the provision of a buffer. Refer to cross section 2b.</i></p>	



SECTION X - OPTION 2a: TA CYCLE LANE (NOT RECOMMENDED)

SCALE 1:50



SECTION X - OPTION 2b: TA CYCLE LANE WITH BUFFER (NOT RECOMMENDED)

SCALE 1:50



SCALE 1:250 AT ORIGINAL SIZE



SCALE 1:50 AT ORIGINAL SIZE

THIS DWG & DESIGN IS SUBJECT TO COPYRIGHT AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT. CONTRACTORS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. REPORT ALL DISCREPANCIES TO PROJECT MANAGER PRIOR TO CONSTRUCTION. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DRAWINGS.



CITY OF PERTH

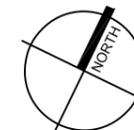
COUNCIL HOUSE,
27-29 ST. GEORGE'S TERRACE, PERTH.

SRI RANJAN - PRINCIPAL ENG,
COORDINATION & DESIGN

ERICA BARRENGER - MANAGER,
COORDINATION & DESIGN

DESIGNED --
TRAFFIC ENG. --
PROJECT MGR. G. Rodoreda
SENIOR ENG. S. Ranjan
DRAWN S. Wilson
DATE 15/01/2016
SCALE AS SHOWN
CO-ORD SYS. MGA 50 / AHD

DRAWING STATUS
ISSUED FOR INFORMATION
CAD REF: 16001-MOUNT-CO-OPTION-2.dwg



**MOUNT ST - WEST PERTH
BICYCLE TREATMENT
OPTION 2 - NOT RECOMMENDED
TRAFFIC ADJACENT (TA) CYCLE LANE**

DWG SET No.	DISPLN	DWG TYPE	SHEET No.	REV.
16001	C - CO - 02		1	1
FOLDER: H:\CAD\1_DR\1_PUB\MOUNT\1_A3				

REV	DATE	REVISION DETAILS	DWN	APP.
1	15/01/2016	DESIGN ITERATION 1	S.Wilson	--

OPTION 3a



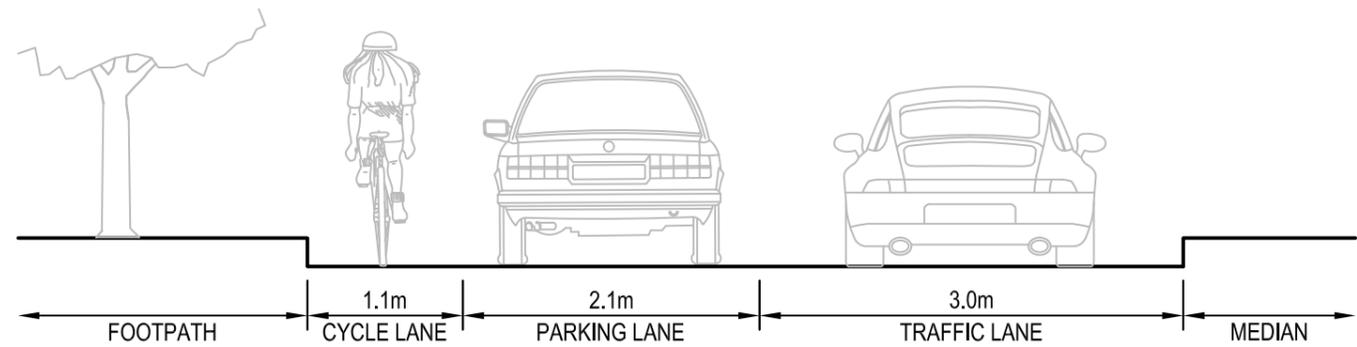
NOTE: SUBJECT TO MAIN ROADS WA APPROVAL

----- INDICATES KERB CUT BACK WIDTH REQUIRED TO ACHIEVE OPTION 3b

Option 3: City cycle lane with 1.1m cycle lane north of the parking lane

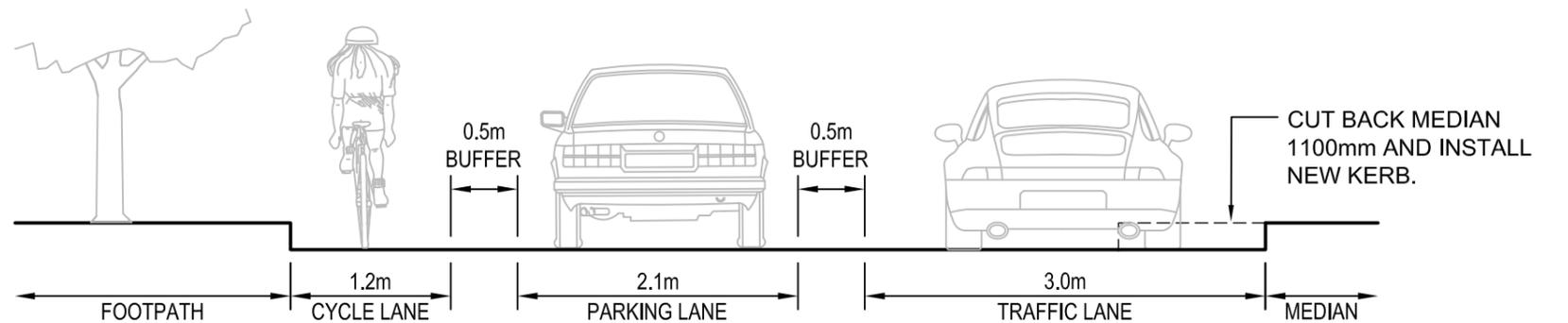
PROS	CONS
Provides a designated space for cyclists	Does not align with the City of Perth Cycle Plan 2029
	Places cyclists in the passenger's side "car door" zone which is unsafe, particularly given the steep gradient.
	Adequate buffers between the parking lane and cycle lane and the parking lane and travel lane cannot be provided within the existing road way unless on-street parking is removed or the kerb is modified, both of which are considered excessive [see note 2].
	High speed cycling is not deterred through the provision of a cycle lane.
	There is potential for conflict between drivers and car doors opening into the road way.
	The cycle lane is unlikely to be used by cyclists due to the potential safety implications of the infrastructure.
	Cyclists are placed within a confined space and cannot easily divert to avoid a potential collision.
	Against best practice bicycle design

Note 2: An additional 1100mm would be required in order to provide a cycle lane facility with an adequate width and buffer, as well as an adequate buffer between the parking and travel lanes. Main Roads WA approval is unlikely without the provision of a buffer. Refer to cross section 3b.



SECTION X - OPTION 3a: KS CYCLE LANE (NOT RECOMMENDED)

SCALE 1:50



SECTION X - OPTION 3b: KS CYCLE LANE WITH BUFFER (NOT RECOMMENDED)

SCALE 1:50



SCALE 1:250 AT ORIGINAL SIZE

SCALE 1:50 AT ORIGINAL SIZE

THIS DWG & DESIGN IS SUBJECT TO COPYRIGHT AND MAY NOT BE REPRODUCED WITHOUT PRIOR WRITTEN CONSENT. CONTRACTORS TO VERIFY ALL DIMENSIONS ON SITE BEFORE COMMENCING WORK. REPORT ALL DISCREPANCIES TO PROJECT MANAGER PRIOR TO CONSTRUCTION. FIGURED DIMENSIONS TO BE TAKEN IN PREFERENCE TO SCALED DRAWINGS.



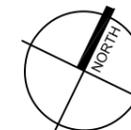
CITY OF PERTH

COUNCIL HOUSE,
27-29 ST. GEORGE'S TERRACE, PERTH.

SRI RANJAN - PRINCIPAL ENG,
COORDINATION & DESIGN

ERICA BARRENGER - MANAGER,
COORDINATION & DESIGN

DESIGNED: --
DRAWN: S. Wilson
TRAFFIC ENG.: --
DATE: 15/01/2016
PROJECT MGR.: G. Rodoreda
SCALE: AS SHOWN
SENIOR ENG.: S. Ranjan
CO-ORD SYS.: MGA 50 / AHD



**MOUNT ST - WEST PERTH
BICYCLE TREATMENT
OPTION 3 - NOT RECOMMENDED
KERB SIDE (KS) CYCLE LANE**

DRAWING STATUS	DWG SET No.	DISPLN	DWG TYPE	SHEET No.	REV.
ISSUED FOR INFORMATION	16001	C - CO - 03		1	
CAD REF: 16001-MOUNT-CO-OPTION-3.dwg	FOLDER: H:\CAD\1_DR\1_PUB\MOUNT\1_A3				

REV	DATE	REVISION DETAILS	DWN	APP.
1	15/01/2016	DESIGN ITERATION 1	S.Wilson	--

Mount Street Designated Locality - Proposed Parking Changes

