6.2 Lenah Valley Retail Precinct Streetscape Upgrade File Ref: F17/31876; 2016-0189-02

Report of the Manager Traffic Engineering and the Director Infrastruture Services of 20 April 2017 and attachments.

Delegation: Council

REPORT TITLE: **LENAH VALLEY RETAIL PRECINCT STREETSCAPE UPGRADE**

REPORT PROVIDED BY: Manager Traffic Engineering
Director City Infrastructure

1. Report Purpose and Community Benefit

1.1. The purpose of this report is to:

(i) Present the developed concept design and results of community engagement for the Lenah Valley Retail Precinct streetscape upgrade project.

(ii) Seek the Council's approval to implement the project in general accordance with the concept design.

1.2. The proposed streetscape upgrade will benefit the community by:

(i) Enhancing pedestrian accessibility and safety, with particular benefits for older people and people with mobility challenges.

(ii) Supporting social life in the community by providing spaces that are more attractive and comfortable for people to stay, rest and interact.

(iii) Providing an improved environment for local traders to do business.

(iv) Supporting the Lenah Valley community in making active transport choices with improved infrastructure for walking, cycling and public transport.

2. Report Summary

2.1. At its meeting held on 21 December 2015 the Council considered a report regarding the development of "A Plan for Hobart's Local Retail Precincts". The Council resolved that a report be provided once detailed design and community and trader engagement had occurred in 2016 with a view to the works being completed in 2017/2018.

2.2. In response to that resolution, the streetscape design has been developed in close collaboration with a community-based Project Action Team comprising members who live, work and shop in the precinct, and community association representatives.

2.3. Broader community engagement was undertaken during February 2017. The community engagement report is contained in Attachment B to this report.

3. Recommendation

That:

1. The Lenah Valley Retail Precinct streetscape be upgraded, generally in accordance with the concept plans shown in Attachment A to this report, at an approximate cost of $2 million, as allocated in the 2017-2018 capital works program, subject to approval of the funding in the 2017-2018 budget.

2. Stakeholders be advised of the Council's decision.

4. Background

4.1. At its meeting held on 21 December 2015 the Council resolved the following:

"That: 1. The Council endorse "A Plan for Hobart's Local Retail Precincts", marked as attachment A to item 10 of the Open City Infrastructure Committee agenda, as the framework basis for developing the City's significant local retail precincts.

2. Detailed design work be undertaken for the Lenah Valley retail precinct based on the concept design provided in "A Plan for Hobart's Local Retail Precincts", and a further report be provided once detailed design and community and trader engagement has been completed in 2016, with a view to the works being completed in 2017/2018.

3. Detailed design work be undertaken for improved pedestrian crossing facilities in South Hobart in line with the concepts described in "A Plan for Hobart's Local Retail Precincts" with a view to works being undertaken in 2016/2017.

4. An implementation plan based on "A Plan for Hobart's Local Retail Precincts" and the decisions of the Council in relation to this matter be provided to the traders and other stakeholders who participated in the development of the Plan."

4.2. South Hobart Pedestrian Improvements project is being progressed in line with point 3 of Council's resolution, and a separate report will be provided to the Council.

4.3. In line with point 4 of Council's resolution, the implementation plan was developed as part of the Council's ten year capital works program. The staged program of capital upgrades to retail precincts is as follows:

(i) South Hobart pedestrian crossing improvements to occur in 2016/2017 with a budget of $350,000. This project is in development and the subject of separate report.

(ii) Lenah Valley Retail Precinct Upgrade to occur in 2017/2018 with a budget of $2 million (the subject of this report).

(iii) New Town Retail Precinct Upgrade to occur in 2018/2019 with a budget of $2 million. Initial steps towards project planning and stakeholder engagement for this project have begun.

(iv) Elizabeth Street Retail Precinct Upgrade to occur in 2019/2020 with a budget of $2.5 million. Some stakeholder engagement has begun with traders in the 'midtown' area, with the development of the UTAS Melville Street apartments.

(v) South Hobart Retail Precinct Upgrade to occur in 2020/2021 with a budget of $2 million.

(vi) Battery Point Retail Precinct Upgrade to occur in 2021/2022 with a budget of $1.75 million.

4.4. This report responds to clause 2 of the Council's resolution. Community engagement has been undertaken for the Lenah Valley Retail Precinct streetscape upgrade, and the results of the engagement have informed the design.

4.5. The proposed streetscape design is included as Attachment A and the community engagement report is contained in Attachment B to this report.

5. Proposal

5.1. It is proposed that the Lenah Valley Retail Precinct be upgraded in general accordance with the concept plans at Attachment A, with works commencing in or around October 2017 and completed in the 2017/2018 financial year.

5.2. The design is broadly based on the concept outlined in "A Plan for Hobart's Local Retail Precincts" (the Consultant Plan).

5.3. Additional planning work has been undertaken to inform the current proposal including:

(i) Traffic counts and traffic modelling – a consultant report was provided by Pitt and Sherry (included in Attachment C to this report);

(ii) Review of provision for bicycle riders – a consultant report was provided by CDM Research (included in Attachment D to this report);

(iii) Car parking study; and

(iv) Detailed survey including underground services locations.

5.4. The additional planning work has informed a number of changes that have been made to the Consultant's concept plan. The key changes and the rationales for these changes are listed below:

(i) **Change 1:** Expansion of the project scope area to include the shops immediately to the west of Giblin Street: the grocer, pizza shop and pharmacy.

Rationale: The Consultant Plan didn't include Augusta Road businesses west of Giblin Street but it is clear that these shops are part of the retail precinct. This was agreed by the Project Action Team.

(ii) **Change 2:** The two bus stops are proposed to remain in their existing locations and two new bus shelters will be provided.

Rationale: There are currently bus stops in the precinct for both inbound and outbound services, however the Consultant Plan did not include the inbound (city-bound) bus stop, nor did it suggest an alternative site for it. Retail precincts are considered to be priority locations for bus stops as they provide access to shops and services for people using public transport.

(iii) **Change 3:** The proposal includes an uphill bicycle lane (westward) and bicycle 'head start' boxes at the Giblin Street intersection.

Rationale:

- The Consultant Plan did not include provision for bicycle riders but rather recommended that cyclists 'take the lane' within the precinct.
- The gradient of Augusta Road means that taking the lane is not a realistic option for many bike riders due to the difference in speed between a vehicle and a bicycle going uphill.
- Augusta Road is on the Council's endorsed Principal Bicycle Network and as such, new or replacement infrastructure should include provision for bicycles.
- A review of the Consultant Plan was provided by bicycle transport consultants CDM Research. Several options were considered and the uphill lane option is considered to strike the best balance between providing for motor vehicles, bicycles and pedestrians.
- The Hobart Bicycle Advisory Committee was consulted and reports to be satisfied with the proposal.

(iv) **Change 4:** The Consultant Plan shows trees and extensive kerb bulbing on the northern side of the road. The revised concept proposes that the northern side kerb line remains in generally the same location, and street trees will be mostly limited to the south side.

Rationale: The locations of underground services were unlikely to have been investigated by the initial consultant team. The location of a gas main on the northern side limits the scope for significant excavation, such as would be needed for tree planting, kerb relocations or substantial footings.

5.5. The revised concept includes the following key features:

(i) Two pedestrian crossing facilities to assist people crossing Augusta Road. These will include pedestrian refuges and kerb extensions.

(a) Two on street car parking spaces adjacent to 105 Augusta Road will need to be removed to make way for one of these pedestrian crossing facilities.

(ii) A continuous, step-free footpath treatment at the intersections of Greenway Avenue and Courtney Street where they meet with Augusta Road.

(a) These treatments are classified as ‘road humps’ and require the approval of the State Government’s Transport Commissioner.

(b) The road humps have been advertised in accordance with statutory requirements and no representations were received.

(iii) Footpath widening on the south side of Augusta Road to improve access and allow space for outdoor dining.

(iv) The existing central median lane has been removed in order to provide the additional space required to widen the footpath.

(v) New paving surfaces, renewed kerb and channel to both sides of the street.

(vi) An accessible car parking space for people with a disability in the centre of the precinct.

(vii) New street trees and low-height landscaping.

(viii) Rain garden to be installed as a trial site for Water Sensitive Urban Design in urban streetscapes.

(ix) New furniture including public seating, rubbish bins and bicycle racks.

(x) Two new bus shelters.

(xi) Improved lighting.

(xii) Precinct signage and upgraded precinct threshold treatments.

(xiii) Public art that will be integrated with the streetscape.

(xiv) A bicycle lane in the uphill direction and bicycle head start boxes at the intersection of Augusta Road and Giblin Street.

(xv) A reduction in vehicle speed limit from 50km/hour to 40km/hour within the precinct (subject to the approval of the State Government's Transport Commissioner).

Public Art

5.6. The Public Art program commissioned an artist team to develop a concept for an artwork as an integrated part of the Lenah Valley Retail Precinct Upgrade with the following objective:

(i) To contribute to the revitalisation of the Lenah Valley Retail Precinct Upgrade, through inclusion of integrated, changing and engaging urban elements that appeal to a wide range of community members, including children, and remain contemporary and relevant for the long term.

5.7. The brief for the artwork established the following requirements:

(i) Be integrated: the rejuvenation will include a range of changes to the road, paths, lighting, street furniture and street planting. Elements of the public art response can be integrated with this work.

(ii) Incorporate the capacity for change: this area will be occupied by a changing community group over a long period of time, with some residents experiencing it on a daily or weekly basis for decades. The public art can contribute to creating a dynamic space by incorporating the capacity for change.

(iii) Provide opportunities for urban play: As an area for regular use by families, the refurbishment of this precinct offers the opportunity to incorporate urban elements that are playful and engaging for all ages, but particularly children.

5.8. The artist team was commissioned using the following process:

(i) Expressions of interest were advertised nationally.

(ii) 11 submissions were assessed for shortlisting.

(iii) Four submissions were shortlisted by a panel including the Public Art Advisory Panel; the design team; the Public Art Program team and several members of the Project Action Team (PAT) drawn from the local community.

(iv) Each of the shortlisted artists/artist teams were paid a fee to develop a concept for the work.

(v) The four concepts were presented, in person, to the same panel for selection of the artist or artist team.

5.9. The artist team selected was Alex Miles and Tony Bacic from Tasmania.

5.10. The concept for the selected artwork, as shown in Attachment E, proposes using a strong identifying colour, an illustrative graphic style and a series of collected stories from local residents, to establish a strong visual and story-based identity for the retail precinct.

5.11. The artist team will now develop the design, fabricate and install the work in coordination with the overall construction project.

5.12. The detail of the final artwork is being resolved in collaboration with the design team and is likely to include some or all of the following:

(i) A mural to the side of an existing property, in the selected artwork colour (likely blue).

(ii) A series of small graphic elements throughout the area on walls and fences (e.g an image of a dog running away with a string of sausages, on the side wall of the old butcher shop).

(iii) A series of interventions into new infrastructure for the street including seating and bus shelters that use the colour, collected stories, or illustrations.

(iv) A series of small scale and artful elements in the street, which might include additional playful seating for children, tree grates indicating water movement and Water Sensitive Urban Design Initiatives, or objects to be illuminated at night.

6. Implementation

6.1. Should the Council resolve to proceed with the project there are several activities that need to be undertaken prior to construction of the works commencing. These include:

(i) Finalise detail design and documentation of the works.

(ii) Approval to be sought from the Transport Commissioner for the raised hump / continuous footpath treatments across Greenway Avenue and Courtney Street where these streets meet Augusta Road. The advertising and consultation that is required for the formal approval process under Section 31 of the Local Government (Highways) Act 1982, has already been undertaken and no representations were received.

(iii) Approval to be sought from the Transport Commissioner for the reduction of vehicle speed limit in the precinct from 50km/hour to 40km/hour, to take effect after the completion of the works.

6.2. The project is scheduled to commence in the fourth quarter of 2017, to be substantially complete by the end of June 2018.

6.3. It is anticipated that the first stage of works will be the north side of Augusta Road (the service station side).

7. Strategic Planning and Policy Considerations

7.1. Implementing a streetscape upgrade in the Lenah Valley Retail Precinct brings together a number of strategic objectives from the Capital City Strategic Plan 2015-2025, namely:

1.3.3 Develop and implement local retail precinct plans.

1.5.3 Investigate and implement a broad range of public art projects.

2.1.3 Identify and implement infrastructure improvements to enhance road safety.

2.1.5 Identify and implement measures to support the use of public transport.

2.1.6 Implement the Principal Bicycle Network.

2.2.1 Provide a wide range of quality places where the community can enjoy urban activities and events.

2.2.2 Develop, manage and maintain the city's urban spaces and infrastructure.

7.2. The project furthers intentions and objectives of the following strategic documents:

(i) Equal Access Strategy;

(ii) Public Art Strategy; and

(iii) Stormwater Strategy 2012-2017.

8. Financial Implications

8.1. Funding Source and Impact on Current Year Operating Result

(i) The works proposed in the Lenah Valley Retail Precinct Streetscape Upgrade have been estimated to cost in the order of $2 million.

(ii) $2 million has been allocated for the project in the 2017-2018 capital works program.

8.2. Impact on Future Years' Financial Result

(i) The works are expected to be completed within 2017-2018 and therefore no impact on future years' financial results are anticipated.

8.3. Asset Related Implications

(i) Based on the addition of new furniture and lighting assets, future annual depreciation is expected to increase by approximately $30,000.

(ii) Based on the expected footpath and kerb renewal works, an asset write off of $76,000 is expected to be incurred when the project is handed over.

(iii) The proposed new street trees will incur an operational cost for their establishment and ongoing maintenance.

9. Legal, Risk and Legislative Considerations

9.1. The *Local Government (Highways) Act 1982* (The Act), Section 31 requires the Council to apply to the Transport Commissioner for permission to install road humps such as those proposed in Courtney Street and Greenway Avenue.

9.2. Changes to speed limits are also required to be approved by the Transport Commissioner under the Act.

10. Environmental Considerations

10.1. The Lenah Valley Retail Precinct will be a trial site for water sensitive urban design. An urban rain garden incorporating street trees and planting will be installed. The purpose of a rain garden is to slow down storm water discharge, filter the water to reduce pollutants entering the Derwent Estuary and to provide passive irrigation to the trees.

10.2. The streetscape upgrade project will support the community in making active transport choices, with improved footpaths and road crossings, bicycle infrastructure and new bus shelters.

11. Social and Customer Considerations

11.1. The project includes a range of improvements that will enhance access to shops and services for people who experience difficulties with mobility.

11.2. Wider footpaths, improved pedestrian crossing points, accessible car parking and better bus shelters and facilities will increase the opportunity for members of the public who have difficulties with mobility to participate equally socially and physically.

12. Marketing and Media

12.1. A communications plan for the project has been prepared in consultation with City Marketing.

12.2. The concept phase has made use of a number of communications channels including a Your Say page for community surveys and sharing information, e-newsletters to stakeholders, articles in City News and posts to the City's Facebook page.

12.3. Project communications materials such as newsletters and information sheets have been designed and produced with input from the Brand and Marketing Services coordinator.

12.4. The communications plan will continue to roll out prior to and during the construction phase.

12.5. Transforming Hobart branding will be used on work site branding and signage during construction.

13. Community and Stakeholder Engagement

13.1. Stakeholder engagement has underpinned the development of the proposal. Key methods of engagement have included:

(i) A Project Action Team comprising traders and residents from the precinct, representatives of community organisations and the City's project officers. The PAT has steered the concept development and will continue to meet with project delivery officers to provide a conduit between the Council and the community.

(ii) The project has an on-line presence though a number of channels including Your Say, the City's website, the City of Hobart Facebook page and the community based Linger Longer in Lenah Valley Facebook page.

(iii) City News has published articles regarding the consultation, and updates will continue to be placed as appropriate.

(iv) Local children have participated in engagement place-making activities.

(v) A wide range of officers from across the Council have been consulted during the development of the project from the following areas: Roads and Environmental Engineering, Design Services, City Planning, Traffic Engineering, City Marketing, Economic Development, Public Art, Community Development, Parks, Project Delivery.

(vi) Relevant service authorities have been consulted about the project including: Tas Water, Tas Networks, Metro Tasmania, Tas Gas, NBN.

(vii) Advisory and interest groups have been consulted including: Hobart Access Advisory Committee, Hobart Bicycle Advisory Committee and Bicycle Network.

13.2. The outcomes of the community engagement are summarised as follows:

(i) 65% of community stakeholders who responded to the concept survey have indicated support for the project. Main themes emerging from the people who indicated support include:

- Improvements to the presentation and comfort of the street.
- More space for people.
- Improved safety for pedestrians, including children and older people.
- The benefits that trees will bring.
- Provision for bikes.

(ii) 35% of respondents were not in favour of the concept.

- Most of these people expressed concern about loss of on street car parking. This emerged as the biggest concern among the community during the concept engagement. For the most part, it was based on misinformation about how much car parking was proposed to be removed from the street.
- The issue was clarified and the design has been revised slightly. A total of two car parking spaces are proposed to be removed to make way for a safer pedestrian crossing point.

(iii) The Project Action Team members have all reported that they are satisfied with the revised plan, and they report that their customers and neighbours are also satisfied with the revision and clarification.

(iv) The owner and resident of 105 and 107 Augusta Road does not support the removal of on-street car parking in front of 105 Augusta Road. A list of points raised by the resident are included in the Community Engagement Report, shown as Attachment B to this report.

13.3. The key issues raised during consultation and officer responses are summarised below:

(i) **Issue raised**: Bicycle pinch points at pedestrian refuge crossing points.

Response: Design review has increased the lane width on the north side of the road at the location of the eastern pedestrian crossing point, to avoid

creating a bicycle pinch point. Bike lanes are included where cyclists are travelling uphill. Downhill cyclists will be encouraged to 'take the lane'.

(ii) **Issue raised**: Removal of the central median lane will cause traffic delays. Ensuring traffic flows should be the main priority.

Response: Traffic engineering consultants Pitt and Sherry have provided a traffic modelling report which reviews the traffic impacts of the concept. Delays to traffic caused by the removal of the central median island are expected to be minor, and an acceptable trade-off for the benefits to pedestrian amenity, safety, accessibility and amenity. The traffic modelling report is contained in Attachment C to this report.

(iii) **Issue raised**: Bicycle lanes should not be provided because there are so few riders.

Response: Super Tuesday bicycle count data shows a trend for growing bicycle commuter numbers in the area.

Augusta Road is part of the Council's endorsed Principal Bicycle Network.

An options report and advice on the appropriate bicycle infrastructure for the location was provided by consultants CDM Research. This is contained in Attachment D to this report.

(iv) **Issue raised**: Car parking is at a premium and none should be removed.

Response: A parking study was undertaken to assess parking turnover and occupancy in the precinct as part of the development of the concept.

The results of the parking study indicate that although there are times when all parking spaces in front of the central shops are occupied, there are always opportunities within 100m.

The parking study indicated that improvements to parking availability may be achieved by time-limiting the unrestricted on street spaces on the north side of Augusta Road.

The two on-street spaces that are proposed to be removed are to allow for the installation of a pedestrian crossing facility. The community consultation showed that this was a priority for the community.

Changes to parking controls is an operational matter, and the Traffic Engineering Unit will, separately to the streetscape upgrade, investigate whether changing restrictions to parking would benefit the community.

(v) **Issue raised:** A zebra or wombat crossing is needed across Augusta Road.

Response: The current advice from the State Government is that Australian Standards should be followed when determining the appropriate pedestrian crossing facility. Zebra and wombat crossings are not acceptable treatments on arterial roads under the Australian Standard or VicRoads guidance. Under the Tasmanian Local Government Road Hierarchy, Augusta Road is classified as an arterial road, and therefore it is not considered an appropriate site for such a crossing.

14. Delegation

14.1. This is a matter for the Council to determine.

As signatory to this report, I certify that, pursuant to Section 55(1) of the Local Government Act 1993, I hold no interest, as referred to in Section 49 of the Local Government Act 1993, in matters contained in this report.





Angela Moore
MANAGER TRAFFIC ENGINEERING

Mark Painter
DIRECTOR CITY INFRASTRUCTURE

Date: 20 April 2017
File Reference: F17/31876; 2016-0189-02

Attachment A: Concept plan ⇩
Attachment B: Community Engagement Report ⇩

Attachment C: Traffic Modelling Report ⇩

Attachment D: Review of provision for bicycle riders ⇩

Attachment E: Public Art concept ⇩

LENAH VALLEY RETAIL PRECINCT

Augusta Road Streetscape Upgrade

Concept plan - revised post community consultation 10/04/17

PROJECT DRIVERS

Local Retail Precincts Plan, 2015

The Lenah Valley retail precinct in Augusta Road has been identified as a priority for upgrading and works are planned to occur in 2017-2018.

Capital City Strategic Plan 2015-2025

The project furthers a number of the City's strategic objectives including:

- Develop and implement local retail precinct plans
- Identify and develop infrastructure improvements to enhance road safety

DESIGN FEATURES IN THE PROJECT AREA SHOWN

Improvements for pedestrians

- A wider footpath on the south side to provide improved access and opportunities for on-street dining
- New paving to the footpaths on both sides of Augusta Rd
- Two improved pedestrian refuge island crossing facilities to improve safety for people crossing Augusta Rd. This will mean loss of on-street parking (2 spaces) in front of the property immediately to the west of the petrol station.
- Upgraded kerb ramps at the Giblin Street traffic signals
- Level pedestrian crossing treatments at Courtney Street and Greenway Avenue intersections with Augusta Road **
- Speed limit reduced to 40km/hr in the precinct **

Improvements for bike riders

- 5 new bike parking racks (currently none in the precinct)
- On-road bike lane west-bound (uphill)
- Bicycle 'head-start' boxes at Giblin Street traffic signals

Improvements for disability access

- Accessible car parking space near the pharmacy
- 2.4m wide clear footpath against the building line in the main shopping area

Public Art

- A public art commission will reflect aspects of the place and community of Lenah Valley

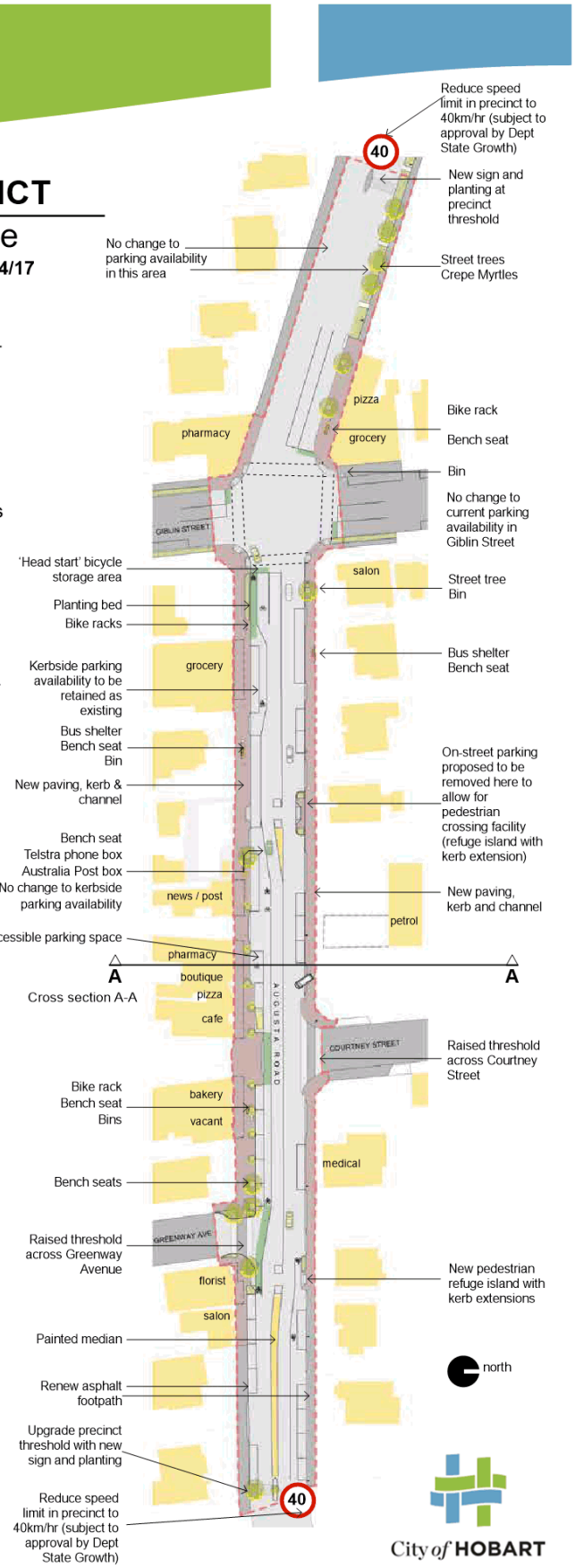
Trees and landscaping

- New deciduous street trees
- Planting beds

Lighting

- New street lighting poles
- Feature lighting

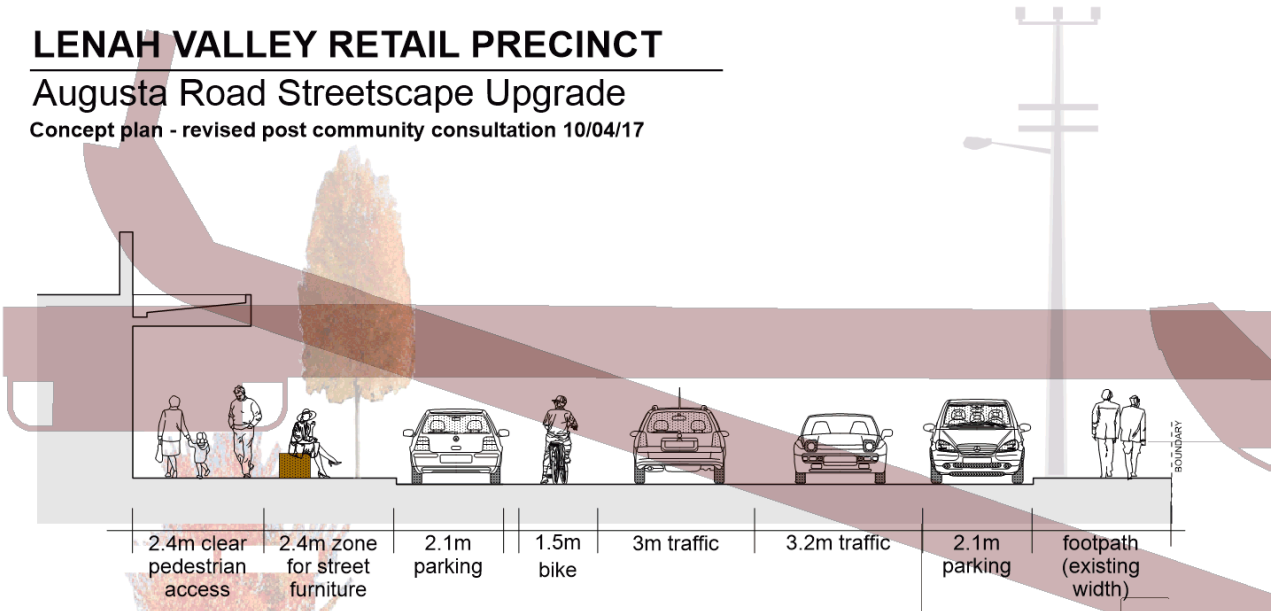
** Subject to final approval by the Department of State Growth



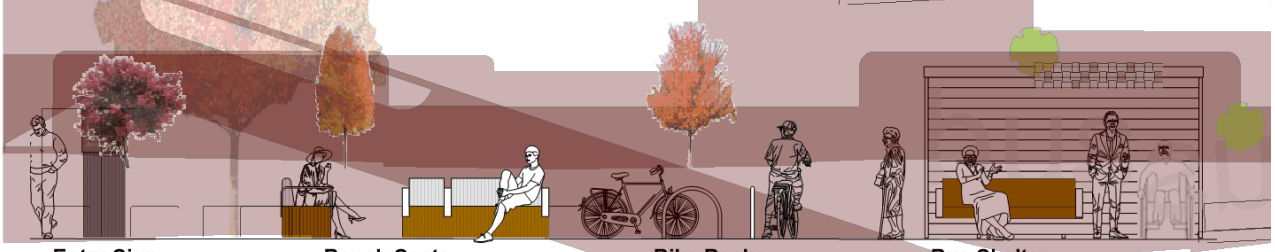
LENAH VALLEY RETAIL PRECINCT

Augusta Road Streetscape Upgrade

Concept plan - revised post community consultation 10/04/17



STREET CROSS SECTION A-A



Entry Sign
Perforated aluminium
1.8m high

Bench Seats
Back and arm rests
Timber slats
Potential for lighting

Bike Racks
Stainless steel arch

Bus Shelter
Coloured steel aluminium
Potential for lighting
Seats with back and arm rests

INDICATIVE FURNITURE AND URBAN ELEMENTS



Example of a level pedestrian crossing treatment as proposed for Greenway Avenue and Courtney Street. The pedestrian path continues level across the road (image: Victoria Walks)

TRAFFIC CALMING



Unit paving - concrete (footpaths on both sides)



Unit paving - brick (used sparingly as a feature)



Acer platanoides *'Columnare'* *Norway maple*



Acer platanoides *Norwegian Sunset*



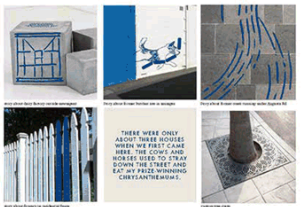
Lagerstroemia *Crepe Myrtle*



Lomandra sp. Dianella sp.

PLANTING

FOOTPATH SURFACES



Art elements to be integrated with the streetscape (indicative image only)

ART ELEMENTS

City of HOBART

COMMUNITY ENGAGEMENT REPORT

Lenah Valley Retail Precinct Streetscape Upgrade

10 April, 2017

Sarah Bendeich
Infrastructure Planner

City of HOBART

Lenah Valley Retail Precinct Streetscape Upgrade

Community Engagement Report

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1. Background

1.1 A plan for Hobart's Local Retail Precincts

In 2015, a consultant team, Council officers and traders from five of Hobart's local retail precincts worked together during a short and sharp engagement, to imagine and test what the future might look like if Hobart's local retail precincts were designed more for people and less for cars.

On a weekend in September 2015 five of the precincts hosted community street parties as a way of trialling streetscape changes designed to calm traffic and improve the appeal of the precincts as people places.

The project was inspired by tactical urbanism - a contemporary urban technique aimed at making streets more people-friendly in a deliberate, phased and locally-driven way. It is experimental and often includes short-term trials. It's a relatively low-risk way of demonstrating the benefits of change, with minimal investment.

Community engagement was central to the making of the Local Retail Precincts Plan

Retail traders in each of the precincts came together in design workshops. Community values and opportunities for each place were brainstormed, concept designs were proposed and traders were encouraged to trial the concepts at street parties. Each precinct (with the exception of Lower Sandy Bay) held a successful event, drawing big crowds. The people who came were surveyed to further test their desire to see more permanent changes in their main streets.

The precincts were prioritised according to four criteria:

- Cohesion of the trading community
- Connection of the local community
- Activation potential
- Compatibility with the long term vision for the City

Lenah Valley was the highest ranked precinct and the favoured candidate for implementing a streetscape project.

1.2 Lenah Valley Retail Precinct Streetscape Upgrade Project

Council resolved in December 2015 that:

Detailed design work be undertaken for the Lenah Valley retail precinct based on the concept design provided in 'A Plan for Hobart's Local Retail Precincts' and a further report be provided to Council, once detailed design and community and trader engagement has been completed in 2016 with a view to the works being completed in the 2017/2018 year.

1.3 Project objectives

The objectives for the Lenah Valley retail precinct streetscape upgrade are:

- *To create a genuine urban village main street environment in the retail precincts*
- *To provide spaces and elements that support social life, accessibility and walkability*

Engagement has underpinned all project activities. In the project planning phase, engagement activities were mapped alongside design and planning milestones in order to integrate community stakeholder input in a timely and meaningful way. Inputs from the community were invited prior to, during and after development of the concept. The results of these inputs have been used by the project team to monitor progress and inform decisions.

Engagement was carried out in three stages, they are detailed in this report:

Stage 1 – Project Planning (internal stakeholder engagement)

Stage 2 – Developing the Concept (community stakeholder engagement)

Stage 3 - Sharing the Concept Design with stakeholders



Above: The Linger Longer Lenah Valley trader team in 2015 (image courtesy of the Mercury)

2. Stakeholder Engagement

Engagement has underpinned the project's activities. In the project-planning phase, engagement activities were mapped alongside design and planning milestones in order to integrate community stakeholder input in a timely and meaningful way. Feedback from the community has been invited prior to, during and after development of the concept. The project team has used this feedback to monitor progress against objectives, and inform decision making.

Engagement activities have occurred over three stages:

Stage 1 planning the project,

Stage 2 developing the concept, and

Stage 3 sharing the concept.

The timeframes, purpose, methods and outcomes of each stage is outlined in this section.

2.1 Stage 1 – Project planning - internal engagement

Timeframe

August – September 2016 (and ongoing as needed)

Purpose of engagement

To consult with internal stakeholders across the council's divisions to raise awareness of the project, to understand the various asset and operational needs and to seek opportunities for expert input from other programs to add value.

Key methods

Workshops and meetings

- City Infrastructure – traffic, roads and environmental engineering, design services, project delivery, asset services
- Community Development – public art, engagement, children and families, activation, city marketing, communications
- Economic Development
- Parks and City Amenity – street trees, rubbish bins
- City Planning – heritage, planning

Key outcomes

Upgrading the streetscape in a retail precinct is about much more than road infrastructure, and this stage allowed provided opportunities to draw on diverse expertise across the Council and align with other programs for enhanced project outcomes. The commissioning of public art for the project is a good example of an outcome of early engagement with other council teams.

2.2 Stage 2 – Developing the Concept

Timeframe

September – December 2016

Purpose of engagement

To involve the community in the scoping and concept development of the streetscape upgrade. Specifically, the objectives of this stage of engagement were to:

- connect the Council's project team with the stakeholders in the local precinct,
- establish a project governance structure that would provide the mechanism for engaged community stakeholders to contribute meaningfully and to be conduits between council officers and the broader community
- discover the community's key issues, aspirations and priorities for the revitalisation
- learn from the community, acknowledging that they are the experts of their place

Key methods

Mail-out to community stakeholders

Introduction letter and information pack to residents and traders in the precinct, community groups, schools, churches and businesses in the area. This invited people to join the Project Action Team and directed people to the Your Say site.

Face to face introductions

Project team members met the local traders and businesses, collected contact details and introduced the project

Presentation to the Lenah Valley Community Association AGM

Project officers addressed the AGM to raise awareness of the project and invite interested community members to the Community Project Meeting.

Project Action Team

Regular meetings were held with a community based Project Action Team to assist with the development of the concept (refer Appendix A for more detail on the Project Action Team's role)



(above) The initial Project Action Team meeting September 2016

Community survey

The community was surveyed at the beginning of the process to help the project team understand what the community's aspirations for the project were. The survey was launched on the Your Say site and copies were distributed by traders to people who visit the shops

176 responses were collected and 76% of respondents lived within 2km of the precinct.

People were asked: 'how important would the following features be in attracting you to a new, improved Lenah Valley retail precinct?' A list of streetscape improvements was presented for people to rate on a scale from unimportant through to very important. The ten highest ranked improvements were:

1. Pedestrian crossings
2. Spaces for people
3. Lighting
4. Frequent bus service
5. Street trees
6. Wider footpaths
7. Outdoor public seating
8. Availability of off-street parking
9. Shade
10. Bus stops

Through analysis of people's comments regarding their aspirations for the upgrade, four key themes were revealed:

1 The appearance of the precinct is a bit tired and it's time for the street to be refreshed
2 Improvements are needed for pedestrian safety, accessibility and amenity
3 Car parking is important for customer convenience and for the viability of the businesses
4 Improvements are needed to encourage people to arrive by bicycle

Business survey

The precinct business survey collected some baseline information which helped us to understand more about the retail precinct – for example, what are the key opening hours and business types? How long have the businesses been trading? The businesses could be re-surveyed at a later date to measure impacts of the re-development. However it should be noted that given the small sample size qualitative methods such as post-construction interviews are likely to be a better way to measure the impacts of the project.

Children's engagement

Students at Lenah Valley Primary School were engaged in a session of activities related to how they use and perceive the retail precinct, what they like and dislike about the area and what they would like to see there in the future. Children expressed their ideas with art work and written surveys. The results of this engagement is included in Appendix B.

2.3 Stage 3 – Sharing the Concept Design with stakeholders

Timeframe

Monday 6 February – Friday 3 March

Purpose of engagement

To share and seek feedback on the concept with the community and other stakeholders. The feedback at this stage will allow for revisions to the concept.

Key methods

Sharing the concept plans

- Community stakeholders were mailed an information pack including a letter, concept plans, feedback survey and a reply paid envelope.
- Concept plans were on exhibition in the foyer of the Council's Customer Service Centre
- Concept plans were exhibited on-line at the project's Your Say page
- Three in-street drop in sessions were held. Council's project officers set up a 'shop front' and met with people in the precinct to discuss the project and collect surveys. Drop in times included a morning weekday, morning weekend and afternoon weekday.



(above) One of three shop front sessions held in the precinct in February

Surveying the community – on-line, in shops and in person

- Feedback survey available on-line on the Your Say page
- Printed feedback surveys were mailed out to stakeholders
- Printed survey forms were available in a number of businesses in the precinct
- People were also surveyed by Council officers during in-street drop in sessions

Social media and marketing

Engagement opportunities were supported by:

- Posts to CoH Facebook page,
- The community's Linger Longer in Lenah Valley Facebook page
- City News



COMMUNITY COMMENTS ON LENAH VALLEY STREETSCAPE DESIGN

A concept plan for the Lenah Valley retail precinct was released for public comment in February with a wider footpath, improved pedestrian crossings and street trees in the mix.

The concept plan was developed by the City of Hobart and a community-based project team including local residents and businesses.

The public feedback will be considered in the final design and construction is due to begin late this year.

To view the concept plans visit **https://yoursay.hobartcity.com.au/lenahvalley** ■

URBAN UPGRADE: The community has had its say on the draft concept plan for the Lenah Valley retail precinct.

(above) City News article, March 2017

Lenah Valley retail precinct plan ready soon for your say

Design work is underway for the Lenah Valley retail precinct streetscape upgrade. The project's focus is to make the shopping area more comfortable, attractive and accessible for pedestrians.

Improvements will include renewed footpaths, additional footpath space on the south side of Augusta Road, new paving, better pedestrian crossings, street trees, street furniture and bicycle parking.

The plan will be ready early next year and the City will be seeking feedback on the design. Sign up to the Lenah Valley project page on yoursay.hobartcity.com.au to be alerted when the designs are released.

Lenah Valley is one of five local retail precincts to receive improvements through the Transforming Hobart capital works program. The streetscape improvement project follows on from the pop-up street party which trialled design ideas in September 2015. ■



LINGER LONGER: Lenah Valley residents and businesses will be asked what they think of designs to improve the shopping area. Photo: Alastair Bett.

(above) City News article, December 2016

Presentations and advisory committee meetings

The concept was presented to:

- Council's Access Advisory Committee
- Council's Bicycle Advisory Committee
- Mathers House afternoon tea event

External stakeholders

The following organisations were written to or emailed, with plans and an invitation to meet or provide comment:

- Metro
- RACT
- Tasmania Police
- Tasmanian Fire Service
- Bicycle Network Tasmania
- Tas Water
- Tas Networks
- Tas Gas
- NBN

Key Outcomes – Results of the Concept Survey

Total responses

A total of 168 survey responses were received between 5 February and 1 March, 2017. These were a combination of electronic Your Say surveys and printed surveys that were either reply-paid posted, collected by the traders or by Council officers during the in street drop in sessions. There were additional responses including phone calls, emails and written submissions.

Level of support

To assess support for the design we asked: "Are you likely to 'linger longer in Lenah Valley' once the streetscape is improved?"

65% said yes

35% said no

Amongst those who said no, the key reason was the impact of (perceived) loss of car parking.

Key themes

The survey invited people to provide comments. The responses were grouped into themes and these are presented below with responses where appropriate.

Supportive?	Theme	Frequency of theme	Comment / Response
Supportive	Sense of identity, more friendly, attractive, welcoming, comfortable, aesthetic improvements, vibrant, community feel, etc.	33	
	More space for people – wider footpaths for walking and on-street dining	27	
	Safety benefits for pedestrians, children and elderly, traffic calming and lower speeds	20	
	Trees	12	
	Provision for bikes	8	
	I am local and will continue to support the businesses	5	
	The upgrade may encourage more businesses to join the precinct	2	
Unsupportive	Perceived loss of on street car parking	24	This was the major theme among those who were not supportive of the plan. The plan has been revised to limit loss of parking to two spaces, and these are to make way for a pedestrian crossing point which emerged from the first round of consultation as the community's highest priority. (see expanded notes below)
	Traffic movement ought to be the priority on this route, not pedestrian or streetscape improvements	14	A traffic modelling report was undertaken by consultants to test the impact of the pedestrian improvements. The impacts were considered to be minor, and an acceptable trade-off for the benefits to the community relating to pedestrian access, safety and amenity
	Unnecessary use of funds	6	A small number of people thought the improvements were not value for money.
	I already shop here	5	These comments suggested that the upgrade would not change the way that they use the precinct.
	Tree impacts to footpaths	3	Trees will be installed in underground cells - best practice for urban trees. These reduce

			compaction and protecting the paving from lifting over time.
	Loss of convenience	3	Reduction in car parking has been minimised with only 2 spaces proposed to go. These will make way for a pedestrian crossing point which is seen as the higher priority.
	The only shows improvements on one side of the street	1	The north side of Augusta Road is largely constrained by underground and overhead infrastructure. The decision was made to focus the improvements on the south side, where most of the retail activity is. The north side will receive new paved footpaths and improved access.

A perceived loss of on-street car parking was a concern

24 people mentioned car parking as their reason for not supporting the project. This was a key issue that arose during this concept stage of engagement.

An alternative survey was developed by precinct traders, which unfortunately indicated that ten parking spaces were proposed to be removed in order to achieve the streetscape upgrade. This was not accurate, but due to the strength of word of mouth communication in a socially connected community, people were very concerned and this is reflected in the comments received.

There were two factors that contributed to the perception of loss of car parking:

1. The concept plans showed car parking spaces individually marked in the central part of the precinct – to indicate where kerb lines were proposed to change. Where no changes were proposed to kerbside parking, individual parking lines were not shown. **The absence of line marking was wrongly interpreted by some as removal of parking areas**, and the word spread quickly.
2. A disability-accessible car parking space was proposed in front of the post office. The location was suggested by the post office proprietor at a PAT meeting, however the size of a disability-accessible parking space meant that no other spaces would be available for the short stay – high turnover nature of the post office customers' needs.

On reflection, the implications of placing the disability-accessible car parking space were not fully communicated to the business operator or the PAT group prior to releasing the concept plan to the public.

During the engagement phase, discussions were held with the post office proprietor and the pharmacist proprietor. It was agreed that an alternative location for the accessible parking space, closer to the pharmacy, was achievable and acceptable. The design has been changed and an information sheet released to explain the proposed changes to the community.

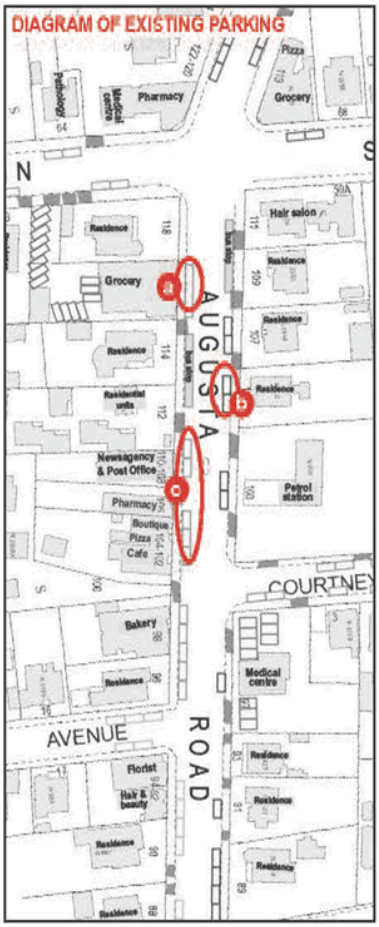
There were also concerns about loss of parking in front of Salamanca Fresh, raised by that business. The design was slightly adjusted to reduce the length of the traffic queuing lane at the Giblin Street intersection in order to remove impact on car parking space in front of Salamanca Fresh. The space available for kerbside parking in front of the Post Office and Salamanca Fresh, will be unchanged.

LENAH VALLEY RETAIL PRECINCT

Augusta Road streetscape upgrade: concept design stage

Fact sheet: on-street parking

During the consultation period for the project, City officers have heard about concerns within the community about changes to car parking in the precinct. The purpose of this fact sheet is to respond to those concerns and to clarify the proposed changes.



What changes are proposed for on-street car parking in the precinct?

The concept proposal currently shows 3 fewer on-street car parking spaces however this is being revised and now **only 2 spaces will be lost** - these are in order to provide a safer pedestrian crossing point.

a In this location near Salamanca Fresh there is currently space for two standard parking spaces, although a third car can fit here if the cars are small and well-positioned. There is no proposed change to the amount of space available for parking in this location.

b Two on-street parking spaces are proposed to be removed in this location to make space for a new, safer pedestrian crossing facility.

c The concept shows the two spaces near the Post Office being replaced with one new accessible space for people with a disability. Accessible spaces are larger than regular spaces to allow access for wheelchairs. We've heard from lots of people that loss of these car spaces will adversely impact them. The design is being revised and will now retain the two standard parking spaces near the Post Office and place an accessible space adjacent to the nearby Amcal Pharmacy. This revision will mean that there will be no change to the total number of spaces in the area between Whisk and Co. and the Post Office.

There are no other proposed changes to the amount of car parking in the precinct.

Can we increase available car parking?

Car parking occupancy and turnover was investigated in September 2016. City officers recorded cars parked in the precinct between 8am-6pm on a typical day. The results show that:

- parking is well-used, but there were available car parking spaces in the precinct at all times of the day
- many cars were parked for longer than the time limit
- cars often parked all day, in spaces without time restrictions

These results show that there is an opportunity to increase parking availability by changing the time restrictions in some spaces. Any changes would be made in consultation with the people living and running businesses nearby.

Still have questions?

Please contact the City's Infrastructure Planner, Sarah Bendeich
Telephone: 6238 2584
Email: bendeichs@hobartcity.com.au

City of HOBART

(above) An information sheet issued to clarify the changes to on-street parking that were (and were not) proposed



Appendix A - The Project Action Team

Role and purpose

The Project Action Team was established as a community-based steering group for the purpose of providing advice to the project officers, and acting as a conduit for information between the City's project team and the community. Twelve local community representatives participated on the Project Action Team including people who live, work and trade in the precinct and community association representatives.

Terms of reference for this group were agreed at the first meeting. PAT members communicated about the project with their customers, clients, friends and neighbours in a range of ways including through the community Facebook page, by placing concept plans in shop windows, distributing and collecting survey forms.

Activities

The PAT met monthly at St Giles in Gant Street, nearby to the retail precinct. Meetings were chaired by the Manager Traffic Engineering. Council officers gave monthly reports to inform members about progress towards the project planning and concept development. Presentations were given by the Infrastructure Planner, Transport Engineer, Manager Traffic Engineering, Community Engagement Advisor, Urban Designer, Public Art Coordinator, Economic Development Officer on topics such as:

- precedents of exemplar streetscape upgrade projects from around Australia
- planning and development context
- project process, stages and timing
- site investigations such as underground services locations in the area and the constraints that they pose
- car parking study and traffic modelling
- community survey results and report on the children's engagement
- public art briefing process - a number of PAT members also participated on the public art selection panel
- public art concept
- ongoing presentations and discussions about the urban design

Evaluation of the Project Action Team

The PAT process was evaluated by members at the final planning meeting in March 2017. This feedback will be used to inform subsequent retail precinct projects.

- All members responded positively to the process, saying that they found the meetings informative and a useful way to have input on behalf of their community.
- All members agreed that the group had provided a 'safe space' where they felt ok about raising issues.
- All members were in support of the revised concept plan, and most indicated that they would continue to be involved in this way throughout the delivery phase of the project



Meeting 2 – October 2016



Meeting 3 - November 2016





Meeting 4 – December 2016

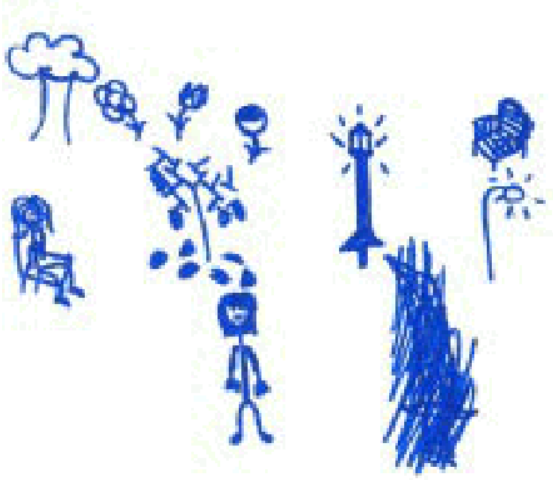


Appendix B - The Children's Engagement

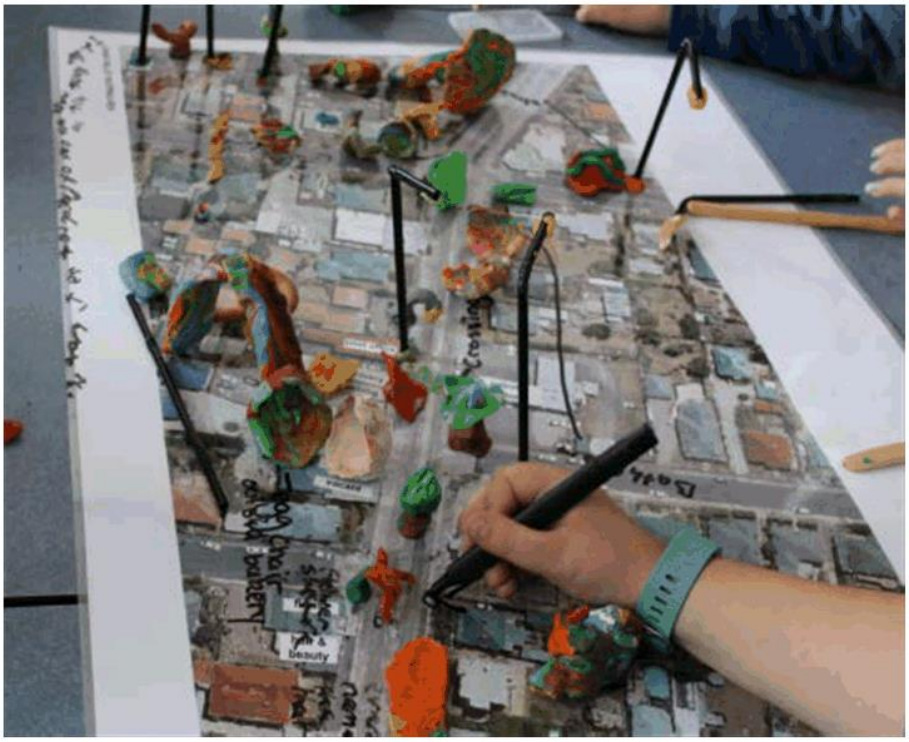
Students at Lenah Valley Primary School were engaged in hands on activities. The objective was for the project team to learn about how local children use and perceive the retail precinct, what they like and dislike about the area and what they would like to see there in the future.

The key findings regarding the children's aspirations for the streetscape upgrade were:

General grouping	Children's ideas	Interpretation
The unexpected	Painting the road in bright colours, rooftop basketball court, pool, maze, pink flamingos.	While it's not altogether possible or ideal to paint the road in bright colours or have pink flamingos this does reflect a desire to create a colourful, unexpected and fun place to visit.
Things to play with	Basketball court, playground, sculptures to climb and play on, giant slide, skate park, play centre.	Children expressed interest in doing something and having facilities they could play with.
Things that provide comfort, safety and amenity	Lighting, tables, toilets, seating, drinking fountains, pedestrian crossings, wider footpath, WIFI.	Children wanted practical items that would create a place to relax in such as seating, tables and toilets.
Aesthetic items	Bright colours, street art, public art, rainbow banners, Christmas decorations, yarn bombing, coloured lights	Children had ideas on how to make the place look and feel interesting to them, they were aware aesthetics is important to a space.
Nature	Trees, flower beds, cherry blossom tree, green space, grass, palm trees.	Many nature items came up repeatedly, reflecting children's need and interest to be around nature.



What would you like to see in a new, improved streetscape?





How do you use the precinct?



If Lenah Valley were a person, how would you describe its personality?



What do you like about the precinct?



What would you like to see in a new, improved streetscape?



Appendix C – Concerns of resident at 105-107 Augusta Road

Concerns raised by the owner and occupier of 105-107 Augusta Road, about the loss of two on-street car parking spaces adjacent to 105 Augusta Road.

The following points were raised by Mr Penprase during two telephone calls and confirmed in email.

1. *The proposed pedestrian crossing is not needed because very few people cross the road in this location. If two additional car parking spaces are removed, there will be even fewer people needing to cross the road*

   Response: Observations are that people do cross the road between the service station and the Giblin Street signals at various times of the day. The two parking spaces are not time restricted and the parking study undertaken in November 2016 indicated that the unrestricted parking on the northern side of the road had relatively low turnover, with some cars parked all day and others staying for hours. The car parking is therefore not considered to be a significant generator of pedestrians. It is more likely that people are crossing the road to reach the bus stops and services that are located on both sides of the road.

2. *This will remove the ability for visitors to park. There are currently four residential houses relying on four untimed car parking spaces 105, 107, 109 and 114.*

   Response: Each of these properties has off-street car parking

3. *Nurse regularly visits 112 and needs on-street car parking - where will she park?*

   Response: There will still be car parking available in the street. There is also an alternative access from Ratho Street for the units at 112.

4. *Is there a covenant on the service station property - historically the service station offered car parking*

   Response: There does appear to be a caveat over the service station property relating to public car parking. The details of this are being investigated by Council officers. However the outcome of this is not considered to be material to the concept design.

5. *Removing car parking will be detrimental to the traders as people will not stop if they can't park easily. They will go to Glenorchy instead where there is plenty of parking.*

   Response: mproving the precinct for pedestrians, to make it safe and convenient for local people to walk to the shops and where possible leave the car at home, is a key objective of the project.

6. *It will reduce the value of 105 Giblin Street, if it prevents the addition of a driveway on the lower side of the property for access to a future unit.*

   Response: The kerb extension will not prevent the addition of a driveway to the property in future

7. *An island in the middle of the road with a cut-through for pedestrians, and reducing the speed limit to 40km/hr are sufficient – there is no need for the car parking to go*

   Response: It is important that pedestrian crossing facilities are designed in accordance with the relevant standards to ensure that they are safe for people crossing the road. Having on-street car parking so close to a pedestrian crossing does not allow sufficient sight distance

for a person crossing the road to be able to see the approaching traffic. This is the reason that the car parking is proposed to be removed.

8. *The crossing point used to be a zebra crossing years ago, and there was an accident where a pedestrian was hit, and lots of near misses, due to the cars coming down the hill at speed. The traffic lights have since been installed and this dangerous crossing was removed.*

Response: Sixteen years of crash data has been analysed by Council's officers. The most common type of crash in the precinct is associated with cars coming and going – either from parking spaces or driveways. One pedestrian crash has been recorded in that time and this was a minor incident and associated with a car reversing.

A zebra crossing would not be supported by the Australian Standard on Augusta Road due to its classification as an arterial road. However the intention is to reduce the traffic speed limit to 40km/hr in the precinct (this is subject to approval from State Government). This speed reduction coupled with a properly designed pedestrian crossing point with appropriate sight distance will make the road safer to cross.

9. *If people are unable to cross safely here, they can easily walk to the lights at Giblin Street*

People will still have the option to do this, however people are currently observed choosing to dash across the street rather than walk up the hill to the signalised crossing. The pedestrian crossing point will cater to this demonstrated 'desire line' and it will better connect the two sides of the street. Although the south side has more retail offering, the north side does include a number of pedestrian destinations including a hairdresser, grocery shop, bus stop, medical and pathology services, service station and the nearby St Giles facility.

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Lenah Valley Retail Precinct
Traffic Modelling Report

transport | community | mining | industrial | food & beverage | carbon & energy





Prepared for:	City of Hobart
Client representative:	Sarah Bendeich
Date:	14 December 2016 Rev A

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Prepared by: _____ Date: 14 December 2016
Rebekah Giana

Reviewed by: _____ Date: 14 December 2016
Ross Mannering

Authorised by: _____ Date: 14 December 2016
Ross Mannering

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Revision History					
Rev No.	**Description**	**Prepared by**	**Reviewed by**	**Authorised by**	**Date**
A	Traffic Modelling Report	R. Giana	R. Mannering	R. Mannering	14/12/2016

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1. Introduction

City of Hobart are planning streetscape upgrades at several retail precincts in Hobart. One of the flagged upgrades is the Augusta Road retail precinct in Lenah Valley. The upgrade will cover the retail precinct between Giblin Street and Greenway Avenue.

A concept design has been prepared for the upgrade, however before progression of the Detailed Design City of Hobart require traffic modelling to be undertaken to determine whether the upgrades will affect traffic movements on Augusta Road and the intersections within the upgrade area.

City of Hobart engaged **pitt&sherry** to undertake traffic modelling at the intersections within the study area.

2. Site Location and Existing Layout

The section of road proposed for upgrade is Lenah Valley retail precinct located on Augusta Road between Giblin Street and Greenway Avenue as shown in Figure 1. The intersection of Augusta Road and Courtney Street is also located within the study area.

The Augusta Road/ Giblin Street intersection operates as a signalised intersection whilst the Augusta Road/ Courtney Street and Augusta Road/ Greenway Avenue intersections operate as priority controlled T-intersections.

The retail precinct has several businesses including a newsagent, doctors surgery, pharmacies, grocery stores and other retail uses lining Augusta Road. A service station is located on the corner of Augusta Road and Courtney Street.

There are several driveways for these businesses located on Augusta Road. The majority of these are used by very low traffic volumes and do not greatly impact traffic movements on Augusta Road. The service station has two driveways located on Augusta Road and another driveway located on Courtney Street. The service station driveways are known to carry more traffic than Courtney Street and Greenway Avenue.

Augusta Road has a central median which is used by vehicles turning right into Courtney Street, Greenway Avenue and the service station.

There are two bus stops located on Augusta Road within the study area, one on each side of the road. The bus stop on the north side of the road is located approximately 10 metres east of Giblin Street and the bus stop on the south side is located approximately 40 metres east of Giblin Street. Several bus services use these stops with a bus stopping every 10 to 30 minutes on a weekday.

Footpaths are located on both sides of Augusta Road and on all side streets. There are no bike lanes in the study area.

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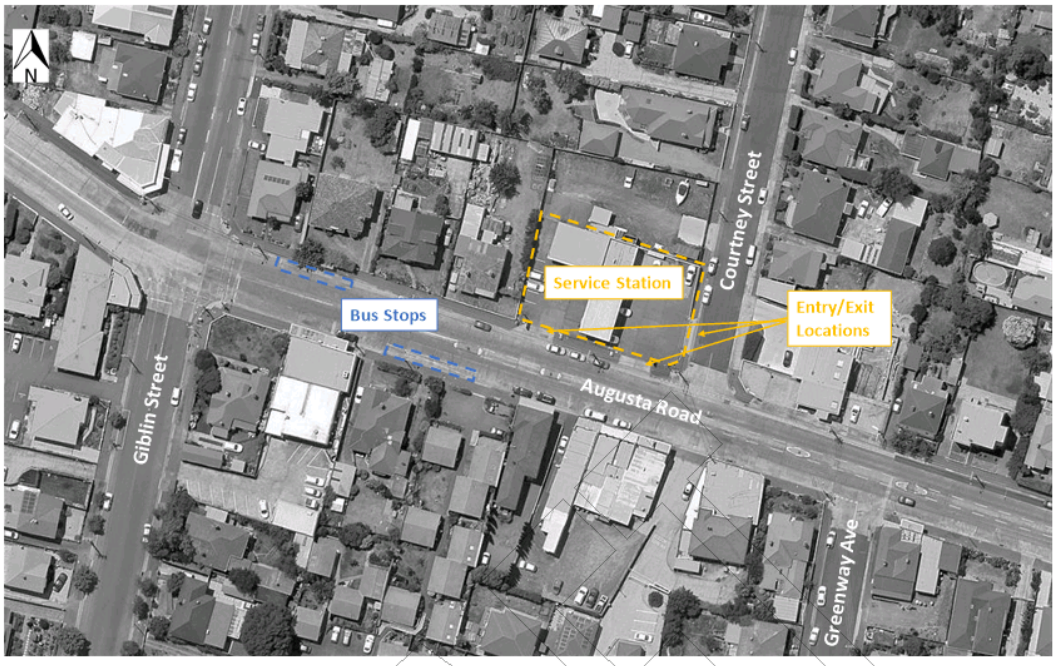


Figure 1: Site Location

3. Proposed Streetscape Upgrade

The major changes proposed to the Lenah Valley Retail Precinct on Augusta Road include the following:

- Reduction of the speed limit from 50km/h to 40km/h
- Removal of the central median except for the pedestrian refuge islands located just east of Greenway Avenue and west of the service station
- Widening of the footpath outside the shops on the south side of Augusta Road
- Addition of a bicycle lane on the south side of Augusta Road between the bus stop and Greenway Avenue
- Addition of a bicycle lane on the north side of Augusta Road to the east of Greenway Avenue.

Council are also considering reducing the width of the south approach of Giblin Street which will remove one of the two existing lanes.

The removal of the central median will result in no option for right turning vehicles into the service station to move out of the path of westbound through vehicles unless there are no vehicles parked on the south side of Augusta Road.

Courtney Street and Greenway Avenue, however are located opposite driveways and therefore a single right turn vehicle could be passed by through vehicles on Augusta Road by using the available space at the access location.

The proposed changes to the Lenah Valley Retail Precinct are shown on the draft drawing in Appendix A.

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4. Traffic Modelling Assessment

4.1 Traffic Modelling Scope

The scope of the traffic modelling assessment is to undertake SIDRA Intersection traffic modelling at the following intersections:

- Augusta Road/ Giblin Street
- Augusta Road/ Service Station West Driveway
- Augusta Road/ Service Station East Driveway
- Augusta Road/ Courtney Street
- Augusta Road/ Greenway Avenue.

Each of the above intersections are to be modelled for the following scenarios:

- Existing layout for the existing (2016) traffic scenario
- Existing layout for the 10-year future (2026) traffic scenario
- Proposed layout for the existing (2016) traffic scenario
- Proposed layout for the 10-year future (2026) traffic scenario.

4.2 Traffic Volumes

4.2.1 Existing Traffic Volumes

City of Hobart provided tube count data at hourly intervals on Augusta Road, Greenway Avenue and Courtney Street with count data available for a minimum of two weeks between September and November 2016 at each location. The tube count data generally showed following weekday peak times:

- AM Peak 8:00am – 9:00am
- PM Peak 4:00pm – 5:00pm or 5:00pm – 6:00pm

For the purposes of the traffic modelling, the highest PM peak hour was chosen at Greenway Avenue and Courtney Street to represent a worst case scenario. Traffic volumes on the weekend were determined to be much lower that during weekdays.

The tube count data provided two-way data for the side roads, the directional distribution of traffic volumes on Augusta Road was used to determine the directional distribution for traffic turning into and out of the side roads from/to Augusta Road.

City of Hobart also provided traffic data for the Augusta Road/ Giblin Street intersection which was sourced from the Department of State Growth SCATS data. Count data was available for a week in October 2016 with data at 15 minute intervals.

Using the SCATS data, **pitt&sherry** completed traffic counts at the Augusta Road/ Giblin Street intersection on Wednesday 25 October 2016 during the following peak periods:

- AM Peak 8:00am – 9:15am
- PM Peak 4:30pm – 5:45pm.

It was determined from the traffic counts that the AM peak hour at the intersection occurs at 8:00am – 9:00am and the PM peak hour occurs at 4:45pm – 5:45pm.

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Traffic volumes at the intersection were compared with tube count data on Augusta Road and Giblin Street to confirm a busy day was counted. The volumes were consistent with those on typically busier weekdays measured by the tube counts and therefore are considered adequate for the traffic modelling.

The Caltex Service Station generates significant traffic volumes. The service station owner provided hourly customer data for a typical weekday with the service station identified to have the AM and PM peak hours between 8:00am – 9:00am and 5:00pm – 6:00pm respectively.

For the purposes of the traffic analysis it has been assumed that every customer recorded at the service station entered and exited the site by vehicle during the peak hour.

The service station has three entry/ exit points, two on Augusta Road and one on Courtney Street. Information from the service station and observations taken on site during the morning and afternoon were used to determine the distribution of traffic between the entry/exit points.

The directional distribution of traffic volumes on Augusta Road were used to determine the directional distribution for traffic turning into and out of the service station from/to Augusta Road.

Based on the data collection and assumptions above, the 2016 AM and PM peak hour traffic volumes are shown in Figure 2 and Figure 3 with all provided data included in Appendix B.

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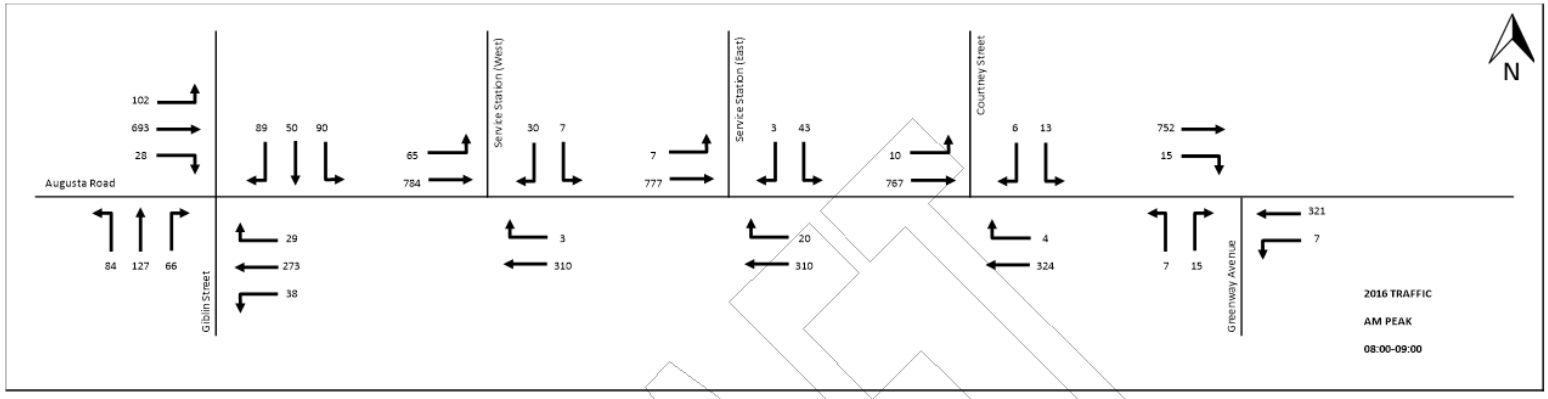


Figure 2: Traffic Volumes - Existing (2016) AM Peak

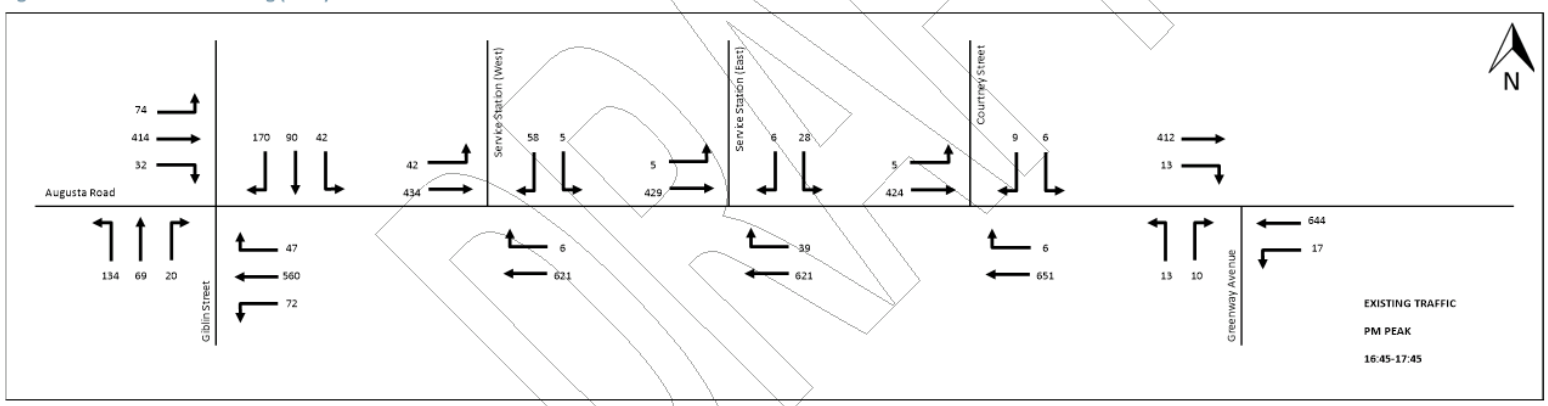


Figure 3: Traffic Volumes - Existing (2016) PM Peak

4.2.2 Anticipated 2026 Traffic Volumes

There are three residential subdivisions proposed near the Lenah Valley Retail Precinct, with all subdivisions under construction and expected to be filled by 2026. The location and size of the subdivisions is as follows:

- 110 Giblin Street – 114 residential lots
- 221A Lenah Valley Road (Parkwood Gardens) – 125 residential lots
- 62 Athleen Avenue – 22 residential blocks.

The subdivisions are expected to generate additional traffic volumes to the intersections in the Lenah Valley Retail Precinct. The expected impact of each subdivision is discussed below.

110 Giblin Street

The additional traffic volumes for this subdivision have been taken from the Milan Prodanovic TIA report dated December 2013. The report did not discuss impacts to Augusta Road, however included traffic generated to and from the south on Giblin Street. It has been assumed as a conservative estimate that all this traffic reaches the Augusta Road/ Giblin Street intersection. The distribution of these vehicles on the Augusta Road/ Giblin Street intersection and into the Lenah Valley Retail Precinct has been based on existing movements at the intersection.

221A Lenah Valley Road

The additional traffic volumes for this subdivision have been taken from the Milan Prodanovic TIA report dated May 2014.

From the TIA report the following assumptions were used:

- 60% use the Augusta Road/ Lenah Valley Road/ Creek Road/ Pottery Road intersection with the remaining traffic using Main Road/ New Town Road to access Creek Road as well as other roads including Springfield Road and Girrabong Road
- 95% of the vehicles at this intersection use Augusta Road
- This results in 512 movements on Augusta Road at this intersection (or 51 in each peak hour).

The report did not consider traffic impacts as far as the Lenah Valley Retail Precinct, however it has been assumed that of the 51 movements in each peak hour, 90% would travel through the Augusta Road/ Giblin Street intersection or 46 in each peak hour.

The 46 movements have been distributed to the study area based on the existing movements at the Augusta Road/ Giblin Street intersection and the following split:

- AM Peak: 30% in/ 70% out
- PM Peak: 70% in/ 30% out

62 Athleen Avenue

There is a 22 block subdivision currently completed at 62 Athleen Avenue. There was no TIA completed as part of the subdivision Development Application.

The traffic generation rate for the subdivision has been taken from the *RMS Guide to Traffic Generating Developments* which specifies the following:

- 0.99 trips per dwelling in the weekday AM peak
- 0.95 trips per dwelling in the weekday PM peak.

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In line with the assumptions from the Milan Prodanovic reports for 110 Giblin Street and 221A Lenah Valley Road, it is assumed there are 5 lots that could accommodate multiple unit dwellings. Assuming as a conservative estimate this 10 dwellings could be accommodated on these 5 blocks this results in 27 dwelling on the subdivision.

This results in the following traffic generation to the development in each peak hour:

- AM Peak: 27 movements
- PM Peak: 26 movements.

The following directional split has been assumed:

- AM Peak: 30% in/ 70% out
- PM Peak: 65% in/ 35% out.

It has also been assumed that 90% of vehicles accessing/ egressing the subdivision would use the Augusta Road/ Giblin Street intersection. The movements have been distributed to the study area based on the existing movements at the Augusta Road/ Giblin Street intersection.

Other Traffic Growth

In addition to these subdivisions, a 1% compound growth rate has been applied to the traffic volumes to allow for other growth in the area.

Based on the expected traffic growth above, the anticipated 2026 AM and PM peak hour traffic volumes are shown in Figure 4 and Figure 5.

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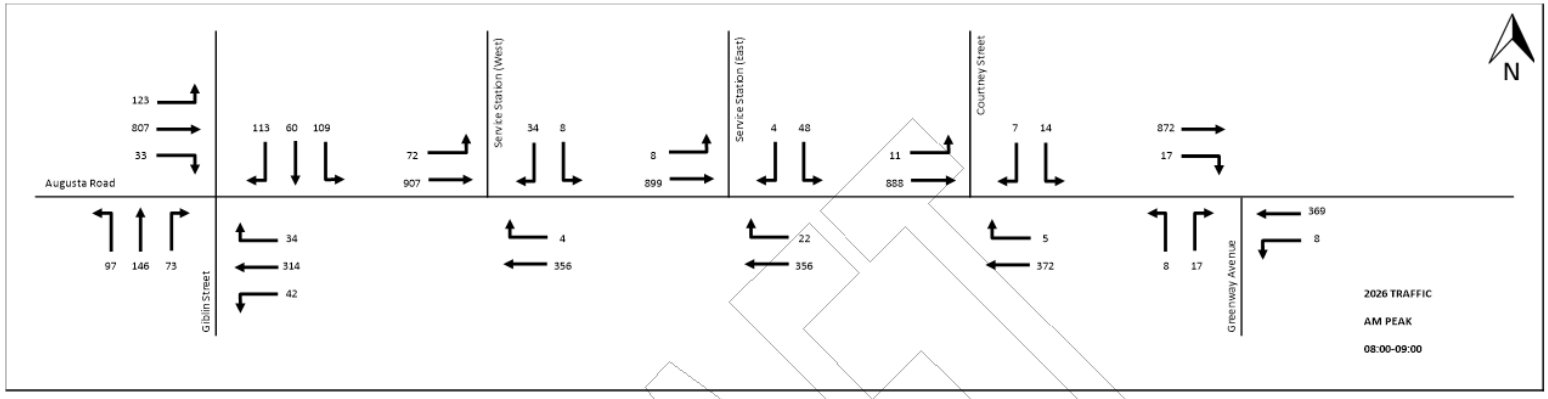


Figure 4: Traffic Volumes - 2026 AM Peak

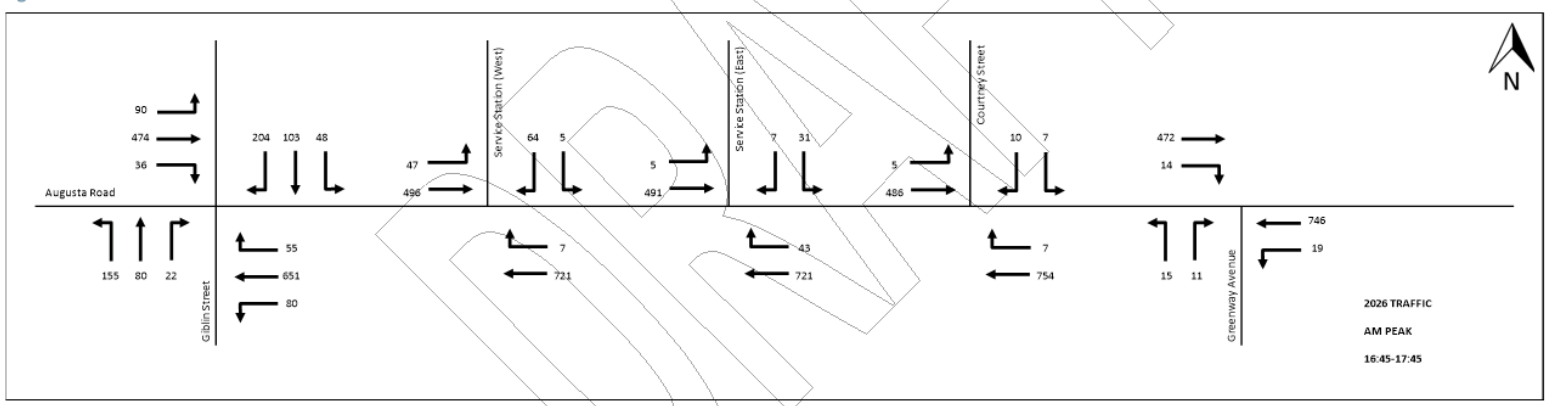


Figure 5: Traffic Volumes - 2026 PM Peak

4.3 Existing Layout Traffic Operation

The traffic operation at each of the intersections has been assessed using SIDRA INTERSECTION. The intersection performance is based on the vehicle delay and the corresponding Level of Service (LOS). It is generally accepted that an intersection operates well if it is at LOS D or higher. Table 1 shows the criteria that SIDRA intersection adopts in assessing the LOS.

Table 1: SIDRA INTERSECTION Level of Service Criteria

LOS	Delay per Vehicle (secs)		
	Signals	Roundabout	Sign Control
A	10 or less	10 or less	10 or less
B	10 to 20	10 to 20	10 to 15
C	20 to 35	20 to 35	15 to 25
D	35 to 55	35 to 50	25 to 35
E	55 to 80	50 to 70	35 to 50
F	Greater than 80	Greater than 70	Greater than 50

4.3.1 2016 Operating Conditions

Table 2 presents a summary of the existing operation of the intersections in the study area. A full breakdown of the SIDRA Intersection results and the layouts used in the SIDRA analysis is presented in Appendix C.

Table 2: Existing Operating Conditions

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
Augusta Road/ Giblin Street	AM	South	0.55	27	44	C
		East	0.33	9	35	A
		North	0.48	29	28	C
		West	0.80	14	154	B
		TOTAL	**0.80**	**17**	**154**	**B**
	PM	South	0.45	21	33	C
		East	0.78	15	107	B
		North	0.67	24	34	C
		West	0.60	11	64	B
		TOTAL	**0.78**	**16**	**107**	**B**
Augusta Road/ Service Station (west)	AM	East	0.17	0	0	A
		North	0.21	20	5	C
		West	0.48	1	0	A
		TOTAL	**0.48**	**1**	**5**	**A**
	PM	East	0.35	0	0	A

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
		North	0.31	19	8	C
		West	0.27	1	0	A
		TOTAL	**0.35**	**1**	**8**	**A**
Augusta Road/ Service Station (east)	AM	East	0.17	1	1	A
		North	0.10	6	2	A
		West	0.44	0	0	A
		TOTAL	**0.44**	**1**	**2**	**A**
	PM	East	0.35	1	1	A
		North	0.06	5	2	A
		West	0.24	0	0	A
		TOTAL	**0.35**	**1**	**2**	**A**
Augusta Road/ Courtney Street	AM	East	0.18	0	0	A
		North	0.06	14	1	B
		West	0.43	0	0	A
		TOTAL	**0.43**	**0**	**1**	**A**
	PM	East	0.36	0	0	A
		North	0.05	16	1	C
		West	0.24	0	0	A
		TOTAL	**0.36**	**0**	**1**	**A**
Augusta Road/ Greenway Avenue	AM	South	0.09	18	2	C
		East	0.18	0	0	A
		West	0.42	0	0	A
		TOTAL	**0.42**	**1**	**2**	**A**
	PM	South	0.07	14	2	B
		East	0.37	0	0	A
		West	0.23	0	1	A
		TOTAL	**0.37**	**1**	**2**	**A**

On the basis of the above assessment it is clear that each of the intersections operate satisfactorily with acceptable queues and delays on all approaches.

4.3.2 2026 Operating Conditions

Table 3 presents a summary of the anticipated operation of the intersections in the study area in 2026 if the existing layout was to remain taking into account the subdivisions and traffic growth. A full breakdown of the SIDRA Intersection results are presented in Appendix D.

Table 3: 2026 Operating Conditions – Existing Layout

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
Augusta Road/ Giblin Street	AM	South	0.77	35	66	C
		East	0.37	9	43	A
		North	0.84	37	41	D
		West	0.88	21	247	C
		TOTAL	**0.88**	**23**	**247**	**C**
	PM	South	0.41	28	61	C
		East	0.90	35	266	C
		North	0.88	41	80	D
		West	0.69	18	133	B
		TOTAL	**0.90**	**30**	**266**	**C**
Augusta Road/ Service Station (west)	AM	East	0.20	0	0	A
		North	0.37	37	9	E
		West	0.55	1	0	A
		TOTAL	**0.55**	**2**	**9**	**A**
	PM	East	0.40	0	0	A
		North	0.49	35	14	E
		West	0.30	1	0	A
		TOTAL	**0.49**	**2**	**14**	**A**
Augusta Road/ Service Station (east)	AM	East	0.20	1	1	A
		North	0.15	9	4	A
		West	0.51	0	0	A
		TOTAL	**0.51**	**1**	**4**	**A**
	PM	East	0.40	1	1	A
		North	0.09	7	2	A
		West	0.28	0	0	A
		TOTAL	**0.40**	**1**	**2**	**A**
Augusta Road/ Courtney Street	AM	East	0.21	0	0	A
		North	0.10	19	2	C
		West	0.50	0	0	A
		TOTAL	**0.50**	**1**	**2**	**A**
	PM	East	0.42	0	0	A
		North	0.09	21	2	C
		West	0.27	0	0	A

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
		TOTAL	**0.42**	**0**	**2**	**A**
Augusta Road/ Greenway Avenue	AM	South	0.16	25	4	D
		East	0.21	0	0	A
		West	0.49	0	1	A
		TOTAL	**0.49**	**1**	**4**	**A**
	PM	South	0.11	18	3	C
		East	0.43	0	0	A
		West	0.26	0	1	A
		TOTAL	**0.43**	**1**	**3**	**A**

On the basis of the above assessment it is clear that with the existing layout overall each of the intersections are expected operate satisfactorily with acceptable queues and delays on most approaches in 10 years' time. In 2026, some long delays are expected for vehicles turning right out of the side roads due to the high through traffic volumes anticipated on Augusta Road which has resulted in some LOS E approaches.

4.4 Proposed Layout Traffic Operation

4.4.1 2016 Operating Conditions

Table 4 presents a summary of the anticipated operation of the intersections in the study area with existing traffic flows and modified layout. A full breakdown of the SIDRA Intersection results and the layouts used in the SIDRA analysis is presented in Appendix E.

Table 4: 2016 Operating Conditions – Proposed Layout

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
Augusta Road/ Giblin Street	AM	South	0.81	32	69	C
		East	0.34	10	37	A
		North	0.45	28	27	C
		West	0.83	17	168	B
		TOTAL	**0.83**	**19**	**168**	**B**
	PM	South	0.56	22	39	C
		East	0.78	15	107	B
		North	0.60	22	45	C
		West	0.60	11	64	B
		TOTAL	**0.78**	**16**	**107**	**B**
Augusta Road/ Service Station (west)	AM	East	0.18	0	1	A
		North	0.14	11	3	B
		West	0.48	1	0	A

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Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
		TOTAL	**0.48**	**1**	**3**	**A**
	PM	East	0.35	0	1	A
		North	0.20	10	5	B
		West	0.27	1	0	A
		TOTAL	**0.35**	**1**	**5**	**A**
Augusta Road/ Service Station (east)	AM	East	0.21	2	4	A
		North	0.09	6	2	A
		West	0.44	0	0	A
		TOTAL	**0.44**	**1**	**4**	**A**
	PM	East	0.39	1	5	A
		North	0.05	3	1	A
		West	0.24	0	0	A
		TOTAL	**0.39**	**1**	**5**	**A**
Augusta Road/ Courtney Street	Same as Existing					
Augusta Road/ Greenway Avenue	Same as Existing					

On the basis of the above assessment it is clear that with the proposed layout each of the intersections will continue to operate satisfactorily with acceptable queues and delays on all approaches.

4.4.2 2026 Operating Conditions

Table 5 presents a summary of the anticipated operation of the intersections in the study area in 2026 with the modified layout. A full breakdown of the SIDRA Intersection are presented in Appendix F.

Table 5: 2026 Operating Conditions – Proposed Layout

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
Augusta Road/ Giblin Street	AM	South	0.89	54	136	D
		East	0.40	13	62	B
		North	0.74	41	53	D
		West	0.90	28	339	C
		TOTAL	**0.90**	**31**	**339**	**C**
	PM	South	0.47	31	76	C
		East	0.88	30	260	C
		North	0.94	54	101	D
		West	0.68	19	141	B
		TOTAL	**0.94**	**31**	**260**	**C**

Intersection	Peak	Leg	Degree of Saturation (DOS)	Average Delay (secs)	95th Percentile Queue (m)	LOS
Augusta Road/ Service Station (west)	AM	East	0.21	1	1	A
		North	0.23	18	5	C
		West	0.55	1	0	A
		TOTAL	**0.55**	**1**	**5**	**A**
	PM	East	0.41	0	1	A
		North	0.31	16	7	C
		West	0.30	1	0	A
		TOTAL	**0.41**	**1**	**7**	**A**
Augusta Road/ Service Station (east)	AM	East	0.25	2	6	A
		North	0.14	8	3	A
		West	0.51	0	0	A
		TOTAL	**0.51**	**1**	**6**	**A**
	PM	East	0.45	1	7	A
		North	0.07	5	2	A
		West	0.28	0	0	A
		TOTAL	**0.45**	**1**	**7**	**A**
Augusta Road/ Courtney Street	Same as Existing					
Augusta Road/ Greenway Avenue	Same as Existing					

On the basis of the above assessment it is clear that with the proposed layout overall each of the intersections will continue to operate satisfactorily with acceptable queues and delays on most approaches in 10 years' time. In 2026, some long delays are expected for vehicles turning right out of the side roads due to the high through traffic volumes anticipated on Augusta Road which has resulted in some LOS E movements (shown in Appendix F).

4.5 Traffic Impact

The impact of the modifications are listed below.

Augusta Road/ Giblin Street

Modifications to intersection – reduction of Giblin Street to one lane.

Overall impact

- 2016 – increase in delay of 2 seconds in AM peak, negligible impact in PM peak
- 2026 – increase in delay of 8 seconds in AM peak, increase in delay of 1 second in PM peak

South approach impact	• 2016 – increase in delay to through and left turners of 6 seconds in the AM peak and 1 second in the PM peak • 2016 – increase in delay to right turners of 4 seconds in the AM peak and 1 second in the PM peak • 2026- increase in delay to through and left turners of 20 seconds in the AM peak and 4 seconds in the PM peak • 2026 - increase in delay to right turners of 18 seconds in the AM peak and 3 seconds in the PM peak

Augusta Road/ Service Station Entry (West)

Modifications to intersection – removal of the Augusta Road central median used by right turning vehicles into the service station.

Overall impact	• 2016 – increase in delay of less than one second in AM and PM peak hours • 2026 – increase in delay of less than one second in AM and PM peak hours
Impact to westbound through vehicles	• 2016 – average increase in delay to westbound through vehicles of less than one second in AM and PM peak hours, maximum delay to westbound through vehicles of 14 seconds in AM peak and 9 seconds in PM peak • 2026 – average increase in delay to westbound through vehicles of less than one second in AM and PM peak hours, maximum delay to westbound through vehicles of 17 seconds in AM peak and 10 seconds in PM peak

Augusta Road/ Service Station Entry (East)

Modifications to intersection – removal of the Augusta Road central median used by right turning vehicles into the service station.

Overall impact	• 2016 – increase in delay of less than one second in AM and PM peak hours • 2026 – increase in delay of less than one second in AM and PM peak hours
Impact to westbound through vehicles	• 2016 – average increase in delay to westbound through vehicles of less than one second in AM and PM peak hours, maximum delay to westbound through vehicles of 12 seconds in AM peak and 9 seconds in PM peak • 2026 – average increase in delay to westbound through vehicles of less than one second in AM and PM peak hours, maximum delay to westbound through vehicles of 15 seconds in AM peak and 10 seconds in PM peak

Augusta Road/ Courtney Street

Modifications to intersection – removal of the Augusta Road central median used by right turning vehicles into Courtney Street, through vehicles can pass a single right turning vehicle by utilising the driveway across from Courtney Street.

The impact to this intersection is negligible as the 95th percentile right turn queue does not exceed one vehicle in 2016 and is not expected to exceed one vehicle in 2026.

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Augusta Road/ Greenway Avenue

Modifications to intersection – removal of the Augusta Road central median used by right turning vehicles into Greenway Avenue, through vehicles can pass a single right turning vehicle by utilising the driveway across from Greenway Avenue.

The impact to this intersection is negligible as the 95th percentile right turn queue does not exceed one vehicle in 2016 and is not be expected to exceed one vehicle in 2026.

Summary

Based on the assessment above, reducing the Giblin Street south approach of the Augusta Road/ Giblin Street intersection will greatly impact vehicles on this approach only with a maximum average increase in delays of less than 10 seconds to the overall intersection.

Delays to through traffic on Augusta Road at the service station would generally be insignificant compared with those at the Augusta Road/ Giblin Street signals. It is noted however that reducing Augusta Road to no median at the service station may reduce the safety at this location as prohibiting the ability for through vehicles to pass right turn vehicles may result in rear end crashes.

5. Conclusion

City of Hobart are planning streetscape upgrades at the Lenah Valley Retail Precinct on Augusta Road. **pitt&sherry** have completed a traffic modelling investigation of the potential impacts associated with the planned upgrades.

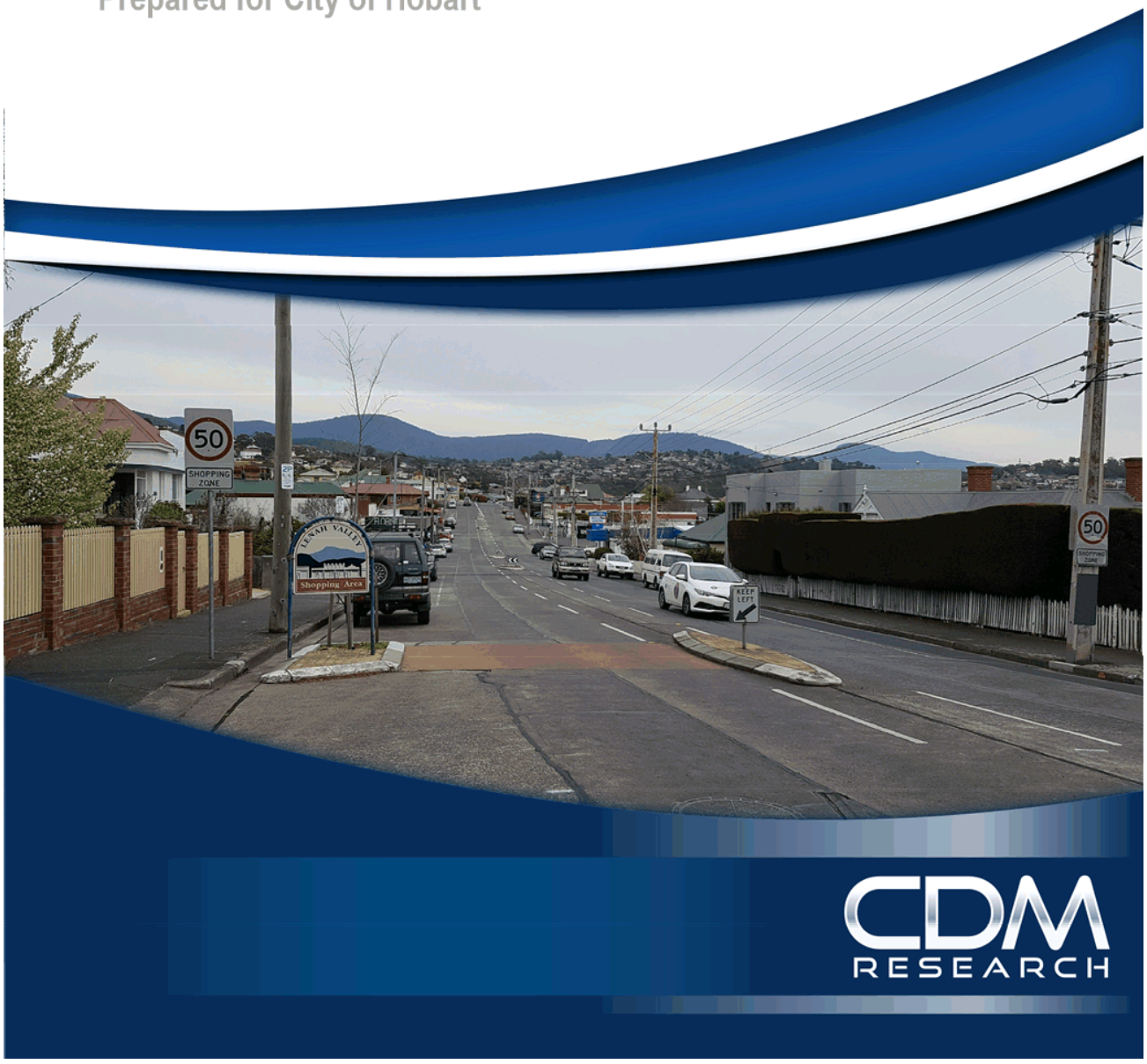
The overall traffic impacts are generally negligible. The removal of the central turning median at the service station will result in short delays for some through vehicles on Augusta Road, however compared with delays at the nearby Augusta Road/ Giblin Street signals they would generally be insignificant.

Reducing Augusta Road to no median at the service station may reduce the safety at this location as prohibiting the ability for through vehicles to pass right turn vehicles may increase the occurrence of rear end crashes.

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Lenah Valley Retail Precinct – Review of master plan for provision for bicycle riders

Prepared for City of Hobart



CDM RESEARCH

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Document history and status

Revision	Date issued	Author	Revision type
1	14/10/2016	C. Munro	Issue-1

Distribution of Copies

Revision	Media	Issued to
1	PDF	City of Hobart

Printed:	14 October 2016
Last saved:	12 October 2016 05:40 PM
File name:	0101 Hobart Lenah Valley - Augusta Road (Issue-1).docx
Project manager:	C. Munro
Name of organisation:	Hobart City Council
Name of project:	Lenah Valley Retail Precinct – Review of master plan provision for bicycle riders
Project number:	0101

Executive Summary

CDM Research was commissioned by the City of Hobart to review plans prepared by a consortium led by MRCagney for the renewal of Hobart's local retail precincts. The focus of the present review was the Lenah Valley retail precinct on Augusta Road. The main objective was to consider whether MRCagney's proposal that bicycle riders share the roadway with motorists is practical, and to consider whether there are alternatives that may achieve the overall placemaking objective while better accommodating bicycle riders.

Augusta Road has around 10,100 vehicles per weekday and 1,000 in the peak hour, of which around 2% are bicycle riders. We consider these volumes, and the current (50 km/h) and proposed speed limits (40 km/h) to be too high for bicycle riders to be expected to practically share the roadway with motorists. Instead, a situation is likely to arise where the road narrowing creates a more uncomfortable environment for bicycle riders. Whether this increases or decreases the crash risk cannot be stated conclusively; while it may increase the likelihood of close passing events with motorists, and push bicycle riders closer to parked cars (hence increasing the "dooring" risk), the lower speed limit will significantly reduce the risks of catastrophic injuries.

In our view, a superior outcome would be to widen the southern footpath as proposed by MRCagney, remove the central median and incorporate on-road bicycle lanes in at least the westbound direction. Ideally, if on-street parking could be removed from the northern side of the road, generous bicycle lanes in both directions of travel could be accommodated. However, if parking removal were deemed to be unviable we suggest bicycle lanes in the westbound direction would offer most benefit to bicycle riders given that parking turnover is greatest on the southern side of the road (so "dooring" risks are greatest).

1 Introduction

1.1 Background

The Lenah Valley local retail precinct along Augusta Road from Giblin Street to Greenway Avenue services the local community as well as providing a significant transport function of motorists, bus passengers and bicycle riders. As part of a wider project being undertaken by the City of Hobart, a consortium led by MRCagney developed concept plans for the precinct that included:

- narrowing the roadway by pushing out the kerb on the southern side of the road and removing the painted median and pedestrian refuges,
- installing kerb outstands at intersections,
- installing street trees and kerbside plantings,
- reduction in the posted speed limit from 50 km/h to 40 km/h,
- improvements to footpath surface condition (including widening of the southern footpath, as noted above) and street furniture,
- marginal reduction in on-street car parking, and
- no explicit provision for bicycle riders on the roadway.

The latter design element is the key consideration in the present report. The MRCagney report justifies the exclusion of bicycle lanes as follows:

> *"Reduced lane widths, increased 'side-friction' and a reduced perceived speed environment will accommodate bike riders within traffic lanes and encourage them to 'own the space'. Given the amount of street-side activity, on-street parking turnover and driveways/turning traffic, dedicated kerbside bike lanes may not achieve a real safety benefit in comparison to a well designed environment that invites bike riders to visibly integrate with traffic through a low-speed main street section of Augusta Road. Dedicated bike lanes are however encouraged elsewhere on Augusta Road as part of (the) broader bike plan for Hobart."*

The purpose of the present report is to provide a peer review of this rationale, and consider whether there may be superior alternatives that better provide for bicycle riders whilst also accommodating the public realm ambitions of the wider project.

1.2 Objectives

The purpose of the present report was threefold:

- provide guidance on the design features which could be installed to provide for bicycle riders if the MRCagney design were adopted,
- identify alternative options for providing for bicycle riders, and
- consider the advantages and disadvantages of these alternatives.

1.3 Current situation

The Lenah Valley retail precinct currently features a number of small retail establishments, most of which are located on the southern side of the roadway. These include a small supermarket, cafés and pharmacy. The main retail establishment on the north side is a service station, as well as a medical surgery. The road reserve extends over a width of around 19.6 m between the property boundaries. Within this road reserve is a footpath on either side of the road of around 2.6 m and a roadway of 14.4 m from kerb-to-kerb (Figure 1.1). The road has time-limited kerbside parking without marked bays and a 2.2 m wide painted central median. This median accommodates several raised traffic islands and a pedestrian refuge. It also accommodates motorists turning right into properties or side streets.

Vehicle counts were available from an automatic counter positioned immediately east of Greenway Avenue over a week from Monday 19 September to Sunday 25 September 2016. This period was immediately prior to school holidays. The average weekday count was 10,100 on weekdays and 9,500 on weekends. The weekday peak hours (starting 8 am and 4 pm) both had vehicle counts of around 1,000. Cyclist counts are available only for a single March weekday morning between 7 am and 9 am, with 33 bicycle riders observed in 2015 and 37 in 2016. The vehicle count over the same two hour period was roughly 1,800 vehicles, such that bicycle riders accounted for around 2% of road traffic.

While pedestrian counts were unavailable, the retail mix on the southern side of the precinct clearly encourages the greatest pedestrian activity. This side of the street is also best oriented for northern sunlight exposure to suit outdoor seating. During a site visit on a typical mid-morning weekday the outdoor seating associated with the retail uses was well utilised and consistent with incidental social interactions (Figure 1.2). Notably, within the current configuration the southern footpath is barely able to accommodate outdoor seating and the passage of pedestrians, particularly those with prams or requiring mobility aids.



■ Figure 1.1: Augusta Road looking east from Giblin Street



■ Figure 1.2: Outdoor seating and pedestrians with pram fill the current footpath width

2 Precedents

2.1 Design guidance

On most roads in Hobart, as elsewhere in Australia, bicycle riders and motorists must share the roadway. Under the road rules bicycle riders are required to keep as far left as practicable and may not ride more than two abreast, but are otherwise treated as any other road user. Furthermore, in Tasmania bicycle riders of all ages may also ride on the footpath.

While it is commonplace for bicycle riders and motorists to share the roadway it is noted that:

- many bicycle riders prefer not to have to interact with high volumes of high speed motor traffic, and
- bicycle riders and motorists sharing high speed roads (i.e. roads at or above 50 km/h) are inconsistent with Safe System principles, which require that crashes be survivable.

Given these issues there is widespread recognition that some form of separation of bicycle riders and motorists is appropriate at higher volumes and speeds. The current Australian guidance for on-road provision of bicycle facilities is illustrated in Figure 2.1. This diagram is adapted from earlier Dutch guidance and has been widely replicated internationally.

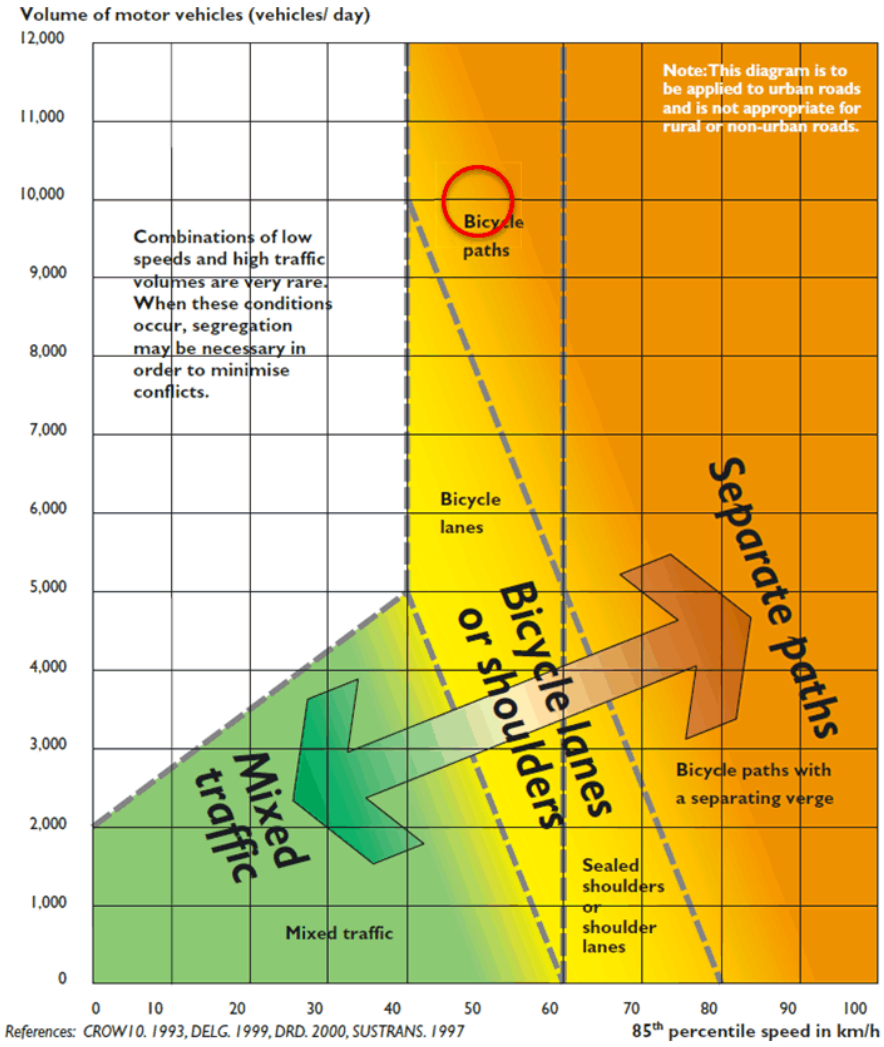
While the 85th percentile speed on Augusta Road is not known, it seems reasonable to assume it is not dissimilar to the posted speed limit of 50 km/h. This area is marked in Figure 2.1, and is an area where a physically protected bicycle path is recommended[1]. Most notably, the circumstances where sharing are considered acceptable within this guidance do not extend beyond motor vehicle volumes of 5,000 per day, or around half the current demand on Augusta Road.

The thinking on the separation of bicycle riders in the Netherlands, from which this Australian guidance originates, has evolved in recent years. The Dutch guidance (CROW 2007) suggested that physical protection was required on all roads with 50 km/h speed limits, and on roads with more than 5,000 vpd, However, more recent advice[2] suggests that full sharing is viable where motor vehicle volumes are under 400 vph and speed limits are 30 km/h, and that a form of "soft" segregation is acceptable up to 600 vph and 30 km/h. This configuration is shown as B2 in Figure 2.2 and is discussed by means of an example in Section 2.2. What is notable is that for traffic volumes and speeds on Augusta Road modal segregation is required according to this guidance. We also note that the "cycle street" (fietstraat) options C1 and C2 refer to a cyclist-priority design whereby motorists may share

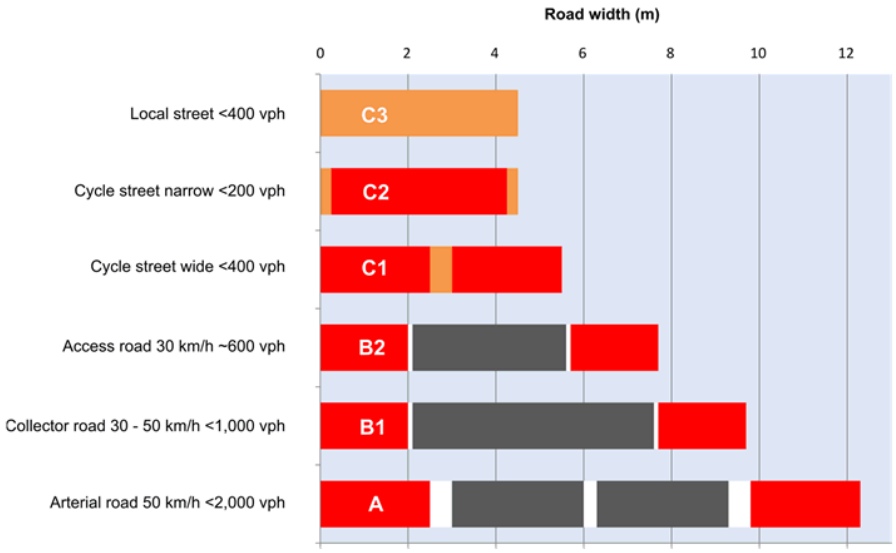
[1] The language used in the Austroads guidance is not explicit, but we suggest "bicycle path" refers here refers to physically segregated provision in the road reserve. Most commonly this would imply protection from moving traffic through the use of a raised kerb, bollards, longitudinal hump or floating parking.

[2] http://www.fietsberaad.nl/library/repository/bestanden/Discussienotitie_fietsstroken_11feb2014-def.pdf. This guidance is not official engineering guidance, but was developed by the Dutch Cycling Union. Nonetheless, the principles appear to be followed quite widely in current Dutch practice.

the road with bicycle riders, and retain full access, but are to give way to riders at all times. To varying degrees, this is what is presumably implied in MRCagney's rationale that bicycle riders should seek to "own the space".



■ **Figure 2.1: Separation of bicycle riders and motorists by speed and volume (Austroads 2014)**



■ **Figure 2.2: Dutch cycling union recommended road cross sections (red is priority cycling space, black is priority motorist space)**

2.2 International example

It is common to refer to European examples as best practice in accommodating cyclists on roadways, and most often the Netherlands. Whilst recognising the very significant cultural differences and differing road and built form contexts there will be some insights that are transferrable from examples taken from these jurisdictions, even if only to serve as examples to aspire to over the longer term. In particular, we note the Sustainable Safety principles adopted in the Netherlands which, similarly to Australia's Safe System approach, recognise that (a) humans are fallible, and that (b) it is morally unacceptable for these errors to result in serious or fatal injury. These principles provide an overarching guiding speed limit and road design in the Netherlands.

As an illustration of current thinking in the Netherlands, consider Maliesingel in the city of Utrecht[3]. This road had around 6,800 vpd and 4,000 cyclists per weekday with a 5 m carriageway for motor vehicles and 2 m bicycle lanes along the kerb prior to modification in mid-2016. The modification was motivated by a desire to improve the public realm, much as for Augusta Road. In the reconfiguration the road has been has a central 2.5 m allocated for motorists in *both* directions, and 2 m bicycle suggestion lanes along the shoulders in accordance with design B2 in Figure 2.2. The speed limit was also reduced from 50 km/h to 30 km/h. Motorists meeting one another are required to drift into the shoulder but should, in accordance with the rules for this type of road, give way to bicycle riders in the shoulder.

[3] Much of the material here is from: https://bicycledutch.wordpress.com/2016/10/11/utrecht-reclaims-ever-more-space-for-people/.



■ **Figure 2.3: Reconfigured Maliesingel (Utrecht, Netherlands)**

Clearly, the context along Augusta Road is radically different to Maliesingel. However, we would note a number of design considerations made by the local authorities along Maliesingel which are, in our view, relevant:

- While motor vehicle demand is somewhat lower than along Augusta Road (6,800 vpd versus 10,000 vpd) the number of bicycle riders is much, much higher, and accounts for almost 40% of all vehicles on the road.
- The speed limit is reduced to 30 km/h rather than the 40 km/h proposed for Augusta Road.
- There is a very strong cycling culture in the Netherlands which is not present in Hobart.
- Despite these "advantages" a full sharing arrangement was still not considered acceptable, either in the before- or after-modification designs. Instead, in the new design (not entirely uncommon in the Netherlands) a soft form of segregation is used whereby bicycle riders are encouraged to use the wide shoulders (which are smooth asphalt) and motorists are encouraged to use the centre of the roadway (which is paved).
- While the street improvement itself has been well received, there remains some controversy as to whether the soft segregation approach is sufficient for a road of these traffic volumes.

In our view, the key message from this particular example is that sharing the roadway, even in the Netherlands, is considered a marginal proposition at 7,000 vpd and 30 km/h speed limits – even where there are 4,000 cyclists per day. Further, the conditions that make sharing more viable in this Dutch example – namely lower traffic volumes, speeds, higher cyclist volumes and a cycling culture, are not present in the case of Augusta Road.

3 Design options

Our view is that there is a paucity of evidence from current guidance and practices, both in Australia and internationally, to suggest that sharing of bicycle riders and motorists on major roads is a practical or safe proposition. Moreover, the car-oriented culture, proposed speed limit of 40 km/h, topography, high motor vehicle volumes and low cyclist volumes on Augusta Road all conspire against such an option being acceptable to all but a small minority of very confident road riders.

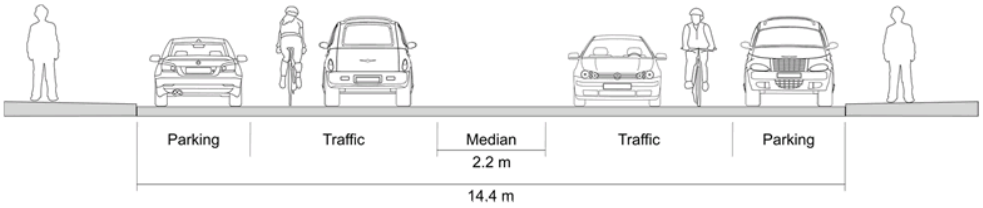
However, we would concur with MRCagney on the following general principles:

- there is a strong case for improving the public realm on Augusta Road,
- there is a strong case for widening the footpath on the south side of the roadway as a minimum, and
- the value of the painted median and pedestrian refuges is comparatively low, and could be better utilised for other purposes.

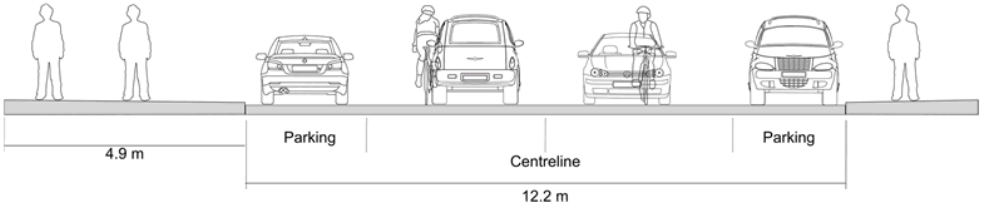
In the options that follow we assume the footpath on the south side of the road will be widened by 2.2 m, or equivalent to the width of the painted median. While it is conceivable less width may be preferred, we suggest a footpath of at least 4.0 m is highly desirable to facilitate the envisaged level of street activation.

We discuss six options in this section, including retaining the status quo (Option 1) and the MRCagney alternative (Option 2). The typical cross-sections of five of the six options are shown in Figure 3.1 and the relative merits of the options are discussed in the following sections.

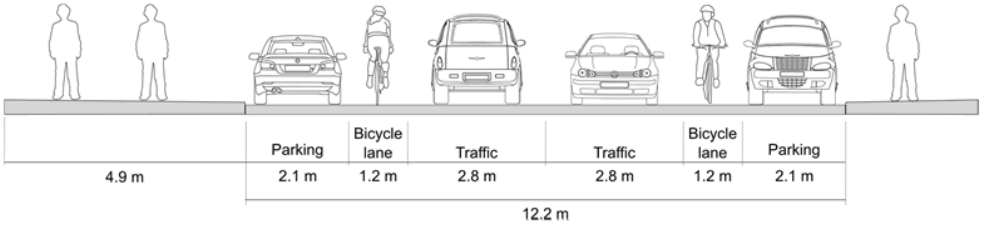
Option 1: Status quo



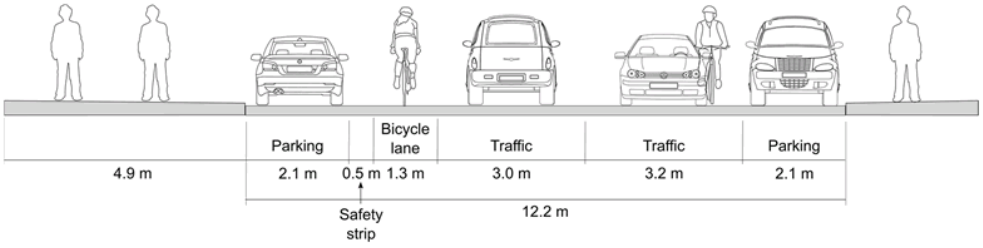
Option 2: Shared roadway



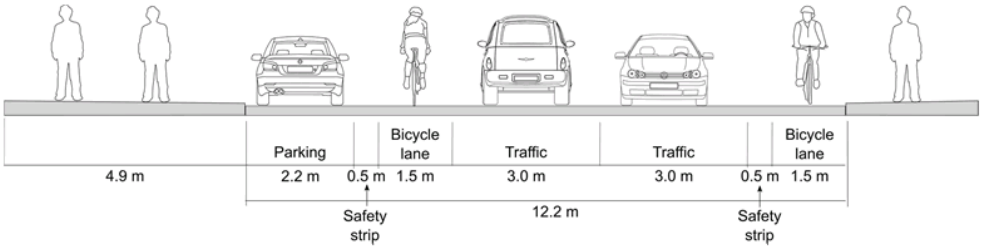
Option 4: Narrow bicycle lanes



Option 5: Westbound bicycle lane



Option 6: Wide bicycle lanes



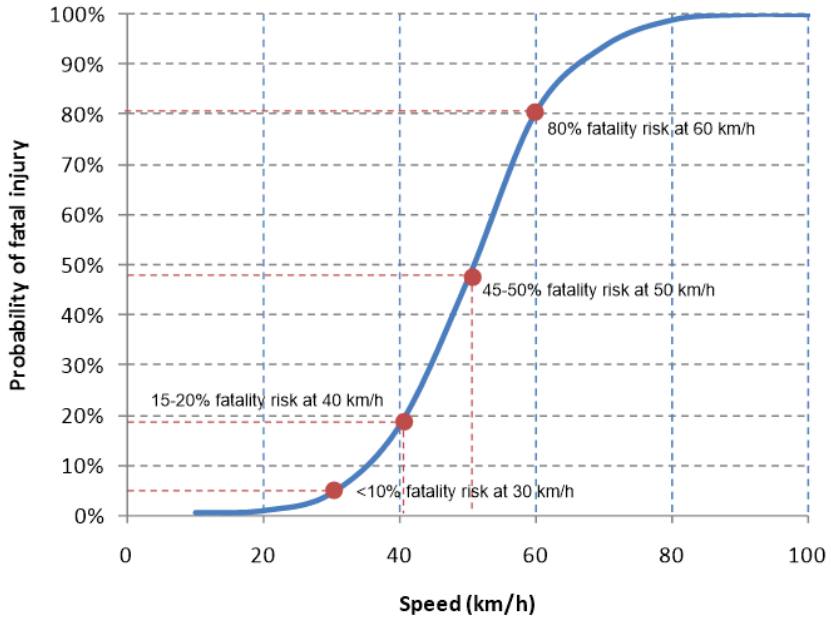
■ **Figure 3.1: Cross-sections**

3.1 Option 1: Status quo

This option assumes no change from the current situation. We suggest the main advantages of this option are that it is a no cost option and maintains motor vehicle traffic capacity and travel times. However, it does so by severely compromising the public realm, pedestrian amenity and road safety – most particularly for pedestrians and bicycle riders.

Advantages	Disadvantages
No financial cost	Poor public realm
Maintains motor vehicle capacity and travel times	Inadequate footpath width
Retains on-street parking	No cyclist provision
	No provision for plants
	50 km/h speed limit is incompatible with Safe System philosophy with pedestrians/bicycle riders

Our view, in agreement with MRCagney, is that the status quo is unacceptable both from placemaking and from road safety perspectives, particularly because of the 50 km/h speed limit. We suggest this speed limit is manifestly incompatible with the Safe System principles enshrined in the Tasmanian and National Road Safety strategies that require that speeds be set at levels that are below the survivable threshold in collisions between road users. The risks of a pedestrian incurring a fatal injury in a collision with a motor vehicle travelling at 50 km/h are greater than 50% (Figure 3.2), which are well beyond what would be considered as survivable.



■ **Figure 3.2: Probability of pedestrian/cyclist fatality by motor vehicle speed**

3.2 Option 2: Shared roadway (MRCagney)

This option is as per the MRCagney proposal, and assumes the footpath on the south side is widened to 4.9 m by removing the painted median but that the road cross-section otherwise remains as now; that is, bicycle riders and motorists share the main carriageway. We agree with MRCagney that this alternative offers significant opportunities to improve the public realm and revitalise the activity centre. We also recognise that there may be marginal increases in motorist travel times as a result of the reduced speed limit and the absence of midblock right-turning lanes, particularly at Courtney Street and the petrol station. However, we suggest these delays will not be significant and in any case, may be transient given potential downstream delays at the signalised intersection at Giblin Street.

Advantages	Disadvantages
Safer road situation than present	No cyclist provision
Much larger pedestrian space on south footpath	Marginal increase in motorist travel times
Improved public realm	
Retains on-street parking	

We suggest the greatest road safety benefit from this option would be the reduction in speed limit to 40 km/h, which should reduce the risk of fatal injuries to pedestrians involved in collisions with motorists to under 20%. If motorists were to travel at the posted speed limit this risk of fatal injury is, while a substantial improvement on 50 km/h, we would still suggest the risks are not consistent with Safe System principles and in any case are inequitable with what a cyclist could reasonably be expected to maintain. However, as noted by MRCagney the lower speed limit will be accompanied by street calming measures such as a narrower roadway and landscaping, both of which would be expected to have some positive impact on actual motorist speeds[4]. It is generally accepted that to be consistent with Safe System principles motorist speeds in the vicinity of pedestrians will need to be at or below 30 km/h. It is not clear the proposed design will achieve this outcome. In any case, within current Australian and Tasmanian speed limit practices speed limits under 40 km/h are not acceptable except in shared zones.

From a bicycle rider perspective, we suggest the proposed design offers benefits insofar as it will reduce motorist speeds, thereby making the street safer and more comfortable to ride on. However, the effective roadway width will be narrower which will possibly leading to closer overtaking events. We note that MRCagney argue that bicycle riders will be able to share the roadway under this design, such that overtaking should not occur. In practice, we suggest this is unlikely given the traffic speeds and that motorist speeds of 40 km/h are insufficient to facilitate safe and comfortable road sharing.

It is challenging to propose treatments that would best facilitate the ambition of encouraging sharing in this design given the high traffic volume (and low cycling volume). However, we concur with MRCagney's view that street activation through increased pedestrian activity, parking turnover, kerbside plantings and street narrowing will at least partially contribute to slower motorists speeds which will assist some bicycle riders in sharing. However, our view is that this of itself would be inadequate and further measures would be required, including:

- gateway treatments that create physical and perceptual narrowings on entry to the precinct,
- tactile road treatments, both longitudinally and laterally, to create a perceptibly different environment to the adjoining road sections, and
- prominent roadway markings such as "sharrows" to encourage riders to claim a central lane position, and legitimise this behaviour among motorists.

However, we would caution that even if this latter approach of using sharrows were to be accepted by the road authority as a legitimate treatment, it would be difficult to endorse its' use on Augusta Road given the traffic volumes. Only if motorist speeds could be demonstrated to be well below 40 km/h, and ideally below 30 km/h, would we suggest such an approach is likely to be effective and safe.

[4] Increased street activation should also have a positive effect on motorist speeds. However, it is difficult to predict just how significant these effects will be. Indeed, there is debate about whether such interventions have a material impact on speeds. Our view is that they are likely to have some second order benefits, but that the extent of the benefits will depend very much on the detail design.

3.3 Option 3: Shared zone

Under this option a "genuine" shared zone would be created; that is, a 10 km/h speed limit with priority given to pedestrians. This option would, in our view, truly achieve the Safe Systems objectives of creating a safe, fault tolerant road environment. However, doing so on Augusta Road is almost certainly impractical given the high traffic volumes; under around 1,000 vpd are probably required for such an option to be effective, and in any case current and projected pedestrian volumes are probably inadequate to rebalance the mode split sufficiently to make this option work. Furthermore, the absence of a clear alternative road route precludes a network-based solution to redirect traffic around the activity centre. Given these restrictions this option appears unviable, so is noted here only for completeness[5].

Advantages	Disadvantages
Fully Safe System compliant	Motorist congestion and travel time disbenefits
Greatest public realm benefit	Likely rat-running on local streets
	May increase likelihood of pedestrian-rider conflict

3.4 Option 4: Narrow bicycle lanes

Under this option the footpath is widened as per the MRCagney proposal but narrow bicycle lanes are provided on the roadway in both directions.

Advantages	Disadvantages
Creates dedicated cyclist space	Marginal increase in motorist travel times
Retains on-street parking	Places bicycle riders in "dooring" zone
Provides buffer from on-street parking to general purpose travel lane	Atypical narrow traffic lanes present challenges for wide vehicles and road authority acceptance

While providing dedicated cycling facilities, this option could only provide minimum parking bay and bicycle lane widths, as well as providing unusually narrow general purpose traffic lanes of 2.8 m. While it is recognised there would likely be some reticence to such narrow traffic lanes, it is noted that (a) there is no evidence to suggest narrow traffic lanes are less safe than wider lanes, and (b) the "soft" shoulder of the bicycle lane provides lateral clearance for larger vehicles such as buses where required. Further, we note there are examples of this type of road cross-section operating in other Australian cities. In any case,

[5] However, we do recognise there are shared spaces internationally with these levels of motor vehicle traffic – including Exhibition Street in London and Rijksstraatweg in Haren (Netherlands).

the 1.2 m bicycle lanes adjacent to kerbside parking poses, in our view, an unacceptable risk of "car dooring" collisions such that this option should be avoided.

3.5 Option 5: Westbound bicycle lane

This option represents, in our view, an improvement on Option 4 insofar as it recognises the risks posed by narrow bicycle lanes from car dooring and that riders will benefit most from a bicycle lane in the uphill (westbound) direction of travel. Moreover, it is likely that parking demand and turnover will be highest on the southern side of the street – and so the dooring crash risk will also be higher.

Advantages	Disadvantages
Creates dedicated cyclist space	Marginal increase in motorist travel times
Retains on-street parking	No cyclist provision in eastbound direction
Provides buffer from on-street parking to general purpose travel lane in westbound direction	

In this design a 1.3 m bicycle lane is provided in the westbound direction with a 0.5 m safety strip to kerbside parking. The safety strip design alongside parking is in accordance with Figure 4.3 in Austroads (2014), although this design has only rarely been implemented in Australia. Traffic lanes would be 3.0 m wide in the westbound direction and 3.2 m in the eastbound direction. We suggest narrower lanes are appropriate in the westbound direction given the presence of the bicycle lane as an overrun area, and that there exists no such clearance to the left in the eastbound direction of travel.

3.6 Option 6: Wide bicycle lanes

Under this option on-street parking would be removed from the north side of the street so as to accommodate wider parking bays, bicycle lanes and general purpose traffic lanes. Indeed, under this option there would be adequate space to provide a buffer adjacent to the bicycle lanes. We suggest the best alternative would be a safety strip (ideally a painted chevron buffer) alongside the parking on the south side of the road, and between the bicycle lane and general purpose traffic lane on the northern side of the road.

Advantages	Disadvantages
Creates high quality dedicated cyclist space	Marginal increase in motorist travel times
Provides buffer from on-street parking to general purpose travel lane in westbound direction	Loss of on-street parking

4 Recommendations

We have simplistically assigned a score from one (poor) to five (excellent) to each of the options based on four criteria:

- public realm potential,
- road safety,
- motor vehicle provision, and
- cyclist provision.

These scores are shown in Table 4.1 for each option (excluding the shared zone, which we suggest is impractical). This assessment suggests the wide bicycle lanes option would be the preferred option, with westbound bicycle lanes as a next-best solution should on-street parking removal be unviable.

Table 4.1: Multicriteria assessment

	Option				
Criteria	**1: Status quo**	**2: Shared roadway**	**4: Narrow bicycle lanes**	**5: Westbnd bicycle lane**	**6: Wide bicycle lanes**
Public realm	1	4	3	3	3
Road safety	1	2	3	4	5
Motor vehicle provision	5	3	4	4	3
Cyclist provision	1	2	3	3	5
Total	**8**	**11**	**13**	**14**	**16**

In conclusion, we suggest that:

- the current public space is of poor standard and the road environment operates in a manner inconsistent with Safe System principles,
- traffic volumes and speeds, a lack of cycling culture, and the low mode share of cycling on the corridor all make sharing of the roadspace an unattractive option,
- wide bicycle lanes in both directions can be accommodated *if* the loss of parking on the north side of Augusta can be accepted, and
- there would be no detrimental impact on the placemaking ambitions of the activity centre if dedicated bicycle lanes were to be provided.

However, we would caveat these conclusions by noting that further consideration would be required of how any of these alternative designs could accommodate kerb outstands, bus stops and (if necessary) pedestrian refuges.

References

Austroads. 2014. *Cyclist Aspects of Austroads Guides*. AP-G88-14. Sydney, NSW: Austroads.
CROW. 2007. *Design Manual for Bicycle Traffic*. CROW-Record 25.

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City of Hobart
Lenah Valley Project

Concept V1

Job No: HCC003
File: hcc_lenahvalley_V1
Date: 01.03.2017
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Lenah Valley Project
Concept

A proposal for a series of works for the Lenah Valley retail precinct celebrating its formal and informal stories.

We would like to put a call-out to the residents, businesses and organisations of Lenah Valley to tell us how they feel about their suburb. What do they love about it? How did they come to live/work there? Has it changed? We'd like to ask them to share a Lenah Valley story or moment with the community in the form of a postcard - supplied by us, written by them and returned to the post office.

The stories we collect will form the inspiration and content for a family of temporary and permanent works integrated into the architecture and landscape of the street.

The project would ideally work in three stages and we have outlined these on the next pages along with examples of the work we would like to produce.

Job No: AT010
File: at_DDP_riverside_final
Date: 05.10.2016
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Lenah Valley Project
Project overview

Stage 1: Call for responses and production of 'postcard' mural

A wall mural (at a site TBC) would form a central work for the project. It would be based on a classic postcard design that captures the spirit of today's Lenah Valley in a playful 'welcome-to-Lenah-Valley' kind of way.

A run of 5000 or so physical postcards with the same image would be printed and distributed to residents, businesses, schools and community organisations in the Lenah Valley area. Residents would be asked to share a personal story, memory or connection they have with Lenah Valley on the back of the card (limiting it to a postcard will help in editing responses). We'd suggest giving people about 3-4 weeks to complete and return their postcards to the local post office - it would get people into the precinct and interacting with the businesses (we would of course seek their involvement first if the proposal were successful).

During this time we would be working on the mural to generate interest and act as a passive reminder to locals to get their cards in.

Stage 2: Publication of responses in 'story window'

Once responses are collected, we propose a temporary installation of the stories, en mass, in one or more of the shop windows. These would be reproduced in lasercut face-mounted vinyl. The ideal place for this would be in the windows of the shop which is currently vacant (the old post office). Again, this would encourage people to engage with the location and would provide a splash of energy and colour in what is currently an under-utilised but central zone on the strip.

Stage 3: Design and production of custom tree grates and graphic interventions

As a more permanent record of some of Lenah Valley's stories and history, we propose a series of custom tree grates and small graphic, interventions along the strip. The tree grates would feature a pattern or graphic based on a Lenah Valley history, architecture or landscape - the orchards, the milk factory, the school or the nearby bushland, flora and fauna for example. Each of these would include a quote or extract from one of the residents' related stories.

Similarly, we would like to create a series of smaller graphic story points throughout the precinct - these may be more playful have a more guerilla-style application such as a stencilled graphic applied to a wall or footpath or appropriation of an existing structure

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Lenah Valley Project
Call for responses postcard

Stylistically the postcard would be based on a classic travel/holiday postcard with a contemporary feel.

Mood would be playful and positive and imagery would feel familiar and accessible.

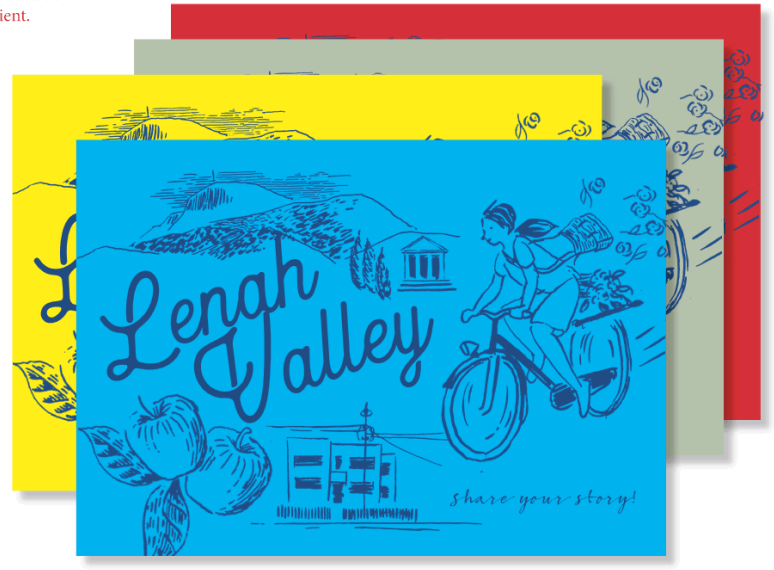
On the reverse side there would be a brief blurb about the project and instructions on where to leave the card.

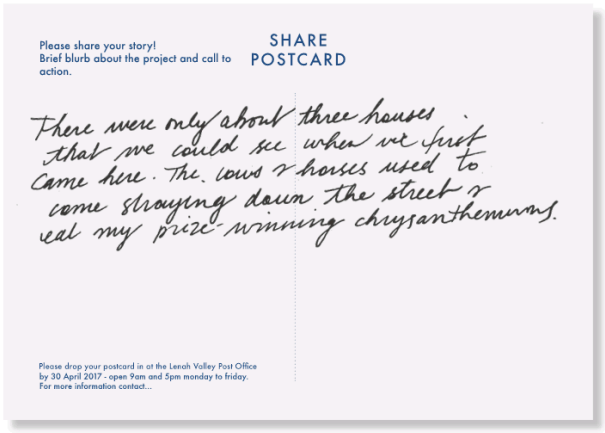
possible locations

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NB Visual is indicative only and would be developed in consultation with client.





Lenah Valley Project
Mural

NB Visual is indicative only and would be developed in consultation with client.

The mural would be a variation on the postcard featuring imagery from the Lenah Valley area.

It would be painted in the style of traditional signwriting as a nod to Campbells General Store which once occupied the site.

Ideally it would be on a wall with high visibility like the Salamanca Fresh wall or the Whisk cafe wall.

It would act as a welcome beacon and visual and conceptual anchor to the smaller story interventions throughout the precinct.





possible locations



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Lenah Valley
Story Window

Once we have collated and edited all the responses we would like to share them with the community. One way to do this would be to reproduce them on shop windows.

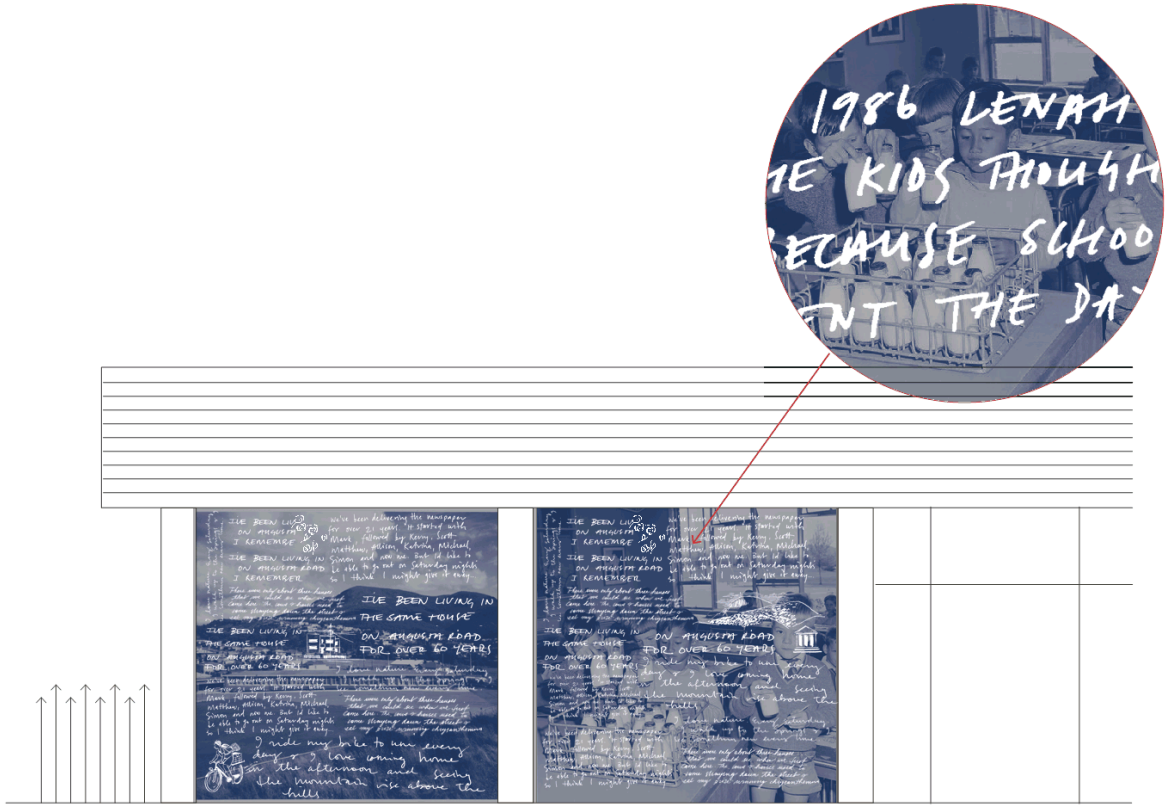
Given that there are a couple of vacant shop fronts at the moment it could be a great way to liven up some of the dead zones in the precinct and encourage people to 'linger longer'.

We could either write them directly to the glass or have them printed to clear face mounted film.

If the space is vacant we could hang interesting/fun local images as a backdrop.



possible location



collected stories written onto internal surface of shop window.

If shop is empty, we could hang a backdrop image behind them.

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Lenah Valley
graphic interventions + tree grates

NB Visual is indicative only and would be developed in consultation with client once we have received responses from public.

The tree grates would focus on the more formal aspects of Lenah Valleys history and character but might incorporate a line from the responses we receive from the public that ties in with a theme.

Possible themes may include:

- the orchards
- the dairy industry
- the local flora
- the local fauna
- the brickworks
- the school
- the mountain
- architecture
- gardens
- the rivulet

Other interventions could be more informal and may include paint direct to surfaces or potentially laser cut and powdercoated steel.



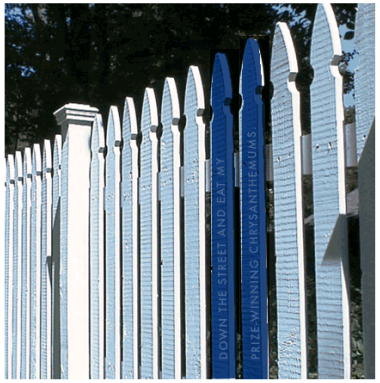
story about dairy factory outside newsagent



Story about former butcher site in sausages



Story about former creek running under Augusta Rd



story about flowers on residential fence

THERE WERE ONLY ABOUT THREE HOUSES WHEN WE FIRST CAME HERE. THE COWS AND HORSES USED TO STRAY DOWN THE STREET AND EAT MY PRIZE-WINNING CHRYSANTHEMUMS.



custom tree grate

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Lenah Valley
Proposed suppliers + timeline

Suppliers

Component	Supplier	Contact	Email
Printing of postcards	moo.com	NA	NA
Window stories	Eye Spy Signs	John Howard	john@eyespysigns.com.au
Mural painting	Alex Miles	Alex	alex@alexmiles.com.au
Painted Interventions	Alex Miles	Alex	alex@alexmiles.com.au
Tree Grates & lasercut steel	Xanderware	Rob Alexander	production@xanderware.com.au

Timeline

Action	Process	Who	By date	Notes
DESIGN	Design of postcard and mural	Alex	End March 2017	
	Concept designs and specs for grates	Alex	End March 2017	Specs drawn up in anticipation of final graphics based on supplied stories
	Design of window stories	Alex	Early May 2017	
	Design of final tree grates	Alex		
PRODUCTION	Print and distribution of cards	moo.com / Alex	Early April 2017	Mailbox drop and distribution of cards to schools/business/services
	Painting of mural	Alex	End April 2017	
	Collection and edit of responses	Alex	End April 2017	
	Production of tree grates	Xanderware	End May 2017	
	Production of additional interventions	Alex/Xanderware	End May 2017	
FINAL SIGN OFF	Final paperwork submitted	Alex	Early June	
	Final sign-off	HCC	TBC	

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Lenah Valley
Proposed budget

Component	Process	Who	Notes	Budget
DESIGN	Artwork Concept	Alex Miles	Design and development of all elements	$10,000.00
	Project management	Alex Miles	Includes on-site meetings and liaison with suppliers and manufacturer	$2,000.00
Subtotal				**$12,000.00**
FABRICATION				
Postcards	Print of approx 5000 postcards	moo.com		$1,500.00
Mural	Painting of mural	Alex	Depending on location of mural, a base colour may need to be applied (I've allowed for this)	$6,000.00
Window stories	Print of face mounted film	Eye Spy Signs		$2,500.00
Tree grates	Fabrication of tree grates	Xanderware	Final number TBC - maybe 10-12	$10,000.00
Additional interventions	Painting/various	Alex / Xanderware	TBC depending on stories (paint, lasercutting etc)	$15,000.00
Subtotal				**$35,000.00**
TOTAL				**$47,000.00**
GST				$4700.00

GRAND TOTAL **$51,700.00 INC GST**

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