LIVEABLE TOWN ADVISORY COMMITTEE

ATTACHMENTS

TOWN OF BASSENDEAN

LIVEABLE TOWN ADVISORY COMMITTEE

RENEWABLE ENERGY WORKING GROUP MEETING

COMMITTEE ROOM, 48 OLD PERTH ROAD, BASSENDEAN

THURSDAY 17 AUGUST 2017 at 4.00PM

Meeting Notes

1.0 DECLARATION OF OPENING

DOS welcomed everyone.

2.0 ATTENDANCES, APOLOGIES

Working Group Members
Cr Renee McLennan
Caroline Easton, Community Member
Sarah Quinton, Community Member

Officers
Jeremy Walker, A/Manager Asset Services (A/MAS)
Simon Stewert-Dawkins, Director Operational Services (DOS)
Brian Reed, Manager Development Services (MDS)

Apology
Kathryn Hamilton, Community Member
Melissa Mykytiuk, Community Member
Tim McLennan, Community Member
Susan Reader, Community Member
Kylie Turner, Community Member

Guest
Bruce Armstrong

3.0 ACCEPTANCE OF MEETING NOTES

That the meeting notes of the Renewable Energy Working Group held 18 May 2017, be accepted.

The REWG accepted the meeting notes of its meeting held 18 May 2017.

4.0 DECLARATIONS OF INTEREST

Nil

5.0 BUSINESS DEFERRED FROM PREVIOUS MEETING

5.1 Terms of Reference

At the May 2017 meeting of the Renewable Energy Working Group (REWG), it was agreed that, in order to progress tasks and aims/outcomes, the Liveable Town Advisory Committee (LTAC) be requested to consider amending the wording of the final dot point under the heading "Purpose" in the REWG Terms of Reference.

A report on the 18 May 2017 REWG meeting was included for discussion in the June 2017 LTAC meeting agenda and it was recommended (LTAC-1/06/17), in part, by the LTAC that the final dot point under the heading "Purpose" in the Renewable Energy Working Group's Terms of Reference, be amended as follows:

From:

- "Develop policy guidelines about the installation and uptake of renewable energy in the Town of Bassendean."

To:

- "Provide feedback and input for staff to develop policy guidelines about the installation and uptake of renewable energy in the Town of Bassendean."

At the June Ordinary Council Meeting, Council received, in part, the LTAC Report (OCM-23/06/17)

The new REWG Terms of Reference was provided with the REWG Agenda.

REWG - 1/08/17 OUTCOME Item 5.1:

The Working Group members in attendance noted the amendment to the Terms of Reference.

6.0 WORKING GROUP REPORTS

6.1 Working Group Tasks/Aims

6.1.1. Town of Bassendean – Carbon Reduction Plan

The Renewable Energy Working Group's Terms of Reference outlined seven actions under the heading "Purpose (task and aims/outcomes)" with one of these being:

> Review what renewable energy initiatives have been undertaken in the Town to date and evaluate the success of those initiatives.

Senior Environmental Officer (SEO) provided an ACER update, advising that he had rescheduled his meeting with the EMRC to enable him to report to this Group on the Carbon Reduction Plan Review. Notes of verbal update provided by SEO are attached and include draft timeline of review process, Town of Bassendean Emissions Report Card and Potential Fleet CRP actions. SEO commented that the reason for the final Carbon Action Plan being scheduled for March 2018, is to enable inclusion in the budget.

Draft timeline of review process for the Carbon Reduction Plan:

Strategic Document Review (August-October)
↓
Staff Consultation CRP actions (October)
↓
Draft v1 Caron Reduction Plan constructed
↓
Draft v1 Consultation with Renewable Energy Working Group
↓
Draft v2 Carbon Reduction Plan updated
↓
Draft v2 Consultation with Bassendean Public
↓
Final Carbon Action Plan constructed (March 2018)

The Group discussed the Carbon Reduction Plan with the following questions raised:

- *What is the plan for taking on ideas of this Group?*
- *How can ideas from this group be included in the plan?*

SEO responded that officers would look at what has already been achieved, meet internally and come back to this group, at which time ideas could be incorporated where appropriate, with costs and benefits being taken into account.

SEO reported that the EMRC predicted that the Town's targets will be achieved, with improvement measured from the Town's base target. He further commented that the biggest driver in the Town is streetlights; however, streetlights are the responsibility of Western Power and the only action that can be taken is to advocate for change.

DOS further added that in the past the Town has been successful in an Underground Power application for Ashfield and that as part of this program energy efficient luminaires where used. Unfortunately the more recent Underground Power application for Eden Hill was not supported by ratepayers.

REWG - 2/08/17 OUTCOME OF DISCUSSIONS Item 6.1.1:

Sarah Quinton to make contact with the Western Power, Corporate Affairs Manager, who lives in Bassendean, advocating for change in Western Power policy in relation to street lighting.

6.1.2. Other LGA Renewable Energy Policies & Initiatives

The Renewable Energy Working Group's Terms of Reference outlined seven actions under the heading "Purpose (task and aims/outcomes)" with the following being:

> Investigate and review renewable energy initiatives across other Australian jurisdictions and identify those that may be applied to the Town of Bassendean to increase renewable energy uptake and reduce the Town's carbon footprint
>
> Provide feedback and input for staff to develop policy guidelines about the installation and uptake of renewable energy in the Town of Bassendean.
>
> Collate and package information on renewable energy that the Town's residents may find valuable

ATTACHMENT II:

Renewable Energy Policies & Initiatives – table of tasks and recommendations.

ATTACHMENT III:

(a) Informal REWG Meeting – Report & Recommendations
(b) Notes from Kathryn Hamilton

DOS spoke on the (Attached APPENDIX II) table of ideas/ initiatives put forward by REWG members at the May 2017 meeting and advised that since this meeting, Officer comments had been added to the table to indicate what actions the Town had or was currently undertaking.

The REWG ideas where the Town is currently undertaking actions or the following ideas where the Town is not currently involved with may be worth the community members further exploring:

- *E-charging locations*
- *Sustainable Expo*
- *Smart Cities e-charging stations*
- *Electric Highway*

- *Driverless Bus*
- *Bulk-buy Solar Panels and*
- *Budget for Maintenance for purchase of solar panels*

Cr McLennan outlined that there was some frustration with the progress of the renewable energy initiatives and suggested that informal meetings of Community Representative members of the REWG be arranged to assist in further develop the groups ideas, particularly considering the group members' enthusiasm and desire to select and action some projects.

Sarah Quinton asked if the Town has submitted CEFC application. In response to question raised, DOS advised that CEFC is listed in the agenda for discussion at Item 6.2.2. However, the Town has not yet applied for funding as a project has not been nominated, for which a business plan would need to be drafted to present with any application for funding.

Mr Armstrong suggested that the Group would benefit from maintaining a book of possible projects and proposals to draw from when suitable funding is available. The Group could identify plausible projects and undertake further investigation to prepare a report (2 or 3 page), including cost estimates, financial and social benefits.

DOS confirmed that in May 2017 the REWG identified ideas/ initiatives and these where captured in the attached APPENDIX II table.

Senior Environmental Officer pointed out that the Carbon Reduction Plan is being progressed and when completed, will provide information that will assist this Group select projects by demonstrating the Town's targets and initiatives to achieve those targets.

The Group discussed objectives and the following points:

- *Benefits of having a "flagship" that could be seen as an initiative of this Group, promoting the message of Renewable Energy in the Town of Bassendean.*
- *People want to be involved in a project that is visible to the community.*
- *Project to be educational and motivational.*
- *Process: Planning > costing > reporting > funding*

In relation to the Town's policies, the following points were discussed:

- *The Group's ambition to be involved in the development of policies whilst recognizing impracticalities of this.*
- *Director Statutory Development's policies programme that will be ongoing for 12 months.*

- *Possibility for this Group to have input in the Town's policies and Council's appreciation for feedback from this Group during the policy development process.*

The Group discussed the Town's fleet vehicles in relation to the use of hybrid and electric vehicles and Senior Environmental Officer advised that the Eastern Metropolitan Regional Council (EMRC) is currently undertaking investigation into the Town's fleet carbon emissions.

Further discussion ensued with the following points, being raised:

- *Timeline and implementation of funding for next year.*
- *Feasibility of choosing a project now.*
- *Looking at the Town's carbon emissions and street lighting, and what can be done to reduce those, including lobbying Western Power.*
- *Vehicle fleet and difference in price between current fleet, hybrid and electric.*
- *Benefits of promoting renewable energy initiatives to the community.*

REWG - 3/08/17 OUTCOME OF DISCUSSIONS – Item 6.1.2:

- ***Initiatives and recommendations of the Informal REWG Meeting held in the interim between the 18 May 2017 REWG meeting and August 2017 REWG meeting (Report and Recommendations attached), be noted.***
- ***Further informal meeting(s) of REWG community members to be convened when possible, before the next meeting of the REWG.***
- ***Submission provided as an attachment to the Agenda by Kathryn Hamilton, be noted.***
- ***Review carbon reduction plan at the next meeting of the REWG.***

REWG – 7 to 19/08/17 RECOMMENDATIONS OF INFORMAL REWG

Post Meeting: Recommendations of the Informal REWG meeting have been included in the RENEWABLE ENERGY POLICIES / INITIATIVES table (APPENDIX 1).

6.2 New Discussion Items

6.2.1. White Gum Valley Precinct Development

On 19 May 2017, all REWG members were advised of a Western Australian Local Government Association (WALGA) event: White Gum Valley Precinct Development: Sustainability Innovation through Demonstration scheduled for Thursday 8 June 2017.

As the event only cost $44 (Inclusive of GST) the Town of Bassendean paid for the community representatives in the Renewable Energy Working Group to attend.

Three REWG community representatives and three Town of Bassendean officers, attended the event

WALGA Biodiversity and Sustainability Project Officer, Melanie Davies emailed her thanks to all for attending, and her hope that the Group found it valuable to see first-hand, a precinct that addresses all aspects of sustainability, and is developing innovative governance models that can be applied to future housing estates.

Attached to the agenda are two presentations from the WALGA Sustainability Innovation event that were made by Ms Davies for the REWG's information, being:

- Compact City Planning – Driving Innovation in Energy, by James Eggleston and Paula Hanson, CUSP (ATTACHMENT IV provided with REWG Agenda)
- Living Labs, by Professor Greg Morrison, CUSP (ATTACHMENT V provided with REWG Agenda)

Further inclusions in her communication are the following links to additional information about the WGV sustainability features:

- Density by Design videos (episodes 1-4, 5-10 to be released in July): http://www.architectureanddesign.com.au/news/first-four-episodes-of-josh-byrne-s-density-by-des
- WGV Sustainability Overview: https://www.landcorp.com.au/innovation/wgv/
- 'WGV by LandCorp: One Planet Action Plan 2016 Review': https://www.landcorp.com.au/Documents/Corporate/Innovation%20WGV/Innovation-WGV-OPL-Review-2016.pdf
- CRC for Low Carbon Living: http://www.lowcarbonlivingcrc.com.au/

WALGA aims to organise another tour of the precinct in about a year's time, when more building works have been completed and results from the Living Lab studies of residential utility use are available

Community representatives who attended the White Gum Valley Precinct Development: Sustainability Innovation through Demonstration event, provided feedback.

Caroline Easton commented that although she did not attend the Western Australian Local Government Association (WALGA) event: White Gum Valley Precinct Development: Sustainability Innovation through Demonstration on 8 June 2017, she is familiar with the project. This sensitive urban design project is particularly

interesting as it demonstrates that housing should not just be for one type of family.

Cr McLennan reported that she and Melissa Mykytiuk will be meeting with the director of the project, from Landcorp, who is keen and receptive to engage with the Town, and if there is anything this Group would like to take to that meeting, please advise.

REWG - 4/08/17 OUTCOME OF DISCUSSIONS Item 6.2.1:

Group members to advise Cr McLennan of any relevant matters they wish her to take to meeting with the Landcorp representative.

6.2.2 Clean Energy Finance Programs

Cr McLennan has requested the Clean Energy Finance Programs (CEFC) be listed for discussion.

A hard copy of the CEFC information is attached for your information (ATTACHMENT VI provided with REWG agenda). This can also be accessed via the following links:

http://www.cefc.com.au/media/158207/cefc-factsheet_local-govt-finance-program_lr.pdf

http://www.cefc.com.au/

The Director Corporate Services, Mr Costarella, has advised that from a financial investment perspective, Council resolved (OCM-24/03/16) in March 2016, to amend its investment policy and include the following:

> "Preference will be given to invest in financial institutions who do not invest in or finance the fossil fuel industry."

REWG - 5/08/17 OUTCOME OF DISCUSSIONS of Item 6.2.2:

Sarah Quinton will make initial enquiries regarding CEFC, in terms of:

a) What other local authorities have participated?

b) What were the funds used for?

c) What measure of success has been achieved?

6.2.3 Electric Vehicles

DOS invited Mr Bruce Armstrong to speak to the Group on electric vehicles.

Mr Armstrong tabled a discussion paper describing the case for electric vehicles and their place in the Town of Bassendean, which had been distributed electronically before the meeting. Mr Armstrong spoke on the subject and made the following comments, before general discussion with the Group.

- *Good response from the display of electric vehicles at the Old Perth Road Markets – Minister for Innovation (Minister Dave Kelly MLA) was impressed.*
- *Aim is to identify some of the issues in the Town and capture some of the ideas.*

DOS thanked Mr Armstrong for providing the great report and for sharing his considerable knowledge of electric vehicles with this Group.

The Group discussed various models, performance and availability, and the possibilities for provision of charge stations, including locations for safety and convenience of users. The group also considered the time for changing over to EV as possibly being 2019, due to improved availability as the Australian market is currently being driven by the dealers prepared to sell them. In the interim, consideration could be given to changing some vehicles when they come up for renewal.

SEO advised that City of Swan has recently installed a hi-speed charger at the administration building, and he would contact them to obtain details.

Discussion ensued and further points discussed included:

- *Use of Hybrid vehicles (Hybrid and normal Camry are the same price).*
- *Decals or wrap on vehicles, advertising when around the Town.*
- *Criteria for selection of current fleet includes star rating, energy efficiency and safety.*
- *Short-term economy versus value placed on sustainable energy.*
- *Putting projects in place to show leadership in the community, encouraging education and uptake of renewable energy.*
- *Need for this Group to undertake projects to be seen to be progressing its aim of reducing carbon emissions.*
- *Greenhouse gases produced by food waste.*
- *Electric Buses, driverless vehicles and population density required to warrant use within the Town.*
- *That Dave Kelly MLA, Minister for innovation should be encouraged to lead by example and the State Government purchase an energy efficient car.*

- *Community mini buses with appropriate branding. Mr Armstrong offered to do another report on:*
  - *Mini buses*
  - *Trucks*
  - *Ride on Mowers*
- *Plastic free July – promoted by Caroline Easton*
- *Home Energy Audits:*
  - *Raising awareness*
  - *Audit then audit after retrofit*
  - *Green house rating gets a green house sign*
  - *Gumnut rating*
  - *Training and qualifications to undertake the audits.*
  - *Funding for people to come in and assist.*
- *Possibility of identifying a project (not currently working on) that the Group can run with.*
- *Proposal book to assist with identifying suitable projects.*
- *Sustainable House Day – Sunday 17 September https://sustainablehouseday.com/*

Actions garnered from discussions, are listed below:

REWG - 6/08/17 OUTCOME OF DISCUSSIONS Item 6.2.3:

- ***SEO to contact City of Swan regarding newly installed charger station.***
- ***Cr McLennan to follow up with Curtin University Sustainability Policy (CUSP) regarding charger.***
- ***Cr McLennan to investigate solar panel initiatives.***

Cr McLennan requested that it be noted, that Caroline Easton and Bruce Armstrong had both been amazing this month. Caroline had spent many hours sewing vege totes as an alternative to plastic bags and attended the Markets handing them out, and promoting their use. Bruce had attended the markets with the electric vehicles display and provided the Electric Vehicle Issues Discussion Document for this Group.

During the above discussions:

5.10pm Sarah Quinton left the meeting and did not return.
5.15pm Senior Environmental Officer left the meeting and did not return.

7.0 Proposed future REWG meetings

9:30am or 4pm	Thursday	9 November

If required, additional meetings can be scheduled. Should the meeting not be required, participants will be advised accordingly.

8.0 CLOSURE

Meeting closed at 5.30pm

AGENDA ATTACHMENTS

Attachments were provided electronically prior to meeting and hard copy at meeting.		
ATTACHMENT I	REWG Terms of Reference (revised) Attached with e-Agenda (pdf 50KB)	Refer Item 5.1
ATTACHMENT II	May 2017 REWG meeting notes and Addendum. Attached with e-Agenda (pdf 3MB)	Refer Item 6.1.2
ATTACHMENT III	(a) Informal REWG Meeting – Report & Recommendations (received 10/8/2017) Attached with e-Agenda (pdf 64 KB) (b) Notes from Kathryn Hamilton (received 10/8/2017) Attached with e-Agenda (pdf 2MB)	Refer Item 6.1.2
ATTACHMENT IV	Compact City Planning – Driving Innovation in Energy, by James Eggleston and Paula Hanson, CUSP Emailed separately with ATT V (Pdf 3 MB)	Refer Item 6.2.1
ATTACHMENT V	Living Laps, by Professor Greg Morrison, CUSP Emailed separately with ATT IV (Pdf 2 MB)	Refer Item 6.2.1
ATTACHMENT VI	Clean Energy Finance Programs Access through links provided in electronic agenda.	Refer Item 6.2.2

RENEWABLE ENERGY POLICIES / INITIATIVES

APPENDIX 1

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
REWG – 1/05/17	Policies	Remove from the Town's policy, the wording: "solar panels and solar hot water system must not obstruct or detract, cannot be visible from the street".	In 2016, the newly appointed Director Strategic Planning, Tony Dowling, presented to Council a report on the Bassendean Strategic Planning Framework 2016-2019. Council (OCM-15/09/16) adopted the Year 1 "Indicative Implementation Plan" that outlines the time frames when the "existing" and "proposed" Local Planning Policies & Design Guidelines" are scheduled to be provided to Council for consideration. Under the Residential Design Codes, Solar Collectors may be placed on the roof or other parts of a building without approval.
REWG – 2/05/17	Point System	Points given for double-glazing, photovoltaic installation etc.; negative detractors for things that are inefficient. Detraction point for high-energy consumption. Renewable energy should not be limited, e.g. grey water does not have a great uptake.	Refer to the May 2017 REWG meeting notes ADDENDUM regarding Energy Efficient Design & Credit Point Checklist system and other issues raised at the meeting.
REWG – 3/05/17	Lot orientation	Width of block, solar setback – trigger a detailed area plan to show setback and overshadowing.	Refer to the May 2017 REWG meeting notes ADDENDUM regarding Energy Efficient Design & Credit Point Checklist system and other issues raised at the meeting.
REWG – 4/05/17	Green Building Council of Australia	▪ Rating system; ▪ Staff courses, also really good for Council ▪ Encourage builders to move in that direction. ▪ Education and knowledge ▪ Become a member. (website: http://new.gbca.org.au)	This voluntary program is designed to support and drive the adoption of green building practices in the property industry. Council has not allocated fund in the 2017/2018 budget to become a member of the Green Building Council; however, membership for the Town of Bassendean appears to be $2,550.
REWG – 5/05/17	Incentives to encourage developers	Developers attracted to the incentives and this will filter down.	Refer to the May 2017 REWG meeting notes ADDENDUM regarding Energy Efficient Design & Credit Point Checklist system and other issues raised at the meeting.
REWG – 6/05/17	Green Power	Invest into own infrastructure (website http://www.greenpower.gov.au)	

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
REWG – 7/05/17	Travelsmart	Nil	The EMRC, on behalf of the 6 member Councils, developed the 2014-2016 Regional Integrated Transport Strategy. This strategy was revised and a new 2017-2021 Regional Integrated Transport Strategy plan adopted. Priority work in the plan is to develop a regional Congestion Management Plan that will include actions to encourage schools and workplaces use shared vehicles and public transport etc. Advocating to the State Government to implement programs to deliver major infrastructure projects. In 2013, the Town conducted a Department of Transport Travelsmart audit questionnaire for all TOB staff and then in 2014 a draft travel plan was developed. In 2015, the Town wrote to all schools and promoted the Department of Transport Travelsmart program and provided each school with an application form, a Proactive Schools Checklist and travel Plan documents to assist the schools in determining what actions can be taken to encourage walking, cycling or to catch public transport. In 2016 the Town promoted to all schools the National Walk Safely to School day – 20 May 2016. The EMRC and the Town promotes Bike friendly cafes to encourage cycling use in the Town. The Town's Director Operational Services attends the EMRC Regional Integrated Transport – Implementation Action Group. The Engineering Coordinator attends the EMRC Regional Travelsmart Working Group on a regular basis and has worked with schools and with the Department of Transport. As part of the Department of Transport Travelsmart program the Town has been successful in obtaining grant funding to prepare designs for the Whitfield Street Bicycle Boulevard.
REWG – 8/05/17	Car Sharing	Support those who wish to set up car sharing.	See above Travelsmart information
REWG – 9/05/17	Greenhouse energy audits	Environmental house. Maintain register and do retrofit of certain things, and then follow up with another audit to see improvement. Changes behaviour.	The Town of Bassendean monitors all water, gas and power usage using planet footprint platform. All retrofits on council owned and operated buildings can be monitored using this platform to gauge successfulness of measures implemented.
REWG – 10/05/17	Retrofit workshops	Arrange workshops to retrofit house to save energy.	In 2016/17 financial year, the Town engaged Environment house to undertake In home Eco audits for residents, the program involved a trained professional analysing residents' bills and auditing their home to tailor an action plan for residents to improve their gas, water, power and waste. The program was advertised on the Towns webpage and through the Eastern Reporter. Unfortunately, only 26 residents signed up for the free program so the Town used the remaining budget to undertake audits and action plans for the Primary Schools located within the Town. In previous years the Town has run free workshops using 'Greater Gardens' & 'Beyond Gardens' presenters.
REWG – 11/05/17	Workshop ("Future Bayswater")	Speakers on best practice: water consumption, energy use, etc. Good way to involve community and Council	The Town has booked the first of 3 workshops with Water Corporation. The first workshop: 'Perth Water Future', will take place on 8 November 2017.

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
		(Cr McLennan commented that Future Bayswater came from the community)	
REWG – 12/05/17	E-charging location	Install an E-charge location	
REWG – 13/05/17	Home energy audit kit	Community resource to measure footprint	Available from the Town's Library
REWG – 14/05/17	Sustainable Expo	Hold an exposition on sustainability	
REWG – 15/05/17	Carbon Neutral Fleet	Work towards carbon neutral fleet.	All Town of Bassendean motor vehicles purchased or leased have an Australian Government's Green Vehicle Guide (GVG) Five (5) star rating for fuel consumption in an urban environment in order to minimize the CO2 emissions https://www.greenvehicleguide.gov.au/GVGPublicUI/home.aspx In addition, the Town of Bassendean has been in partnership with Men of the Trees for a number of years with the aim of providing environmental and business benefits, compensating for the Town's fleet. All Council vehicles are used on a 'pool' basis and used for operational purposes.
REWG – 16/05/17	EMRC	ToB officers to meet with EMRC staff to look at bigger projects.	In 2009, the Achieving Carbon Emissions Reduction (ACER) program was developed by the Eastern Metropolitan Regional Council (EMRC), in collaboration with its six member councils: the Town of Bassendean, City of Bayswater, City of Belmont, City of Kalamunda, Shire of Mundaring and the City of Swan. On Monday 10 July 2017, at a Special Council Meeting (SCM – 6/7/17) the 2017/2018 budget was adopted which included funding to engage the East Metropolitan Regional Council to continue to implement the ACER Program.
REWG – 17/05/17	Smart Cities e-charging stations	Research Smart cities e-charging stations.	
REWG – 18/05/17	Electric Highway	RAC has been installing e-charging points - Locations are 70 m apart, and a lot of them not well located and subject to vandalism. Principle is good as it means you can use EVs for extended trips - Tesla are better and we should be asking Western Power	
REWG – 19/05/17	Driverless Bus	Build neighbourhood and communities. Envisage driverless bus travelling around the Town. Work with Department of Transport on issue. Local Government take it up for private enterprise.	

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
REWG – 20/05/17	Bulk-buy Solar Panels	A scheme Council could implement as the Town has buying power to negotiate with suppliers. Best price could be passed on to householders	
REWG – 21/05/17	Budget for Maintenance	Budget for maintenance at point of purchase of the solar panels for new buildings, then get quote for residential take up of panels.	
REWG – 22/05/17	Solar Cities Program	Solar Panels	Town is involved with Solar Cities Program – solar panels plus smart metering.
August			
REWG – 1/08/17	Terms of Reference	Amendment	At the June Ordinary Council Meeting, Council received, in part, the LTAC Report (OCM-23/06/17)
REWG - 02/08/17	Street Lighting	Sarah Quinton to make contact with the Western Power, Corporate Affairs Manager, who lives in Bassendean, advocating for change in Western Power policy in relation to street lighting.	
REWG - 03/08/17	Review	• Initiatives and recommendations of the Informal REWG Meeting held in the interim between REWG meetings 18/5/17 and 17/8/17, (Report and Recommendations attached) be noted. • Further informal meeting(s) of REWG community members to be convened when possible, before the next meeting of the REWG. • Review carbon reduction plan at the next meeting of the REWG.	
REWG - 04/08/17	Landcorp Meeting	Group members to advise Cr McLennan of any relevant matters they wish her to take to meeting with the Landcorp representative.	
REWG - 05/08/17	Clean Energy Finance Programs (CEFC)	Sarah Quinton to make initial enquiries regarding CEFC, in terms of: a) What other local authorities have participated? b) What were the funds used for? c) What measure of success has been achieved?	

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
REWG - 06/08/17	a) Charger Station b) CUSP – charger c) Solar Panels d) BPS involvement in solar panel program	a) SEO to contact City of Swan regarding newly installed charger station. b) Cr McLennan to follow up with Curtin University Sustainability Policy (CUSP) regarding charger. c) Cr McLennan to investigate solar panel initiatives. d) Council be requested to consider supporting the Bassendean Primary School in their endeavour to be involved in the solar panel programme.	
REWG - 07/08/17	Old Perth Road Markets promotions	REWG informal meeting 1.1: Markets sustainability theme and Plastic Free July promotion.	Thanks to Caroline Easton
REWG - 08/08/17	Carbon Clever	REWG informal meeting 1.2: Carbon Clever Presentation Tuesday 25 July	Thanks to Melissa Mykytiuk
REWG - 09/08/17	Electric vehicles (EV)	REWG informal meeting 1.3: EV Display at the July Old Perth Road Markets	Thanks to Bruce Armstrong
REWG - 10/08/17	EV Charger	REWG informal meeting 1.4: Curtin University Sustainability Policy meeting scheduled for August - Melissa Mykytiuk and Cr Renee McLennan to attend and will report.	
REWG - 11/08/17	Sustainability	REWG informal meeting 1.5: Planning for Sustainable House Day 17 September Caroline Easton will report.	
REWG – 12/08/17	ToB Emissions	REWG informal meeting 2.1: Conduct an audit of the Town's fleet vehicles and prepare a report on transitioning the fleet to hybrid / electric vehicles and implementing alternative transport options.	
REWG – 13/08/17	ToB Emissions	REWG informal meeting 2.2: Investigate the installation of electric charging station/s within the Town. Refer REWG-06/08/17 above	
REWG – 14/08/17	ToB Emissions	REWG informal meeting 2.3: Lobby Western Power to transition the Town's street lighting (REFER REWG - 02/08/17) Sarah Quinton to make contact with the Western Power, Corporate Affairs Manager, who lives in Bassendean, advocating for change in Western Power policy in relation to street lighting	

REWG	Focus area	Initiatives / Recommendations	Actioned/Outcome/Update
REWG – 15/08/17	Renewable Energy Uptake	REWG informal meeting 3.1: Investigate and introduce solar bulk buy purchase scheme for property owners in ToB.	
REWG – 16/08/17	Renewable Energy Uptake	REWG informal meeting 3.2: Develops and implements a "Sustainable Town Incentive Scheme"	
REWG – 17/08/17	Renewable Energy Uptake	REWG informal meeting 3.3: Investigates offering environmental sustainability grants for suitable community projects.	
REWG – 18/08/17	Renewable Energy Uptake	REWG informal meeting 3.4: Advertises available grants to the community to encourage groups and individuals with the Town to directly apply for funding for sustainability projects.	
REWG – 19/08/17	Energy Efficient Design	REWG informal meeting 4: • Seeks clarification of when the "Local Planning Policy No.2 Energy Efficient Design" is scheduled for review. • Recommend that when staff are preparing the draft policy the City of Vincent policy be referred to. • Requests input info reviewing the draft energy efficient design policy credit points checklist. • Further meetings on this topic planned following clarification of timing.	

Informal REWG Meeting
Report & Recommendations

At the May REWG meeting it was decided that informal meetings between working group members would be useful in helping to give direction. Group members have subsequently met to identify & discuss suitable initiatives under the following three categories:

- Initiatives to Reduce Town of Bassendean's Emissions
- Initiatives to Increase Resident / Business Renewable Energy Uptake
- Energy Efficient Design

1.0 Projects Update

Since the May REWG meeting, there have been some activities worth celebrating thanks to the efforts of various working group members:

1.1 Markets sustainability theme & Plastic Free July promotion (Thanks to Caroline)
1.2 CarbonClever Presentation Tuesday 25th July (Thanks to Melissa)
1.3 EV Display (Thanks to Bruce)
1.4 Meeting with CUSP scheduled for August (Melissa & Renee)
1.5 Planning for Sustainable House Day (Caroline)

2.0 Initiatives to Reduce Town of Bassendean's Emissions

The working group recommends that the Town of Bassendean:

2.1 Conduct an audit of the Town's fleet vehicles and prepare a report on transitioning the fleet to hybrid / electric vehicles and implementing alternative transport options (e.g. bikes, staff smart riders for public transport)
www.communitynews.com.au/stirling-times/news/city-of-stirling-says-fuel-efficient-fleet-cars-paying-off/

2.2 Investigates the installation of electric charging station/s within the Town
Email Richard Baird chair@wa.aeva.asn.au for information on charging stations for local governments
http://therevproject.com/trials/charging-trial.php
http://e-station.com.au/
www.delta-es.com.au/city-swan-embraces-sustainability-installing-new-dc-electric-vehicle-charging-station/#.WYxfmf-GMUQ

2.3 Lobby Western Power to transition the Town's street lighting to
LED.http://walga.asn.au/getattachment/Policy-Advice-and-Advocacy/Environment/Climate-Change/Climate-Change-Projects-and-Resources/Street-lighting-Discussion-Paper.pdf.aspx?lang=en-AU

3.0 Initiatives to Increase Resident / Business Renewable Energy Uptake

The working group recommends that the Town of Bassendean

3.1 Investigates and introduces a solar bulk buy purchase scheme for property owners in the Town of Bassendean.
(e.g.http://www.byron.nsw.gov.au/newsletters/2017/04/04/solar-bulk-buy-opportunities)

3.2 Develops and implements a "Sustainable Town Incentive Scheme".
(e.g. City of Adelaide sustainable incentives scheme: www.cityofadelaide.com.au/your-council/funding/sustainable-city-incentives-scheme/)

3.3 Investigates offering environmental sustainability grants for suitable community projects. (e.g. www.banyule.vic.gov.au/Council/Grants/Environmental-Sustainability-Grants)

3.4 Advertises available grants to the community to encourage groups and individuals with the Town to directly apply for funding for sustainability projects

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4.0 Energy Efficient Design

The group seeks clarification of when the "Local Planning Policy No. 2 Energy Efficient Design" is scheduled for review?

Recommend that when staff are preparing the draft policy the City of Vincent policy be referred to: www.vincent.wa.gov.au/residents/environment-health/environment-sustainability/green-initiatives/sustainable-building-design.aspx

The group also requests input into reviewing the draft energy efficient design policy credit points checklist.

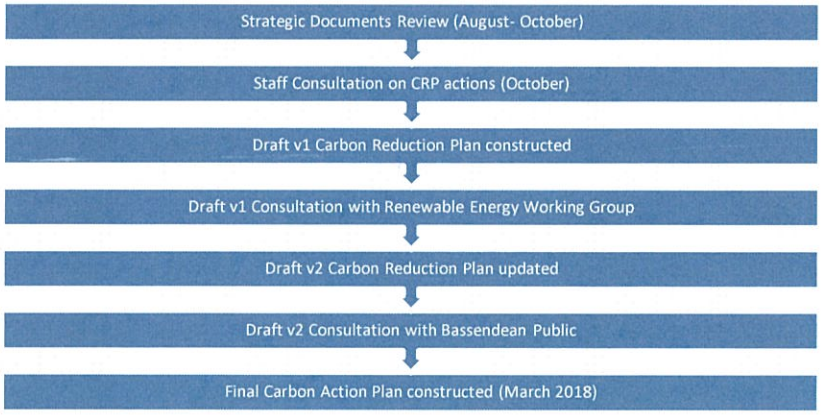
Further meetings on this topic planned following clarification of timing.

Bassendean ACER update – Renewable Energy Working Group

17/08/2017

Carbon Reduction Plan Review

- Review is currently in progress
- Consultation with Bassendean's staff to be held in October to discuss new actions to achieve Emissions Reduction Target
- Draft timeline of review process below – some dates need to be confirmed



Bassendean Fleet

Tables below sourced from Town of Bassendean Emissions Report Card 2015/2016

Organisational Units	Total Greenhouse Gas Emissions (tCO_2-e)			Difference between 2013/2014 and 2015/2016		
	2013/2014	2014/2015	2015/2016	tCO_2-e		%
Buildings and Facilities	*577.8*	*541.7*	*518.5*	*-59.3*	↓	*10.3*
Parks and Gardens	*132.0*	*125.1*	*114.4*	*-17.6*	↓	*13.3*
Fleet	*247.5*	*318.5*	*254.1*	*+6.6*	↑	*2.6*
Street Lighting	*773.9*	*764.7*	*766.7*	*-7.3*	↓	*1.0*
Grand Total	**1731.2**	**1750.1**	**1653.5**	**77.6**	↓	**4.5**

Fleet					
Diesel	147.9	209.3	157.3	-9.4	6.3
ULP	99.6	109.2	96.8	+2.8	2.8

- The Town currently (2016/2017) has 83 vehicles/plant equipment in its fleet (breakdown below)
- Emissions for Fleet 2016/2017 is currently being uploaded into Planet Footprint
- The average emissions per fleet vehicle/equipment is ~3-4 tCO2-e

27 Passenger vehicles
26 Operation vehicles
13 Heavy Operation vehicles
6 Buses
11 Plant equipment

<u>Potential Goals (based on 2014/2015 data)</u>
Reduce fleet emissions by 50%/25%/10%

50% reduction = 159.25 tCO2-e ~ 42 vehicles – 35% of total target
25% reduction = 79.63 tCO2-e ~ 21 vehicles – 17.5% of total target
10% reduction = 31.85 tCO2-e ~ 8 vehicles – 7% of total target

Potential Fleet CRP actions

- Review fleet vehicle use to prioritise vehicles that are required and those that could be shared, removed or replaced with a low emission model (hybrid/electric)
- Investigate introducing hybrid and electric vehicles into the Town's passenger and operations vehicle fleet
- Replace one operations or passenger vehicle with a low emissions model such as a hybrid or electric car each year until 2030. (~10 cars replaced = ~ 40 tCO2-e reduction if electric)
- Continue to change fleet vehicles from ULP to diesel, hybrid or electric on replacement
- Investigate changing older plant equipment with alternative fuel models that reduce the use of ULP and Diesel
- Install electric charging stations within Town centre
- Educate staff on alternative transport options – provide incentives to take public transport, bike to work or carpool.
- Ensure that purchasing or leasing of vehicles adhere to Australian light and heavy vehicle emission standards (review currently under consultation in Federal Government)

TOWN OF BASSENDEAN

LIVEABLE TOWN ADVISORY COMMITTEE

URBAN FOREST WORKING GROUP MEETING

HELD IN COUNCIL CHAMBERS, 48 OLD PERTH ROAD, BASSENDEAN

FRIDAY 8 SEPTEMBER 2017 AT 10.00AM

Meeting Notes

1.0 DECLARATION OF OPENING

Director Operational Services (DOS) welcomed everyone to the meeting, with a particular welcome to Ms Keryn Marley, a new member of the Urban Forest Working Group.

DOS reminded the Group that the focus of the September meeting is to review the revised Draft Urban Forest Strategy and an electronic copy of the document will be projected onto an overhead screen to allow the UFWG to progressively review and amend as required.

2.0 ATTENDANCES, APOLOGIES

Working Group Members
Cr Paul Bridges
Nonie Jekabsons, Community Representative
Greg Peterson, Community Representative
Emma Slavin, Community Representative
Keryn Marley, Community Representative

Officers
Brian Reed, Manager Development Services
Simon Stewert-Dawkins, Director Operational

Apologies
Sarah Quinton, Community Representative
Naomi Bannister, Community Representative
Kylie Turner, Community Representative
Jeremy Walker, Senior Environmental Officer
Tony Dowling, Director Strategic Planning

3.0 ACCEPTANCE OF MEETING NOTES

The Meeting notes of the Urban Forest Working Group meeting held 15 June 2017, were accepted.

4.0 BUSINESS DEFERRED FROM PREVIOUS MEETING

4.1 Urban Forest Working Group - Members

Prior to the June 2017, Urban Forest Working Group meeting Alison Healey tendered her resignation, due to work commitments.

As a result, the Liveable Town Advisory Committee (LTAC-5/08/17) appointed Keryn Marley to the Urban Forest Working Group.

Ms Marley was welcomed to the Working Group and introductions made.

4.2 Terms of Reference – Task (1)

> "to review and make recommendations on the Town's draft Urban Forest Strategy 2016–2026 to create a strategy specifically applicable to the Town of Bassendean – with the aim of a staged implementation with identifiable goals and milestones".

In February 2016, Council (OCM – 7/02/16) received the draft Urban Forest Strategy for the purpose of community consultation.

On the 25 May, 31 May, 14 June and 21June, 7th November 2016 the Urban Forest Working Group (UFWG) meetings reviewed the draft document and provided feedback up to page 25 - A Milestone Approach.

The UFWG meeting notes reported that at the 21 June 2016 meeting, the following community sub-group members planned to restructure the format of the draft strategy:

- Sarah Quinton;
- Emma Slavin;
- Nonie Jekabsons; and
- Naomi Bannister.

At the June 2017 UFWG meeting the community sub-group members tabled a suite of draft revised Urban Forest Strategy chapters and a "Index" to indicate how each of the revised chapters were to be collated.

The Town of Bassendean subsequently collated the revised chapters/information in accordance with the index and forwarded to the working group as an attachment to the 15 June 2017 meeting notes. *Refer attached table for details.*

The focus of the September 2017 Urban Forest Working Group meeting is to review the revised draft document and provide feedback to community sub-group members.

No hard copies of the revised Draft Strategy provided as it is intended that the electronic copy of the revised Draft Strategy will be projected onto an overhead screen to allow the UFWG to progressively review and amend as required.

The Group reviewed the revised Draft Urban Forest Strategy with corrections, amendments and inclusions being placed directly into the electronic document.

Once the document has been re-formatted by ToB officers, including all amendments and inclusions, it is to be distributed to the Group for further feedback.

The Group agreed that hard copies be available prior to future meetings to enable members to make notes in preparation for workshopping at the meeting.

5.0 Proposed future UFWG meetings

At the June meeting of the UFWG, it was requested that the September meeting be brought forward and the December 14 meeting be cancelled. At the September UFWG meeting, an alternative date in November is to be considered.

Date for the next meeting is yet to be confirmed. Group members to be contacted to ascertain the most suitable date and time.

6.0 CLOSURE

Meeting closed at 12pm

Urban Forest Working Group			
Heading and comments provided by Sarah Quinton	*Recommendations and comments 15/6/17*	September 2017 Feedback to UFWG	Actions
Intro and Definition Written by Nonie Jekabsons	*Provided in draft form*	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes.	
Executive Summary • Not written as yet		At completion of Strategy	
Foreword • Tidy up original, justification of why strategy exists and more emphasis on community engagement. • Case Studies & Inspirations – to be written by all and include photographs.	• *Note spelling – correction* • *More emphasis on community engagement.* • *One page* • *Include case studies and inspirations (integrating community activities),* • *Lighten up and give inspirational examples, e.g. Gary Blanch Reserve.* • *Should be overarching statement and at beginning of document.* • *To be at front of document.*	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes.	
Background • Attached with recommended content • Needs further editing. • Context including info from mapping. • Astron mapping in context – 'take home messages' summary – Nonie to write	• *Provided in draft* • *Draft background provided by Sarah, could be shortened.* • *City of Melville – Cool areas identified were actually air-conditioned houses.* • *Early morning survey of Town indicates evapotranspirative cooling on irrigated areas.* • *202020 Vision will provide updated information.* • *Beneficial to receive reports 2 weeks before meeting(s).*	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes. Before August UFWG meeting Nonie to write overview of what was learned from Astron Mapping.	
Historical Background • Written by Cr Bridges and attached	• *Historical background "A Rich and Romantic Country" written by Cr Bridges, includes historical Indigenous background*	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes.	

Indigenous Background	• *Need comment from local Indigenous people on contemporary issues.*	TOB to discuss with UFWG, the cost implication of meeting with Indigenous Elders. Alternatively, present the draft Indigenous background information to a meeting of the Bassendean Cultural Advancement Group (BCAG) (Reconciliation Action Plan) and seek feedback. The BCAG meets monthly.	
Social Benefits	•		
Economic Developments	• *This already exists in the document and can be adjusted as required.*		
Environmental Issues – why we need a UFS.	• *A lot of material for this issue has already been researched by Nonie Jekabsons and is ready for compilation.*	Nonie Jekabsons to write and provided to ToB, as soon as ready.	
Community Engagement Written by Emma Slavin and attached.	• *Draft "People and our Urban Forest", provided.* • *Instructions included with draft to be noted by ToB Officers when reviewing.*	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes.	
Urban Forest Recommend review and check against other section otherwise remove	• *Urban Forest written by Naomi – avoid duplication*	Community sub-group members to note .	
Our Future Urban Forest Strategy Written by Naomi Bannister	• *All the pages from Naomi – ToB Officers to go through and amend accordingly.* •	ToB Officers collated the draft UFS and distributed 28 July, along with meeting notes.	

Further instructions:	• *Move items from current draft UFS to the appendix.* • *Refer list of items to be moved to appendix.* • *List and brief description, including contact details, of all stakeholders.* • *Include references used to put documents together – adding as provided (References can be taken from Google drive)* • *References to be the final pages* • *Include glossary of terms.*		

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To :	Flyt Pty Ltd	**Date :**	9/6/2017
Attention :	Matthew Root	**Our Ref :**	J6412a
Email :	m.root@flyt.com.au	**Pages :**	12

WHITFIELD ST BIKE BOULEVARD, TOWN OF BASSENDEAN: WATER SENSITIVE URBAN DESIGN CONCEPTS

1. INTRODUCTION

The Whitfield Street Bike Boulevard (WSBB) is an initiative of the Department of Transport's (DoT) Safe Active Streets Program in cooperation with the Town of Bassendean. The existing Whitfield St will be upgraded into a Bike Boulevard, and will connect a range of commercial areas, train stations, education facilities and recreation facilities between Guildford Road and Sandy Beach Reserve. The proposed WSBB route is 1.8 km long and is shown in Figure 1.

Bike boulevards are cycle routes on quiet local streets, where speeds have been reduced to 30 km/h to allow people in cars and on bikes to share the street safely. With lower traffic speeds, streets are also much safer for pedestrians and children, and additional tree planting and landscaping make them more attractive places to walk or ride.

This report presents Water Sensitive Urban Design (WSUD) concepts that could be incorporated into the Whitfield Street Bike Boulevard, both as stormwater best management practices and for beautifying the streetscape. WSUD concepts include both structural and non-structural controls; this report focusses on structural controls only.

2. ENVIRONMENTAL CONDITIONS

2.1 Climate

The Study Area has a Mediterranean climate with warm dry summers and cool wet winters. The long term average annual rainfall is 766.1 mm (1945 -2016) at the Bureau of Meteorology Perth Airport Station (Site No. 009021). The short term average annual rainfall since 1975 is 712.8 mm, reflecting a 7% reduction compared to the long term average, consistent with the trend over the southwest of WA.

The average annual pan evaporation is approximately 1100 mm (Luke et al, 1988).

2.2 Topography

Whitfield St grades from approximately 13 mAHD at Guildford Rd on the northern end to approximately 3 mAHD at Ashfield Flats/Sandy Beach Reserve on the southern end (Figure 2).

2.3 Geology and Acid Sulphate Soils

For most of the WSBB, the Perth 1:50 000 Environmental Geology map (GSWA, 1986) shows the surface geology as sand over Guildford Clay, with the sand described as "*very light grey at surface, yellow at depth, fine to medium-grained, sub-rounded quartz, moderately well sorted of eolian origin*". However, a review of residential bores in the area show clay is present below the topsoil, down to depths of approximately 12 to 16 m (Figure 3).

The southern portion of the WSBB is mapped as sandy silt, described as "*light yellow brown, blocky, mottled, some fine to medium-grained sand, soft when moist, variable clay content*" (Figure 3). This area coincides with the Swan River Flood Fringe.

Infiltration in the natural soil will be poor.

2.4 Acid Sulphate Soils

Acid Sulphate Soil (ASS) risk mapping (DER, 2014) shows most of the WSBB has a moderate to low risk of ASS occurring within 3 m of natural soil surface (Figure 3).

The southern portion of the WSBB has a high to moderate risk of ASS occurring within 3 m of the natural soil surface (Figure 3). This area coincides with the Swan River Flood Fringe.

2.5 Wetlands

The WSBB does not go through any wetlands, terminating at the boundary of Ashfield Flats. However, Ashfield Flats itself is classified as an "Estuary – Peripheral" wetland (DEC, 2013). Parts of it has been evaluated as a Conservation Wetland (Figure 3). Stormwater runoff from the WSBB that exceeds the capacity of the piped drainage system will flow towards Ashfield Flats.

2.6 Surface Hydrology

Department of Water (DoW, 2009) has mapped the 1% Annual Exceedance Probability (AEP) floodplain for the Swan River (equivalent to the 100 yr Average Recurrence Interval (ARI) floodplain). The flood fringe is an area of the floodplain outside the main flow path (the 'floodway') which is generally covered by still or very slow moving waters during a 1% AEP flood (WRC, 2000).

Approximately 268 m of the southern end of WSBB (south of Reid St) is located within the Swan River Flood Fringe (Figure 3).

2.7 Groundwater Hydrology

Maximum groundwater level contours are shown in Figure 2. Maximum groundwater level ranges from approximately 11.5 mAHD at the northern most end of the WSBB (WRC, 1997), and would approach 0 mAHD at the southernmost end where it is close to the Ashfield Flats wetland and Swan River.

Between Guilford Rd and Watson St, maximum groundwater level is generally very close to surface (within 0.5 m). Between Watson St and Reid St, there is more clearance to maximum groundwater level (greater than 0.5m).

3. WHITFIELD ST DRAINAGE

The existing stormwater drainage network along Whitfield St is shown in Figure 4. Generally, there are grated gully pits on both sides of the road which collect stormwater. Stormwater from Whitfield St is discharged into a Water Corporation open drain which conveys flow to the Swan River.

4. WATER SENSITIVE URBAN DESIGN CONCEPTS

The Town of Bassendean's Local Planning Policy No. 3 (ToB, 2014) recommends the adoption of WSUD for redevelopments within the catchment. With the upgrade of Whitfield St into a Bike Boulevard, there is an opportunity to retrofit WSUD structures into its design, both to manage stormwater runoff and to improve the streetscape.

An overview of the WSUD concepts that could be incorporated into the WSBB is presented below. WSUD structures being integrated into the Whitfield Street Bike Boulevard should meet the following objectives:

- Appropriate for environmental conditions of the Whitfield Street Bike Boulevard. Designs should take into account the low permeability of the natural clay soils and portion of the WSBB within the flood fringe.
- Able to be retrofitted into the existing street and tie in with existing drainage services
- Provide water quality treatment for stormwater runoff. Ideally, WSUD structures would be sized for the 4 Exceedances per Year (EY) event (equivalent to the 3 month ARI). The rainfall depth for the 4 EY 1 hr event in Bayswater is 10.3 mm. This would provide >95% treatment efficiency (Wong, 2006). However it is acknowledged that as this is a retrofit, proposed

WSUD structures may be limited by existing infrastructure, and implementation of any WSUD concepts within the WSBB would be an improvement over existing conditions.

- Not impede the drainage pathways of events greater than the 4 EY (ie. have a bypass mechanism)
- Not require long term irrigation beyond plant establishment. Native or xeric vegetation should be selected as per the Monash University (2014) vegetation guidelines for stormwater biofilters.

4.1 Raingardens/Biofiltration Pockets

Raingardens are gardens that also act as biofiltration systems. A lined biofiltration system with submerged zone configuration is recommended due to site conditions. Raingarden concept is in Figure 5.

The clay present on site would act as a liner, whereas the submerged zone would provide both a water source for vegetation during the dry summers and an anaerobic zone to promote denitrification. This system is also suitable for treating Cu and Zn (FAWB, 2015).

Specifications for the amended soil, transition layer and submerged zone are in Figure 5. The depths of the transition layer and submerged zone are to be determined during detailed design, and will have to be adapted to ensure that the system is above the shallow groundwater table. To further reduce the total depth of the system, the drainage layer specified in FAWB (2015) may be substituted as subsoil pipes packed with gravel, wrapped in geotextile fabric and laid within the submerged zone at the base of the system (Figure 5).

Raingardens can be sized and shaped as needed and can be located in verges, between parking bays or within the angled slow point treatments which are proposed approximately every 80 m (Flyt, 2017). Example cross sections of possible configurations are in Figure 6. Where there is an existing grated pit close to the proposed raingarden, the grated pit could be retrofitted into a bubbleup/overflow pit within the raingarden, or large flows could bypass the raingarden and flow into the grated pit downstream. If there are no existing grated pits nearby, a new bubbleup may have to be installed within the raingarden and connected to the existing stormwater drainage network.

Due to the low permeability of the natural clay soils, subsoil drainage is required to allow the raingarden to function as intended. As long as the subsoil outlet is raised to create a submerged zone (Figure 6), the subsoil may connect to either a bubbleup within the raingarden or to an external pit downstream.

Raingardens may require more maintenance within the Swan River flood fringe (Figure 3) due to mulch or soil media being washed away during floods. However, as floods are infrequent events, the benefits of a raingarden may outweigh the risk. Should this be undesirable, tree pits are proposed as an alternative in the flood fringe.

4.2 Tree Pits

Tree pits typically contain a single tree, have a smaller treatment area than raingardens, and may have to be spaced at more regular intervals. However they can be designed with a grate or permeable paving, which prevents soil media from washing away in a flood. Tree pit concept is in Figure 7.

Tree pits should be either located immediately upstream of an existing grate so large events can bypass the tree pit and enter the stormwater drainage system (Figure 6), or an overflow pit that connects to the existing stormwater drainage should be provided within the tree pit (Figure 7).

Due to the clay acting as an impervious liner, subsoil drainage would have to be installed below the tree pit to prevent the tree from being waterlogged. The tree pit and subsoil should be above AAMGL to avoid draining the groundwater. The total depth of the tree pit can be reduced by forgoing the transition layer, and having subsoil pipes packed with gravel, wrapped in geotextile fabric and laid within the amended at the base of the system (Figure 6).

A root barrier is recommended on the sides of the pit to prevent damage to nearby drainage infrastructure and other services. The Town may opt to not have a root barrier at the base of the tree pit, to allow trees to root more deeply and negate long term irrigation requirements.

Tree pits can be located in verges, on the road between parking bays and within angled slow point treatments (Figure 7). Example cross sections are in Figure 6 and specifications for the amended soil are in Figure 5.

4.3 Permeable Paving

Permeable paving may be installed in the car parking bays. Concept is in Figure 8. Sand would have to be installed below the permeable paving to allow runoff to infiltrate, and subsoils should be installed to prevent the area under the car parking bays from becoming waterlogged. Figure 8 shows an example of how the subsoil under the car parking bays can be integrated with subsoils from the raingarden.

The underlying natural soil has been assumed to be clay with very low permeability. Geotechnical testing may need to be undertaken to determine actual site conditions. If sand with hydraulic conductivity greater than 5 m/day is present, subsoils may not be required.

5. REFERENCES

Department of Water (2008) *LiDar Contours*

Department of Water (2009) *FMP 100 Year ARI Floodway and Flood Fringe Areas*

FAWB (2009) *Adoption Guidelines for Stormwater Biofiltration Systems*. Facility for Advancing Water Biofiltration, Monash University. June 2009.

Flyt (2017) Whitfield Street Bike Boulevard, Town of Bassendean: Schematic Design Plans – Supporting Technical Notes. Ref. 81113-259-FLYT-TEN-0003a. 22 May 2017.

Luke, G.L., Burke, K.L. & O' Brien, T.M. (1988). *Evaporation Data for Western Australia – Technical Report 65*. Perth: W.A, Department of Agriculture, Division of Resource Management.

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Geological Survey of WA (1986) *1: 50 000 environmental map - Perth (2034-II, 2034-III, 2134-III)*

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New Water Ways (nd) *Tree Pits Fact Sheet.*

Town of Bassendean (2014) *Local Planning Scheme No. 10: Local Planning Policy No. 3 – Water Sensitive Design.*

Town of Bassendean (2017) *Drainage*, June 2017.

Water and Rivers Commission (1997) *Perth Groundwater Atlas.*

Water and Rivers Commission (2000) *Water Facts 14: Floodplain Management.* July 2000.

Wong, T.H.F (2006) Australian Runoff Quality: A guide to Water Sensitive Urban Design. Engineers Australia.

JDA CONSULTANT HYDROLOGISTS

Data Source: Flyt (2017) Whitfield St Bike Boulevard: Schematic Design Plans

JDA

Job No. J6412
Scale 1:10,000 @A4
Coordinate System: GDA 94, Zone 50

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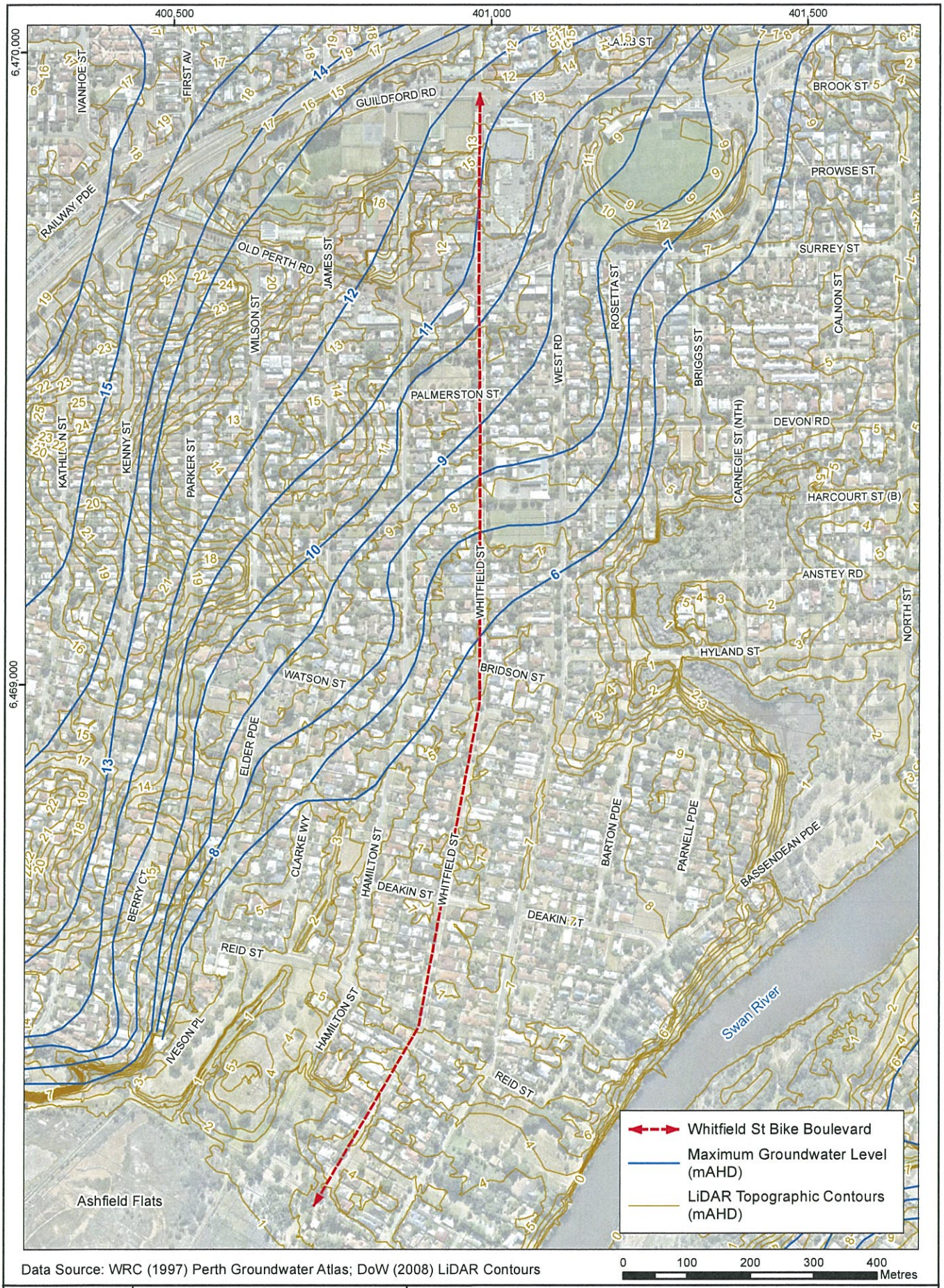
Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts

Figure 1: Location Plan



Data Source: WRC (1997) Perth Groundwater Atlas; DoW (2008) LiDAR Contours

JDA

Job No. J6412
Scale 1:8,000 @A4
Coordinate System: GDA 94, Zone 50

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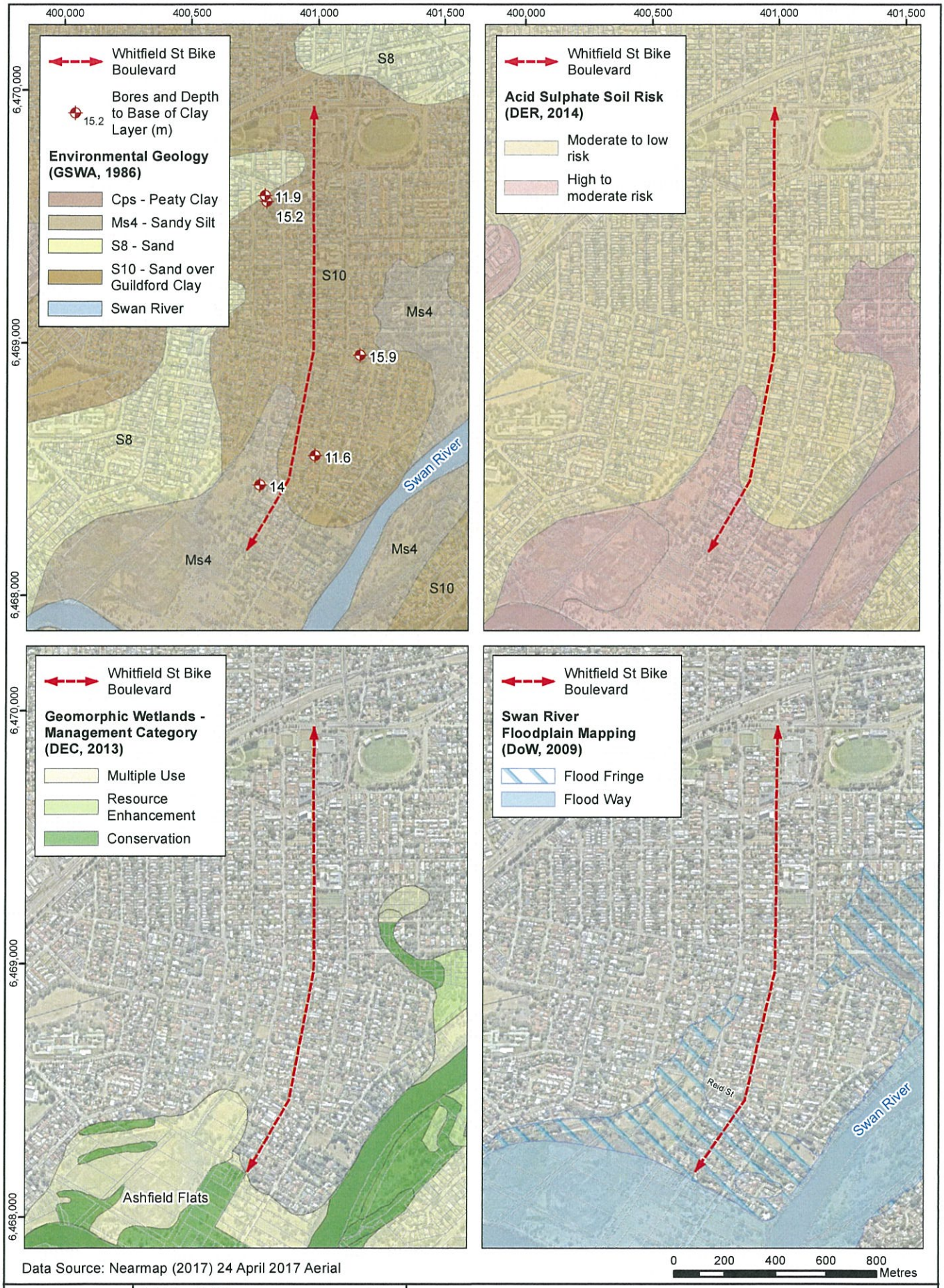
Flyt Pty Ltd
Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts

Figure 2: Topography and Groundwater



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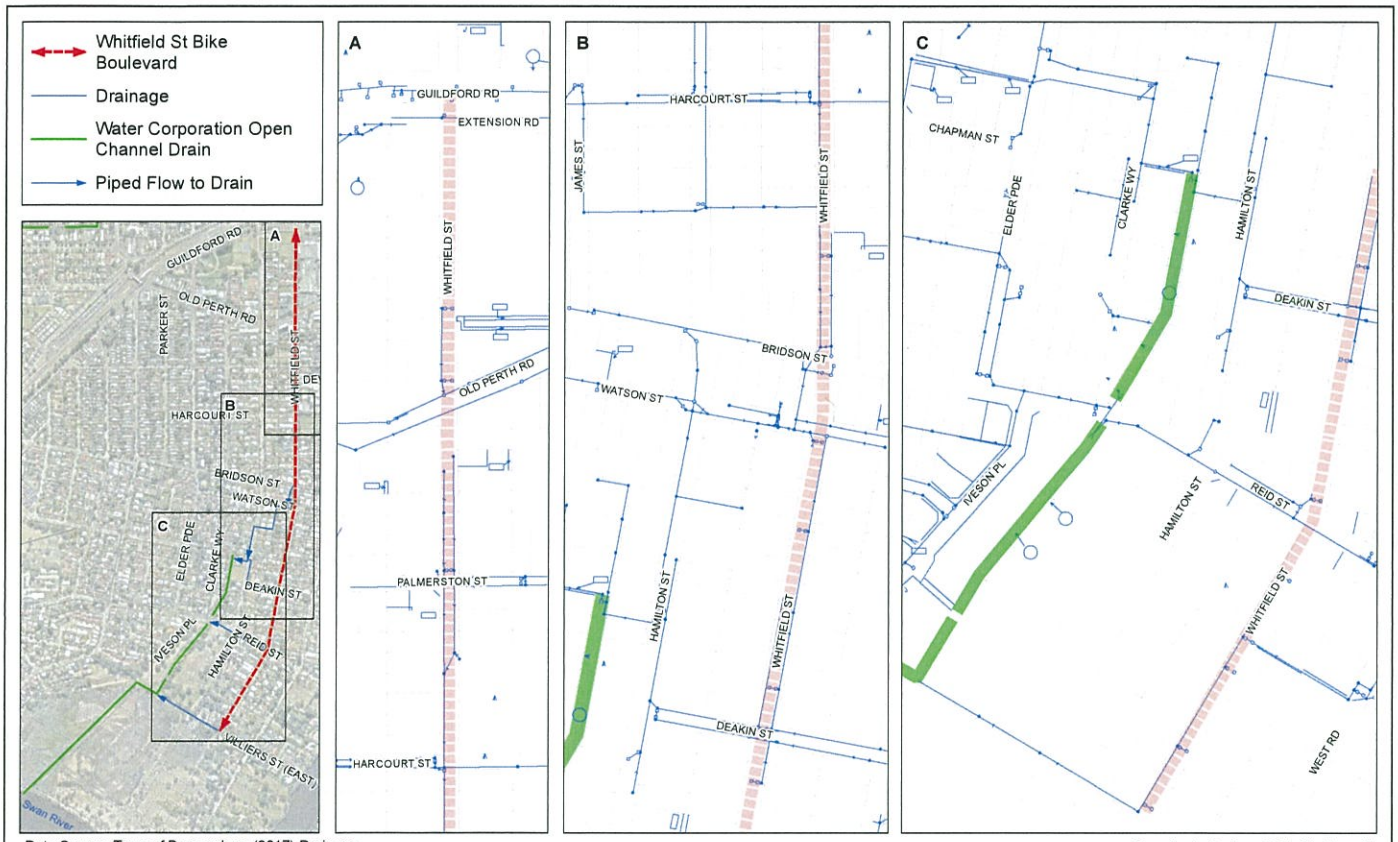
Flyt Pty Ltd
Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts

Figure 3: Surface Geology, ASS, Wetlands & Floodplains



Data Source: Town of Bassendean (2017) Drainage

Coordinate System: GDA 94, Zone 50

JDA

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Scale: 1:18,000 @A4
0 100 200 300 400
Meters

N

Flyt Pty Ltd
Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts
Figure 4: Existing Drainage Network

Plant Selection and Density:
As per South-West Vegetation Guidelines (Monash University, 2014)

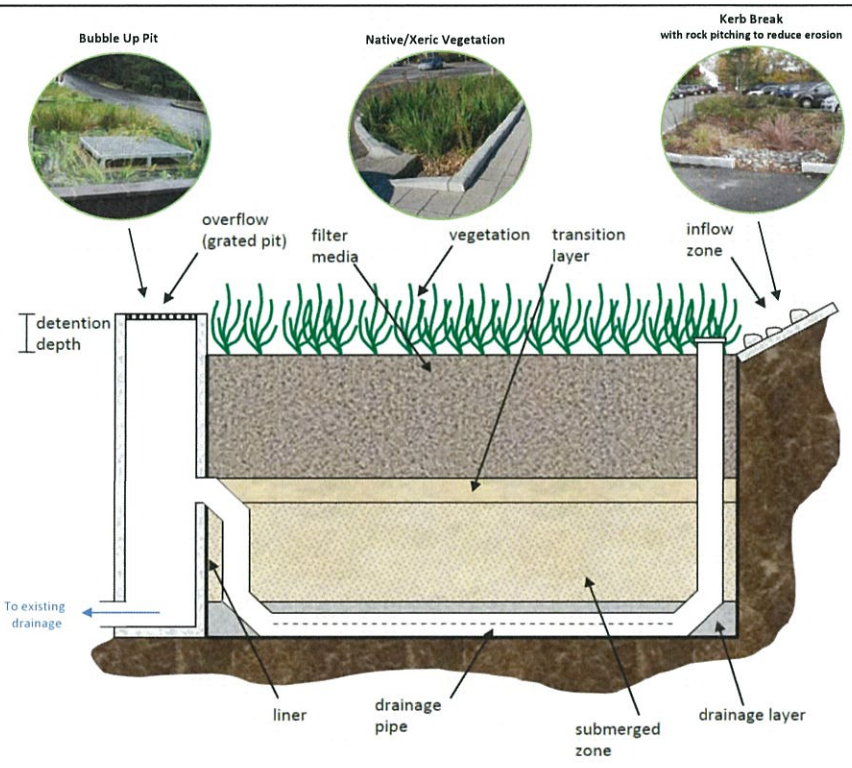
Amended Soil/Filter Media:
- Minimum 300mm thick.
- 2.5 m/day ≤ Hydraulic Conductivity ≤ 7.5 m/day once compacted.
- Total clay and silt fraction <3% in total (w/w)
- Organic matter content <5% in total (w/w)
- Phosphorus content (Colwell) <80mg/kg.
- PRI ≥ 5
- Infiltration testing of material prior to installation and again once construction is complete.

Installation of Amended Soil
Prior to the placement of amended soil profile, the first 300 mm of in situ material at the base of the biofiltration facility is to be ripped to maximise porosity. The amended soil shall be placed and graded using low-ground-contact pressure equipment or by excavators and/or backhoes operating on the ground adjacent to the biofiltration facility where possible. Use of heavy equipment should be minimised within the perimeter of the biofiltration facility before, during and after the placement of the amended soil. Planting should occur as soon as amended soil has been installed.

Transition Layer:
As per Adoption Guidelines for Stormwater Biofiltration Systems (FAWB, 2015)

Submerged Zone:
- As per Adoption Guidelines for Stormwater Biofiltration Systems (FAWB, 2015)
- Include 5% (v/v) carbon source (mulch and hardwood chips) to drive denitrification. The carbon source needs to be low in nutrients.

Subsoil Drainage:
- Laid within submerged zone at the base
-14mm, 10mm and 5mm (equal third composition) granular material (granite or similar approved) compacted and shaped to fit pipe barrel.
-Geotextile fabric to wrap around drainage aggregate

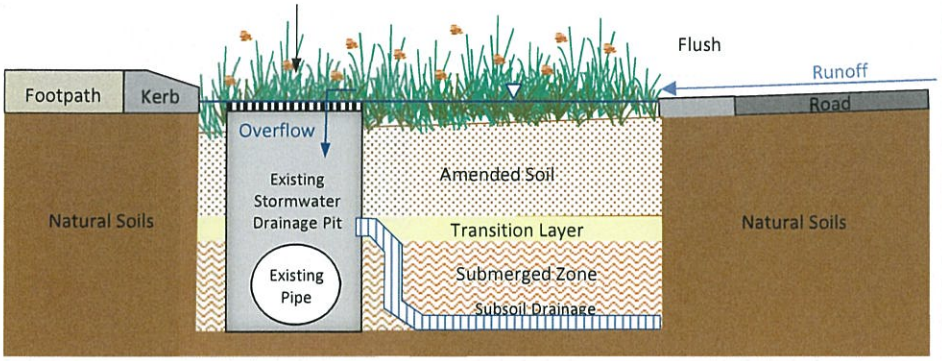


Lined Biofiltration System/Raingarden with Submerged Zone

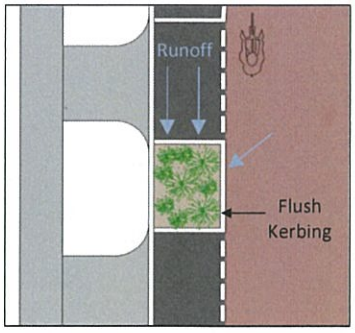
Data Source: FAWB (2009) Adoption Guidelines for Stormwater Biofiltration Systems

Job No. J6412

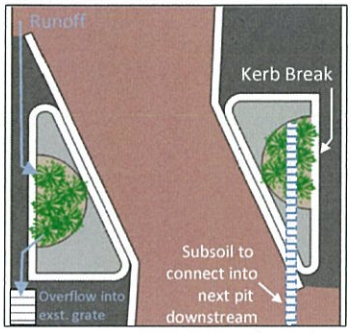
Flyt Pty Ltd
Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts
Figure 5: Raingarden Concept



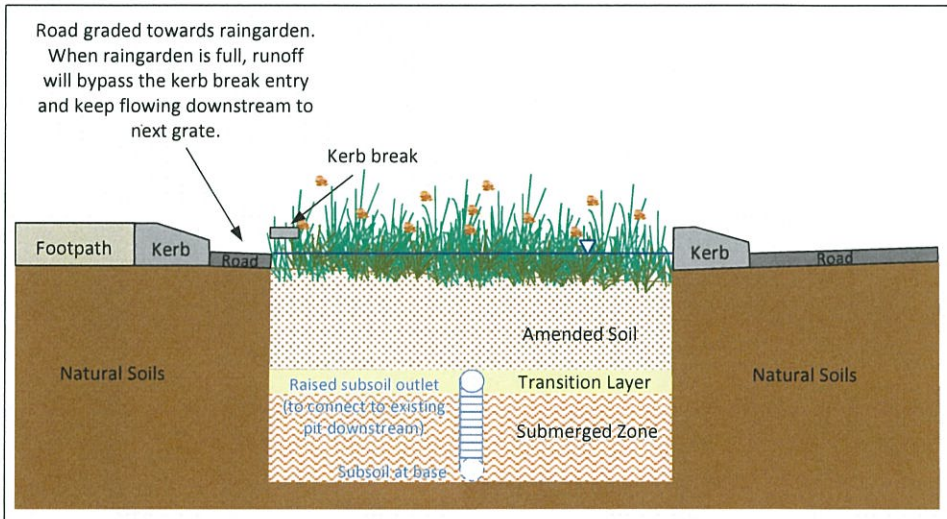
Raingarden with Bubbleup Overflow Mechanism
Not to scale



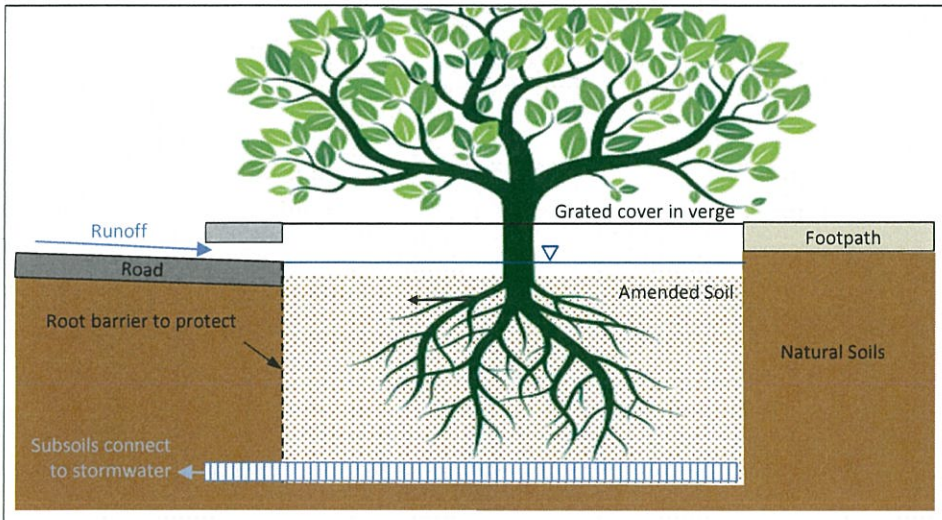
Between Car Parking Bays



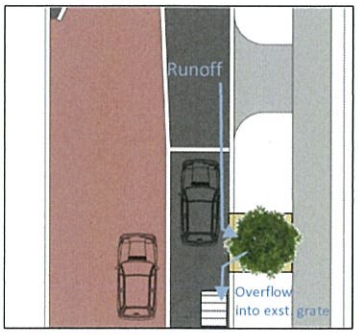
Angled Slow Point Treatments



Raingarden with Bypass Mechanism and Raised Subsoil Outlet Connecting Downstream
Not to scale



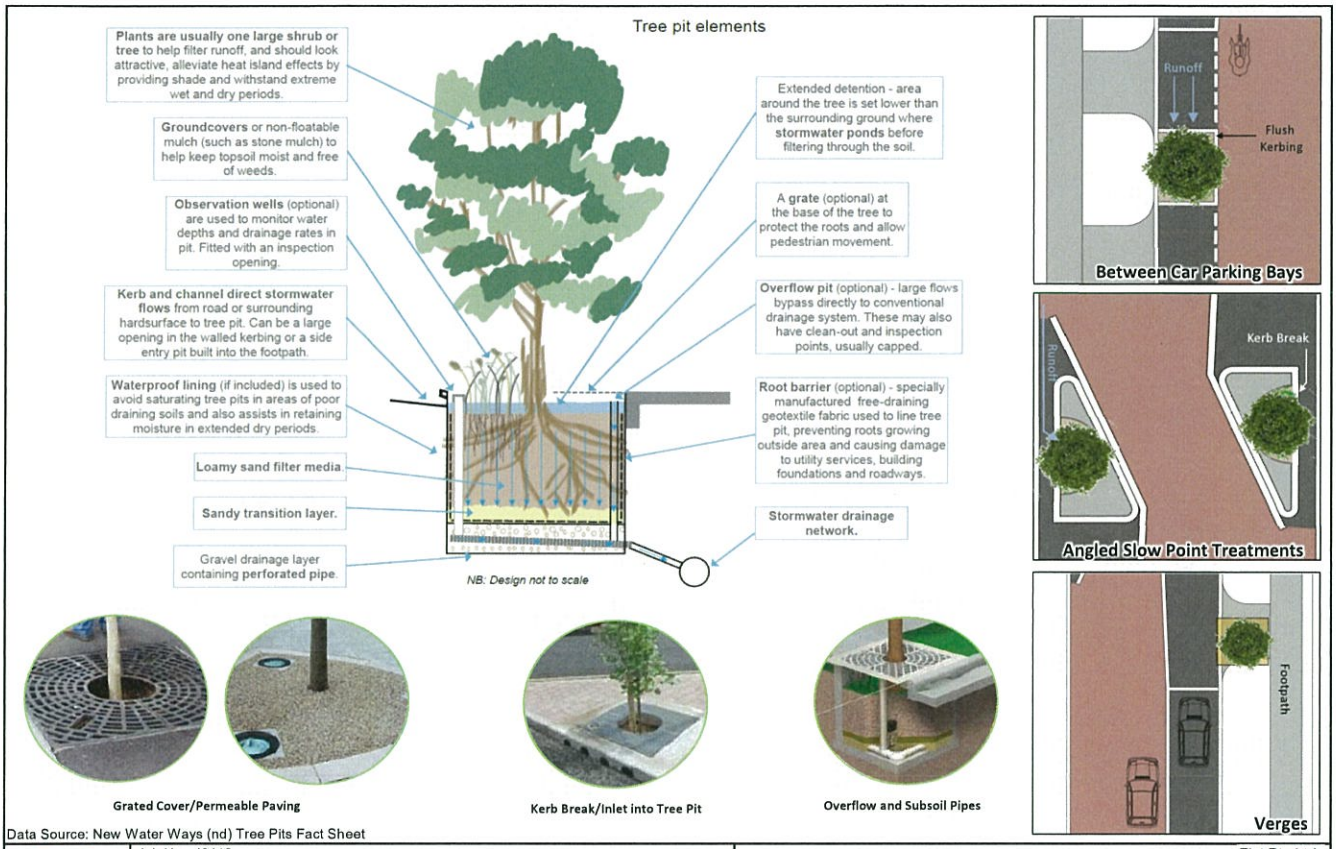
Tree Pit with Bypass Mechanism
Not to scale



Verges

Data Source:

JDA	Job No. J6412 	Flyt Pty Ltd Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts **Figure 6: Example Cross Sections**



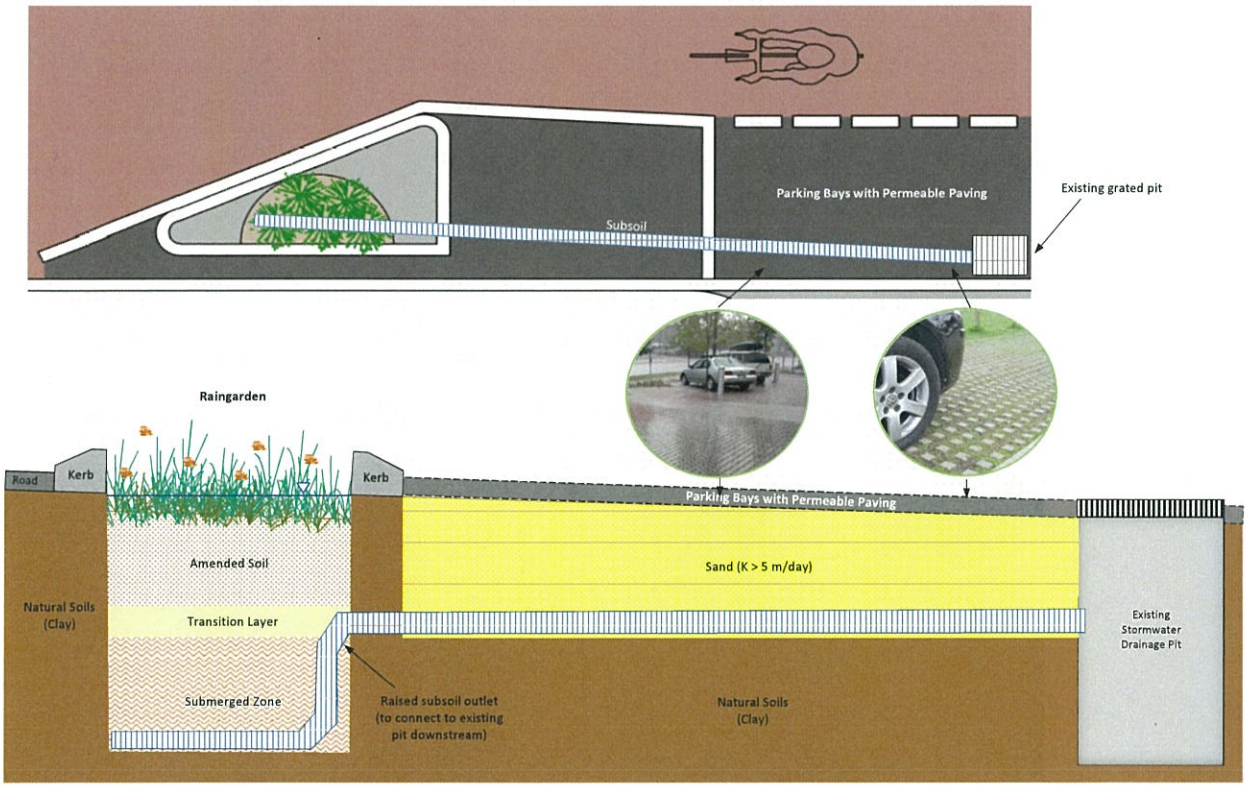
Data Source: New Water Ways (nd) Tree Pits Fact Sheet

Job No. J6412

Flyt Pty Ltd

Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts

Figure 7: Tree Pit Concept



Data Source:

JDA	Job No. J6412 Not to Scale	Flyt Pty Ltd Whitfield St Bike Boulevard, Town of Bassendean: WSUD Concepts **Figure 8: Permeable Paving Concept and Integration with Raingarden**

Technical Note	81113-259-FLYT-TEN-0003b
PROJECT	**Whitfield Street Bike Boulevard, Town of Bassendean** Schematic Design Plans – Supporting Technical Notes
Date Issued	09/06/17

1. Introduction

The Town of Bassendean (ToB) was successful in its application for funding by the Department of Transport (DoT) for the delivery of the Project Scope and Concept Design of the Whitfield Street Bike Boulevard (Guildford Road to Sandy Beach Reserve).

The Whitfield Street Bike Boulevard forms part of the second phase of bike boulevard schemes being considered by DoT, following on from the three initial pilot projects planned, designed and at various stages of delivery/construction.

A bike boulevard is a quiet, low-traffic and low speed street designed to allow cyclists and cars to share the street space safely. Bike boulevards are a type of on-street cycleway where speed limits have been reduced and cyclists are given right of way. Target users are not fast cyclists, but are mums, dads, children, senior citizens and others making short to medium length trips on bikes to schools, train stations, shops, community or recreational facilities. Bike boulevards in Perth will have a posted 30km/h speed limit.

Figure 1 shows a series of images of the first completed bike boulevard pilot project in Perth, Shakespeare Street Bike Boulevard in Mount Hawthorn. The images show (in a clockwise direction) the on-street stencil used as an entry statement to the bike boulevard, the angled slow points used to slow vehicles and formalise on-street parking, the 'honeycomb' linemarkings used to signify pedestrian crossing locations and the planted treatments within the angled slowed point islands.

Figure 1 – Shakespeare Street Bike Boulevard in Mount Hawthorn (images from December 2016)

2. Bike Boulevard Route Context

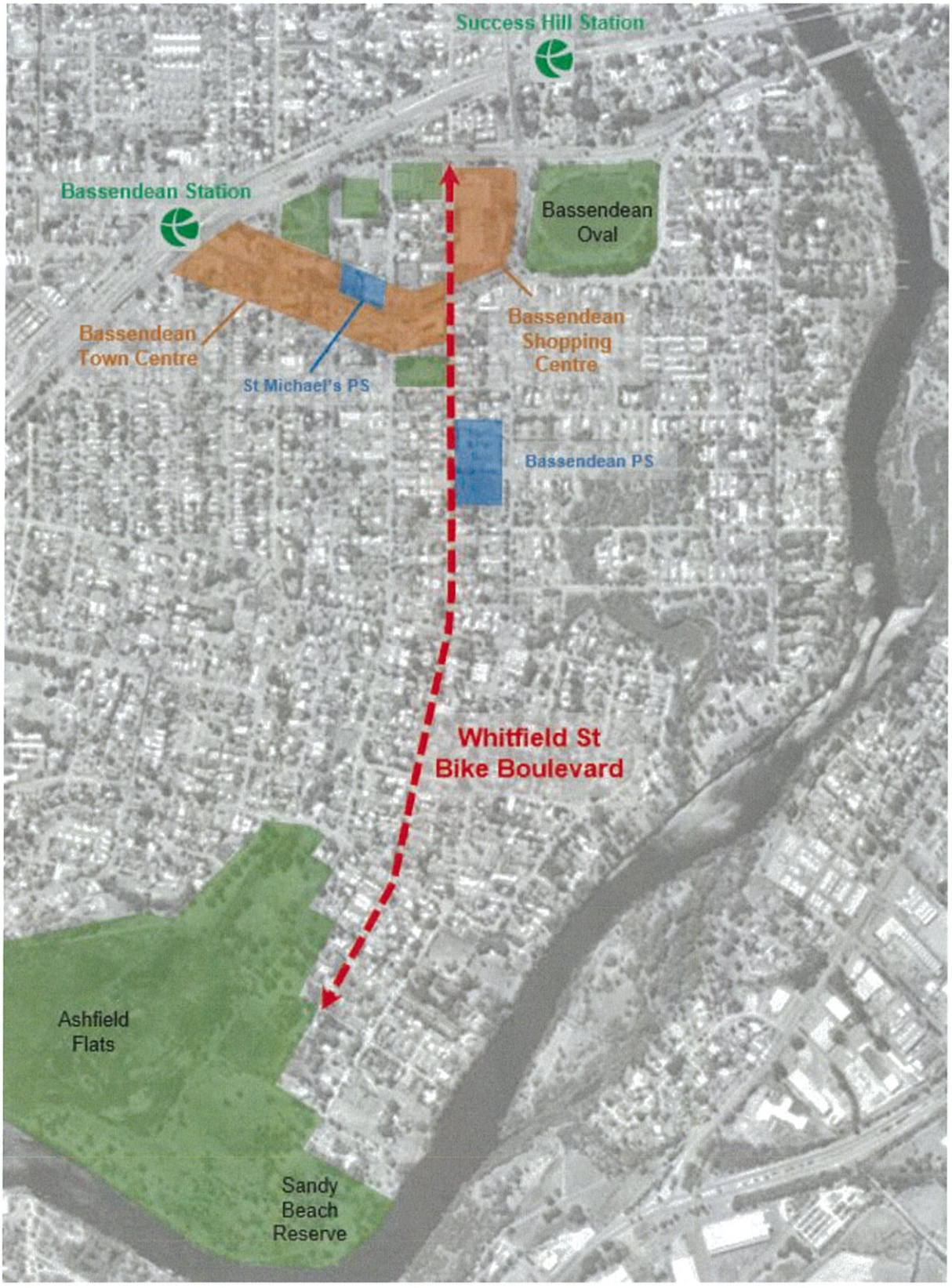
2.1 Land Use

The proposed Whitfield Street Bike Boulevard route connects and serves a range of commercial areas, train stations, education facilities and recreation facilities. The details of which are provided below.

- Commercial areas:
  - Bassendean Shopping Centre.
  - Bassendean Town Centre (Council Offices, Library, St Joseph's Church, St Mark's Church).
- Train stations:
  - Bassendean Station (Midland Line).
  - Success Hill Station (Midland Line).
- Education facilities:
  - Bassendean Primary School.
  - St Michael's Primary School (and St Joseph's Centre).
- Recreation facilities:
  - Sandy Beach Reserve / Ashfield Flats.
  - Palmerston Square.
  - Bassendean Oval (home of the Swan Districts Football Club).
  - Bassendean Tennis Club / Bassendean Bowls Club.
  - Bassendean Civic Gardens.

Figure 2 shows the location of the Whitfield Street Bike Boulevard in context to the existing land uses detailed above.

Figure 2 – Whitfield Street Bike Boulevard in context to existing land uses (map source: Nearmap)



2.2 Existing Bike Network

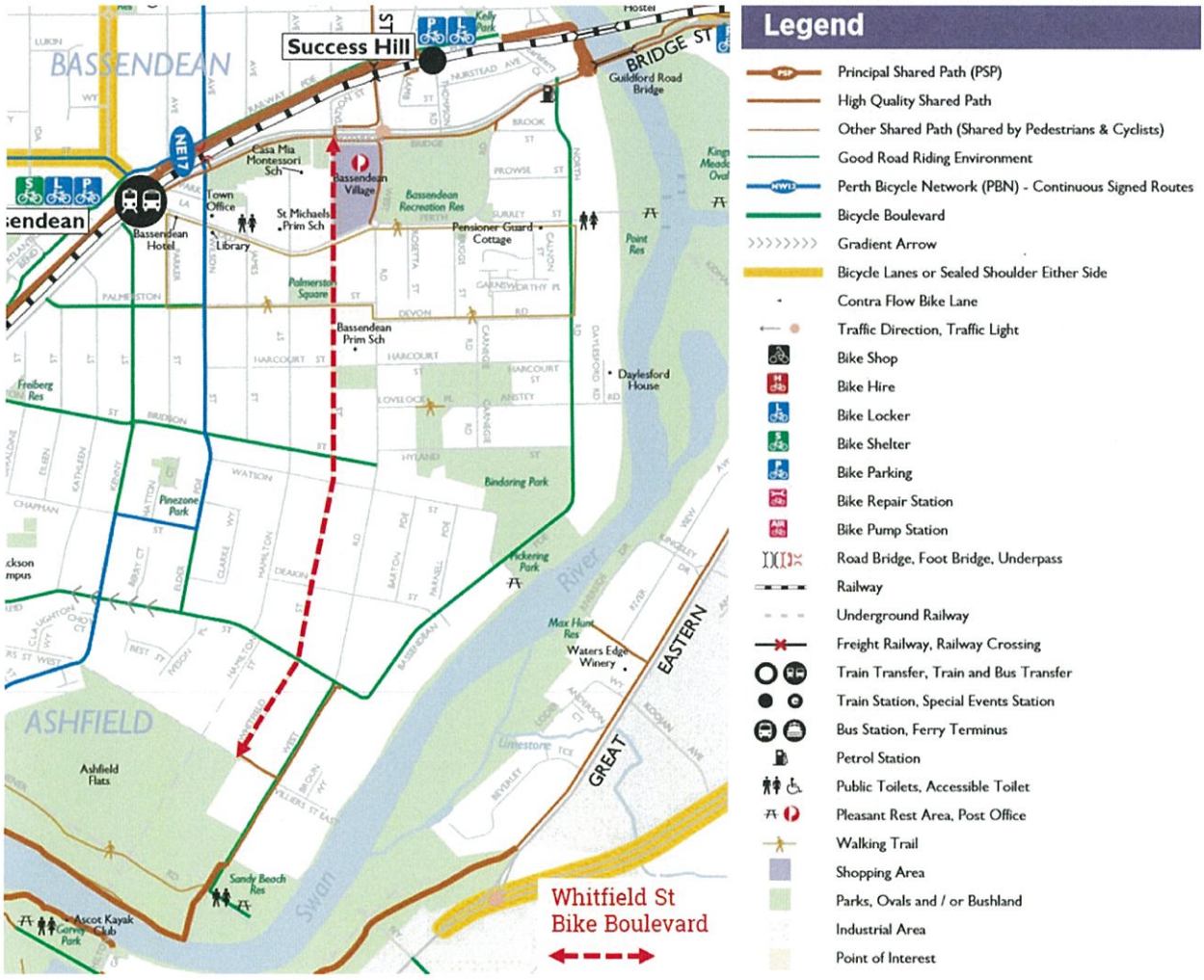
The Whitfield Street Bike Boulevard will provide a strategic connection within the bike network that connects the residential catchment of Bassendean, between the Swan River and the Kenny Street corridor, with the commercial and education land uses at the northern end of the bike boulevard and the recreational facilities at the southern end of the bike boulevard.

Within proximity of the Whitfield Street Bike Boulevard are the following existing bike routes:

- Midland Line Principal Shared Path (PSP):
  - Provides a strategic connection alongside the Midland train line into central Perth.
- Shared path connection from the Midland Line PSP to northern end of Whitfield Street:
  - Shared path along the western side of West Road and southern side of Guildford Road.
  - The crossing of Guildford Road via the traffic signal controlled West Road/Guildford Road intersection.
  - Provides a connection between Whitfield Street and Success Hill Station.
- Perth Bicycle Network (PBN) Route NE14 (continuous signed route):
  - Provides a connection from the Midland Line PSP (to the north of Bassendean Station) down through Bassendean Town Centre and runs parallel to the Whitfield Street corridor (350m to the west) and runs along the northwest edge of Ashfield Flats down to Baywater's eastern Swan River foreshore.
  - The crossing of Guildford Road via an underpass and the continuous signed route runs along Wilson Street and Elder Parade corridors.
- High quality shared path to river foreshore to the south of Whitfield Street:
  - Shared path connection between the southern end of Whitfield Street and West Road.
  - Shared path connection along the eastern side of West Road between Reid Street and Sandy Beach Reserve.
  - High quality shared path from Sandy Beach Reserve along the Ashfield Flats Swan River foreshore.
- The following roads are identified as providing a 'good road riding environment' for cyclists:
  - Bridson Street/Shackleton Street – between West Road and Guildford Road.
  - North Road/Bassendean Parade – between Guildford Road and West Road.
  - West Road – between Reid Street and Sandy Beach Reserve.
  - Reid Street – between West Road and Ashfield Reserve/Ashfield Station.
  - Kenny Street – between Guildford Road/Bassendean Station and Hardy Road.

Figure 3 shows the location of the Whitfield Street Bike Boulevard in context to the existing bike network detailed above.

Figure 3 – Whitfield Street Bike Boulevard in context to existing bike network (source: DoT Bike Map)



2.3 Existing Public Transport Network

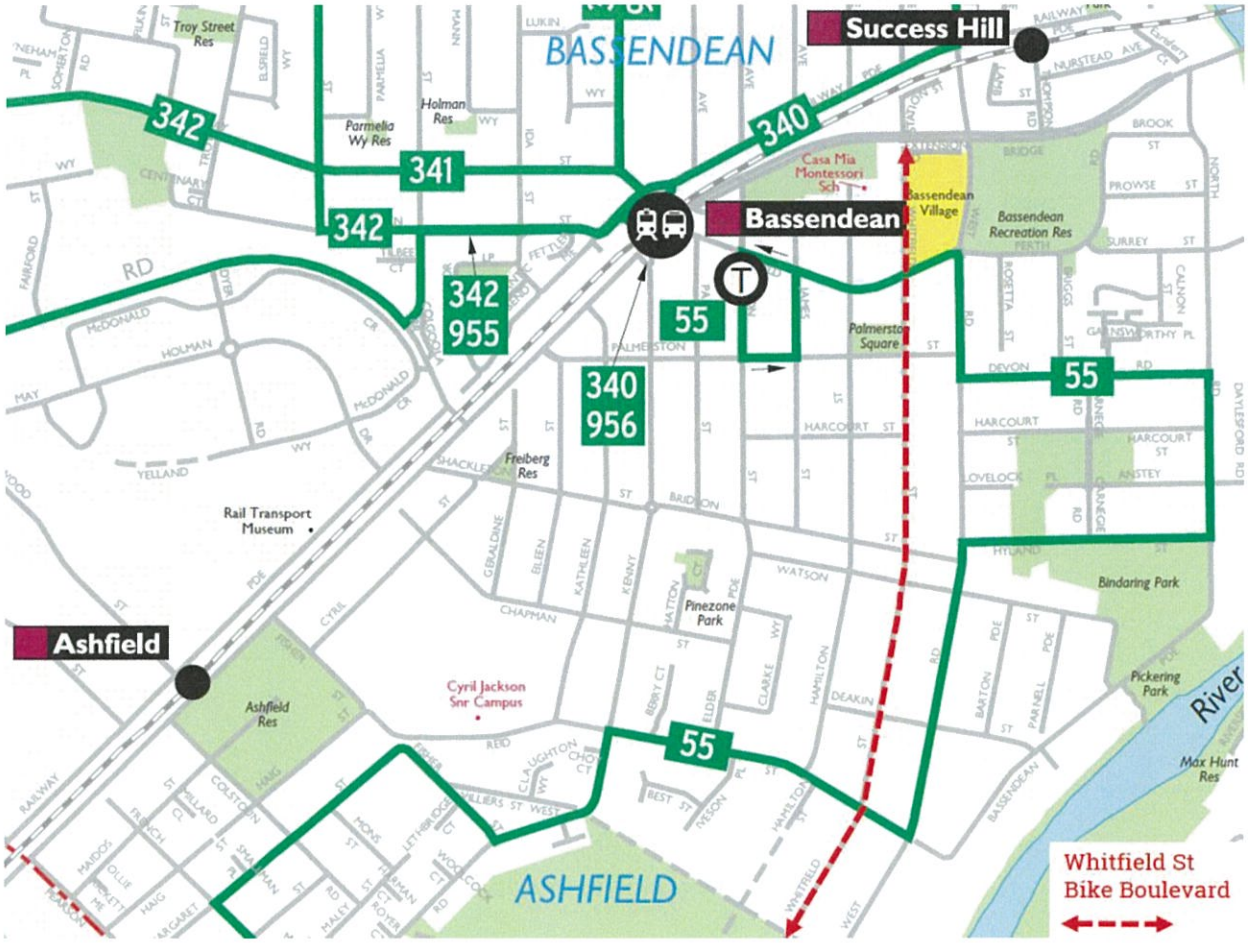
The Whitfield Street Bike Boulevard corridor twice crosses an existing bus route. Bus Route 55 crosses the bike boulevard corridor in the following locations:

- Whitfield Street/Old Perth Road intersection:
  - 22 eastbound and 23 westbound bus movements per weekday – total of 45 bus movements across the bike boulevard route per weekday.
  - 15 eastbound and 16 westbound bus movements per Saturday – total of 31 bus movements across the bike boulevard route per Saturday.
  - 11 eastbound and 12 westbound bus movements per Sunday – total of 23 bus movements across the bike boulevard route per Sunday.
- Whitfield Street/Reid Street intersection
  - 23 eastbound and 22 westbound bus movements per weekday – total of 45 bus movements across the bike boulevard route per weekday.
  - 16 eastbound and 15 westbound bus movements per Saturday – total of 31 bus movements across the bike boulevard route per Saturday.
  - 12 eastbound and 11 westbound bus movements per Sunday – total of 23 bus movements across the bike boulevard route per Sunday.

Bus Route 55 runs along Old Perth Road from West Road to Parker Street. The section of Old Perth Road between Whitfield Street and Guildford Road/Bassendean Station contains one westbound bus stop but no eastbound bus stop. The one westbound bus stop is a fully embayed bus stop.

Figure 4 shows the location of the Whitfield Street Bike Boulevard in context to the existing public transport network detailed previously.

Figure 4 – Whitfield Street Bike Boulevard in context to existing public transport network (source: PTA)



2.4 Bike Boulevard Route Details

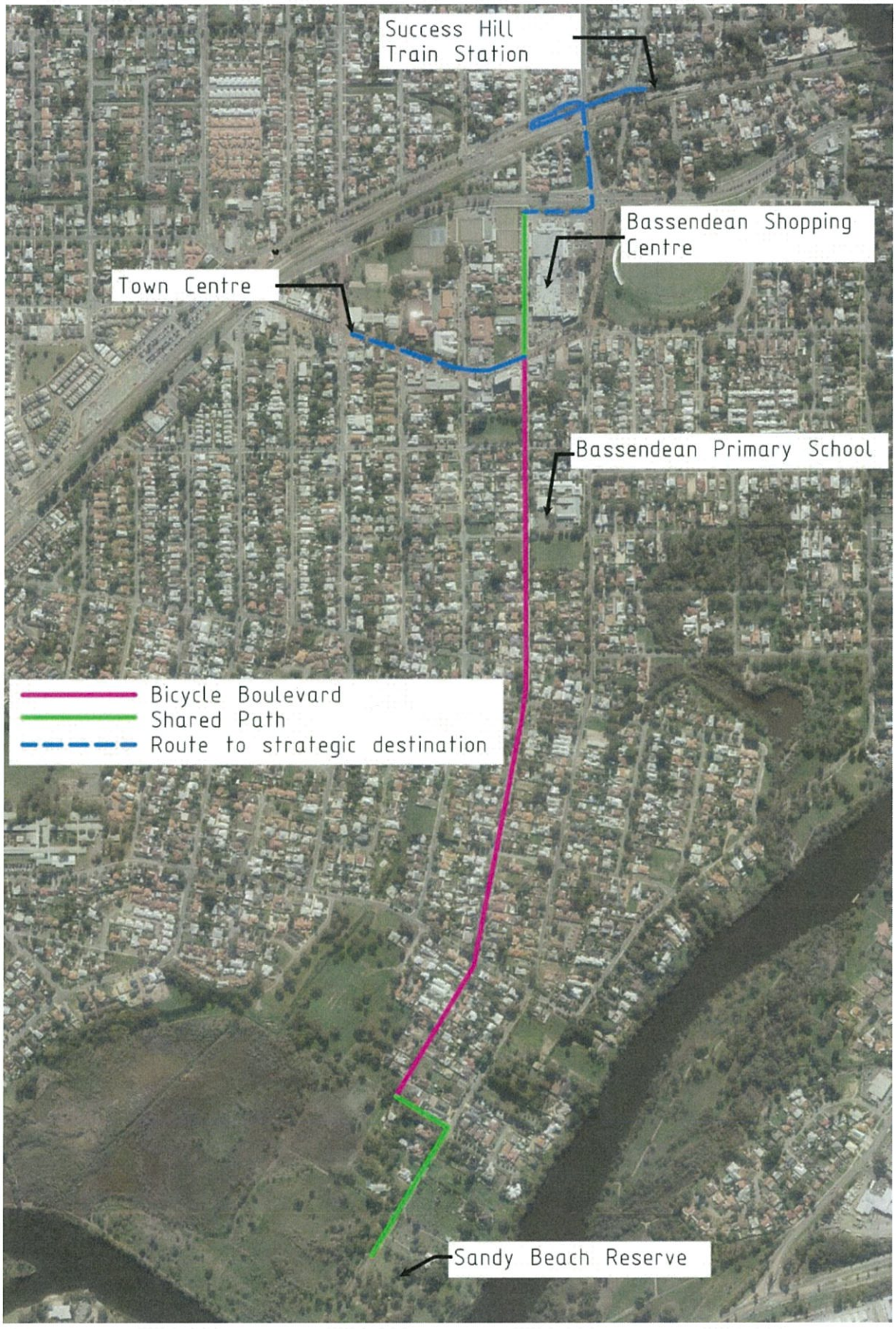
The route of the Whitfield Street Bike Boulevard has been developed by the ToB and supported by DoT through funding by the Department for the delivery of the Project Scope and Concept Design of the bike boulevard.

The route and initial ToB design intent for the bike boulevard can be summarised as follows:

- Primary Bike Boulevard Route:
  - Whitfield Street corridor between Old Perth Road and Ashfield Flats.
  - On-street bike boulevard treatment.
- Route alongside Bassendean Shopping Centre:
  - Whitfield Street corridor between Guildford Road and Old Perth Road.
  - Off-street shared path treatment.
- Connection to Success Hill Station/Midland Line PSP:
  - Link between Success Hill Station and Whitfield Street via Midland Line PSP, West Road shared path (western side of corridor) and Guildford Road shared path (southern side of corridor).
  - Use of existing PSP and existing shared path network.
- Connection to Bassendean Station/Bassendean Town Centre:
  - Old Perth Road corridor between Whitfield Street and Guildford Road (Bassendean Station).
  - On-street treatment.
- Connection to Ashfield Flats/Sandy Beach Reserve:
  - Link between southern terminus of Whitfield Street and Sandy Beach Reserve car park via Whitfield Street-West Road shared path connection and West Road shared path (eastern side of the corridor) to Ashfield Flats/Sandy Beach Reserve/Swan River foreshore shared path network.
  - Use of existing shared path network.

Figure 5 shows the Whitfield Street Bike Boulevard route and initial ToB design intent.

Figure 5 – Whitfield Street Bike Boulevard route and initial ToB design intent (source: ToB)



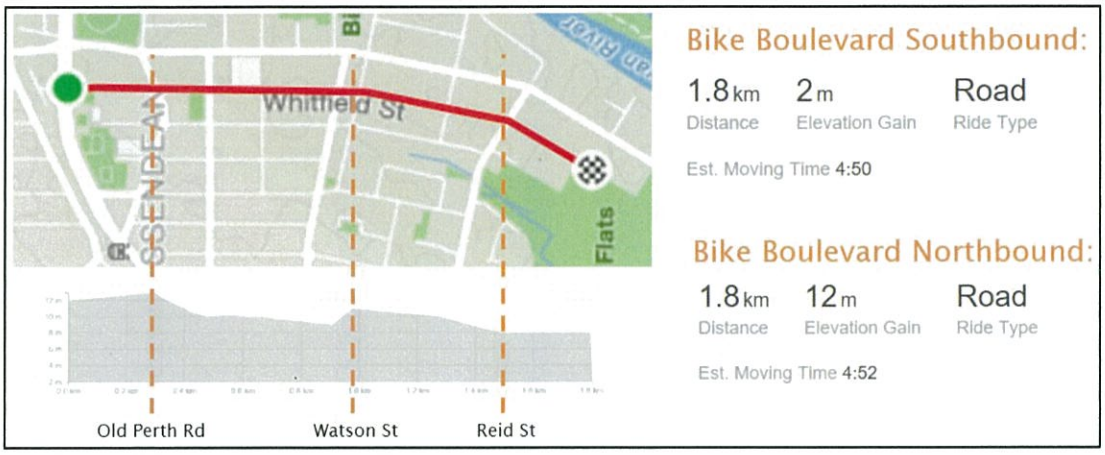
Whitfield Street Bike Boulevard Route Attributes

The primary Whitfield Street Bike Boulevard route and connection alongside Bassendean Shopping Centre has the following route attributes:

- Whitfield Street between Guildford Road and Ashfield Flats:
  - 1.8km route length.
  - Approximate 5 minutes to cycle from start to finish.
  - Relatively flat gradient with an approximate 5m decline between Guildford Road and Ashfield Flats (i.e. slight decline down toward the Swan River foreshore).

Figure 6 shows the route attributes taken from the Strava cycling app.

Figure 6 – Bike Boulevard route attributes between Guildford Road and Ashfield Flats (source: Strava)



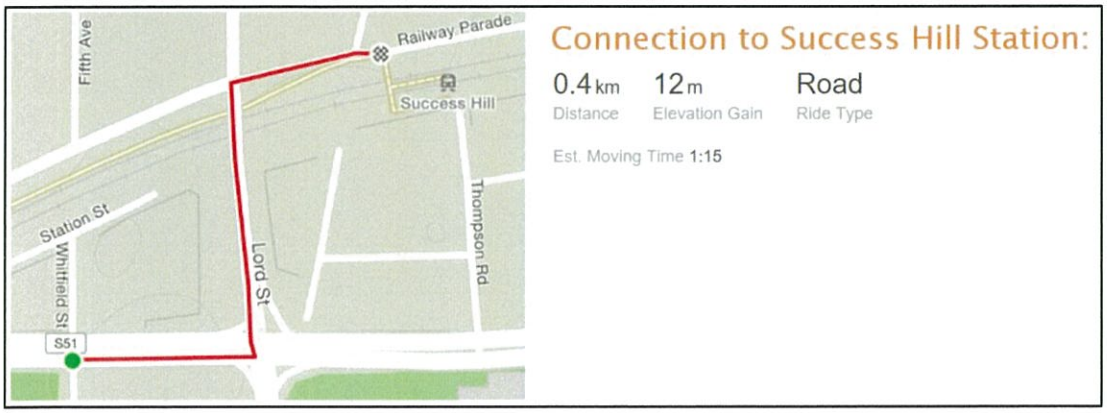
Connection to Success Hill Station Route Attributes

The connection to Success Hill Station via the Midland Line PSP, West Road shared path and Guildford Road shared path has the following route attributes:

- Whitfield Street to Success Hill Station:
  - 0.4km route length.
  - Approximate 1½ minutes to cycle from start to finish.
  - 12m elevation gain from Whitfield Street to Success Hill Station (primarily due to the incline along the West Road shared path to go up and over the rail line).

Figure 7 shows the route attributes taken from the Strava cycling app.

Figure 7 – Connection to Success Hill Station route attributes (source: Strava)



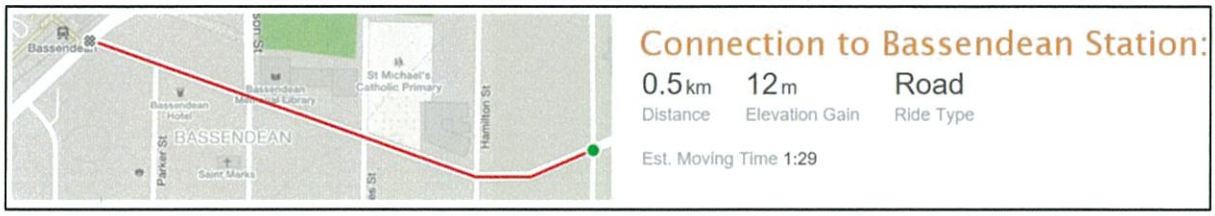
Connection to Bassendean Station Route Attributes

The connection to Bassendean Station via Old Perth Road has the following route attributes:

- Whitfield Street to Bassendean Station:
  - 0.5km route length.
  - Approximate 1½ minutes to cycle from start to finish.
  - 12m elevation gain from Whitfield Street to Bassendean Station (an incline along Old Perth Road from Hamilton Street up to Guildford Road/Bassendean Station).

Figure 8 shows the route attributes taken from the Strava cycling app.

Figure 8 – Connection to Bassendean Station route attributes (source: Strava)



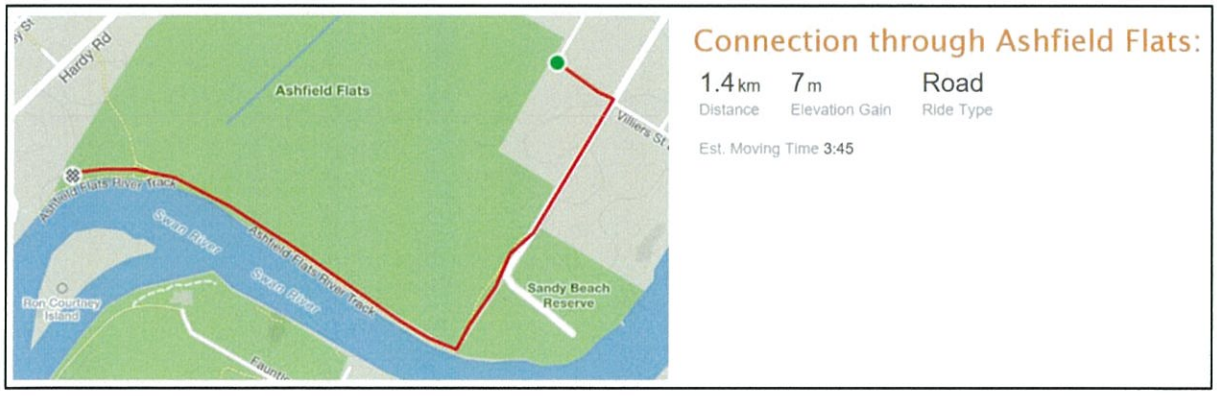
Connection through Ashfield Flats/Sandy Beach Reserve/Swan River Foreshore Route Attributes

The connection through Ashfields Flats/Sandy Beach Reserve/Swan River foreshore has the following route attributes:

- Whitfield Street to Ashfield Flats/Sandy Beach Reserve/Swan River foreshore:
  - 1.4km route length.
  - Approximate 4 minutes to cycle from start to finish.
  - 7m elevation gain from Whitfield Street to Ashfield Flats (due to a series of very minor inclines along the route).

Figure 9 shows the route attributes taken from the Strava cycling app.

Figure 9 – Connection through Ashfield Flats route attributes (source: Strava)



2.5 Existing Road Hierarchy

The Whitfield Street Bike Boulevard corridor (between Guildford Road and Ashfield Flats) is designated under the Main Roads WA Road Hierarchy as an Access Road. The vast majority of roads within the vicinity of the bike boulevard corridor are designed as Access Roads.

The Whitfield Street Bike Boulevard corridor crosses four Local Distributor roads (Old Perth Road, Palmerston Street, Bridson Street and Reid Street). Each of the Local Distributor roads has priority over the Whitfield Street corridor, with the Old Perth Road, Palmerston Street and Reid Street intersections with Whitfield Street stop sign controlled and the Bridson Street intersection with Whitfield Street give way sign controlled.

The connection to Success Hill Station requires the crossing of a Primary Distributor road (Guildford Road) and runs alongside a Distributor A road corridor (West Road). The safe crossing of Guildford Road is facilitated through the traffic signal controlled intersection of Guildford Road and West Road, with pedestrian crossing facilities provides across all arms of the intersection.

The connection to Bassendean Station requires the use of a Local Distributor corridor (Old Perth Road) and the crossing of a Primary Distributor road (Guildford Road). The safe crossing of Guildford Road is facilitated through the traffic signal controlled intersection of Guildford Road and Old Perth Road, with pedestrian crossing facilities provides across all arms of the intersection.

Main Roads WA criteria for the various hierarchy of roads are detailed below:

Primary Distributor Roads: Provide for major regional and inter-regional traffic movement and carry large volumes of generally fast moving traffic. Some are strategic freight routes and all are State Roads. They are managed by Main Roads WA.

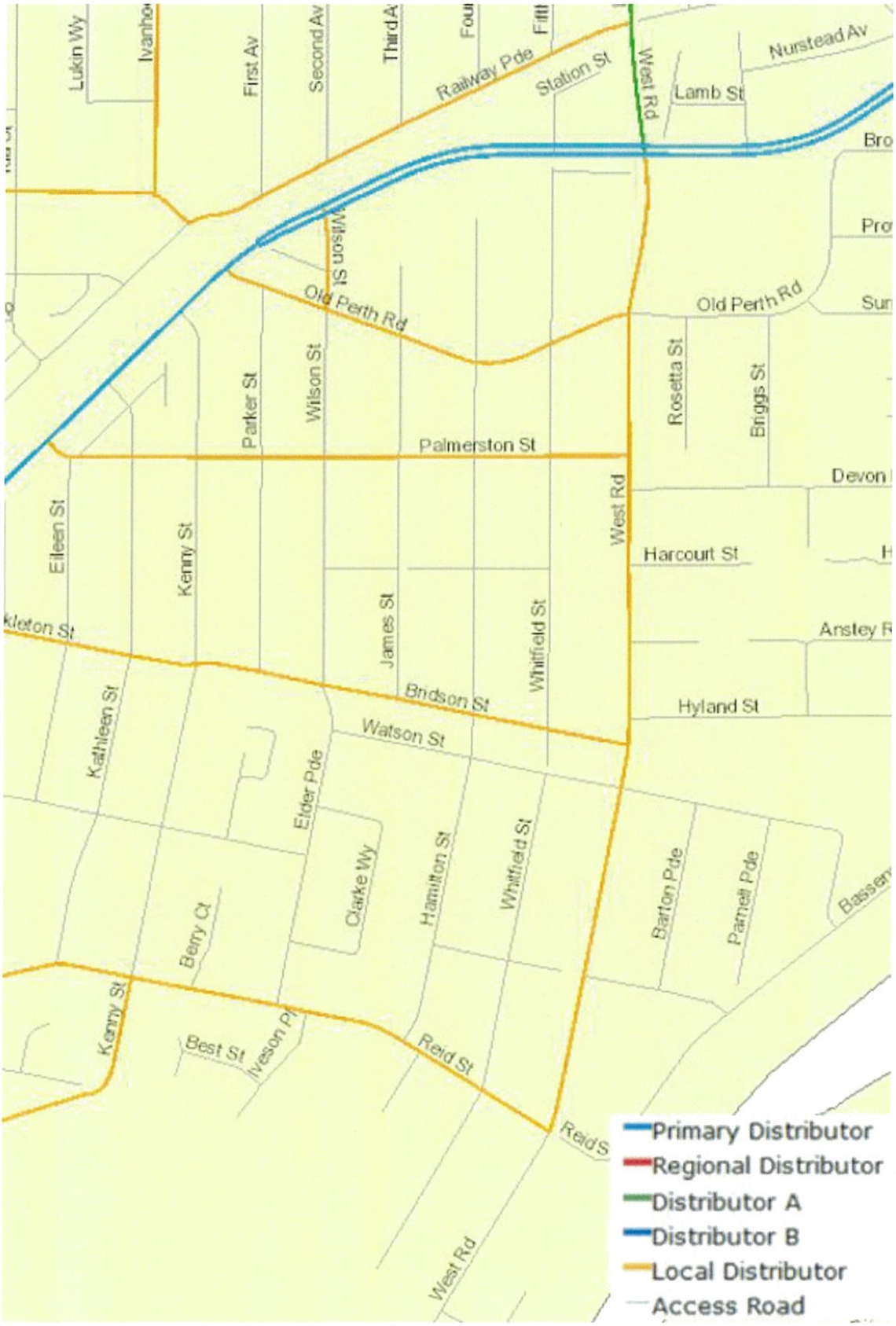
Distributor A Roads: Carry traffic between industrial, commercial and residential areas and generally connect to Primary Distributors. These are likely to be truck routes and provide only limited access to adjoining property. They are managed by local government.

Local Distributor Roads: Roads that carry traffic within a cell and link District Distributors or Regional Distributors at the boundary, to Access Roads. The route of Local Distributors should discourage through traffic so that the cell formed by the grid of District Distributors only carries traffic belonging to, or serving the area. These roads should accommodate buses, but discourage trucks. They are managed by local government.

Access Roads: Provide access to abutting properties with amenity, safety and aesthetic aspects having priority over the vehicle movement function. These roads are bicycle and pedestrian friendly. They are managed by local government.

Figure 10 shows the existing road hierarchy within the vicinity of the Whitfield Street Bike Boulevard.

Figure 10 – Existing Road Hierarchy within the vicinity of the bike boulevard (source: Main Roads WA)



2.6 Existing Posted Speed Limit

The Whitfield Street Bike Boulevard corridor (between Guildford Road and Ashfield Flats) is a local street with a posted speed limit of 50km/h. The vast majority of roads within the vicinity of the bike boulevard corridor are designed as local streets with posted speed limits of 50km/h.

The connection to Success Hill Station requires the crossing of Guildford Road, which has a posted speed limit of 60km/h. The safe crossing of Guildford Road is facilitated through the traffic signal controlled intersection of Guildford Road and Old Perth Road, with pedestrian crossing facilities provides across all arms of the intersection.

The connection to Success Hill Station north of Guildford Road requires the use of the existing shared path along the western side of West Road. Whilst West Road has a posted speed limit of 60km/h, the shared path provides an off-road bike facility to access the PSP along the northern side of the Midland Line train line.

The connection to Bassendean Station requires the use of Old Perth Road between Whitfield Street and Guildford Road. The posted speed limit along this section of Old Perth Road is 40km/h.

Figure 11 shows the existing posted speed limit within the vicinity of the Whitfield Street Bike Boulevard.

Figure 11 – Existing Posted Speed Limit within the vicinity of the bike boulevard (source: Main Roads WA)

2.7 Existing Intersection Controls

The existing intersection controls along the route of the Whitfield Street Bike Boulevard (northern section of the route) are summarised below and shown in Figure 12:

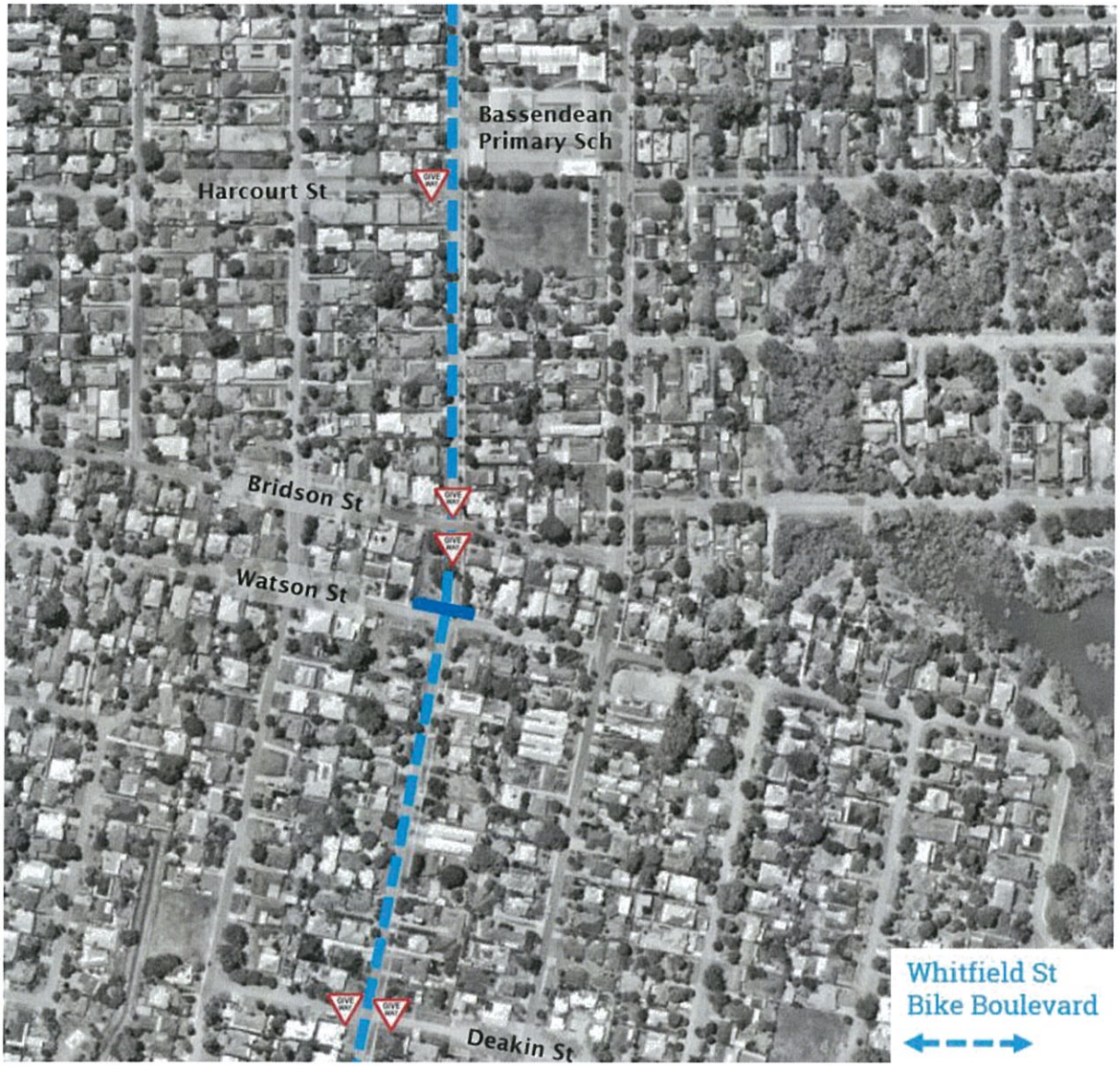
- Connection to Success Hill Station/Midland Line PSP
  - Existing bicycle access to Success Hill Station from the northern end of Whitfield Street is via:
    - the shared path along the southern side of Guildford Road, which requires crossing the uncontrolled left turn slip road into the Shopping Centre.
    - the crossing of Guildford Road is facilitated via the four way traffic signal controlled intersection of West Road/Guildford Road.
    - the shared path along the western side of West Road provides a connection north from the traffic signal controlled intersection of West Road/Guildford Road to the Midland Line PSP.
    - the Midland Line PSP provides a direct connection to Success Hill Station.
- Connection to Bassendean Station/Bassendean Town Centre
  - Existing bicycle access to Bassendean Station from Whitfield Street, via Old Perth Road through Bassendean Town Centre passes through the following intersections:
    - Old Perth Road/Whitfield Street intersection – four way stop sign controlled intersection with Old Perth Road having priority.
    - Hamilton Street/Old Perth Road intersection – four way stop sign controlled intersection with Old Perth Road having priority.
    - James Street/Old Perth Road intersection – four way stop sign controlled intersection with Old Perth Road having priority.
    - Wilson Street/Old Perth Road intersection – four way stop sign controlled intersection with Old Perth Road having priority.
    - Parker Street/Old Perth Road intersection – three way give way controlled intersection with Old Perth Road having priority.
    - Guildford Road/Old Perth Road intersection – three way traffic signal controlled intersection with pedestrian crossing facilities across all arms of the intersection.
- Route alongside Bassendean Shopping Centre
  - The proposed use of the existing footpath along the eastern side of Whitfield Street adjacent to Bassendean Shopping Centre for the bike boulevard passes the following crossovers:
    - Crossover providing vehicle access into small parking area (x16 bays) and loading bay area.
    - Crossover providing vehicle access into southern car parking area (primary access to approx. 108 bays) and loading bay area.
- Primary Bike Boulevard Route (Old Perth Road to Palmerston Street)
  - The proposed primary bike boulevard route between Old Perth Road and Palmerston Street passes through the following intersections:
    - Old Perth Road/Whitfield Street intersection – four way stop sign controlled intersection with Old Perth Road having priority.
    - Palmerston Street/Whitfield Street intersection – four way stop sign controlled intersection with Palmerston Street having priority.

Figure 12 – Whitfield Street Bike Boulevard and existing intersection controls (map source: Nearmap)

The existing intersection controls along the route of the Whitfield Street Bike Boulevard (central section of the route) are summarised below and shown in Figure 13.

- Primary Bike Boulevard Route (Palmerston Street to Deakin Street)
  - The proposed primary bike boulevard route between Palmerston Street and Deakin Street passes through the following intersections:
    - Harcourt Street/Whitfield Street intersection – three way give way controlled intersection with Whitfield Street having priority.
    - Bridson Street/Whitfield Street intersection – four way give way controlled intersection with Bridson Street having priority.
    - Watson Street/Whitfield Street intersection – three way uncontrolled intersection with Watson Street having priority. Whitfield Street is cul-de-sac to the north of Watson Street, thereby creating a three way intersection.
    - Deakin Street/Whitfield Street intersection – four way give way controlled intersection with Whitfield Street having priority.

Figure 13 – Whitfield Street Bike Boulevard and existing intersection controls (map source: Nearmap)



The existing intersection controls along the route of the Whitfield Street Bike Boulevard (southern section of the route) are summarised below and shown in Figure 14.

- Primary Bike Boulevard Route (Deakin Street to Ashfield Flats/Sandy Beach Reserve)
  - The proposed primary bike boulevard route between Deakin Street and Ashfield Flats/Sandy Beach Reserve passes through the following intersections:
    - Reid Street/Whitfield Street intersection – four way stop controlled intersection with Reid Street having priority.
    - Ashfield Flats/Whitfield Street cul-de-sac – Whitfield Street is a cul-de-sac at the southern end with unsealed path access for bicycles into Ashfield Flats.
    - Access to Sandy Beach Reserve from the southern end of Whitfield Street is provided via the shared path between Whitfield Street and West Road, and then via the shared path along the eastern side of West Road – which requires the uncontrolled crossing of West Road within the vicinity of the West Road/Villiers Street East intersection.

Figure 14 – Whitfield Street Bike Boulevard and existing intersection controls (map source: Nearmap)

2.8 Existing Traffic Volumes and Vehicle Speed

The NACTO Urban Bikeway Design Guide (second edition, 2014), recommends that daily traffic volumes along bike boulevards are less than 1,500vpd.

> *'On roadways with shared travel lanes such as bicycle boulevards, motor vehicle traffic volumes significantly impact bicyclist comfort. Higher vehicle volumes decrease comfort and may lead to a greater potential for conflicts, as well as a loss of perceived safety. Bicycle boulevards should be designed for motor vehicle volumes under 1,500vpd'.*

The NACTO guide also recommends that bike boulevards should have a preferred 85th percentile vehicle speed of approx. 30km/h.

> *'Streets developed as bicycle boulevards should have 85th percentile speeds at 25mph [40km/h] or less (20mph preferred [32km/h]). Speed management (traffic calming) measures can be divided into vertical or horizontal features. These measures can be implemented individually or in combination to increase their efficacy. Common combinations include raised crosswalks with pinchpoints, raised intersections with pinchpoints, and speed humps with center island narrowings, chicanes, or pinchpoints'.*

In March/April 2017 the ToB conducted week long traffic counts at various locations along the Whitfield Street Bike Boulevard corridor and side streets. The traffic count data is displayed in Figure 15 and Figure 16, they show the following information at each count location:

- Average weekday traffic (AWT) – average daily volume of weekday traffic recorded at a given location.
- 85th percentile vehicle speed – the speed at or below which 85% of all vehicles are recorded at a given location.
- Percentage of commercial vehicles – the percentage of commercial vehicles that make-up the total mix of traffic at a given location.

The data displayed in Figure 15 shows that along the entire length of the Whitfield Street corridor the AWT ranges from 150/200vpd at the southern end of the corridor to 500vpd at the northern end of the corridor. All sections of the proposed bike boulevard corridor have weekday traffic volumes less than a third of the recommended international guidance.

As such the design of the bike boulevard will need to consider the impact any changes in priority, in the favour of Whitfield Street, may have in attracting additional vehicle movements along the corridor. The design of the bike boulevard will need to consider the balance between the benefit gained by providing priority to the bike boulevard route, versus the disbenefit of potentially attracting additional vehicle movements.

The data displayed in Figure 15 shows that along the majority of the Whitfield Street corridor the 85th percentile vehicle speed ranges from 40km/h-50km/h. Therefore the 85th percentile speed is above the recommended speed (40km/h) and significantly above the preferred speed (approx. 30km/h).

In order to achieve 85th percentile vehicle speeds at the preferred 30km/h (noting that the posted speed limit along the bike boulevard will be 30km/h), the design of the bike boulevard will need to implement horizontal and vertical deflection measures to ensure compliance with the speed limit and consider filtered permeability treatments.

Figure 16 shows the traffic count data for the main side streets along the Whitfield Street corridor.

Figure 15 – Whitfield Street Bike Boulevard and existing traffic volumes and vehicle speed (source: ToB)

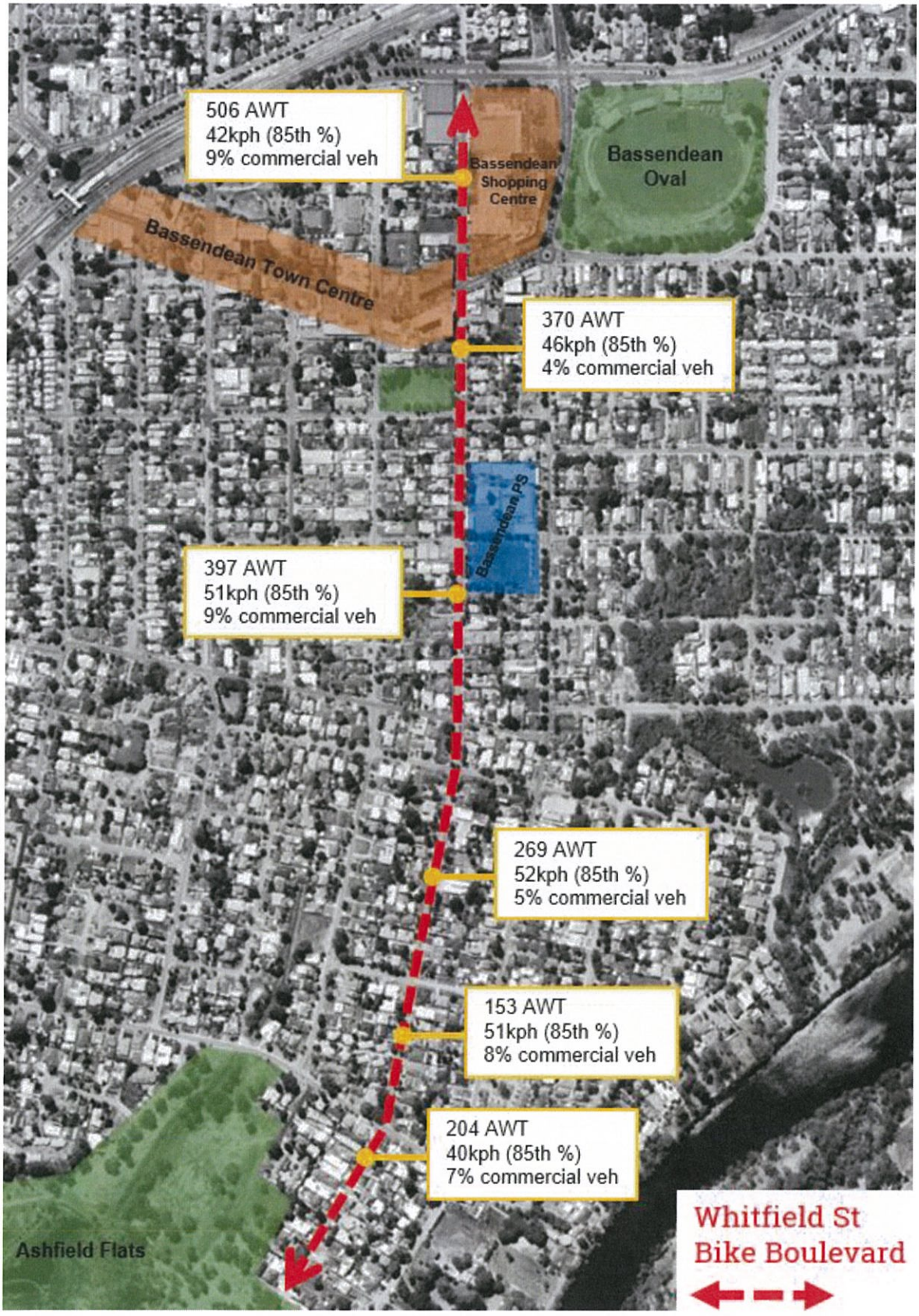
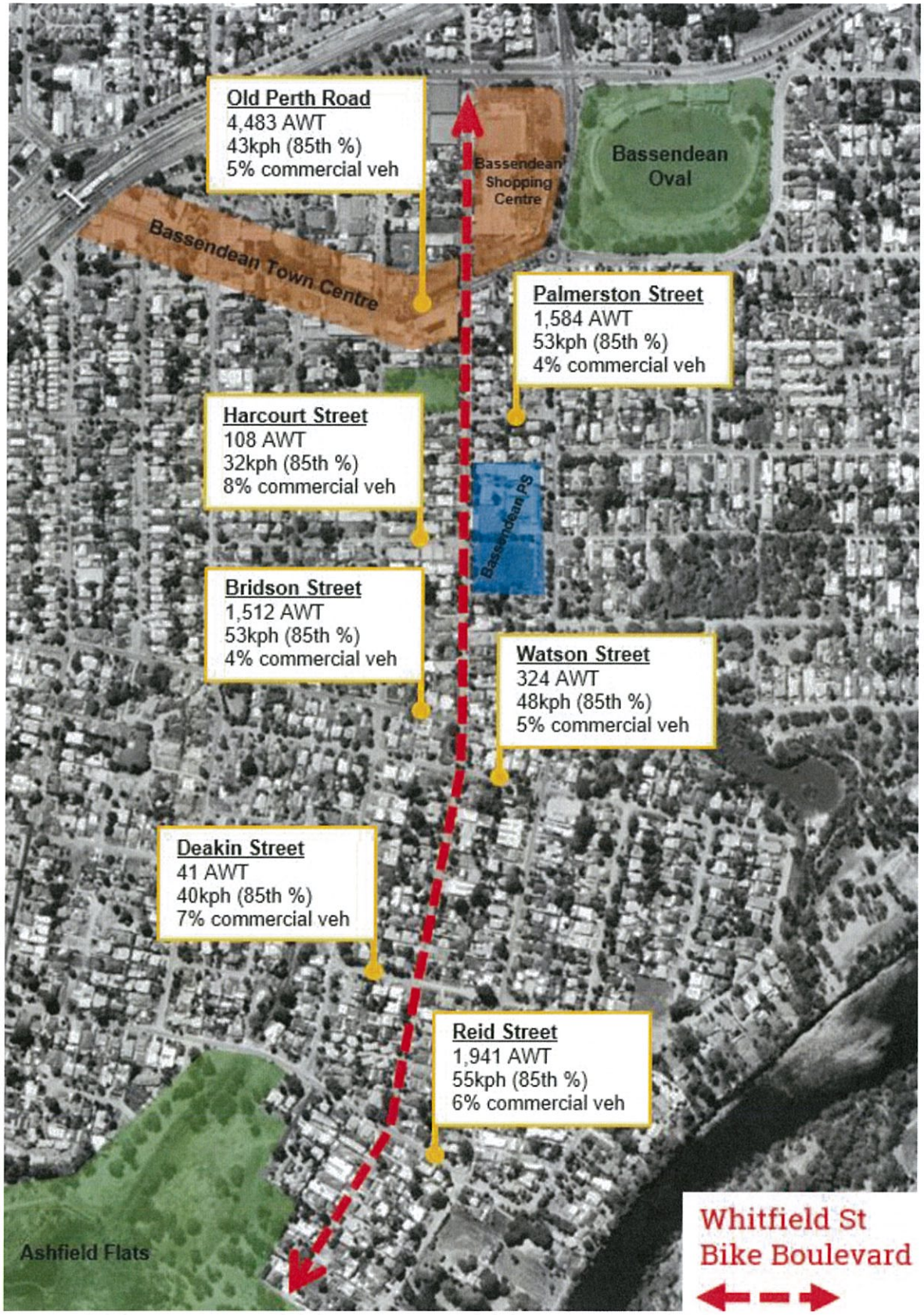


Figure 16 – Whitfield Street Bike Boulevard and existing traffic volumes and vehicle speed on side roads (source: ToB)



2.9 Existing Use of On-Street Parking

During April 2017 the ToB collected data to monitor the existing use of on-street parking along the Whitfield Street Bike Boulevard corridor.

Table 1 shows the on-street parking capacity along the Whitfield Street Bike Boulevard corridor between Guildford Road and Ashfield Flats (the southern cul-de-sac of Whitfield Street).

The data collected by the Town shows that the subject corridor has capacity for approximately 338 vehicles to park on-street at any given time. The majority of capacity is in the form of unmarked kerb side parking (289 vehicles), with a limited number of marked parking bays (49 bays).

All marked on-street parking bays are located towards the northern end of the Whitfield Street corridor, close to either commercial land uses or education facilities.

The 9 marked bays between Guildford Road and Old Perth Road are adjacent to Bassendean Shopping Centre, the 20 marked bays between Old Perth Road and Palmerston Street are located close to the commercial Town Centre along Old Perth Road, and the 20 marked bays between Palmerston Street and Harcourt Street are located adjacent to Bassendean Primary School.

Table 1 – Whitfield Street Bike Boulevard and existing on-street parking capacity (source: ToB)

Whitfield Street	Direction	No. of Unmarked Parking Bays	No. of Marked Parking Bays	Total Parking Bays
Guildford Rd to Old Perth Rd	NB	37		37
	SB	24	9	33
Old Perth Rd to Palmerston St	NB	12	4	16
	SB		16	16
Palmerston St to Harcourt St	NB	14		14
	SB		20	20
Harcourt St to Bridson St	NB	23		23
	SB	24		24
Bridson St to Watson St	NB	5		5
	SB	6		6
Watson St to Deakin St	NB	27		27
	SB	24		24
Deakin St to Reid St	NB	16		16
	SB	20		20
Reid St to CDS	NB	28		28
	SB	29		29
TOTAL		**289**	**49**	**338**

Table 2 shows the parking occupancy data collected by the Town during April 2017. The Town collected parking data for four time periods:

- Weekday morning: 8.30am
- Weekday lunchtime: 1.30pm
- Weekday afternoon: 4.30pm
- Weekday evening: 7.30pm

Parking occupancy data was collected on three separate weekdays for each of the four time periods above. The parking occupancy data collected represents a single snapshot of the number of parking bays occupied at the time of the data collection. The data displayed in Table 2 represents an average of the three sets of weekday data for each of the four time periods.

The parking occupancy shows that on average across the entire Whitfield Street corridor 20% of available parking bays are used at any given time on a weekday – the greatest use is during the lunchtime period (23% of bays occupied), with the lowest use during the evening period (11% of bays occupied).

The sections of the Whitfield Street corridor with the highest use of on-street parking during a weekday are between Guildford Road and Harcourt Street:

- On average 40% of on-street bays are occupied adjacent to Bassendean Shopping Centre, with peak use over the lunchtime period (51%).
- On average 27% of on-street bays are occupied between Old Perth Road and Palmerston Street (within proximity of Bassendean Town Centre), with peak use during the afternoon period (38%).
- On average 41% of southbound on-street bays adjacent to Bassendean Primary School are occupied, with peak use during the morning and lunchtime periods (62%-72%).

It should be noted that other than the marked southbound on-street parking bays adjacent to Bassendean Primary School (62%-72% utilised during the school period), no other sections of on-street parking were observed to operate with occupancy greater than 50% on a weekday. The vast majority of sections of on-street parking operate with fewer than 30% of available parking bays occupied on a weekday.

As such the weekday parking occupancy data collected by the Town indicates that there is an under utilisation of existing on-street parking provision and the capacity of on-street parking along Whitfield Street could be reduced by up to 50% without any impact on parking availability for surrounding residential areas or commercial land uses (noting that consideration will be required in relation to the provision of on-street parking within the vicinity of Bassendean Primary School.

Table 2 – Whitfield Street Bike Boulevard and existing use of on-street parking (source: ToB)

		Morning Data (8.30am)		Lunchtime Data (1.30pm)		Afternoon Data (4.30pm)		Evening Data (7.30pm)		AVERAGE WEEKDAY DATA	
Whitfield Street	Direction	Total No. of Parked Vehicles	Parking Bay Occupancy (%)	Total No. of Parked Vehicles	Parking Bay Occupancy (%)	Total No. of Parked Vehicles	Parking Bay Occupancy (%)	Total No. of Parked Vehicles	Parking Bay Occupancy (%)	Av. No. of Parked Vehicles	Av. Parking Bay Occupancy (%)
Guildford Rd to Old Perth Rd	NB	12	32%	17	46%	17	45%	11	29%	14	38%
	SB	15	46%	19	57%	16	48%	5	15%	14	42%
Old Perth Rd to Palmerston St	NB	3	19%	4	27%	5	31%	1	6%	3	21%
	SB	7	44%	5	33%	7	44%	2	13%	5	33%
Palmerston St to Harcourt St	NB	0	0%	1	7%	2	12%	1	10%	1	7%
	SB	14	72%	12	62%	6	32%	0	0%	8	41%
Harcourt St to Bridson St	NB	1	6%	3	14%	2	9%	1	3%	2	8%
	SB	6	25%	5	22%	3	14%	6	25%	5	22%
Bridson St to Watson St	NB	1	27%	2	33%	1	27%	1	20%	1	27%
	SB	2	39%	0	0%	1	17%	0	0%	1	14%
Watson St to Deakin St	NB	1	5%	3	12%	4	14%	5	17%	3	12%
	SB	2	7%	3	11%	2	8%	0	1%	2	7%
Deakin St to Reid St	NB	0	0%	0	0%	0	2%	0	2%	0	1%
	SB	2	10%	2	10%	2	10%	2	8%	2	10%
Reid St to CDS	NB	0	0%	1	4%	0	1%	0	1%	0	1%
	SB	1	3%	1	2%	0	1%	3	10%	1	4%
TOTAL		**69**	**20%**	**79**	**23%**	**69**	**20%**	**38**	**11%**	**64**	**19%**

3. Whitfield Street Bike Boulevard Schematic Design Plans

In order to inform the development of the Concept Design for the Whitfield Street Bike Boulevard, a series of schematic design plans have been developed, which provide high-level details regarding the proposed approach to the design of the Whitfield Street Bike Boulevard.

The schematic design for the Whitfield Street Bike Boulevard corridor has been split across seven (7) design plans, these are numbered 1-7 and are attached to the back of this Technical Note.

In the following sections of this Technical Note the proposed bike boulevard treatments are discussed and the sheet number of the concerned schematic design plan is clearly stated to assist with the cross-referencing between the design details discussed and the schematic design plans.

The Whitfield Street Bike Boulevard corridor has been split into ten (10) sections for the discussion of proposed design details/treatments. The ten sections are:

- Section 1: Success Hill Station to Guildford Road
- Section 2: Whitfield Street – Guildford Road to Old Perth Road
- Section 3: Old Perth Road – Whitfield Street to Bassendean Station
- Section 4: Whitfield Street – Old Perth Road to Palmerston Street
- Section 5: Whitfield Street – Palmerston Street to Bridson Street
- Section 6: Whitfield Street – Bridson Street to Watson Street
- Section 7: Whitfield Street – Watson Street to Reid Street
- Section 8: Whitfield Street – Reid Street to Whitfield Street cul-de-sac
- Section 9: Whitfield Street cul-de-sac to West Road
- Section 10: West Road – Villiers Street East to Sandy Beach Reserve

3.1 Typical Bike Boulevard Cross Sections

Figure 17 shows the typical existing cross section of the Whitfield Street corridor, as well as the proposed typical bike boulevard cross section for the corridor. The proposed typical bike boulevard cross section is shown for locations between slow point/raised intersection treatments and at slow point treatments.

Typical Existing Whitfield Street Cross Section

The typical kerb-kerb width of the Whitfield Street corridor is approximately 7.4m, with verges on either side (widths vary) and a 2.0m footpath along the eastern side of the road reserve.

Typically, the Whitfield Street corridor has a road reserve width of approximately 18m.

Proposed Typical Whitfield Street Bike Boulevard Cross Section (between slow point treatments)

The proposed typical bike boulevard cross section is to convert the existing 7.4m two-way roadway into a 4.5m two-way bike boulevard travelway (with red asphalt treatment), a 2.1m on-street parking bay (to be provided on one side of the road only at any given point), and a 0.3m buffer between the bike boulevard travelway and the on-street parking (the buffer is to provide a safe zone in which car doors can be opened without encroaching into the bike boulevard travelway and potentially into a cyclists).

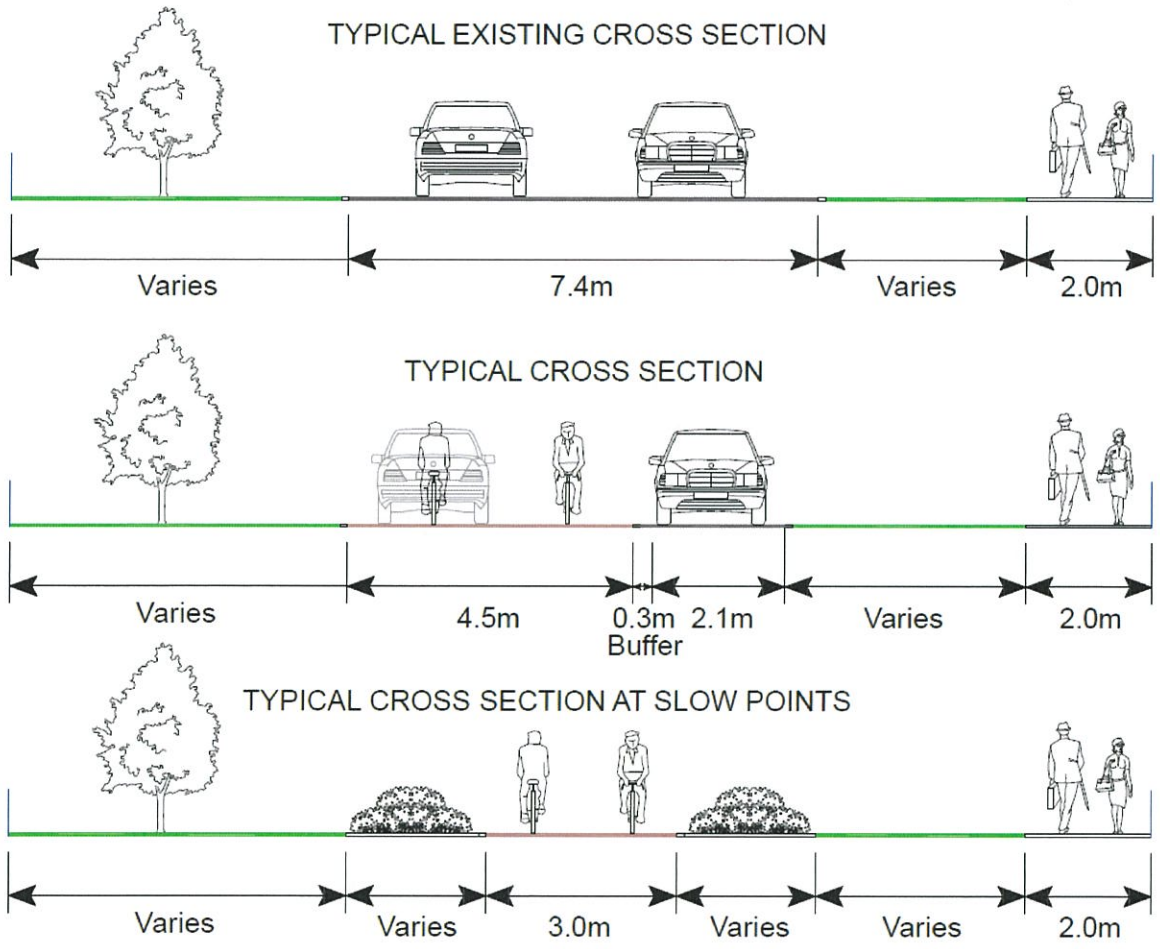
It should be noted that the proposed typical bike boulevard cross section is 6.9m kerb-kerb, therefore an additional 0.5m could be returned to the existing verge treatments.

Proposed Typical Whitfield Street Bike Boulevard Cross Section (at slow point treatments)

The proposed typical bike boulevard cross section at the proposed slow point treatments is to convert the existing 7.4m two-way roadway into a 3.0m bike boulevard travelway (with red asphalt treatment). The 3.0m travelway width would allow cyclists in each direction to pass through the slow point at the same time, but would only provide sufficient width for one-way travel by vehicles.

The slow point island treatments would vary in width to take up the remainder of the carriageway width between the 3.0m bike boulevard travelway and the existing kerb. Planted treatments would be provided within the slow point islands to enhance the aesthetic of the street and local amenity.

Figure 17 – Whitfield Street Bike Boulevard typical cross sections (source: Flyt)



3.2 Typical Bike Boulevard Treatments

In order to ensure the 85th percentile vehicle speed complies with the bike boulevard posted speed limit of 30km/h, it is proposed to install an angled slow point treatment or raised intersection treatment approximately every 80m along the bike boulevard corridor.

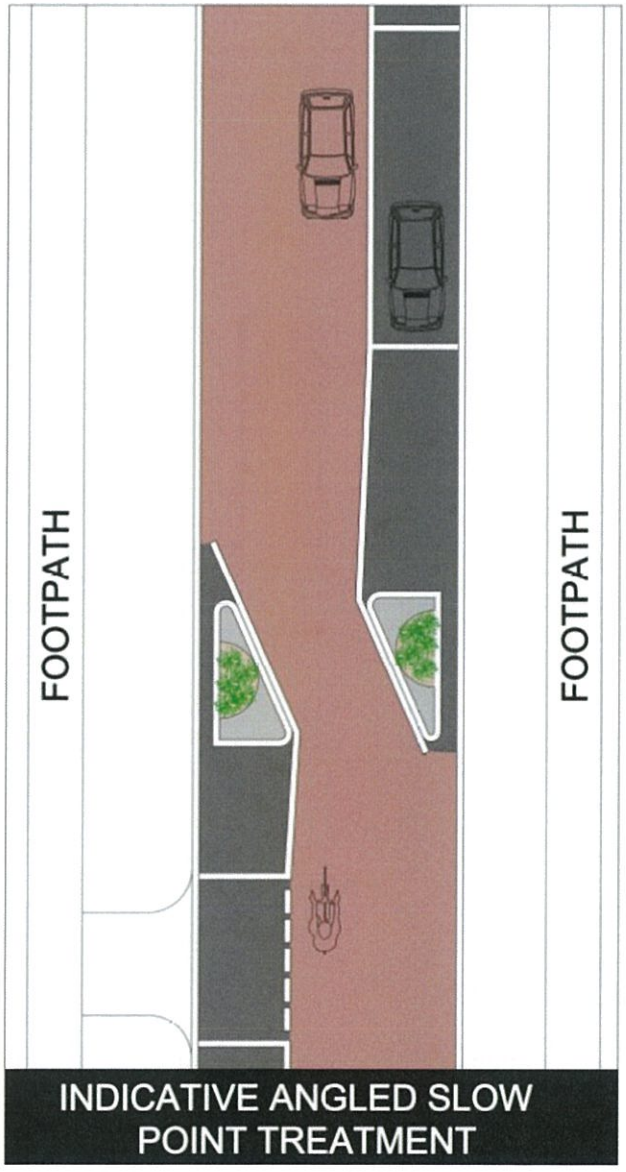
International experience has found that in order for a speed reduction device to be effective over the length of a corridor, the distance between devices needs to approximately 80m apart.

Indicative Angled Slow Point Treatment

Figure 18 shows a plan view of the proposed angled slow point treatment. The angled slow point will be used to slow vehicle speeds by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device.

The angled slow point treatment will be used to provide on-street parking on one side of the street and then switch the on-street parking to the other side of the street.

Figure 18 – Whitfield Street Bike Boulevard indicative angled slow point treatment (source: Flyt)



Indicative Raised Intersection Treatments

Figure 19 shows a plan view of the two forms of proposed raised intersection treatments. The raised intersection treatment on the left shows the north-south bike boulevard having priority over the east-west side street, whilst the raised intersection treatment on the right shows the east-west street having priority over the north-south bike boulevard.

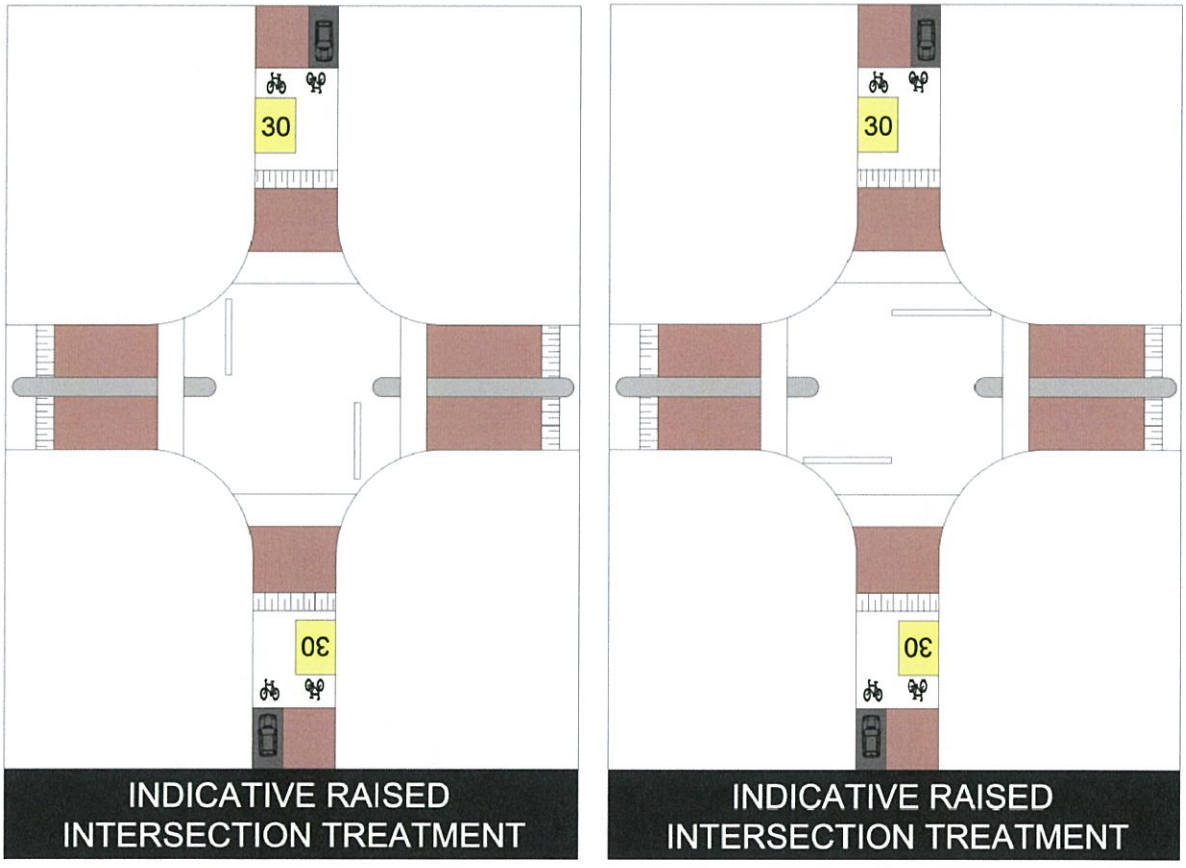
The raised intersection treatments will be used to slow vehicle speeds by introducing a vertical deflection on all approaches to the intersection.

The raised intersection treatments can also be used to change the geometry of an intersection, to 'tighten up' the intersection and narrow the crossing distance for cyclists. This is particularly useful in locations where the bike boulevard does not have priority and cyclists are required to yield before crossing the intersection and continuing along the bike boulevard route.

The departure lane away from the raised intersection along the bike boulevard corridor will include 30km/h on-street markings to indicate to users of the street the lower speed zone being entered.

In addition, on-street bike symbol markings will be used on the approach lane towards and departure lane away from the raised intersection along the bike boulevard corridor to indicate to users of the street that they are to take particular care through the intersection with higher volume of bike movements to be expected.

Figure 19 – Whitfield Street Bike Boulevard indicative raised intersection treatments (source: Flyt)



3.3 Whitfield Street Bike Boulevard Schematic Design with and without Old Perth Road Treatments

Schematic designs for the Whitfield Street Bike Boulevard have been developed for two scenarios:

- Whitfield Street Bike Boulevard **with** infrastructure treatments along the Old Perth Road corridor (between Whitfield Street and Bassendean Station) to provide a safe cycling environment; and
- Whitfield Street Bike Boulevard **without** infrastructure treatments along the Old Perth Road corridor (between Whitfield Street and Bassendean Station).

The development of schematic design plans for the two scenarios was required to ensure the Whitfield Street Bike Boulevard scheme considered during the schematic design phase the form of bike connection through Bassendean Town Centre that would provide a safe cycling environment along the Old Perth Road corridor (between Whitfield Street and Bassendean Station).

However, the Old Perth Road corridor has been subject to previous high-level bike planning in the following documents:

- Town of Bassendean Local Bike Plan 2012 (Cardno, September 2012); and
- Town of Bassendean Local Area Traffic Management Plan (Opus, July 2012).

Each of these high-level documents has proposed a different form and infrastructure along the Old Perth Road corridor to accommodate the safe movement of cyclists. The schematic design developed for the Old Perth Road corridor as part of this Whitfield Street Bike Boulevard study, has proposed a high-level schematic design that contains some features of these previous studies but also proposed the use of different treatments in certain locations.

With the Old Perth Road corridor and Bassendean Town Centre subject to a range of design considerations in terms of its transport role and function as well as its community services function and retail and commerce function, it was decided by the ToB that the Whitfield Street Bike Boulevard concept design should be based upon the schematic design developed that does not include treatments along the Old Perth Road corridor.

As such, the text in Section 4-13 of this Technical Note provides a written description of the proposed treatments for the Whitfield Street Bike Boulevard including treatments along the Old Perth Road corridor.

The text in Section 14 of this Technical Note provides a written description of the proposed change to those treatments for the Whitfield Street Bike Boulevard without treatments along the Old Perth Road corridor.

4. Section 1: Success Hill Station to Guildford Rd
(see Schematic Design Sheet 1)

It is proposed that the formal signposted bike connection between Success Hill Station and Guildford Road is as follows:

- Via the existing Midland Line PSP:
  - the 3.0m PSP along the northern side of the Midland Train Line provides a bike connection from Success Hill Station to the West Road shared path.
  - Note: there are currently no formal bike parking facilities at Success Hill Station.
- Via the existing shared path along the western side of West Road:
  - the 2.5m shared path provides a bike connection from the Midland Line PSP to the Guildford Road/West Road intersection.
- Upgrade of the existing signal controlled pedestrian crossing at the Guildford Road/West Road intersection:
  - upgrade of the signal controlled crossing lanterns across the western arm of the Guildford Road/West Road intersection. To convert the crossing from a pedestrian crossing facility to a shared bike/pedestrian crossing facility.

5. Section 2: Whitfield St – Guildford Rd to Old Perth Rd
(see Schematic Design Sheets 1 & 2)

It is proposed that the formal signposted bike connection between Guildford Road and Old Perth Road is as follows:

- Upgrade the existing shared path along the southern side of Guildford Road:
  - widen the existing 2.2m shared path to a 2.5m shared path – widen towards Guildford Road.
  - the 2.5m shared path adjacent to the northern parking area for Bassendean Shopping Centre provides a bike connection from the Guildford Road/West Road intersection to the northern end of the Whitfield Street corridor.
- Install raised plateau crossing at the interface between Bassendean Shopping Centre parking access and the Whitfield Street corridor – it is proposed that two raised plateau crossings are installed to slow vehicle speeds at the access to Bassendean Shopping Centre parking areas and provide for the safe movement of cyclists and pedestrians at these locations:
  - install a raised plateau crossing across the uncontrolled left turn slip road into Bassendean Shopping Centre car park from Guildford Road.
  - install a raised plateau crossing at the northern end of the Whitfield Street corridor, to provide a safe connection from the existing footpath along the eastern side of Whitfield Street and the verge to the north.
  - install a new section of shared path (approximately 8.0m x 2.5m of new path required), to connect the proposed new raised plateau crossings.
- Upgrade the existing footpath on the eastern side of Whitfield Street to a shared path:
  - widen the existing 2.0m footpath to a 2.5m shared path – widen towards Whitfield Street.
  - it is proposed to operate the formal signposted bike connection between the Whitfield Street Bike Boulevard and Success Hill Station/Midland Line PSP via the existing path along the eastern side of Whitfield Street – it is proposed that the footpath is widened and reclassified as a shared path.

- the reclassified shared path along the eastern side of the Whitfield Street corridor has two crossovers providing vehicle access to Bassendean Shopping Centre parking and loading bay areas – the northern most crossover provides access to x16 bays and a loading bay area, the southern most crossover provides access to x108 bays and a loading bay area. It is proposed that shallow raised plateau crossings are installed at both of these locations to slow vehicle speeds entering and exiting the car parks, in addition it is proposed that on road bike symbol markings are installed at both locations warning drivers entering or exiting the car parks that they are crossing a primary bike route.
- it is recommended that the ToB discuss with Bassendean Shopping Centre managers the potential signposted bike route adjacent to the site, and explore in more detail the location of bike parking within the shopping centre site and the requirement for safe internal bike connections between the Whitfield Street bike route and existing on-site bike parking.

- Install a raised intersection at the Old Perth Road/Whitfield Street intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Old Perth Road corridor (between West Road and Guildford Road) by slowing vehicles, to provide for the safe crossing of bikes between the Whitfield Street shared path to the north of Old Perth Road and the Whitfield Street Bike Boulevard to the south of Old Perth Road, and to provide an entry statement to the form Whitfield Street Bike Boulevard to the south of Old Perth Road.
  - it should be noted that modifications to the existing footpath network on the northeastern and southeastern corners of the intersection may be required in order to upgrade the path to the shared path and provide for smooth bike access between the on-street bike boulevard to the south of Old Perth Road and the off-street shared path to the north of Old Perth Road.
    - it is proposed to widen the existing 2.5m footpath in front of the shops along the southern side of Old Perth Road, to a 3.5m shared path – widen towards Old Perth Road. This will provide additional room to accommodate pedestrian and bike movements in this location.
  - in addition, it is proposed that a protected right turn bike pocket is provided on the southern approach to the intersection. This will enable cyclists to safely turn right from the on-street bike boulevard section of Whitfield Street (south of Old Perth Road) into the off-street shared path around the southeastern corner of the intersection to access the location of the safe crossing of Old Perth Road and the shared path on the eastern side of Whitfield Street to the north of Old Perth Road.

6. Section 3: Old Perth Rd – Whitfield St to Bassendean Station
(see Schematic Design Sheet 2)

It is proposed to provide an on-street bike connection along Old Perth Road rather than an off-street solution. Old Perth Road already operates with a 40km/h posted speed limit and it is proposed to introduce a 30km/h posted speed limit along Old Perth Road through Bassendean Town Centre. It is proposed that regular raised plateau treatments (approximately every 80m) would be used to ensure the 30km/h posted speed limit is adhered to.

It is proposed that the bike connection along Old Perth Road, between West Road and Bassendean Station is as follows:

- Install a raised plateau pedestrian crossing approximately 40m to the west of the West Road/Old Perth Road roundabout – in the location of the existing uncontrolled drop-kerb pedestrian crossing from Bassendean Shopping Centre to the southern side of the street:
  - install a raised plateau crossing to upgrade the existing uncontrolled pedestrian crossing facility.
  - use the raised plateau crossing as an entry statement into the 30km/h zone and to ensure vehicle speeds are controlled to 30km/h.
- Install a raised intersection at the Whitfield Street/Old Perth Road intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Old Perth Road corridor (between West Road and Guildford Road) by slowing vehicles, to provide for the safe crossing of bikes between the Whitfield Street shared path to the north of Old Perth Road and the Whitfield Street Bike Boulevard to the south of Old Perth Road, and to provide an entry statement to the form Whitfield Street Bike Boulevard to the south of Old Perth Road.
  - it should be noted that modifications to the existing footpath network on the northeastern and southeastern corners of the intersection may be required in order to upgrade the path to the shared path and provide for smooth bike access between the on-street bike boulevard to the south of Old Perth Road and the off-street shared path to the north of Old Perth Road.
  - in addition, it is proposed that a protected right turn bike pocket is provided on the southern approach to the intersection. This will enable cyclists to safely turn right from the on-street bike boulevard section of Whitfield Street (south of Old Perth Road) into the off-street shared path around the southeastern corner of the intersection to access the location of the safe crossing of Old Perth Road and the shared path on the eastern side of Whitfield Street to the north of Old Perth Road.
- Install raised plateau treatments on the approaches to the Hamilton Street/Old Perth Road intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised plateau pedestrian crossing approximately 15m to the east of the Hamilton Street/Old Perth Road intersection – in the location of the existing uncontrolled drop-kerb pedestrian crossing across Old Perth Road.
  - it is proposed to install a raised plateau on the northern and southern approach to the intersection from Hamilton Street.
  - it is proposed to install a raised plateau pedestrian crossing approximately 45m to the west of the Hamilton Street/Old Perth Road intersection – at the western end of the existing Transperth bus stop embayment. There is no existing pedestrian crossing facility in this location and this proposed facility would provide connectivity between the local shopping centre/bus stop on the southern side of Old Perth Road and the school/church on the northern side of Old Perth Road.
- Install a raised intersection at the James Street/Old Perth Road intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Old Perth Road corridor.
  - it is proposed that Old Perth Road retain priority in this location, thereby providing priority to bike movements along the old Perth Road corridor.

- it is proposed that the raised intersection treatment would extend to include the area of the existing raised plateau treatment (the eastern most raised plateau treatment of the three raised plateaus adjacent to the ToB offices) – as such the existing raised plateau would be removed.

- Remove existing raised plateau treatment adjacent to the pedestrian entrance to the ToB offices:
  - it is proposed to remove the existing raised plateau treatment adjacent to the pedestrian entrance to the ToB offices. This is due to its proximity to the proposed raised intersection treatments at the James Street/Old Perth Road intersection and the Wilson Street/Old Perth Road intersection, and because of the number of proposed raised intersection/plateau treatments along the Old Perth Road corridor.
- Install a raised intersection at the Wilson Street/Old Perth Road intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Old Perth Road corridor.
  - it is proposed that Old Perth Road retain priority in this location, thereby providing priority to bike movements along the old Perth Road corridor.
  - it is proposed that the raised intersection treatment would extend to include the area of the existing raised plateau treatment (the western most raised plateau treatment of the three raised plateaus adjacent to the ToB offices) – as such the existing raised plateau would be removed.
- Install raised plateau treatments on the approaches to the Parker Street/Old Perth Road intersection with Old Perth Road retaining priority:
  - it is proposed to install a raised plateau pedestrian crossing approximately 15m to the east of the Parker Street/Old Perth Road intersection – in the location of the existing uncontrolled drop-kerb pedestrian crossing across Old Perth Road.
  - it is proposed to install a raised plateau on the southern approach to the intersection from Parker Street.
- Install a raised plateau treatment approximately 20m to the east of the Guildford Road/Old Perth Road traffic signal controlled intersection:
  - the raised plateau treatment to be located prior to the on-street parking bays on the northern side of Old Perth Road, which may require the removal of one on-street parking bay on the southern side of Old Perth Road:
  - install a raised plateau treatment to provide an entry statement into the 30km/h zone and to ensure vehicle speeds are controlled to 30km/h.
- Reclassify the existing 3.0m footpath on the northern and southern sides of Old Perth Road between the proposed raised plateau treatment and the Guildford Road/Old Perth Road traffic signal controlled intersection:
  - reclassify approximately 30m of existing footpath on the northern and southern sides of Old Perth Road to a shared path – to provide an off-street bike connection between the proposed raised plateau treatment and the Guildford Road/Old Perth Road traffic signal controlled intersection.
- Upgrade of the existing signal controlled pedestrian crossing at the Guildford Road/Old Perth Road intersection:
  - upgrade of the signal controlled crossing lanterns across the eastern and western arm of the Guildford Road/Old Perth Road intersection. To convert the crossing from a pedestrian crossing facility to a shared bike/pedestrian crossing facility.

- All existing bike parking facilities at Bassendean Station are provided to the west of the Station and can only be accessed by those approaching Bassendean Station from the east via a lift up to the bridge over the train lines/station and then via a lift down to the parking area on the western side of the station. The ToB and Transperth should continue to explore options for formal bike parking facilities to be provided on the eastern side of the station.

7. Section 4: Whitfield St – Old Perth Rd to Palmerston St
(see Schematic Design Sheets 2 & 3)

It is proposed that the Whitfield Street Bike Boulevard connection between Old Perth Road and Palmerston Street is as follows:

- Convert the existing street form to the proposed typical bike boulevard treatment (see Section 3 of this Technical Note):
  - it is proposed to convert the street section into a 4.5m two-way bike boulevard travelway (with red asphalt treatment), a 2.1m on-street parking bay along the eastern side of the corridor, with a 0.3m buffer between the bike boulevard travelway and the on-street parking.
  - it is proposed that the posted speed limit is reduced from 50km/h to 30km/h, as discussed in Section 2.8 of this Technical Note.
- Cul-de-sac the Whitfield Street corridor to restrict through vehicle movements and ensure use of the corridor by only those vehicles accessing residences and commercial premises along the corridor:
  - it is proposed to cul-de-sac the Whitfield Street corridor opposite Lots 5 and 123, with a turn around facility provided on either side of the road closure.
  - the location of the road closure was determined to ensure those premises with a frontage on Old Perth Road have vehicle access and servicing access via the Old Perth Road end of the corridor (Lots 3 and 119), whilst the majority of residential properties have access via the Palmerston Street end of the corridor (other than Lots 10 and 11) which have access via the Old Perth Road end of the corridor.
  - permeability for bike movements will be maintained through the road closure, with only vehicle movements restricted.
- Install a raised intersection at the Palmerston Street/Whitfield Street intersection with Whitfield Street having priority (change to existing priority):
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor, as well as slow vehicles on Palmerston Street crossing the bike boulevard corridor.
  - it is proposed that there is a change to the existing priority with the bike boulevard corridor having priority. This will provide priority to bike movements along the bike boulevard.
  - it is proposed to install a raised plateau on the eastern and western approach to the intersection from Palmerston Street. The raised plateaus will slow vehicles on the approach to an intersection with a proposed reverse of priority.

8. Section 5: Whitfield St – Palmerston St to Bridson St
(see Schematic Design Sheets 3 & 4)

It is proposed that the Whitfield Street Bike Boulevard connection between Palmerston Street and Bridson Street is as follows:

- Convert the existing street form to the proposed typical bike boulevard treatment (see Section 3 of this Technical Note):
    - it is proposed to convert the street section into a 4.5m two-way bike boulevard travelway (with red asphalt treatment), a 2.1m on-street parking bay along the eastern or western side of the corridor, with a 0.3m buffer between the bike boulevard travelway and the on-street parking.
    - it is proposed that the posted speed limit is reduced from 50km/h to 30km/h, as discussed in Section 2.8 of this Technical Note.
- Install a raised single lane slow point treatment to restrict vehicle speeds and discourage through movements by vehicles that are not accessing either Whitfield Street residences or Bassendean Primary School:
    - it is proposed to install a raised single lane slow point opposite Lots 42 and the pedestrian gate access to Bassendean Primary School.
    - the location of the raised single lane slow point was determined to ensure vehicle speeds are at their slowest within the vicinity of the existing pedestrian gate access into Bassendean Primary School – an area of high pedestrian movements by young primary school aged students and their parents.
    - the raised single lane slow point can be used as a treatment to slow vehicles by introducing a vertical deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the eastern kerb (adjacent to Bassendean Primary School) to the north and south of the slow point treatment.
- Install a raised intersection at the Harcourt Street/Whitfield Street intersection with Whitfield Street retaining priority:
    - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor.
    - it is proposed that Whitfield Street retain priority in this location, thereby providing priority to bike movements along the bike boulevard.
- Install an angled slow point treatment (1 of 2) to restrict vehicle speeds and discourage through movements by vehicles that are not accessing either Whitfield Street residences or Bassendean Primary School:
    - it is proposed to install an angled slow point opposite Lots 72 and 104.
    - the location of the raised single lane slow point was determined to provide an equal distance between the proposed raised intersection at Harcourt Street (75m away) and the proposed angled slow point to the south (100m away) of this location.
    - the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the western kerb to the north of the treatment and along the eastern kerb to the south of the treatment.
- Install an angled slow point treatment (2 of 2) to restrict vehicle speeds and discourage through movements by vehicles that are not accessing either Whitfield Street residences or Bassendean Primary School:
    - it is proposed to install an angled slow point opposite Lots 82 and 94.
    - the location of the raised single lane slow point was determined to provide an equal distance between the proposed angled slow point to the north (100m away) and the raised intersection at Bridson Street (70m away).

- the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the eastern kerb to the north of the treatment and along the western kerb to the south of the treatment.

- Install a raised intersection at the Bridson Street/Whitfield Street intersection with Bridson Street retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor, as well as slow vehicles on Bridson Street crossing the bike boulevard corridor.
  - it is proposed that Bridson Street retains priority in this location, because of the existing cul-de-sac treatment of Whitfield Street 55m to the south of this location. Due to the cul-de-sac treatment, very few vehicles travel along the section of Whitfield Street to the south of Bridson Street (only one property has vehicle access directly off the cul-de-sac section of Whitfield Street), as such the Whitfield Street/Bridson Street intersection operates in practice as a three way give way controlled intersection (rather than a four way intersection) from a traffic volume perspective. Introducing priority to Whitfield Street in the location may lead to driver inattention over time, as drivers quickly get used to very rarely encountering vehicles coming into or out of the lightly trafficked arm of Whitfield Street and as such would travel across Whitfield Street without giving due care and attention to bike movements along the bike boulevard. It is considered safer in this location for existing priority to be retained and the raised intersection slow vehicles and improve the safety for bikes crossing the intersection.

9. Section 6: Whitfield St – Bridson St to Watson St
(see Schematic Design Sheet 4)

It is proposed that the Whitfield Street Bike Boulevard connection between Bridson Street and Watson Street is as follows:

- Convert the existing street form to the proposed typical bike boulevard treatment (see Section 3 of this Technical Note):
  - it is proposed to convert the street section into a 4.5m two-way bike boulevard travelway (with red asphalt treatment).
  - it is proposed that the posted speed limit is reduced from 50km/h to 30km/h, as discussed in Section 2.8 of this Technical Note.
  - the short 55m cul-de-sac section of Whitfield Street provides directly vehicle access into one property only, as such the section of street is very lightly trafficked.
- Convert the existing head of the cul-de-sac to add permeability for bike movements:
  - it is proposed to install no parking/no stopping markings around the head of the cul-de-sac to ensure vehicles do not park across or block the bike boulevard travelway.
  - Note: during site visits it has been observed that a boat is currently parked up at the head of the cul-de-sac, it is this type of situation that would need to be avoided.
- Install a raised intersection at the Watson Street/Whitfield Street intersection with Watson Street retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor, as well as slow vehicles on Watson Street crossing the bike boulevard corridor.

- it is proposed that Watson Street retains priority in this location, because of the existing cul-de-sac treatment of Whitfield Street adjacent to this intersection. Due to the cul-de-sac treatment, the existing intersection operates as a three way intersection and with the retention of the existing cul-de-sac treatment it is recommended to retain the existing priority arrangements.

10. Section 7: Whitfield St – Watson St to Reid St

(see Schematic Design Sheets 4 & 5)

It is proposed that the Whitfield Street Bike Boulevard connection between Watson Street and Reid Street is as follows:

- Convert the existing street form to the proposed typical bike boulevard treatment (see Section 3 of this Technical Note):
  - it is proposed to convert the street section into a 4.5m two-way bike boulevard travelway (with red asphalt treatment), a 2.1m on-street parking bay along the eastern or western side of the corridor, with a 0.3m buffer between the bike boulevard travelway and the on-street parking.
  - it is proposed that the posted speed limit is reduced from 50km/h to 30km/h, as discussed in Section 2.8 of this Technical Note.
- Install an angled slow point treatment (1 of 3) to restrict vehicle speeds and discourage through movements by vehicles that are not accessing Whitfield Street residences:
  - it is proposed to install an angled slow point opposite Lots 214 and 223.
  - the location of the raised single lane slow point was determined to provide an equal distance between the proposed raised intersection at Watson Street (90m away) and the proposed angled slow point to the south (95m away) of this location.
  - the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the western kerb to the north of the treatment and along the eastern kerb to the south of the treatment.
- Install an angled slow point treatment (2 of 3) to restrict vehicle speeds and discourage through movements by vehicles that are not accessing either Whitfield Street residences:
  - it is proposed to install an angled slow point opposite Lots 21 and 228.
  - the location of the raised single lane slow point was determined to provide an equal distance between the proposed angled slow point to the north (95m away) and the raised intersection at Deakin Place (95m away).
  - the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the eastern kerb to the north of the treatment and along the western kerb to the south of the treatment.
- Install a raised intersection at the Deakin Place/Whitfield Street intersection with Whitfield Street retaining priority:
  - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor, as well as slow vehicles on Deakin Place crossing the bike boulevard corridor.
  - it is proposed that Whitfield Street retain priority in this location, thereby providing priority to bike movements along the bike boulevard.

- Install an angled slow point treatment (3 of 3) to restrict vehicle speeds and discourage through movements by vehicles that are not accessing either Whitfield Street residences:
    - it is proposed to install an angled slow point opposite Lots 201 and 236.
    - the location of the raised single lane slow point was determined to provide an equal distance between the proposed raised intersection at Deakin Place (75m away) and the proposed raised intersection at Reid Street (120m away).
    - the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the eastern kerb to the north of the treatment and along the western kerb to the south of the treatment.
- Install a raised intersection at the Reid Street/Whitfield Street intersection with Whitfield Street having priority (change to existing priority):
    - it is proposed to install a raised intersection in this location to help reinforce the proposed 30km/h speed limit along the Whitfield Street Bike Boulevard corridor, as well as slow vehicles on Reid Street crossing the bike boulevard corridor.
    - it is proposed that there is a change to the existing priority with the bike boulevard corridor having priority. This will provide priority to bike movements along the bike boulevard.
    - it is proposed to install a raised plateau on the eastern and western approach to the intersection from Reid Street. The raised plateaus will slow vehicles on the approach to an intersection with a proposed reverse of priority.

11. Section 8: Whitfield St – Reid St to Whitfield St cul-de-sac

(see Schematic Design Sheets 5 & 6)

It is proposed that the Whitfield Street Bike Boulevard connection between Reid Street and Whitfield Street southern cul-de-sac is as follows:

- Convert the existing street form to the proposed typical bike boulevard treatment (see Section 3 of this Technical Note):
    - it is proposed to convert the street section into a 4.5m two-way bike boulevard travelway (with red asphalt treatment), a 2.1m on-street parking bay along the eastern or western side of the corridor, with a 0.3m buffer between the bike boulevard travelway and the on-street parking.
    - it is proposed that the posted speed limit is reduced from 50km/h to 30km/h, as discussed in Section 2.8 of this Technical Note.
- Install an angled slow point treatment (1 of 2) to restrict vehicle speeds:
    - it is proposed to install an angled slow point opposite Lots 291 and 316.
    - the location of the raised single lane slow point was determined to provide an equal distance between the proposed raised intersection at Reid Street (55m away) and the proposed angled slow point to the south (95m away) of this location.
    - the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the eastern kerb to the north of the treatment and along the western kerb to the south of the treatment.
- Install an angled slow point treatment (2 of 2) to restrict vehicle speeds:
    - it is proposed to install an angled slow point opposite Lots 296 and 311.

- the location of the raised single lane slow point was determined to provide an equal distance between the proposed angled slow point to the north (95m away) and the southern cul-de-sac of Whitfield Street (120m away).
- the angled slow point can be used as a treatment to slow vehicles by introducing a horizontal deflection and narrowing the travelway to 3.0m, allowing only one vehicle at a time to pass through the device. In addition, the treatment allows on-street parking to be provided along the western kerb to the north of the treatment and along the eastern kerb to the south of the treatment.

12. Section 9: Whitfield St cul-de-sac to West Rd

(see Schematic Design Sheet 6)

It is proposed that the formal signposted bike connection between Whitfield Street and Sandy Beach Reserve/Ashfield Flats is as follows:

- From the Whitfield Street southern cul-de-sac via the existing shared path between Whitfield Street and West Road:
  - widen the existing 2.0m shared path to a 2.5m shared path – widen towards the public open space. The shared path provides a bike connection from the southern end of Whitfield Street to the West Road corridor.
- Install a raised plateau crossing across the southern arm of the West Road/Villiers Street East intersection:
  - it is proposed that a raised plateau crossings is installed across the southern arm of the intersection to slow vehicle speeds in this location (noting that shallow plateau treatments exist across the northern and eastern arms of the intersection).
  - the raised plateau crossing will provide a safe crossing for cyclists and pedestrians between the shared paths on the eastern and western sides of West Road.
  - install a new section of shared path (approximately 17.5m x 2.5m of new path required), to realign the eastern end of the existing shared path from Whitfield Street on this approach to West Road, so that the path connects to a safer crossing location of West Road than the existing terminus of the shared path (which terminates within the West Road/Villiers Street East intersection).

13. Section 10: West Rd – Villiers St East to Sandy Beach Res

(see Schematic Design Sheets 6 & 7)

It is proposed that the formal signposted bike connection along West Road between Villiers Street East and Sandy Beach Reserve/Ashfield Flats is as follows:

- Via the existing shared path along the eastern side of West Road:
  - widen the existing 1.8m shared path to a 2.5m shared path – widen towards West Road. The shared path provides a bike connection from Villiers Street East to the existing 2.5m shared path within the Sandy Beach Reserve/Ashfield Flats recreational area.
- Install a raised plateau crossing across the West Road entry into the Sandy Beach Reserve car park:
  - it is proposed that a raised plateau crossings is installed across the West Road entry into the Sandy Beach Reserve car park to slow vehicle speeds in this location.

- the raised plateau crossing will provide a safe crossing for cyclists and pedestrians between the shared paths on the eastern and western sides of West Road.

14. Schematic Design without Old Perth Road Treatments

(see Schematic Design Sheets 1 & 2)

The schematic design for the Whitfield Street Bike Boulevard scenario without treatments along Old Perth Road, is the same as that set out above (Sections 4-13) for the Whitfield Street Bike Boulevard scenario with treatments along Old Perth Road, other than the following differences between the two schematic designs:

- Guildford Road/West Road intersection (see Schematic Design Sheet 1):
  - use of the existing signal controlled pedestrian crossing facility across the western arm of the Guildford Road/West Road intersection – rather than the proposed upgrade of the signal controlled crossing lanterns across the western arm of the intersection, to convert the crossing from a pedestrian crossing facility to a shared bike/pedestrian crossing facility.
- Old Perth Road between Whitfield Street and Bassendean Station (see Schematic Design Sheet 2):
  - no treatments proposed along the Old Perth Road corridor between Whitfield Street and Bassendean Station – Old Perth Road corridor to remain in its existing form.
  - it is proposed to install a raised plateau crossing across the eastern arm of the Old Perth Road/Whitfield Street intersection, to provide a safe connection between the on-street bike boulevard along Whitfield Street to the south of Old Perth Road and the off-street shared path along the eastern side of Whitfield Street to the north of Old Perth Road.

Whitfield Street Bike Boulevard, Town of Bassendean

- Schematic Design Plans WITH Old Perth Road Treatments

- Design Sheets 1-7

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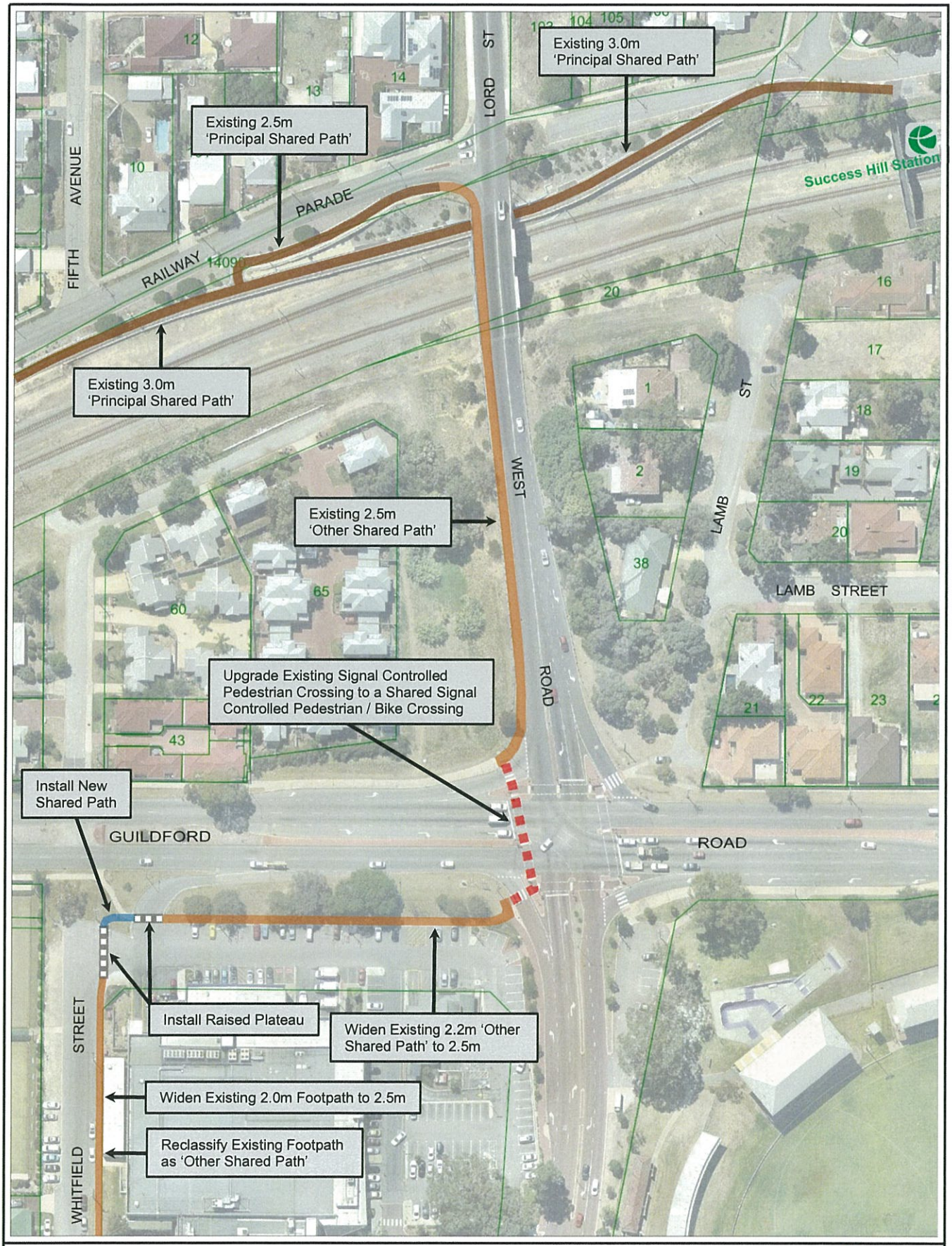
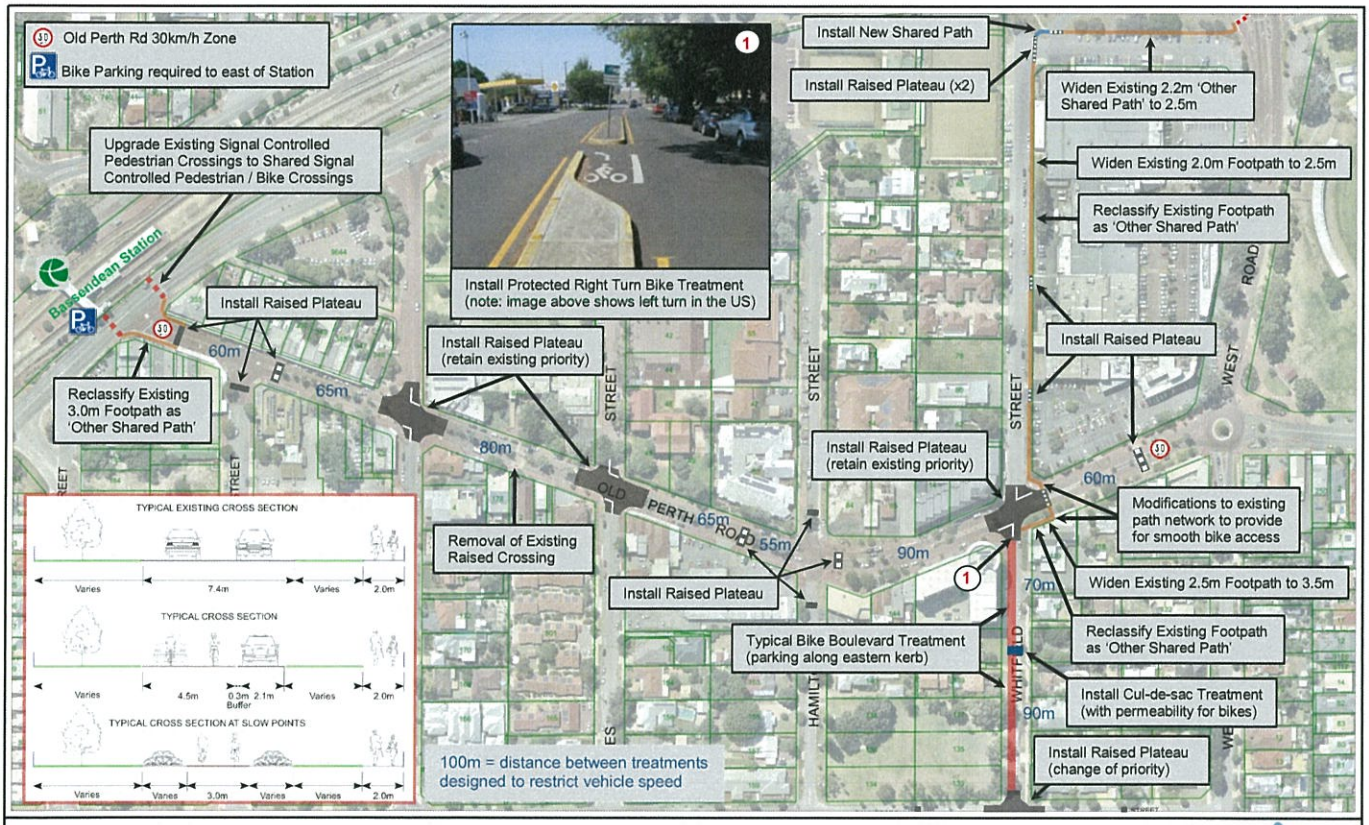


SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 1 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
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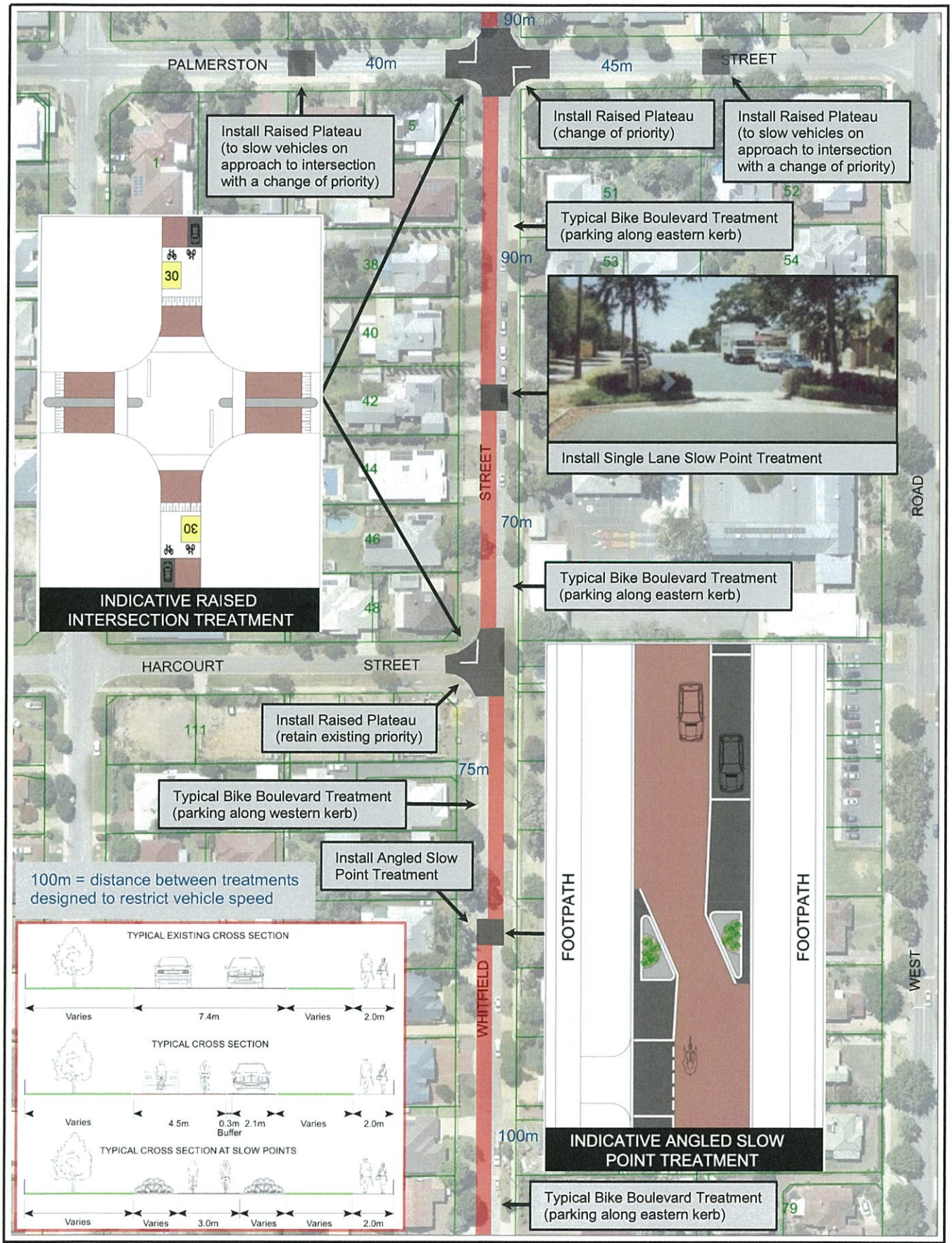
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:2000
ORIGINAL PLAN SIZE A3

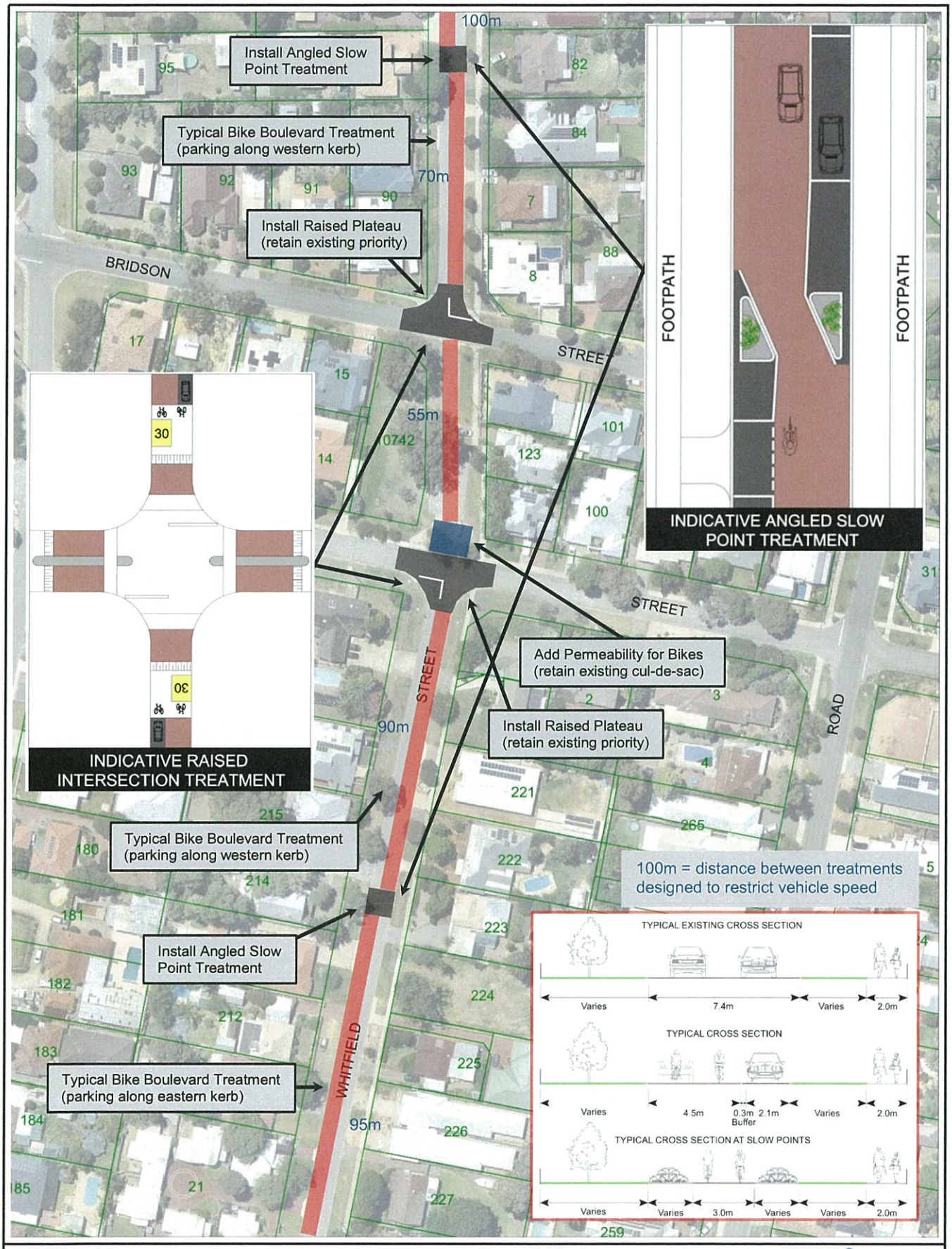
BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 3 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

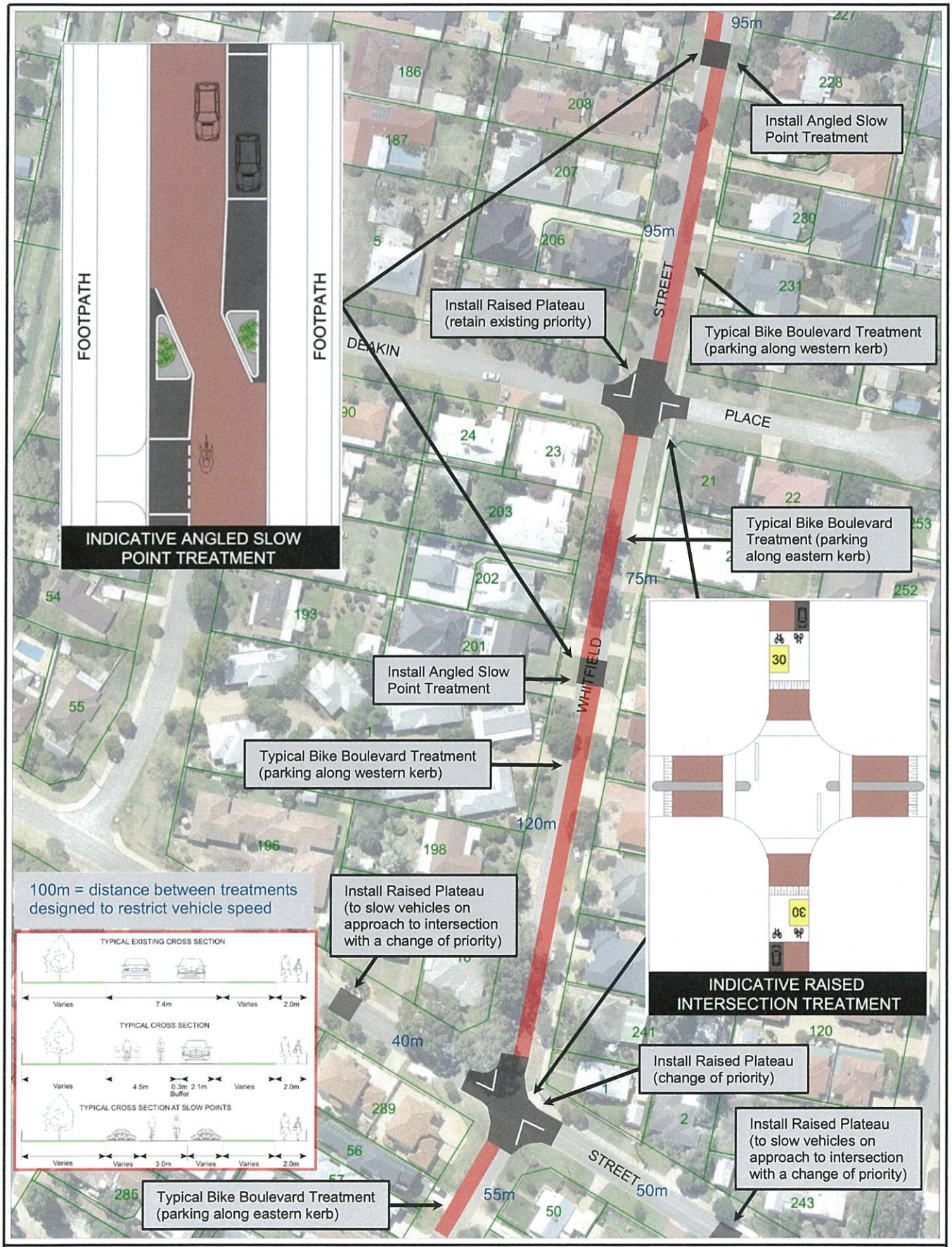
BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 4 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 5 OF 7

GUILDFORD ROAD TO SANDY BEACH RESERVE

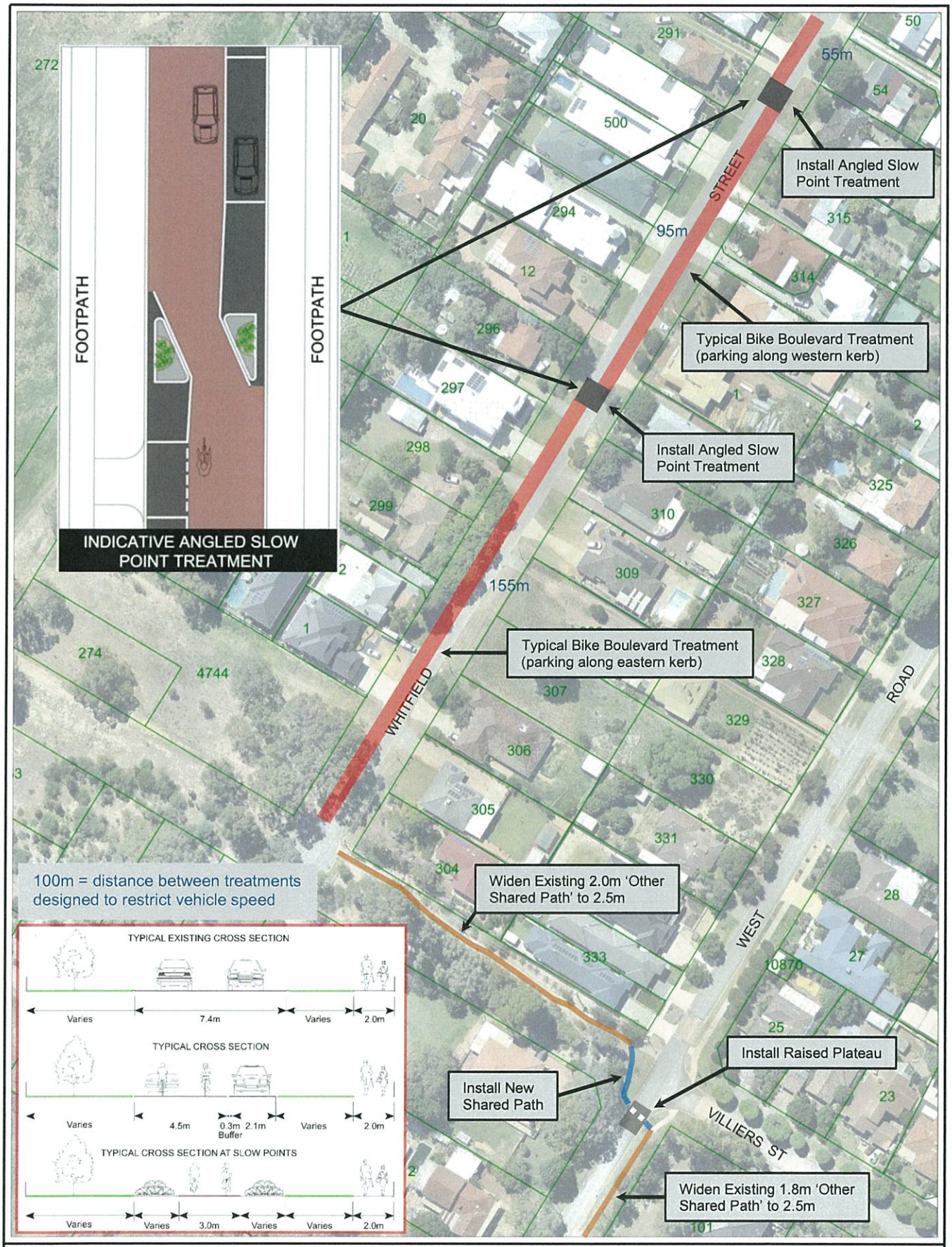
Town of Bassendean

NORTH

SCALE 1:1000
ORIGINAL PLAN SIZE A3

BASSENDEAN

Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 6 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE A3

TOWN OF BASSENDEAN
Department of Transport

SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 7 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:2000
ORIGINAL PLAN SIZE A3

BASSENDEAN
Department of Transport

Whitfield Street Bike Boulevard, Town of Bassendean

- Schematic Design Plans WITHOUT Old Perth Road Treatments

- Design Sheets 1-7

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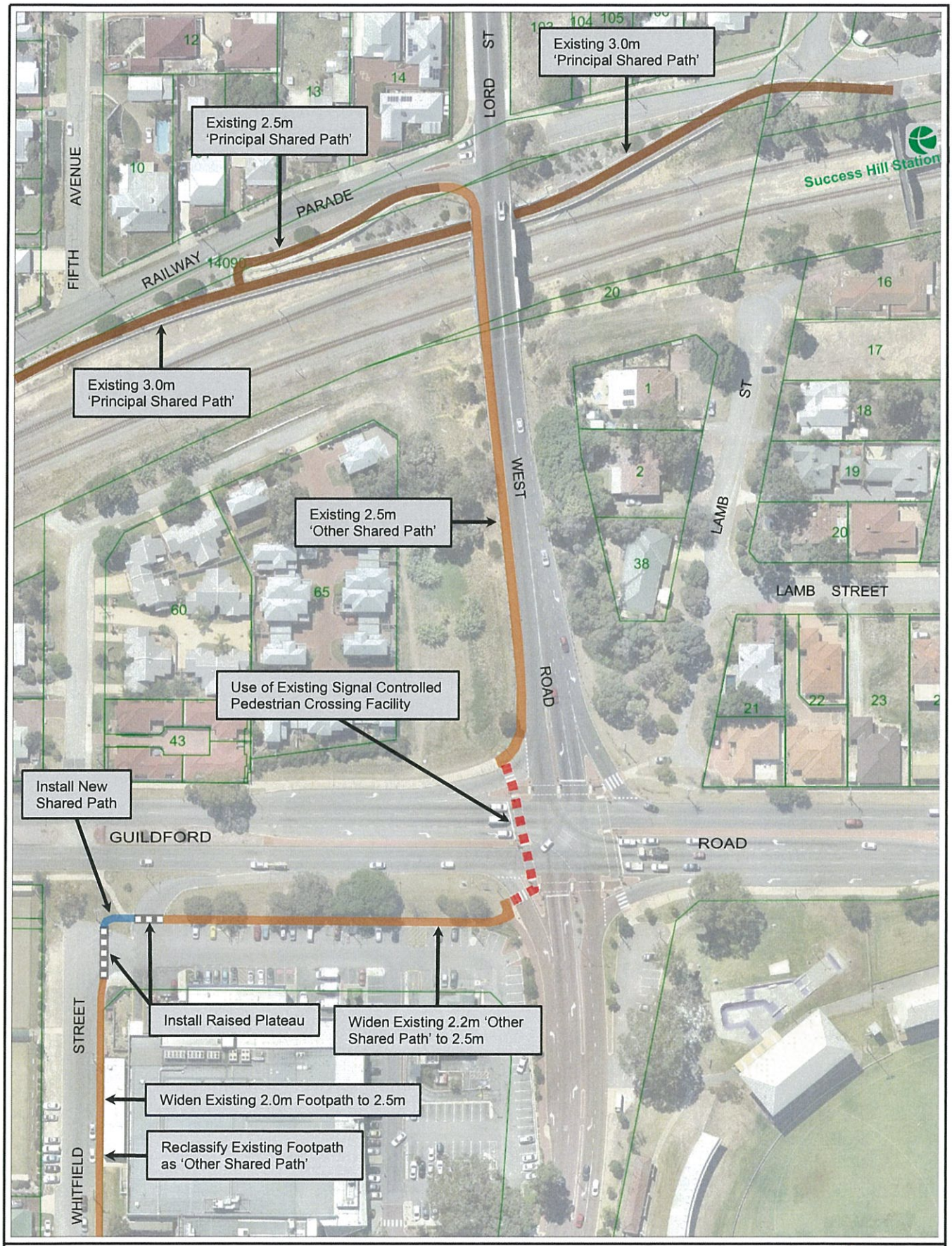


SCHEMATIC DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 1 OF 7

GUILDFORD ROAD TO SANDY BEACH RESERVE

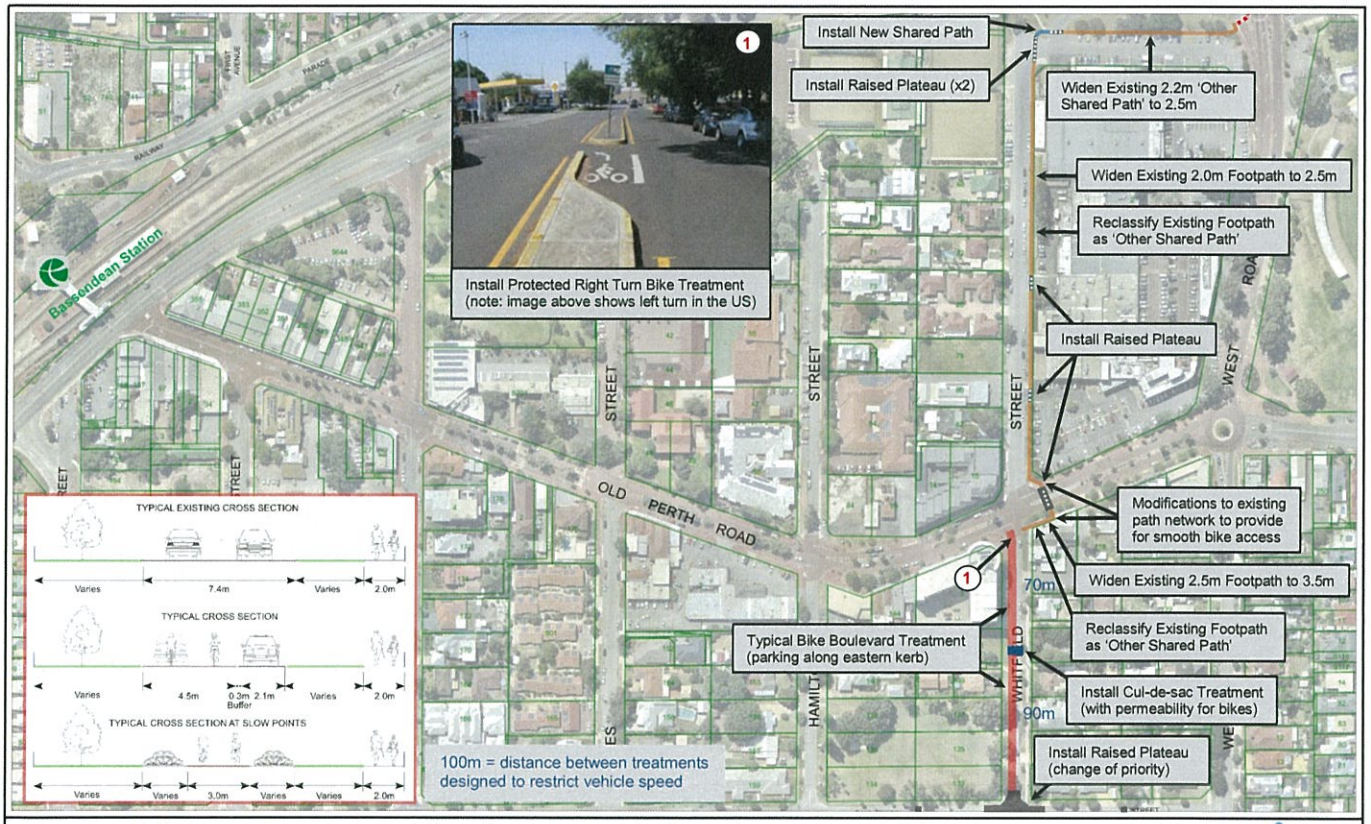
Town of Bassendean

NORTH

SCALE 1:1000
ORIGINAL PLAN SIZE: A3

BASSENDEAN

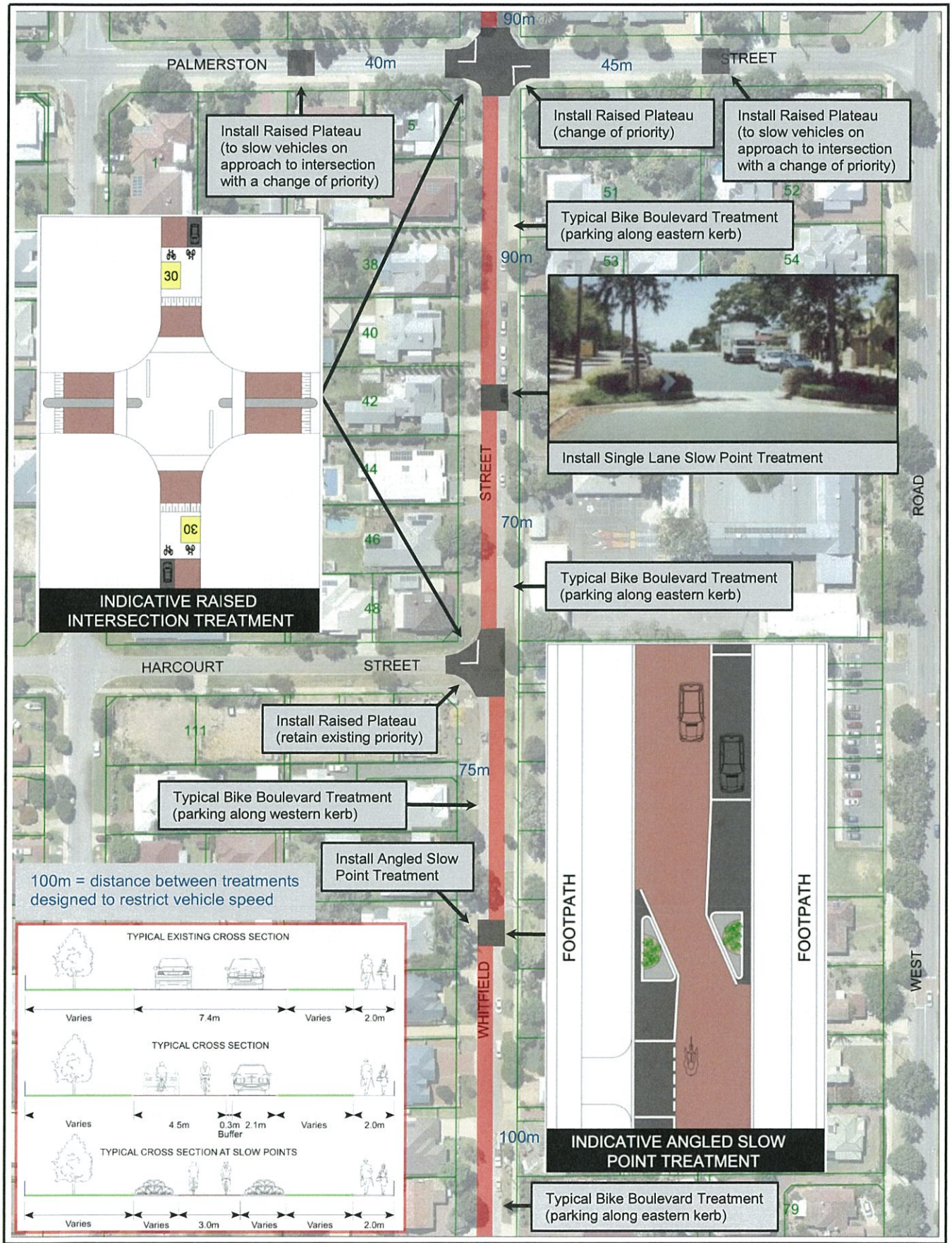
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 2 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:2500
ORIGINAL PLAN SIZE A3

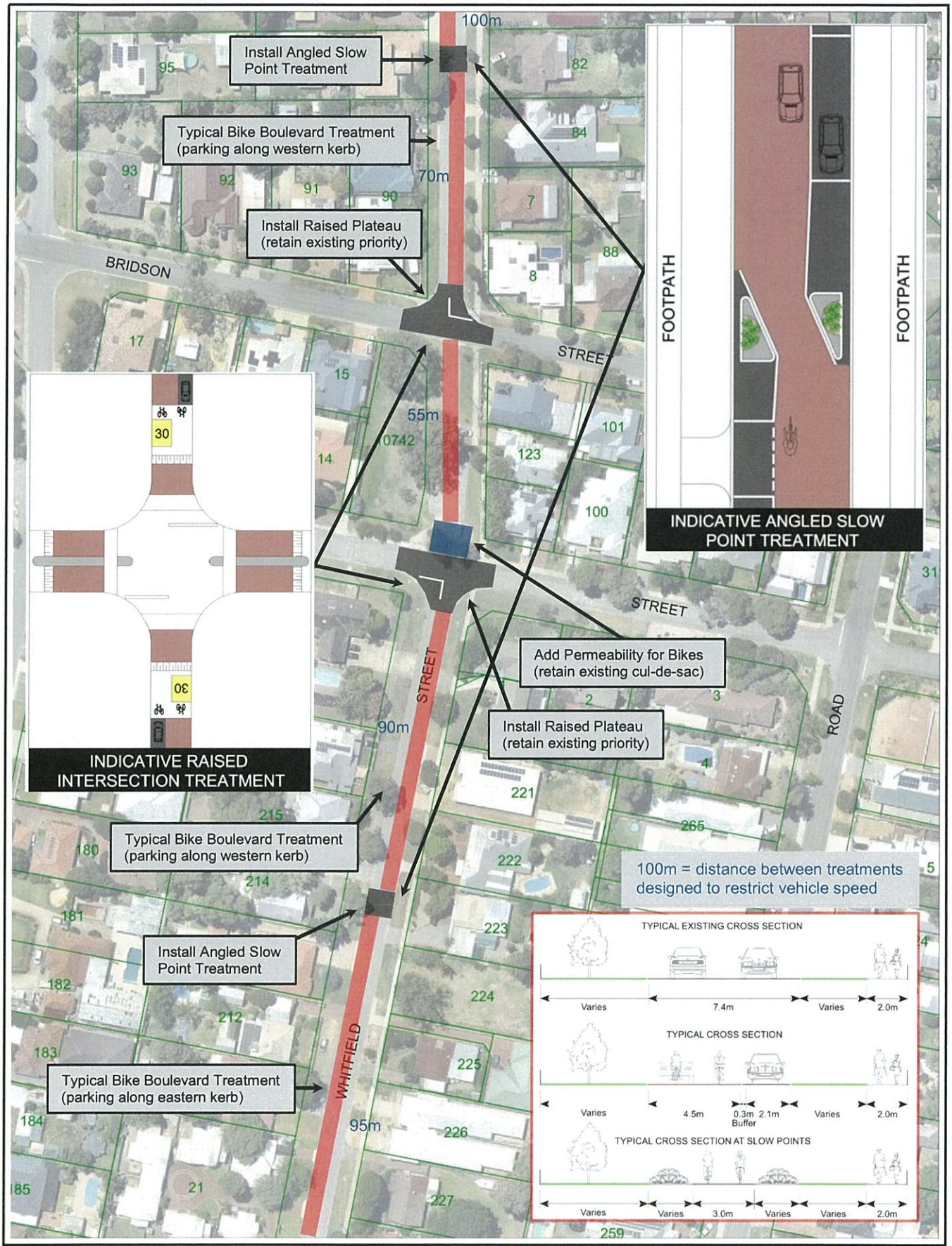
BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 3 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

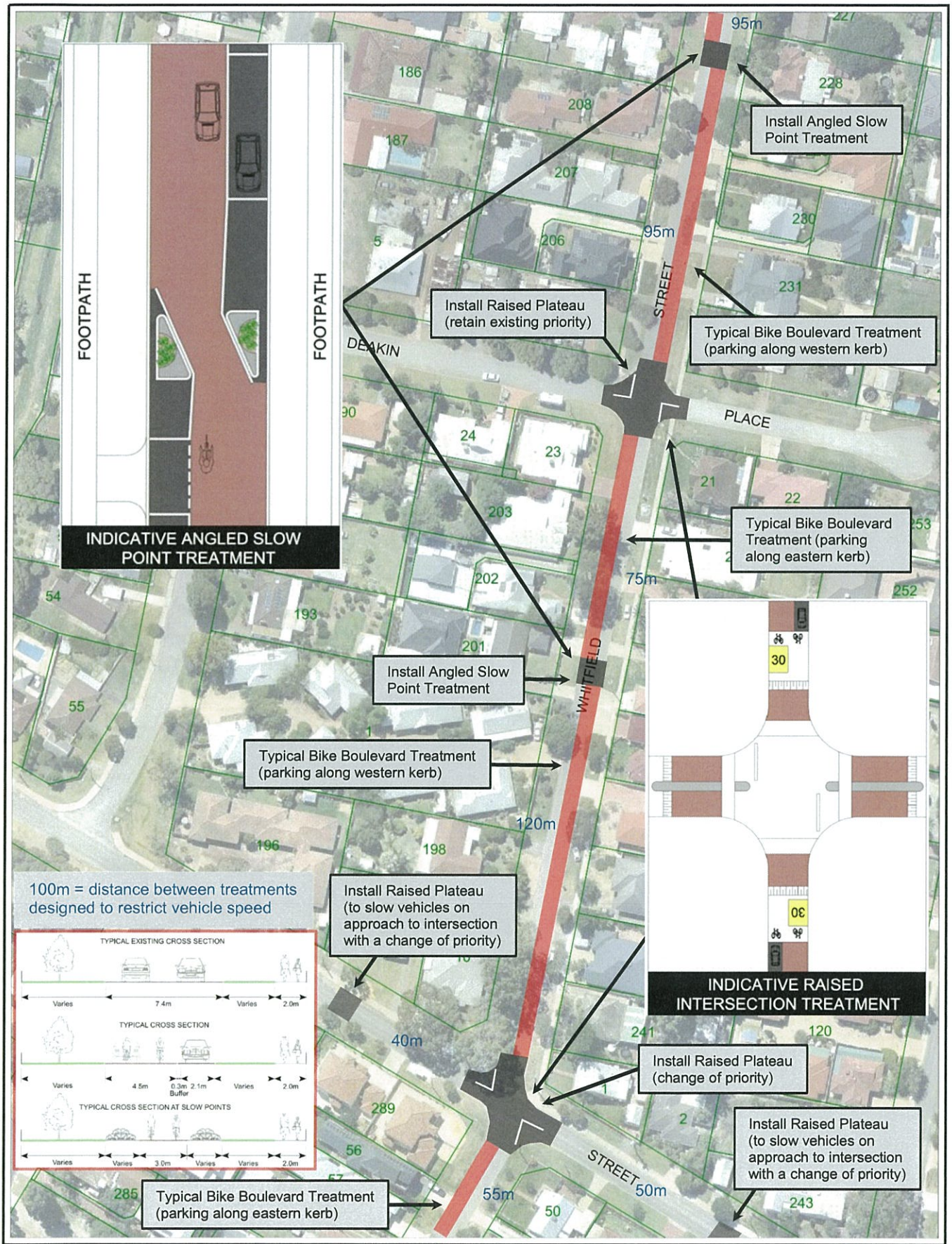
BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 4 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

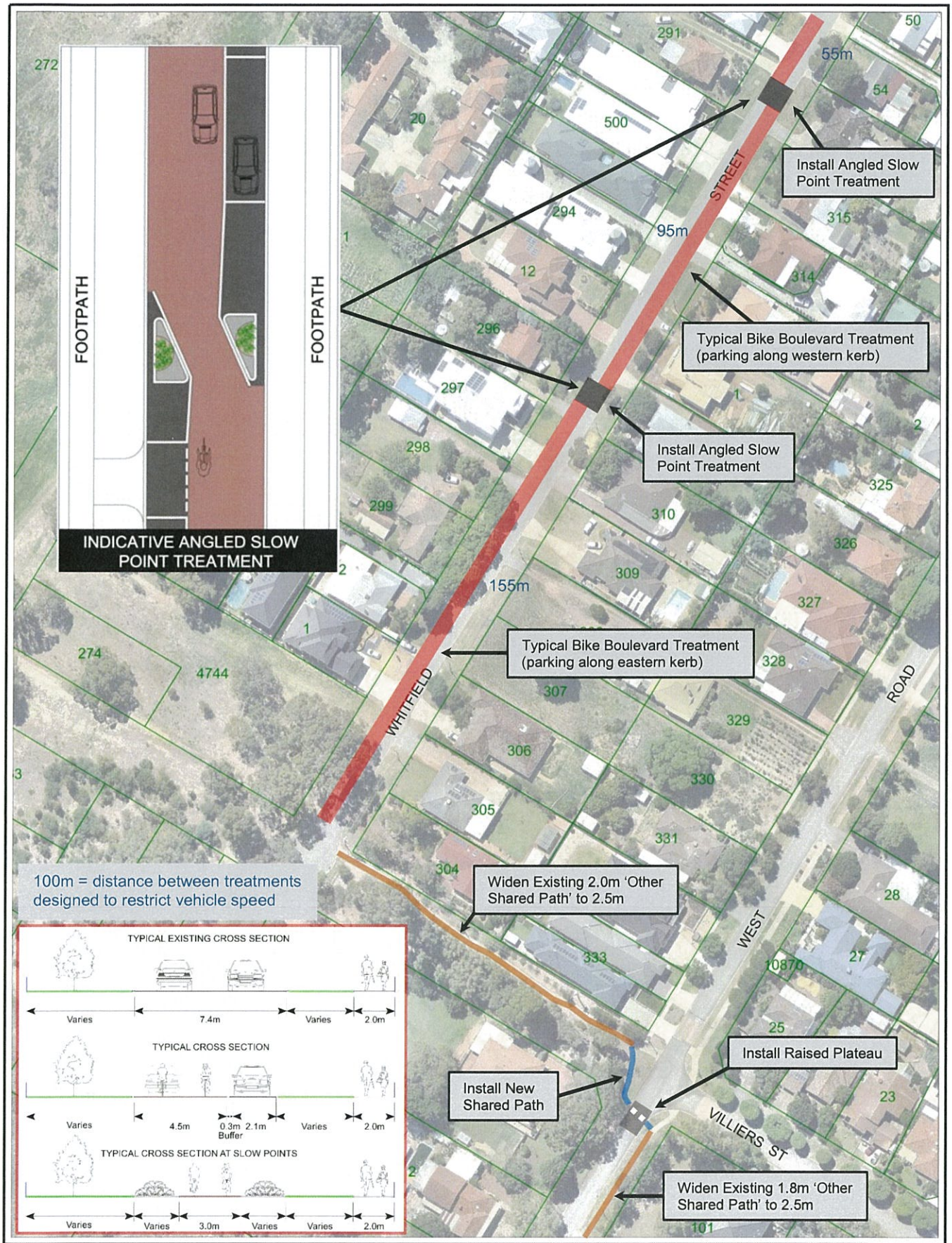
TOWN OF BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 5 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

BASSENDEAN
Department of Transport



SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 6 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:1000
ORIGINAL PLAN SIZE: A3

BASSENDEAN
Department of Transport

SCHEMATIC DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 7 OF 7
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH

SCALE 1:2000
ORIGINAL PLAN SIZE: A3

BASSENDEAN

Department of Transport

Technical Note	81113-259-FLYT-TEN-0004
PROJECT	**Whitfield Street Bike Boulevard, Town of Bassendean** Concept Design Plans
Date Issued	09/06/17

1. Introduction

The Town of Bassendean (ToB) was successful in its application for funding by the Department of Transport (DoT) for the delivery of the Project Scope and Concept Design of the Whitfield Street Bike Boulevard (Guildford Road to Sandy Beach Reserve).

The Whitfield Street Bike Boulevard forms part of the second phase of bike boulevard schemes being considered by DoT, following on from the three initial pilot projects planned, designed and at various stages of delivery/construction.

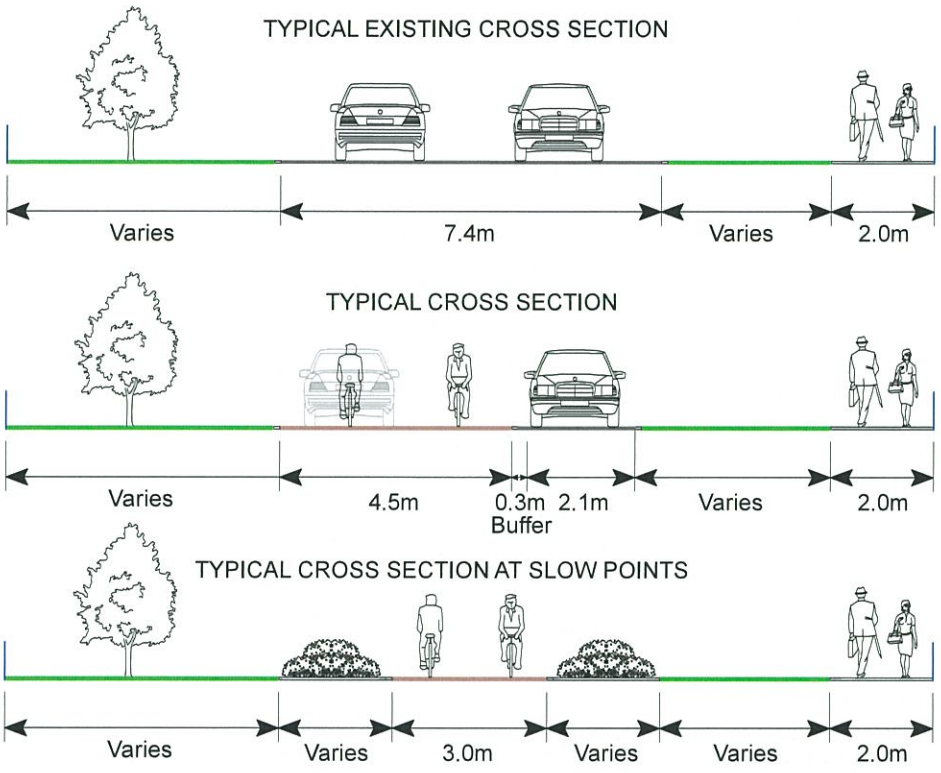
A bike boulevard is a quiet, low-traffic and low speed street designed to allow cyclists and cars to share the street space safely. Bike boulevards are a type of on-street cycleway where speed limits have been reduced and cyclists are given right of way. Target users are not fast cyclists, but are mums, dads, children, senior citizens and others making short to medium length trips on bikes to schools, train stations, shops, community or recreational facilities. Bike boulevards in Perth will have a posted 30km/h speed limit.

2. Whitfield Street Bike Boulevard Concept Design Plans

The concept design for the Whitfield Street Bike Boulevard corridor has been split across fifteen (15) design plans, these are numbered 1-15 and are attached to this Technical Note. In addition, a typical Whitfield Street Bike Boulevard cross section sheet is attached to provide further clarity regarding the on-street bike boulevard concept design approach.

The attached concept design plans for the Whitfield Street Bike Boulevard are:

- Typical Whitfield Street Bike Boulevard cross section
- Sheet 1 of 15: Midland Line Principal Shared Path (Success Hill Station) to West Road
- Sheet 2 of 15: West Road to Guildford Road / Whitfield Street
- Sheet 3 of 15 Whitfield Street adjacent to Bassendean Shopping Centre
- Sheet 4 of 15: Whitfield Street either side of Old Perth Road
- Sheet 5 of 15: Whitfield Street either side of Palmerston Street
- Sheet 6 of 15: Whitfield Street either side of Harcourt Street (Bassendean Primary School)
- Sheet 7 of 15: Whitfield Street north of Bridson Street
- Sheet 8 of 15: Whitfield Street either side of Watson Street
- Sheet 9 of 15: Whitfield Street north of Deakin Place
- Sheet 10 of 15: Whitfield Street between Deakin Place and Reid Street
- Sheet 11 of 15: Whitfield Street either side of Reid Street
- Sheet 12 of 15: Whitfield Street to southern cul-de-sac / shared path to West Road
- Sheet 13 of 15: West Road south of Villiers Street
- Sheet 14 of 15: West Road to Sandy Beach Reserve
- Sheet 15 of 15: Sandy Beach Reserve to Swan River foreshore

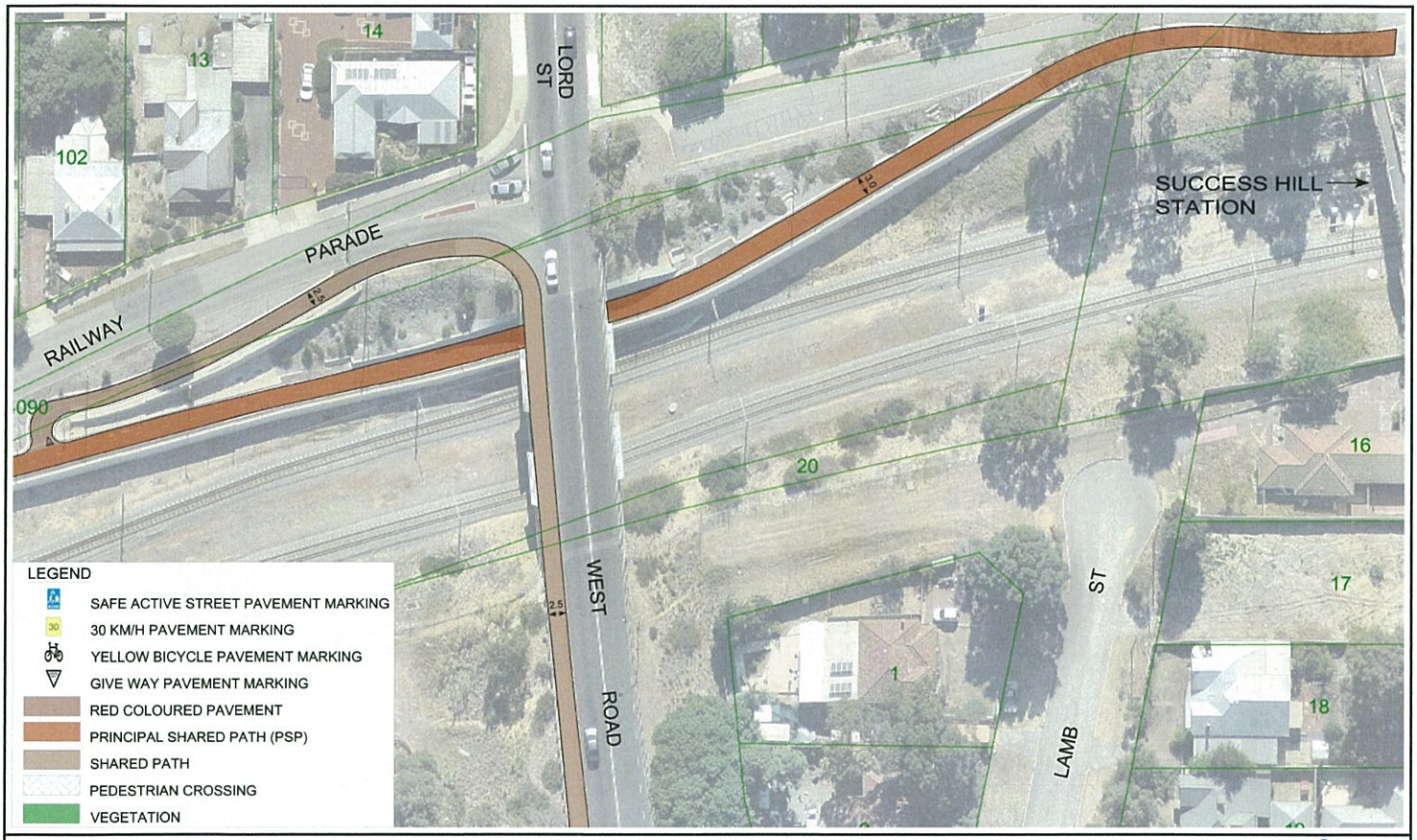


TYPICAL CROSS SECTIONS
WHITFIELD STREET BIKE BOULEVARD
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
0 10 20 30 40 50 60m
SCALE 1:100
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN
Home by the River

THE GOVERNMENT OF WESTERN AUSTRALIA
Department of Transport



CONCEPT DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 1 OF 15
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
SCALE 1:500
ORIGINAL PLAN SIZE: A3

BASSENDEAN
Department of Transport

CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 2 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

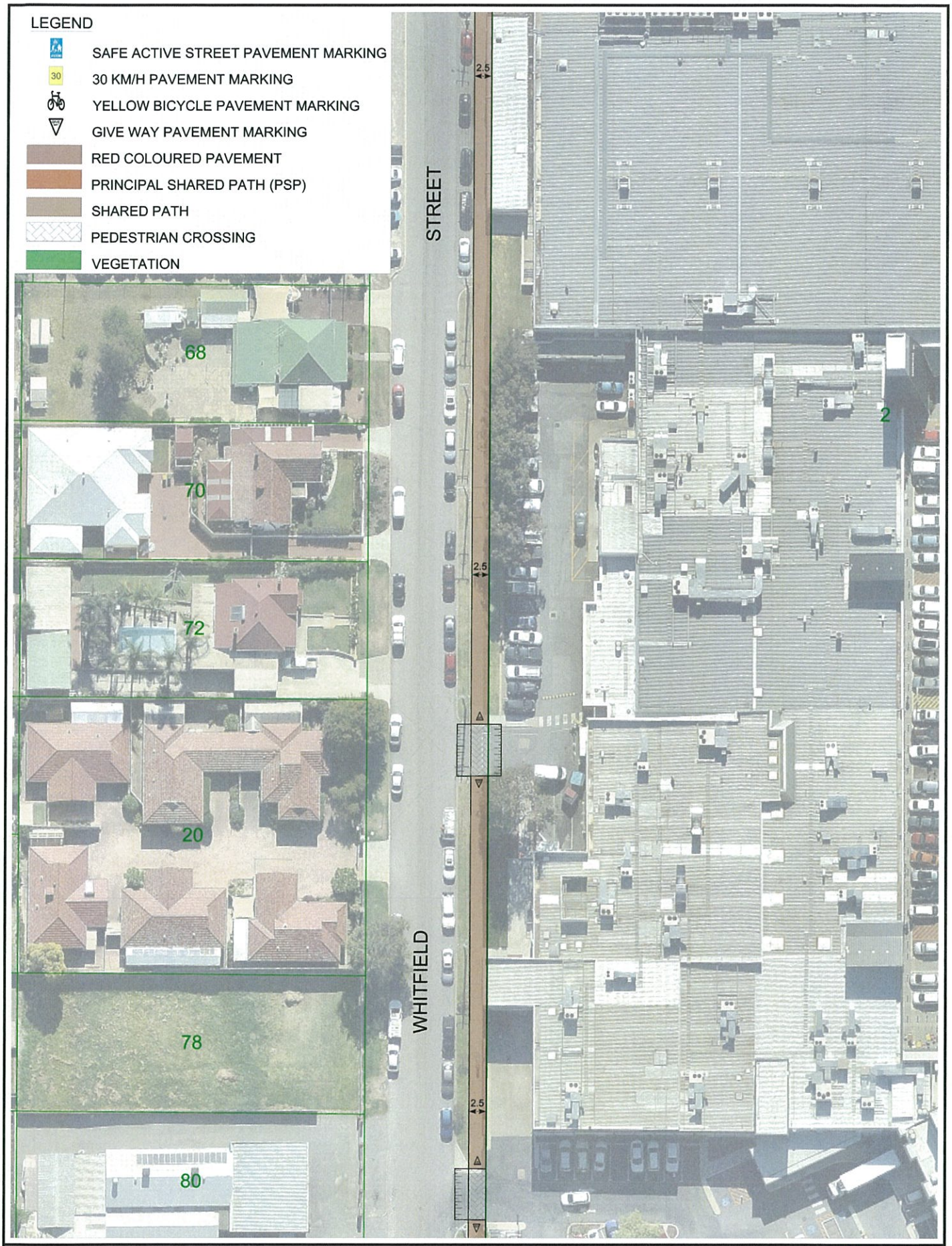
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 3 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport

CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 4 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

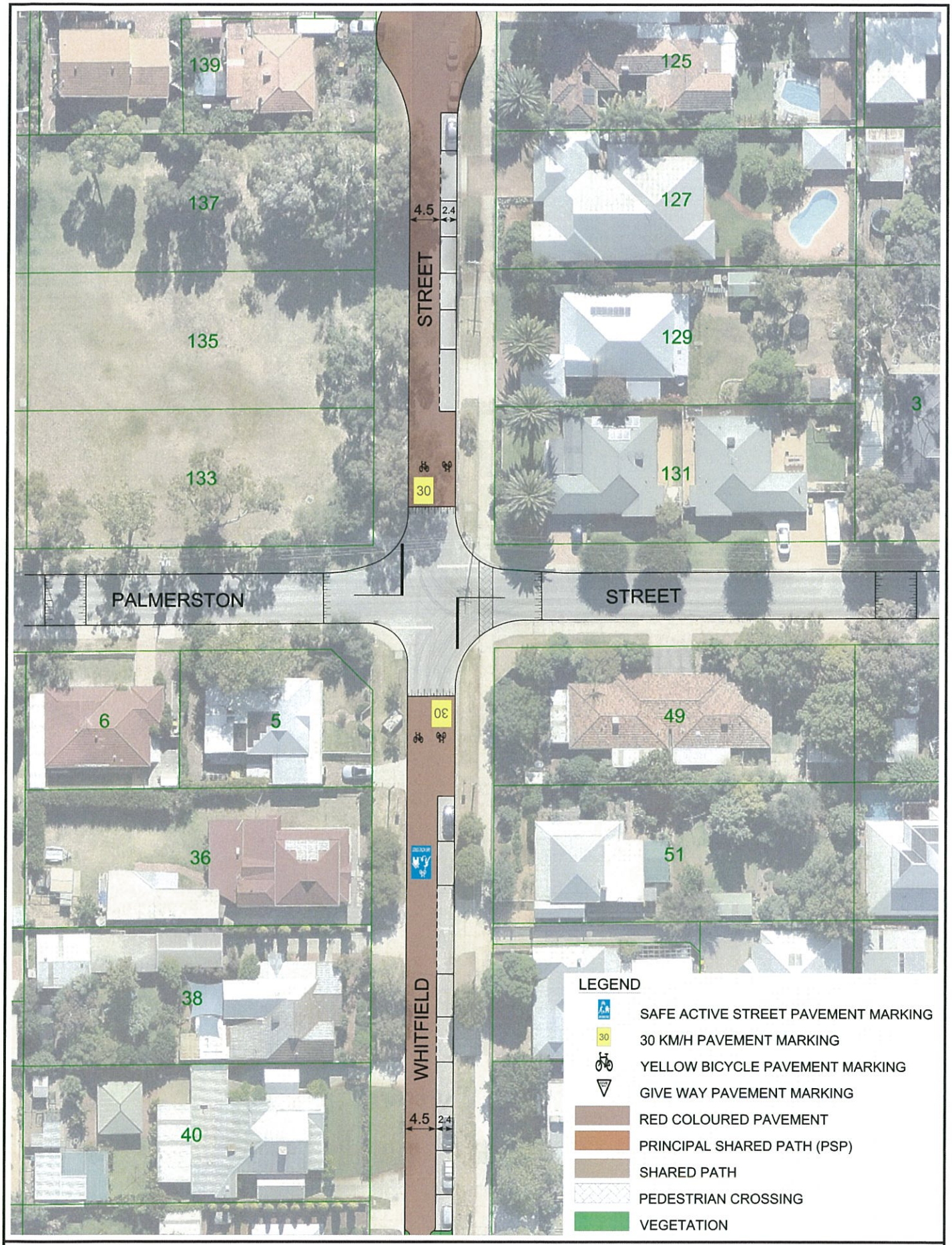
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 5 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

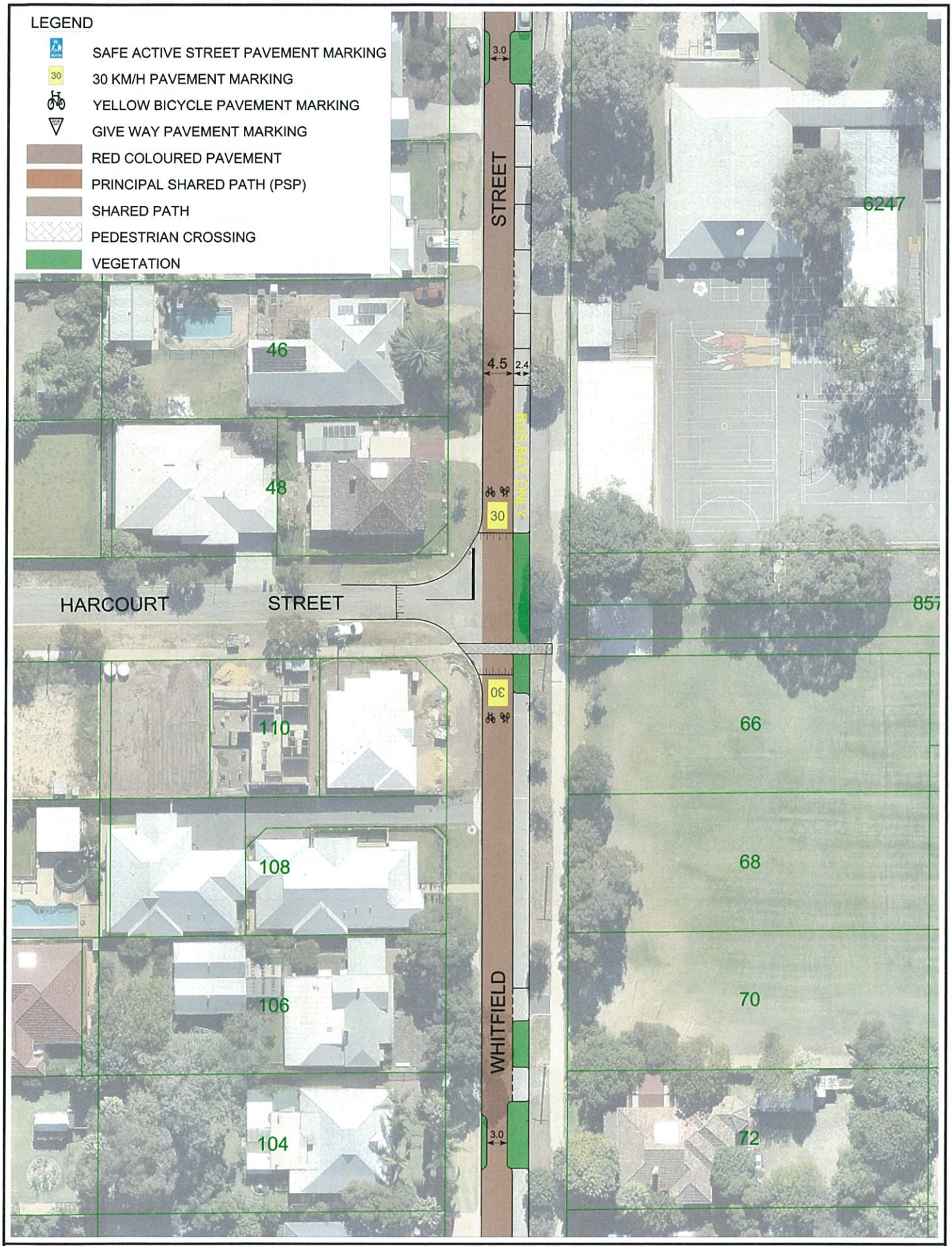
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 6 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

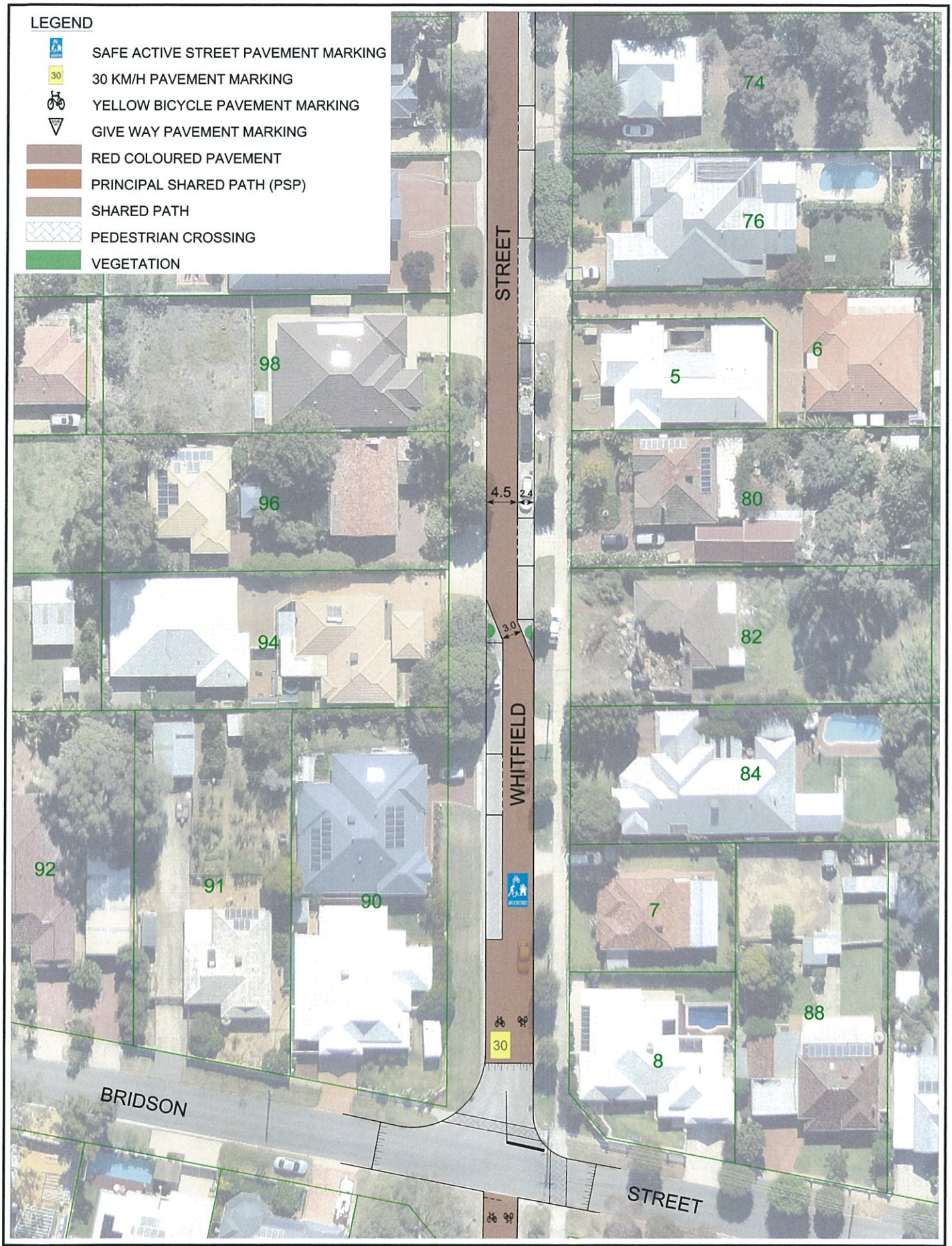
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 7 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport

CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 8 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport

CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 9 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

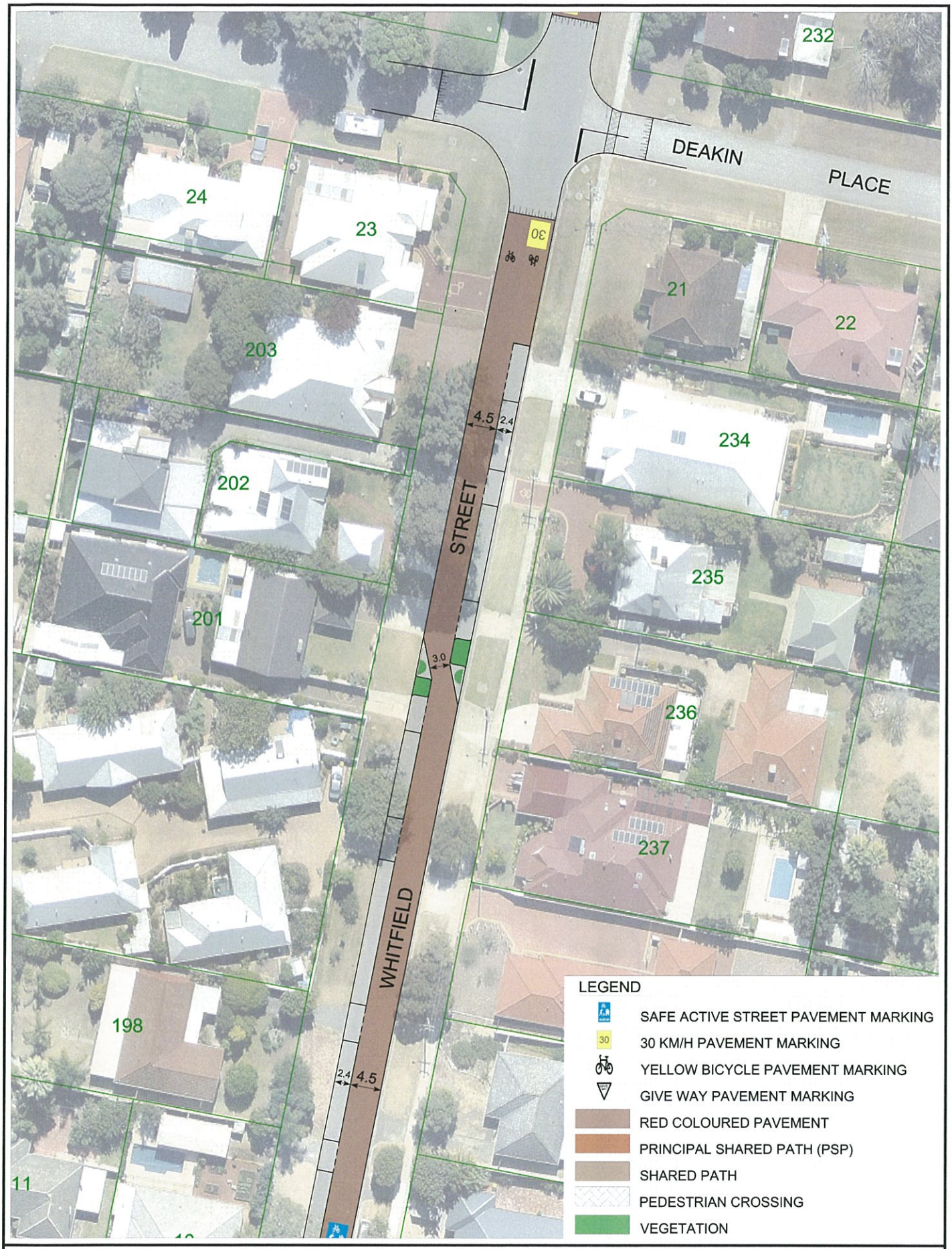
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

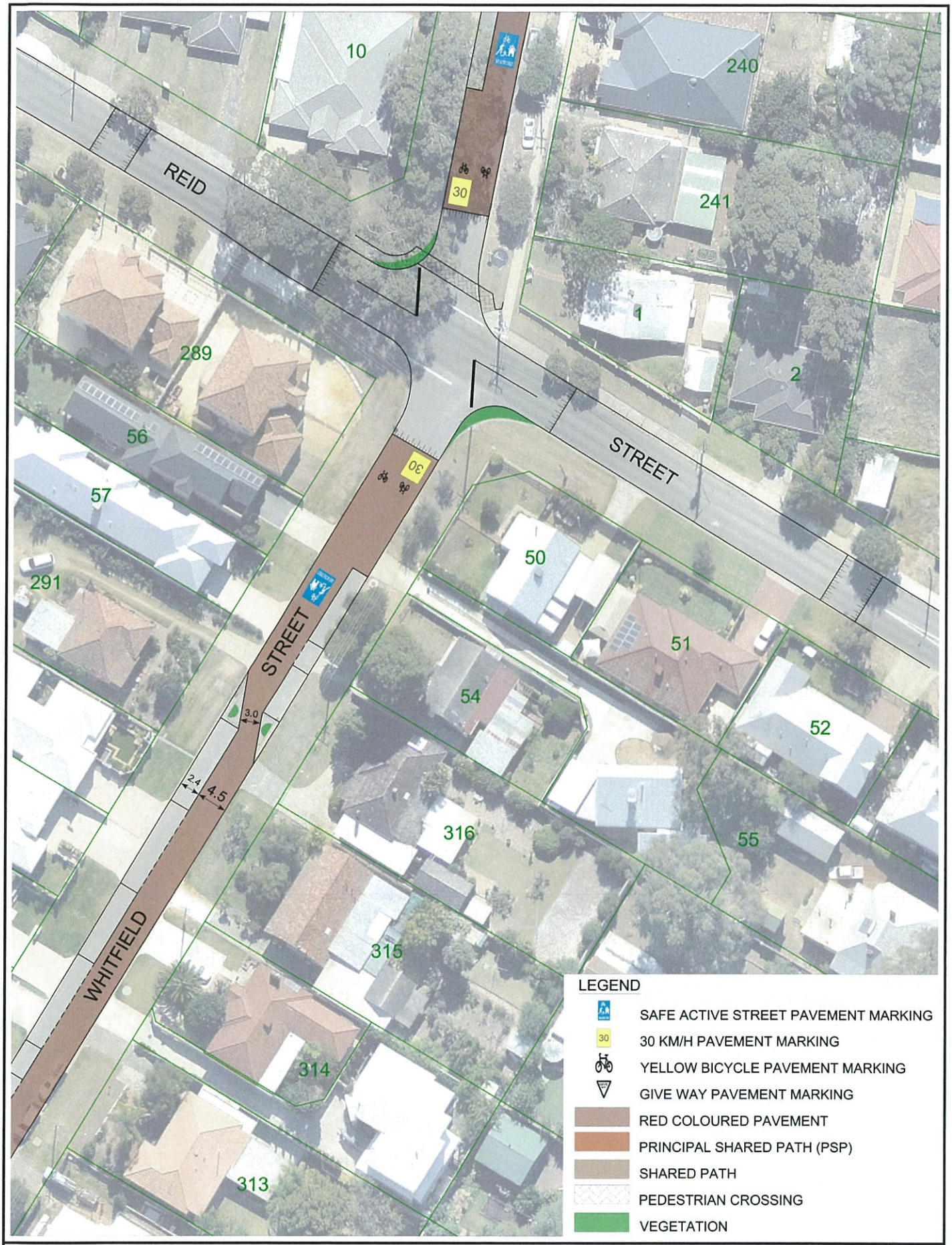
Department of Transport



CONCEPT DESIGN PLAN
WHITFIELD STREET BIKE BOULEVARD - SHEET 10 OF 15
GUILDFORD ROAD TO SANDY BEACH RESERVE
Town of Bassendean

NORTH
0 5 10 15m
SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN
Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 11 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

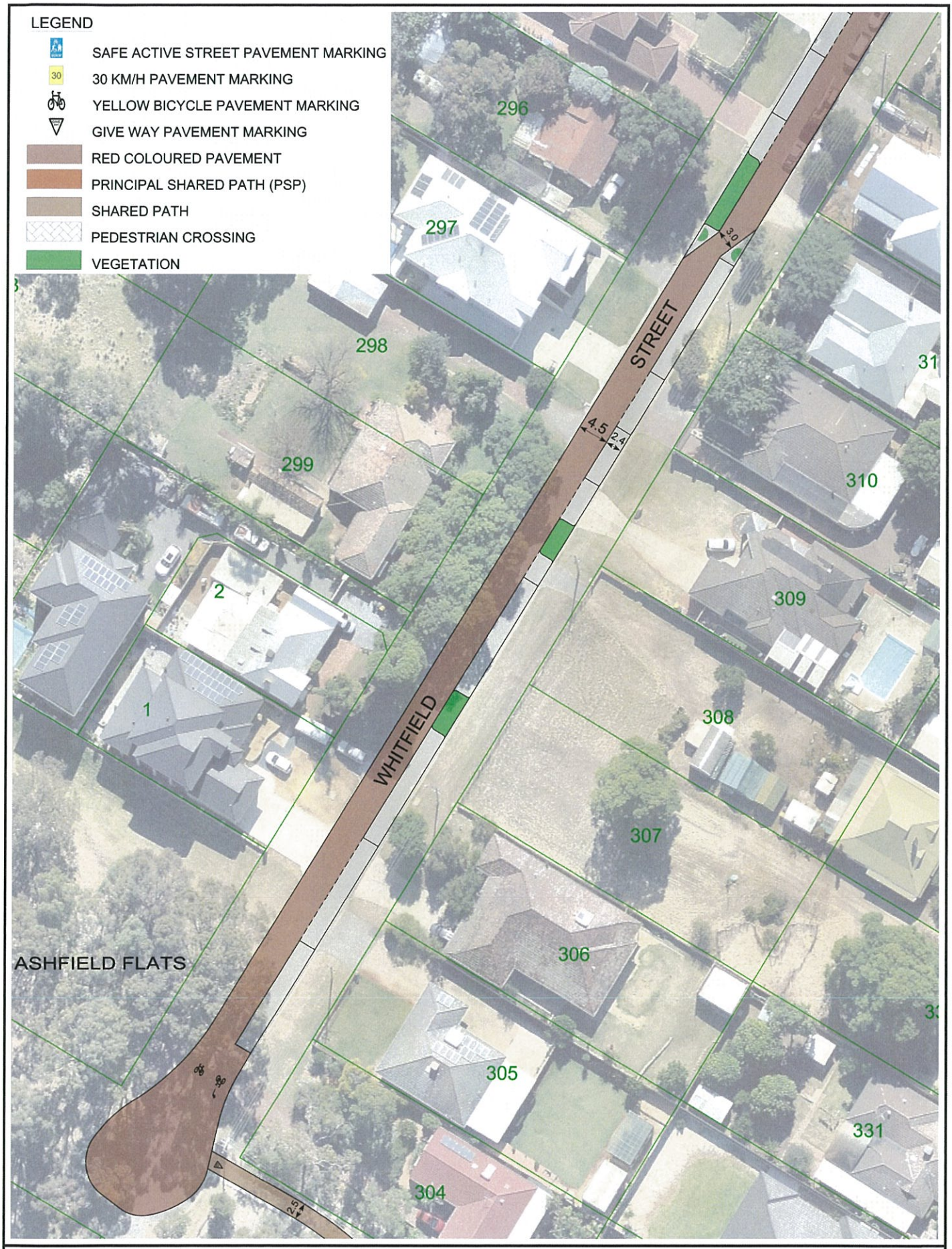
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 12 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

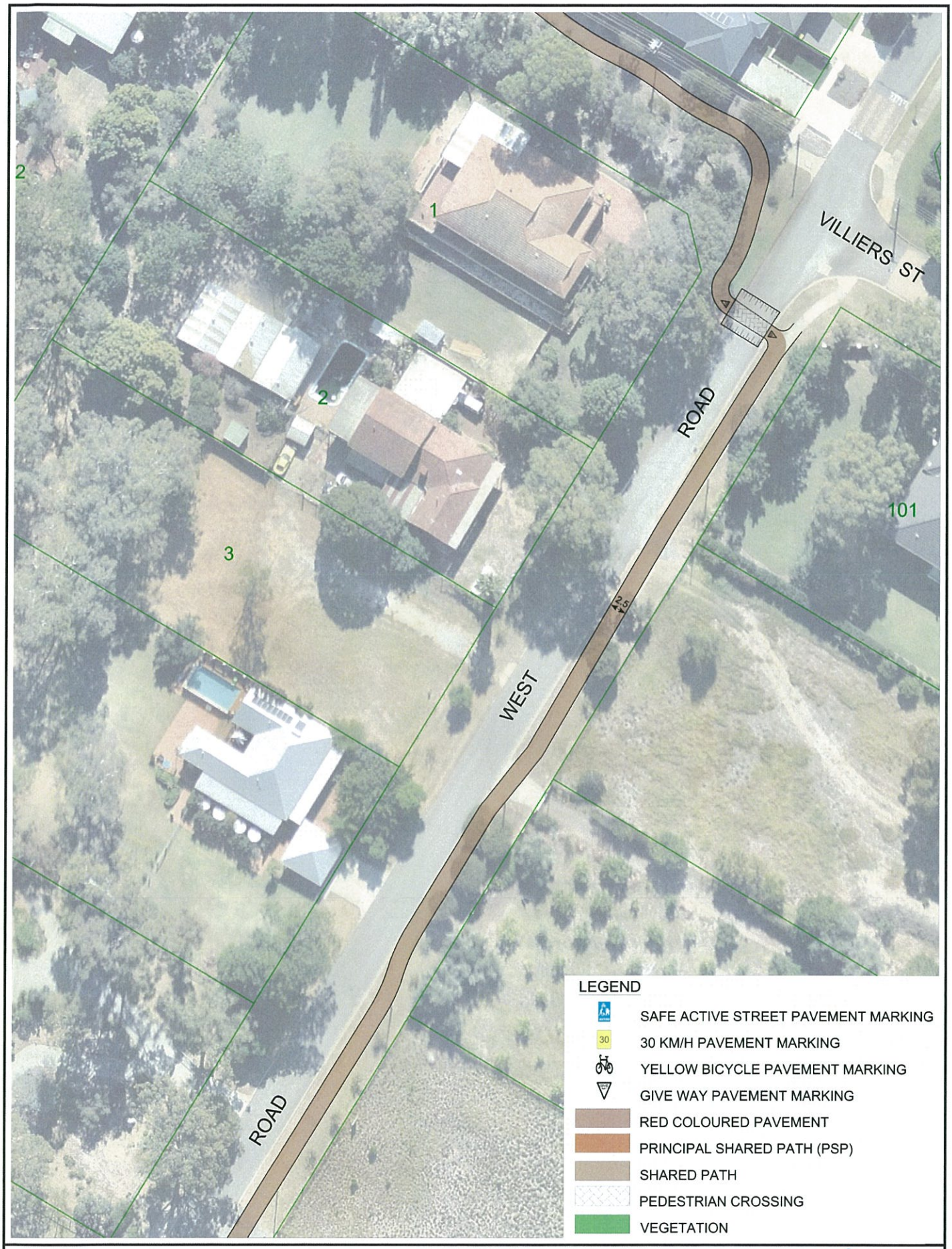
Town of Bassendean

NORTH

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 13 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

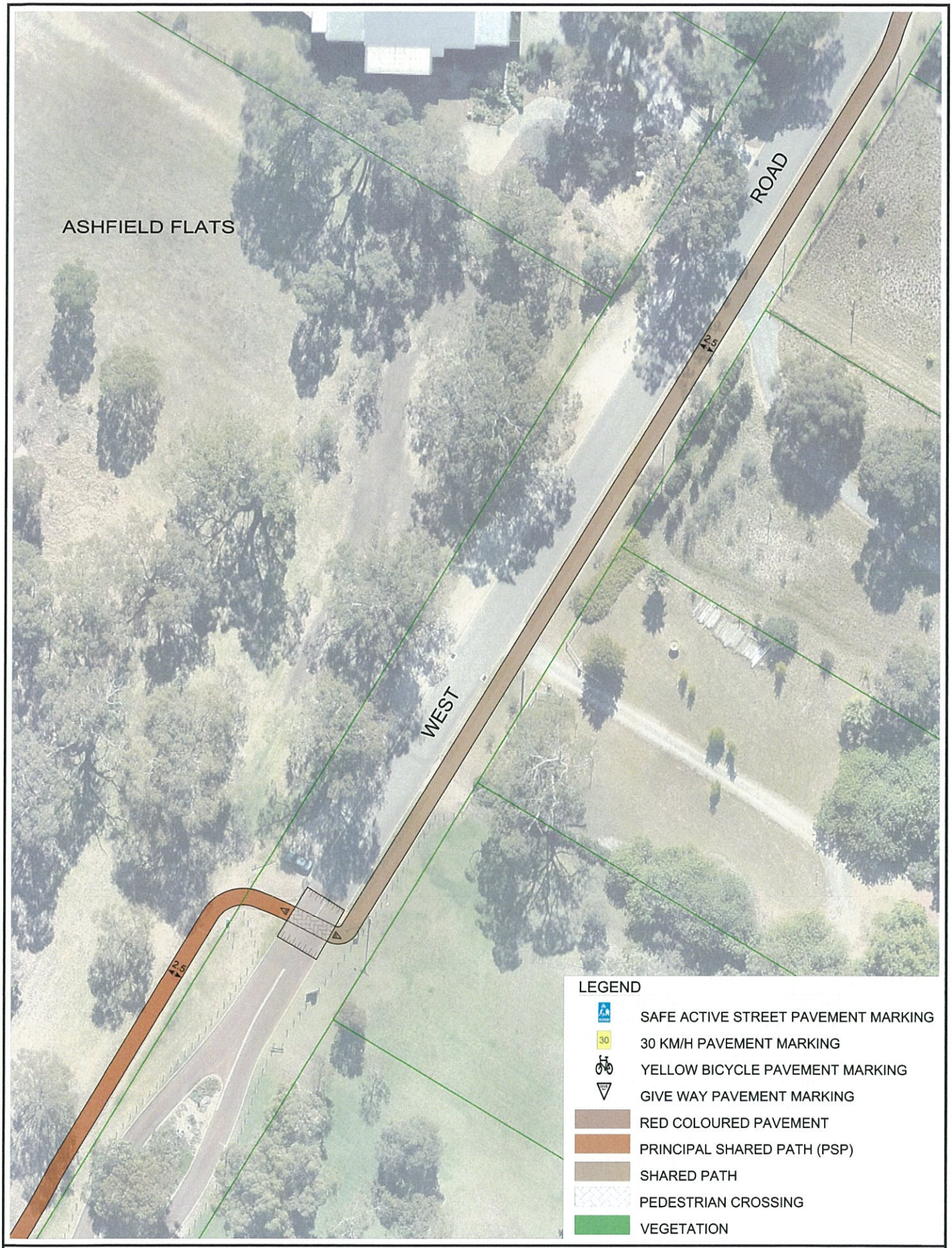
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 14 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

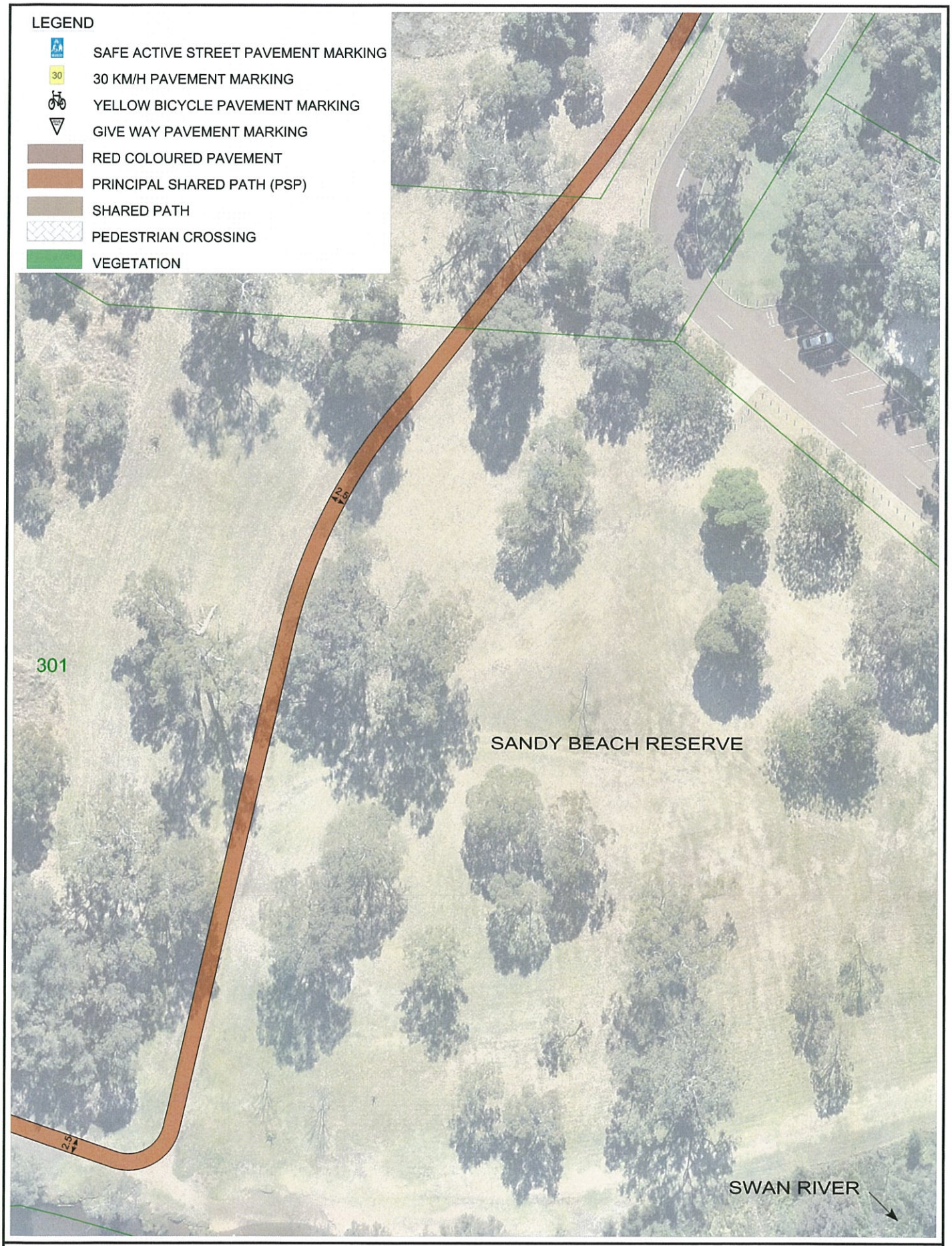
NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

TOWN OF BASSENDEAN

Department of Transport



CONCEPT DESIGN PLAN

WHITFIELD STREET BIKE BOULEVARD - SHEET 15 OF 15

GUILDFORD ROAD TO SANDY BEACH RESERVE

Town of Bassendean

NORTH

0 5 10 15m

SCALE 1:500
ORIGINAL PLAN SIZE: A3

BASSENDEAN

Department of Transport

Australia Day Review Working Group Meeting – No2

Date: Thursday, 31st August 2017
Time: 5:30 pm – 7:30 pm
Venue: 48 Old Perth Road, Bassendean, WA 6054

Purpose: To review the Australia Day consultation communications strategy plan and the 2018 event

Attendees:

- Cr Renée McLennan
- Jane Mitchell
- Warren Wright
- Graeme Haggart
- Gabriella Filippi
- Antonia Bordoni
- Anthea Marshall
- Caroline Easton
- Ricky Arnold
- Salvatore Siciliano

Apologies:

- Gina Williams
- Lynn Cox
- Vivien Weir
- Kylie Turner

Facilitator: Lockie McDonald

Meeting Notes
These are a record of the decisions made by the meeting as opposed to detailed meeting minutes.

Acknowledgement of Country

The facilitator acknowledged that the meeting was taking place on Country of the Wadjuk people of the Noongar nation and their living cultural practices.

House keeping

The facilitator ran through housekeeping details including:

- All mobile phones on silent;
- Location of coffee tea and food throughout the meeting
- Location of toilets; and,
- Safety; emergency exits and muster point

Introductions

The facilitator invited each person to introduce themselves and why they have attended the meeting. Each person introduced themselves

Context and Purpose of the meeting

Salvatore Siciliano, Manager Recreation and Culture, Town of Bassendean
Presented a brief overview of the progress to date of the Australia Day Review. A brief explanation was also provided to the working group as to why there was a delay to the consultation process and agreed timeline from the initial working group meeting conducted on Tuesday 4 April 2017.

Annual National Australia Day Council Conference

Given that any changes as a result of the Australia Day review will come effect from 2019 onwards, the Town was continuing to plan and organise for the staging of the 2018 Australia Day event for Friday 26 January 2018 at Ashfield Reserve.

Jane Mitchell, Events Officer gave a brief overview of her attendance at the National Australia Day Council Conference in Adelaide from 25 to 26 July 2017.

One of the key learnings from the conference was that there is more that unites us than divides us as a nation. **Australia Day is largely all about belonging.** In terms of what does belonging mean, research across all groups identifies 5 Core Values (% indicates how much these values **driving belonging in Australians)...**

1. Egalitarianism -31%
2. Optimism- 24%
3. Tenacity – 25%
4. Independence – 7%
5. Informality -13%

How can the 2018 Australia Day Event be more inclusive?

Discussion centred around possible ideas such as:

- Multi-cultural, ie. Food;
- PR strategy and messaging;
- EOI's to community groups to be involved in the event;
- Water theme – water fights;
- Linking citizenship ceremonies to event;
- Exploring different staging options;
- Promoting stories/narratives through social media and major partner 98five sonshine FM

Staff would explore to see what is realistic/functional to incorporate into the event given the limitations of budget, risk and human resources.

Critical issues in the new communications plan?

Lockie McDonald facilitator, invited the working group to discuss and identify critical issues arising from the communications plan prepared by Public Relations/Communications Consultant Rania Ghandour.

Three main components:

1. Communications Plan and Messaging
2. Community and Stakeholder Survey
3. Communications Risk Plan

For each

- What works?

- What can be improved?
- Is there anything that is missing?

Discussion centred around:

- Condensing the key messages;
- Condensing the community survey questions;
- Ensuring that survey questions were consistent with the central question agreed to by the working group that they wanted to ask the community.....*How do you want to celebrate being Australian?*
- That the community survey also reflected the following consultation context of:
    - *The cost, risk and Town capacity issues associated with the event.*
    - *The issue of having the event on 26th January and the precedence set by other Local Governments' to shift the event to another date.*

The working group also acknowledged the work undertaken by committee member Kylie Turner in drafting the initial background and proposal for a multi-layered communications strategy.

Next Steps & Final Statements

It was agreed that the following timeline would apply to finalise the community survey and overall communications plan:

- Wed 6 September – staff to make amendments to survey and communications plan and send to working group for comment;
- Friday8 September – working group to come back with any amendments;
- Friday 8 September- draft communications plan and survey to be sent to Councillors for comment as part of the Councillor's Bulletin;
- Friday 15 September – last day for Councillors to come back with feedback;
- Monday 18 September – staff to advise working group of any changes;
- Tuesday 19/Wednesday 20 September – community survey to go live and paper copies available at designated venues.

The meeting closed at 7:30 PM

Community Events Sponsorship

TOWN OF BASSENDEAN
Home by the Swan

Please return to:
Town of Bassendean
PO Box 87
Bassendean, WA, 6934
Enquiries – 9377 8000

APPLICATION FORM

To assist in the assessment of your application, please ensure you print clearly, complete all details and provide any attachments requested – Thank you.

NAME OF APPLICANT GROUP:	**Bassendean Church of Christ**
NAME OF EVENT:	**Easter Fair**

TYPE OF APPLICANT GROUP:	o Incorporated charitable (non profit) organisation

CONTACT PERSON: (Must be over 18yrs)	Mr o Mrs o Ms o	Given Name	**Kerry**
		Surname	**Jacques**
		Position Held	**Administration**
		Proof of Identity (Driver's License No.)	**3801892 (WA)**

POSTAL ADDRESS (For Invoices):		**PHYSICAL ADDRESS:**	
(Same as physical address)		**4 Ivanhoe Street**	
Suburb		Suburb	**Bassendean**
Postcode		Postcode	**6054**

CONTACT NUMBERS	Work Phone	**9377 1620**	Fax	
	Home Phone		Mobile	**0437 056 879**
	E-mail	**admin@bassochurch.org.au**		

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IS THE APPLICANT GROUP REGISTERED FOR THE GST? **YES** o **YES** **NO** o	**DOES THE APPLICANT GROUP HAVE AN AUSTRALIAN BUSINESS NUMBER (ABN)?** **YES** o **ABN is: 402 1167 0592** **NO** o
IS THE APPLICANT GROUP INCORPORATED? **YES** o **Incorporation number on top of incorporation certificate is: A1013888T** **NO** o	**DOES THE APPLICANT GROUP HAVE CURRENT PUBLIC LIABLITY INSURANCE?** **YES** o [Please attach a copy of your certificate of currency for public liability cover] **Attached** **NO** o

PROJECT DESCRIPTION (Brief description of overall project – 150 words max):

To organise and run a community-based Easter Fair on Sunday 25 March 2018 for the Bassendean Community to celebrate Easter.

This free event will include a variety of family-friendly activities, including (but not limited to), face painting, Easter egg decorating, paper crafts, an animal petting farm, free sausage sizzle, a puppet show, and other activities for the purpose of a fun afternoon for young children and families.

A sponsorship from the Town of Bassendean will allow us to provide this, and more, for the community to enjoy.

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BRIEF BACKGROUND OF ORGANISATION (Purpose, how long in operation, etc. 150 words max.):

The Bassendean Church of Christ has been in the Town of Bassendean since 1913. We are a protestant evangelical church that seeks to serve God in the community in which we have been placed. Besides the Easter Fair Day, we run other community-based events such as a weekly Community Craft morning, an after-school kids group at Eden Hill primary school, youth groups and Sunday Schools, and participate in such events as Anzac Day. We have also been involved in organising the Bassendean Carols by Candlelight in partnership with the Town of Bassendean for 28 years, since the Carols event started. We have many members who come from the Bassendean town, and enjoy being a part of the community.

PROJECT OUTCOMES:

- For families, and people in general, to enjoy and celebrate the lead-up to Easter through theme-based activities
- For at least 300 people to come along and enjoy the festivities
- For the Easter message of love and hope to be presented

Last year we anticipated 150 people at our event, and through a sponsorship with the Town of Bassendean, we were able to expand what we had on offer, and at one count, had over 300 in attendance, with 120 of them being kids.
We are very appreciative of the Town for this support.
We've attached some photos from last year's event, which shows the community involvement and festive spirit of the event. We had great feedback from the community, including families telling us this is one event they always make a point of coming along to.

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WHAT RELATIONSHIP DOES YOUR ORGANISATION HAVE WITH OTHER SERVICES WITHIN THE COMMUNITY?

The Bassendean Church of Christ interacts with a wide number of community organisations through our Carols event, including the local SES group, the local police (Kiara police station), the Town of Bassendean's leisure services section, Swan Districts Football Club, and local guest artists, choirs and puppeteers from the surrounding community, including the concert band.

We also work with the Morley division of the Salvation Army, Anzac Terrace Primary School, and Eden Hill Primary School through the kids club programs, and are looking at the possibility of next year expanding into Ashfield Primary School in conjunction with YouthCare.

The church also runs services with a number of Aged Care facilities within the community, including Juniper Tranby and Aegis Ascot.

WHAT BENEFITS DO YOU SEE FOR YOUR GROUP FROM THIS PROJECT?

- To highlight the significance and meaning of the Easter period.
- To promote the profile of the Bassendean Church of Christ within the community
- To allow our church members to serve and 'give back' to our community.

TARGET GROUP:

Who is the project being developed for and state approximately how many people will benefit from the project?

- The target group is families and children, but it is also open to (and attended by) all people, including elderly people.
- We seek to reach these groups through advertising, and planning relevant fun-based activities.
- We seek to make it a free event (including a free sausage sizzle).
- We expect, weather permitting, to attract between 250-350 people to the event.

Community Events Sponsorship

TOWN OF BASSENDEAN
Home by the Swan

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BUDGET

INCOME	
Income - Cash	
Sponsorship requested from the Town of Bassendean (GST exclusive)	1000
Cash Contribution from Applicant	1960
Ticket Sales if applicable	-
Merchandise Sales	-
Other cash income	-
Income - In Kind	
Venue Donation	
Coordinators Time	
Materials	
Photocopies	
Mail outs	
Other In-kind support	
TOTAL INCOME	**$2960**

EXPENDITURE	
Expenditure - Cash	
Artist Fees or Quote for Service	
Equipment Hire	100
Venue Costs	
Marketing Promotion	
Administration	
Materials	500
Catering (Sausage sizzle and drinks)	400
Merchandise	
Other (including anticipated spend on Animal Farm approx. $400, Easter Comics for the kids $300)	900
Expenditure - In Kind	
Venue Donation	-
Coordinators Time (20 hours estimate)	500
Materials	
Photocopies	560
Mail outs	
Other In-kind expenditure	
TOTAL EXPENDITURE	**$2960**

Note:

- The sponsorship request that is made to the Town of Bassendean should not include the GST, because the Council will automatically "cash-up" the amount for successful applicants if they are registered for the GST, (i.e. The Council will include an additional 10% for the GST). For example, if an organisation applies for sponsorship of $1,000 and it is approved by Council, they will receive $1,100, if they are registered for GST.
- Requests for sponsorship for items over $500 shall be supported by two written quotes from contractors/suppliers (and included with the application form). In the event of insufficient contractors/ suppliers, one quotation will be accepted.

Community Events Sponsorship

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CHECKLIST

Please check your application against the table below and ensure all relevant criteria has been completed. If any criteria has not been completed, please supply a **brief** comment stating reasons.

Criteria	Yes	No	Comments *If applicable*
Have you enclosed six copies of the completed application?	Yes		
Have you enclosed copies of the quotes from supplier/service providers, if required?	N/A		
Have you enclosed a copy of your Certificate of Incorporation?	Yes		
Have you completed the budget and attached details as outlined in the application?	Yes		
Have you consulted with community groups and individuals affected by the project?	N/A		Event is run on our property by our volunteers. We will let Town of Bassendean Ranger know about the event closer to the date.
Have you discussed this project with Council staff?	Yes		Gabriella Filippi

Community Events Sponsorship

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Conditions of Application to Town of Bassendean

If the application is successful these conditions will form part of your sponsorship contract with the Town of Bassendean.

1. We agree to display the Town of Bassendean logo (supplied by Council) on our letters.
2. We agree to acknowledge the Town's sponsorship through public address announcements.
3. We agree to acknowledge the Town's sponsorship by displaying signage (supplied by Council) at our event.
4. We are prepared to undertake joint media promotion with the Town.
5. We recognise that special conditions may need to apply to the sponsorship addressing relevant elements of the Town's Corporate Plan to compliment the organisation's objectives.
6. We agree to invite two representatives from the Town of Bassendean to the sponsored activity or event.
7. We agree to provide an acquittal report on the form provided within four (4) weeks of the project's completion.
8. We undertake in consideration of the sponsorship payment to carry out our proposed project in full.

Acceptance of Conditions

I have read and understand the above conditions and am authorised to accept them on behalf of the hirer / club / group / school named previously.

APPLICANT GROUP: Church of Christ, Bassendean

SIGNATURE OF APPLICANT: _____ DATE: 13/9/2017

Photos for Easter Fair – Sponsorship Application Town of Bassendean for 2018 Event

Churches of Christ Insurance

To Whom It May Concern

CONFIRMATION OF INSURANCE

In our capacity as Churches of Christ National Insurance Managers, we confirm the following policy details which are correct as the issue date:

INSURED :	The Churches of Christ and its constituents
CLASS OF INSURANCE :	Public and Products Liability
CONSTITUENT :	Bassendean Church of Christ
LIMIT OF INDEMNITY :	Public Liability - $20,000,000 any one occurrence Products Liability - $20,000,000 any one occurrence and in the aggregate
INTEREST INSURED:	All sums which the Insured shall be legally liable to pay to third parties by reason of; - Death or Personal Injury - Loss or Damage to Property happening during the Period of Insurance and caused by an occurrence in connection with the Business
INSURER :	Ansvar Insurance Ltd
POLICY NUMBER/S :	03.80.0582376
PERIOD OF INSURANCE :	31 March 2017 – 31 March 2018 to 4.00pm
GEOGRAPHICAL LIMITS:	Anywhere in the world, except the United States and Canada, as per the policy wording

Signed

Signed for and on behalf of
Churches of Christ Insurance

Date : 13/09/2017

Department of **Consumer & Employment Protection**
Government of **Western Australia**

WESTERN AUSTRALIA

Associations Incorporation Act 1987
(Section 9(1))

Registered No: A1013888T

Certificate of Incorporation

This is to certify that

CHURCH OF CHRIST BASSENDEAN INCORPORATED

was on the second day of September 2008
incorporated under the
Associations Incorporation Act 1987.

Dated this second day of September 2008

Commissioner for Consumer Protection

Resolution Implementation Report

Date	Item	Details	Action	Outcome
7 February 2017	LTAC – 2/02/17	1. Liveable Town Advisory Committee forms a Working Group, comprised of the membership outlined in this report to review the staging of the Town's Australia Day event; 2. Scope of the review be focused around: • The sensitivity of holding the event on 26 January each year; • The effectiveness of the Town's Australia Day event from the perspective of measuring the quality and impact of the event and experiences; • The current investment by the Town, complexity of the event each year and risk management issues associated with the fireworks and overall event management; • The Cultural Plan review that will be conducted in the first half of the 2016/2017 financial year; 3. Working group report back to the April 2017 LTAC meeting with at least their interim findings and recommendations; and 4. An independent consultant be appointed to facilitate the review process.	Currently conducting community consultation via on-line survey (Engagement HQ), which closes 18 October 2017. Also, conducted an intercept at the Bassendean Shopping Centre 27 September 2017. There may be other face to face meetings with key stakeholders. At the closure of the on-line survey, data will be analysed and a meeting will be held with the Working Group to consider findings.	In progress
8 August 2017	LTAC-2/08/17	That: 1. An Integrated Children and Family Services Centre Working Group be established. 2. Membership include Jeanette Maddison, Kylie Turner, Cr John Gangell and that expressions of interest be called from the community; 3. The Working Group Terms of Reference be: a) Define the need, scope of services and stakeholders to ideally be accommodated by such a facility; and b) Investigate a model that would be both acceptable to the community and feasible to the Town including reviewing previous models considered by the Town.		In progress
8 August 2017	LTAC-3/08/17	That the Town seek a suitable alternative location for the Child Health Clinic parents' group sessions as a temporary measure.		In progress
	LTAC-4/08/17	That the Town write to the Department of Health detailing results from the survey conducted by Sarah Quinton into the suitability of the Bassendean Child Health Clinic, and requesting it investigates current birth rates in Bassendean and assess the community's need for another nurse.		In progress
	LTAC-5/08/17	That Keryn Marley be appointed to the Urban Forest Working Group.	The Director Operational Services wrote to Ms Marley, inviting her to attend the Urban Forest Working Group meetings as a community representative. Ms Marley's attended her first meeting 8/9/17.	completed