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Attachment 2 - Plans to be Endorsed - 110 Cimitiere Street, Launceston

PLAN OF SUBDIVISION

PDA Surveyors WALTER SURVEYS Surveying, Engineering & Planning

3/23 Brisbane Street, Launceston, Tasmania, 7250 ww.pda.com.au Also at: Hobart, Burnie, Devonport & Kingston

PHONE: -61 03 6331 4099 FAX: +61 03 6334 3098 EMAIL: pda.ltn@pda.com.au

90-110 Willis Street Launceston Tas 7250 CITYLINK LAUNCESTON PTY LIMITED: STRATA CORP. No 156397 Launceston City Council Council GASWORKS, LAUNCESTON Planning Scheme Launceston Interim Planning Scheme 2015 Title References FR 175929/2; FR 156397/0 Zone & Overlay 15.0 Urban Mixed Use,

This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and

Schedule O areas are subject to final survey. Existing Easements to be carried forward. Map reference 5041-43 Scale PDA Reference Point of Interes 22 JULY 2019 1:400 43682J-P05 3084836 511809E, 5413278N GDA94 MGA55 Note: Staging - Each lot is a separate stage in any order. Title/Proposed Boundary RIGHT OF WAY (PRIVATE) 6.00 WIDE 13± Existing Sewer **Existing Water** 13± Existing Stormwater Proposed Sewer 13± Proposed Water 13式ING Proposed Stormwater 13± 9 FR 166920/2 ELECTRICITY WAY INFRASTRUCTURE 1 EASEMENT 13± EASEMENT RIGHT OF 13± PRIVATE) (P156396) WAY (PRIVATE) VAR. WIDTH S 5.40 PARKING EASEMENT A 13± RIGHT OF WAY (PRIVATE) VARIABLE WIDTH "A" RIGHT OF WAY (PRIVATE) VARIABLE PIPELINE & SERVICES EASEMENT LOT 1 41/1 ~2248m² FR 175929/1 RIGHT OF WAY (PRIVATE) 19.68 VARIABLE WIDTH 63 .26 32± 0.23 13 RIGHT OF WAY (PRIVATE) 5.00 WIDE 0 -(EXISTING) 31.70 LOT 2 1110m² 3/1 8 LOT 3 EXISTING TANK ~2760m² FOUNDATION 34± 74± CIMITIERE STREET Note:

All new sewer + stormwater connections are 150 diameter unless engineering design requires a different size.

NBN + Power: Lot 1 will be provided with these services from a communications cabinet and substation on the lot. Lot 2 and lot 3 will be from Cimitiere street Lots 1, 2 and 3, CT166920/2 and CT175929/1 are to have rights over the ROW.

PLAN OF SUBDIVISION



3/23 Brisbane Street, Launceston, Tasmania, 7250 www.pda.com.au Also at: Hobart, Burnie, Devonport & Kingston

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Owners

CITYLINK LAUNCESTON PTY LIMITED;
STRATA CORP. No 156397,
GASWORKS, LAUNCESTON

Title References

FR 175929/2; FR 156397/0

Document Set ID: 4256240
Version: 1, Version Date: 05/03/2020

Address 90-110 Willis Street Launceston Tas 7250

Council Launceston City Council

Planning Scheme Launceston Interim Planning Scheme 2015

Zone & Overlay 15.0 Urban Mixed Use,

This plan has been prepared only for the purpose of obtaining preliminary subdivision approval from the Council and the information shown hereon should be used for no other purpose. All measurements and areas are subject to final survey.

Schedule Of areas are subject to final survey. Existing Easements to be carried forward. Easements PDA Reference Map reference 5041-43 Scale PID 19 JUNE 2019 3084836 511809E, 5413278N 1:750 43682J-P04 Note: Staging - Each lot is a separate stage in any order. Title/Proposed Boundary Existing Sewer Existing Water BOLAND Existing Stormwater Proposed Sewer STREET Proposed Water Proposed Stormwater LOT4 74± Balance of **Strata Corporation** No. 175929 ~5249m² EXISTING EASEMENT KEY W -- PIPELINE & SERVICES & DRAINAGE EASEMENT Δ :- EASEMENT FOR EAVE & FR 166920/2 FR 227915/1 MILLIS GUTTER OVERHANG 0.35 WIDE Ω :- PANEL PARTY WALL 0.10 WIDE Φ :- BRICK PARTY WALL 0.35 WIDE 0 :- BRICK PARTY WALL 0.46 WIDE Existing Rights of Way & RIGHT OF WAY (PRIVATE) VARIABLE WIDTH "A" Existing Sewer & Stormwater 50± FR 78180/1 for Lot 1 LOT 1 FR \$1541/1 ~2248m² FR 175929/1 Proposed Right of Way & Services Easement LOT 2 1110m² FR 49948/1 LOT 3 ~2760m² Proposed New water CIMITIERE STREET Existing water connection New Stormwate for Lot 2 PLANNING EXHIBITED Existing water Proposed New **DOCUMENTS** for Lot 2 DA 0679/2019 ted for public perusal only and sent of the copyright owner.

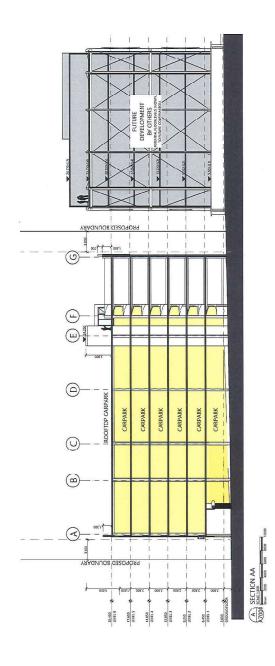


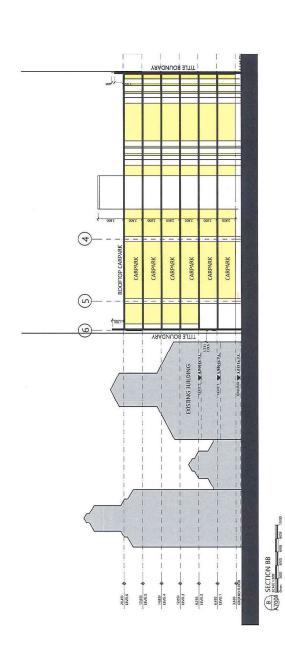




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ARCHITECTS

PROPOSED GASWORKS
MULTI STOREY CARPARK
TASLAND

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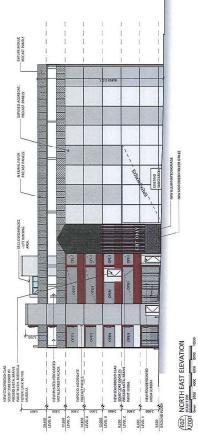
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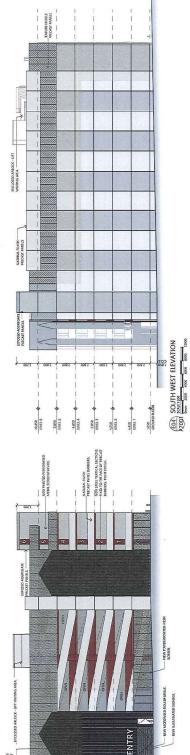
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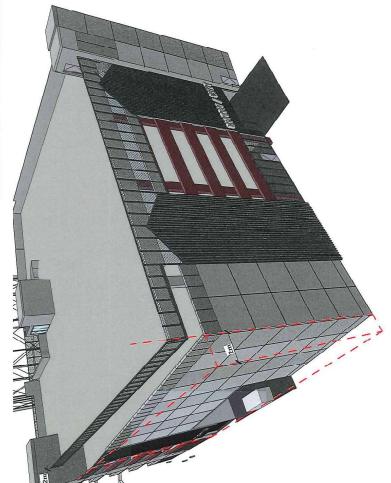


PROPOSED GASWORKS MULTI STOREY CARPARK TASLAND DEVELOPMENTS

EXTERNAL ELEVATIONS

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PERSPECTIVE 2

PERSPECTIVE 1

PROPOSED GASWORKS MULTI STOREY CARPARKA

TASLAND DEVELOPMENTS

191013 SHEET SIZE: A3 (LANDSCAPE)

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SHEET SIZE: A3 (LANDSCAPE)

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PLANNING EXHIBITED
DOCUMENTS
Ref. No. DA 0679/2019

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PROPOSED GASWORKS MULTI STOREY CARPARK TASLAND

DEMINSTRAME SUN STUDY 1

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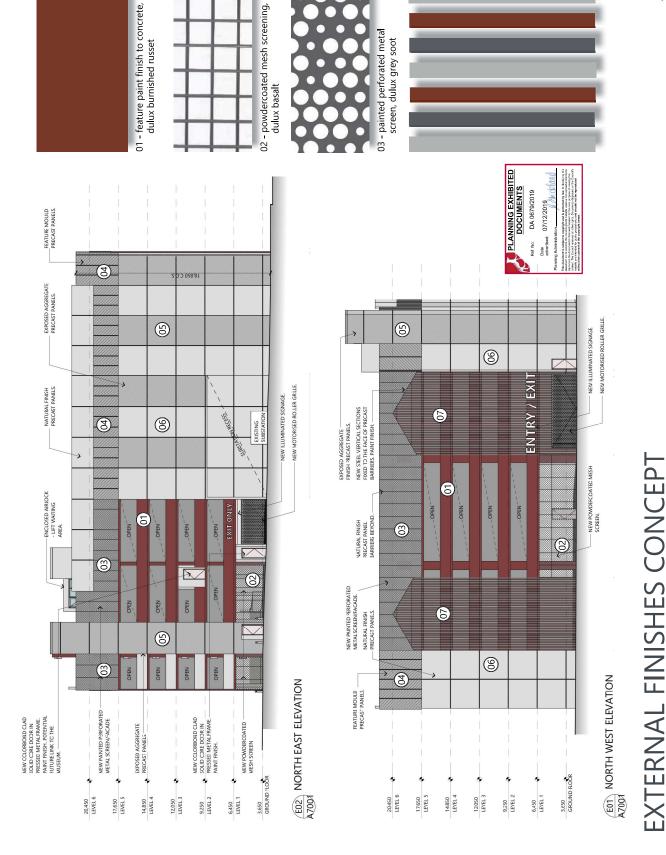


PROPOSED GASWORKS MULTI STOREY CARPARK

DEMINSTRAME SUN STUDY 2

TASLAND

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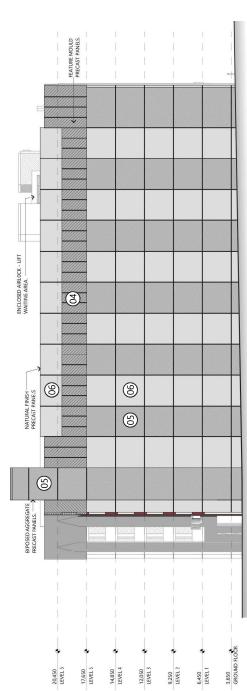
06 - natural precast concrete panels

07 - paint finish to steel work, dulux milton moon, grey soot, burnished russet

PAGE 1

*NOTE PRINTED COLOURS AND IMAGES DISPLAYED ON THIS BOARD SHOULD BE USED AS AN INDICATION OF PRODUCT OR FINISH ONLY FOR ACCURATE REPRESENTATION OF FINISH REFER TO PHYSICAL COLOUR SAMPLES.

GASWORKS MULTISTOREY CAR PARK





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04 - feature mould precast panels, design reckli rhombus in ccs

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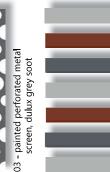


02 - powdercoated mesh screening, dulux basalt



blue metal exposed aggregate

05 - precast concrete panels with



NEW PAINTED PERFORATED METAL SCREEN/FACADE.

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07 - paint finish to steel work, dulux milton moon, grey soot, burnished russet

NEW STEEL VERTICAL SECTIONS FIXED TO THE FACEOF PRECAST BARRIERS, PAINT FINISH.

NATURAL FINISH PRECAST PANEL BARRIERS.

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PLANNING EXHIBITED DOCUMENTS

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NEW ILLUMINATED SIGNAGE.

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DA 0679/2019 Date advertised 07/12/2019

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GASWORKS MULTISTOREY CAR PARK

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PAGE 2





Planning Submission

90 - 110 Willis Street, Launceston

Multi-storey Carpark

The Multi-Storey Carpark is a mix of pay & display, short & long-term parking, leased and individually owned parking bays. A total of 288 parking bays with 190 available to public.



Launceston Gasworks Site view from Willis Street of the Vertical and Horizontal Retorts including an impression of the approved Art Gallery (white building) and proposed Carpark between the Vertical Retort and Art Gallery.

Document Set ID: 4256260 Version: 1, Version Date: 09/03/2020





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	Appendix F - Subdivision Plan	





1. Introduction

The application is for a multi-storey carpark and subdivision to support the parking requirements of the greater precinct. The Carpark was intended to have a parking capacity of 400 bays to support the precinct but was redesigned to 288 bays after consultation with the Launceston City Council and Tasmanian Heritage Council to manage the size and bulk of the building. The carpark he been acknowledged as critical to the future success of the greater precinct redevelopment.

Parking bays are a combination of pay & display, short & long-term parking, leased and individually owned bays with 190 bays possibly available to public. The 288 bays is the minimum number of bays that will support the precinct and remain viable for the project.

The applicant has been incredibly aware on the significance of the Industrial heritage and culture of the site and been extremely responsible with providing the capital and resources for the restoration of the significant buildings on the site, thus making sure they remain functional and maintained to increase their longevity. The most significant buildings on the site are the Vertical and Horizontal Retorts as well as the Carburetted Water Gas Building and Chief Engineers Cottage that have all been restored and remain functional for their individual longevity.

The Carpark is an essential part ensuring these historic building remain occupied make sure they are functional and this safeguards the building from becoming unused and dilapidated. The carpark in its current form establishes longevity of the sites buildings, industrial heritage and culture that can be enjoyed for decades.

The Industrial heritage of the Gasworks site is unique to Launceston as the only surviving site of two major gasworks site in Tasmania retaining intact buildings and preserved infrastructure. *The surviving buildings and elements are rare and uncommon in Tasmania, and increasingly rare in an Australian context, as gas production has changed from coal based to natural.*

The View from William Street was initially believed to be significant but the young trees and adjoining non heritage listed property on Tamar Street that is prime for development of a 6 storey building or building exceeding 12m in height will prevent any view from William Street in the very near future. The significant views should be considered from the immediate streets frontage of the heritage listed site. These views are detailed in Appendix B.



Figure 1 William St view at George St intersection.



Figure 2 William St at Tamar St intersection with shading Depicting a 6 storey building.





2. Description

The Carpark has been positioned on the site internally at a lower height than some surrounding buildings and provides the to absolute minimum parking required for the project viability. The Carpark will operate 24/7 with access boom gates, security swipe cards and ticketing machines at the entries and exits of the carpark. The carpark will be illuminated internally and externally to maintain satisfactory lighting levels and for the safety and security of users.

The Subdivision consists of three lots with all adjoining owners of titles affected by the Right of Ways and works have been notified, the Carpark building is located on Lot one and is accessed via two existing Right of Way and one new Right of Way through lot two that continues through lot three connecting the Right of Ways as per the below section of Plan of Subdivision - 43682J-P05 in Appendix F.

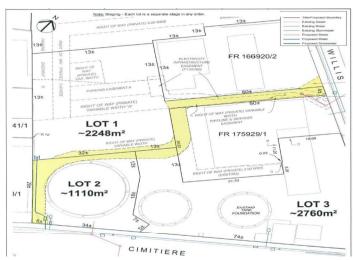


Figure 3 Section of Plan of Subdivision - 43682J-P05 in Appendix F

Although it is not part of this Application it is foresee that the Albert Hall and University of Tasmania proposed developments, on the adjoining properties, will increase pedestrian traffic through the site. For that reason it is proposed, as part of a future planning application for a Pedestrian bridge through the site enhancing the proposed University of Tasmania development link to the City Park. This will isolate Pedestrian traffic from vehicles traffic and the pedestrian path will tell the story of the site with interpretive signage and showcase the buildings from vantage viewing platforms along the path. On the north east elevation a door and connection point has been designed for this purpose.

Four accessible parking spaces will be provided on the ground floor to the requirements of AS2890.6.2009, provide 2.2m headroom on the travel path and 2.5m headroom at the parking space. The accessible parking spaces and access path to Cimitiere Street are shown on the architectural drawing A7000. The typical slab will be 200mm thick with typical thickening beams between columns of 200mm Architectural drawing A7002 shows height dimensions that easily provide height clearances for accessible parking spaces. Refer Appendix B – Architectural Drawings for further detail.

Parking that will be displaced by the proposed carpark is 53 spaces, 14 permanent/long-term and 39 pay & display parking bays.





3. Launceston Planning Interim Scheme

1. 15.0 Urban Mixed Use zone

15.1 Zone Purpose

15.1.1 Zone Purpose Statements

15 1 1 1

To provide for integration of residential, retail, community services and commercial activities in urban locations.

15.1.1.2

To provide for a diverse range of urban uses and increased intensity of development including residential densities that support the role of activity centres.

15.1.1.3

To encourage residential, visitor accommodation and tourist operation uses as a means of increasing activity outside normal business hours.

15.1.1.4

To create:

- (a) activity at pedestrian levels, with active road frontages offering interest and engagement to shoppers; and
- (b) appropriate provision for car parking, pedestrian access and traffic circulation.
- 15.1.2 Local Area Objectives

There are no local area objectives

15.1.3 Desired Future Character Statements

There are no desired future character statements

Response:

In considering the above, the Carpark provides community services and commercial activities in an urban location, assisting to alleviate parking demand in the area and support the cities activities. The positioning of the development internally from Cimitiere, Willis and Boland Streets has a significantly reduced impact on the streetscape and the colour schemes on building finishes will contribute to the heritage vales of the site acting as a recessive element behind the heritage buildings.

15.2 Use Table

Discretionary - Vehicle parking

15.3.1 Hours of operation

Objective:

To ensure that non-<u>residential</u> uses do not cause unreasonable loss of <u>amenity</u> to nearby sensitive uses.

Acceptable Solutions Performance Criteria





A1	P1
Commercial vehicles must only operate between 6.00am and 10.00pm.	Commercial vehicles must not unreasonably impact on the amenity of nearby sensitive uses, having regard to:
	(a) the extent and timing of traffic generation;
	(b) the hours of delivery and dispatch of goods and materials; and
	(c) the existing
	levels of amenity.

Assessment: Complies with A1.

Commercial vehicles for adjoining lots will use a Right of Way between the hours of 6am and 10pm. This application will not increase Commercial vehicle activity on the site. There are no nearby sensitive areas.

15.3.2 Mechanical plant and equipment

Objective:

To ensure that the use of mechanical plant and equipment does not cause an unreasonable loss of <u>amenity</u> to sensitive uses.

Acceptable Solutions	Performance Criteria
A1	P1
Air conditioning, air extraction, heating or refrigeration systems or compressors must be designed, located, baffled or insulated to prevent noise, odours, fumes or vibration from being received by adjoining or immediately opposite sensitive uses.	Noise, odours, fumes or vibration generated must not cause unreasonable loss of amenity to adjoining or immediately opposite sensitive uses, having regard to: (a) the characteristics and frequency of any emissions generated; (b) the nature of the proposed use; (c) the topography of the site; (d) the landscaping of the site; and (e) any mitigation measures proposed.

Assessment: Not applicable.





No requirement for mechanical plant and equipment.

15.3.3 Light spill and illumination

Objective:

To ensure that light spill and levels of illumination from external lighting does not cause unreasonable loss of <u>amenity</u> to sensitive uses.

Acceptable Solutions	Performance Criteria
A1	P1
The use must: (a) not include permanent, fixed floodlighting where the zone adjoins the boundary of the General Residential, Inner Residential, and Low Density Residential zones; and (b) contain direct light from external light sources within the boundaries of the site.	Floodlighting or other external lighting used on the site must not cause an unreasonable loss of amenity to nearby sensitive uses, having regard to: (a) the number of light sources and their intensity; (b) the proximity of the proposed light sources to nearby sensitive uses; (c) the topography of the site; (d) the landscaping of the site; (e) the degree of screening between the light source and the sensitive uses; and (f) existing light sources nearby.

Assessment: Complies with A1.

Low impact security lighting will be fixed to the external walls of the building and contained within the boundaries of the site for Pedestrian safety and security. There are no nearby sensitive users.

15.3.4 Noise level

Objective:

To ensure that noise levels from uses do not unreasonably impact on the <u>amenity</u> of nearby sensitive uses.

as es.	
Acceptable Solutions	Performance Criteria
A1	P1
Noise generated by a use on the <u>site</u> must:	Noise levels generated by a use on the site must not unreasonably impact on the amenity of nearby
(a) not exceed a time average A-weighted sound pressure level (L _A eq) of 5 dB(A)	sensitive uses, having regard to:





- above background during operating hours when measured at the boundary of an existing <u>sensitive use</u> adjoining or immediately opposite the <u>site</u>; or
- (b) be in accordance with any permit conditions required by the Environment Protection Authority or an environmental protection notice issued by the <u>Director</u> of the Environment Protection Authority.
- (a) the nature and intensity of the use;
- (b) the characteristics of the noise emitted;
- (c) background noise levels;
- (d) any mitigation measures proposed;
- (e) the topography of the site; and
- (f) the character of the surrounding area.

Assessment: Complies with A1.

The proposal has no impact on adjoining or immediately opposite sites.

15.3.5 Retail impact

Objective:

To ensure that the economic, social and environmental impact of significant new retail use and <u>development</u> is consistent with the <u>activity centre hierarchy</u>.

Acceptable Solutions	Performance Criteria
A1	P1
If for no permit required or permitted use class.	Uses must have acceptable impacts on the viability of the activity centre hierarchy, having regard to the extent that the proposed use:
	(a) improves and broadens the commercial or retail choice within the area;
	(b) improves the urban design outcome for an activity centre including its amenity;
	(c) contributes to an attractive environment for pedestrians;
	(d) contributes to loss of investment, blight or disinvestment for a particular centre;
	(e) includes environmentally sustainable design principles; and
	(f) is accessible by public transport.





Assessment: Not Applicable.

15.4.1 Building height, setback and siting

Objective:

To ensure that <u>building</u> bulk and form, and siting:

- (a) is compatible with the streetscape and character of the surrounding area;
- (b) protects the <u>amenity</u> of adjoining lots; and
- (c) promotes and maintains high levels of public interaction and <u>amenity</u>.

Acceptable Solutions	Performance Criteria
A1	P1
Building height must be no greater than: (a) 12m; or (b) 1m greater than the average of the building heights on the site or adjoining lots; whichever is higher.	Building height must be compatible with the streetscape and character of the surrounding area, having regard to: (a) the topography of the site; (b) the height of buildings on the site, adjoining lots and adjacent lots; (c) the bulk and form of existing and proposed buildings; (d) the apparent height when viewed from roads and public places; and (e) any overshadowing of adjoining lots or public places.
A2	P2
 Setback from a frontage: (a) must be built to the frontage at ground level; or (b) be setback a distance that is not more or less than the maximum and minimum setbacks of the buildings on adjoining lots 	Buildings must be sited to be compatible with the streetscape and character of the surrounding area, having regard to: (a) the level of public interaction and amenity, and pedestrian activity; (b) the topography of the site; (c) the setbacks of surrounding building;





	 (d) the height bulk and form of existing and proposed buildings; (e) the appearance when viewed from roads and public places; (f) the retention of vegetation; (g) the existing or proposed landscaping; and (h) the safety of road users.
A3	Р3
Setback from a side boundary: (a) must be built to the side boundaries at ground level; or (b) be setback a distance that is not more or less than the maximum and minimum setbacks of the buildings on adjoining lots	Buildings must be sited such that there is no unreasonable loss of amenity to the occupiers of adjoining lots, having regard to: (a) the topography of the site; (b) the size, shape, and orientation of the site;

Assessment: Complies with A1, A2 & A3.

As the building in greater that 12m it has been evaluate against adjoining building that surpass 12m and formulated to a height of 20.250m an intermediate height that is less that 1m greater than that of the adjoining multi-storey lots including the Vertical Retort Building ~29m, Carburetted Water





Gas Building ~ 23m, Gasholder No.4 structure ~ 24m, Albert Hall ~ 23.5m and under construction the Verge Hotel ~ 23m. The size, shape and height of the building is at very minimum to maintain the buildings context of the precinct and viability of the project. The colour schemes of the building finishes will contribute to the heritage vales of the site acting as a recessive element behind the heritage buildings. The setback of the development internally from Cimitiere, Willis and Boland Streets has significantly reduced impact on the streetscape. The setback from adjoining northeast side of the proposed building and the Carburetted Water Gas building has not been built hard up but set at 1.9 to 5m so what was the old Store entrance and brick finish can still be seen. The southeast side of the proposed building setback is 6m, southwest 0m and the northwest from 17 to 23m. the setbacks are constant to the surrounding building. Refer Appendix B - Architectural Drawings for further detail.

15.4.2 Location of car parking

Objective:

To ensure that car parking:

- (a) does not detract from the streetscape; and
- (b) provides for vehicle and pedestrian safety.

Performance Criteria
P1
Car parking must be located to minimise its visibility from a road, mall, laneway or arcade, having regard to:
(a) the existing streetscape;
(b) the location of the car parking;
(c) vehicle and pedestrian traffic safety;
(d) measures to screen parking; and
(e) any landscaping proposed.

Assessment: Complies with A1.

The proposed Carpark provides for vehicle and pedestrian safety. Refer Appendix E – Traffic Impact Assessment (TIA)

15.4.3 Active ground floors

Objective:





To ensure that <u>building</u> facades promote and maintain high levels of pedestrian interaction and amenity.

Acceptable Solutions

A1

New buildings with non <u>residential</u> uses on ground floors must:

- (a) have clear glazing, display windows or glass doorways for a minimum of 80% of all ground floor facades to, roads, malls, laneways or arcades;
- (b) not have security grilles or screens that obscure the ground floor facades to roads, malls, laneways or arcades;
- (c) not have mechanical plant or equipment, such as air conditioning units or heat pumps located on the facade; and
- (d) not have blank walls, signage panels or blocked out windows, wider than 2m on ground floor facades to roads, malls, laneways or arcades.

A2

Alterations to ground floor facades of non <u>residential</u> buildings must not:

- (a) reduce the level of glazing on a facade to a <u>road</u>, mall, laneway or arcade that is present prior to alterations;
- (b) have security grilles or screens that obscure the ground floor facade;
- (c) introduce new or additional mechanical plant or equipment such as air-conditioning units or heat pumps located on the façade; and
- (d) increase blank walls, signage panels or blocked out windows, wider than 2m on ground floor facades to roads, malls, laneways or arcades.

Performance Criteria

P1

New buildings must be designed to maximise interaction between the use of the building and pedestrians, having regard to:

- (a) an adequate level of glazing, openness and transparency on the ground floor facades to roads, malls, laneways or arcades;
- (b) the potential for security grills or screens to reduce the amenity of the building or reduce levels of interaction with the public;
- (c) screening or obscuring all mechanical plant or equipment such as air conditioning units or heat pumps so they are not recognisable or visible from ground level public view points; and
- (d) minimising the area of all blank walls, signage panels or blocked out windows on ground floor facades to roads, malls, laneways or arcades

P2

Alterations to ground floor facades of non-residential buildings must be designed to maximise interaction between the use of the building and pedestrians, having regard to:

- (a) the level of glazing, openness and transparency on the ground floor facades to roads, malls, laneways or arcades;
- (b) the potential for security grills or screens to reduce the amenity of the building or reduce levels of interaction with the public;
- (c) screening or obscuring all mechanical plant or equipment such as air conditioning units or heat pumps so they are not recognisable or visible from ground level public view points; and
- (d) minimise the area of all blank walls, signage panels or blocked out windows on ground floor facades to roads, malls, laneways or arcades.





A3

The building must:

- (a) provide a direct access for pedestrians from the <u>road</u> or publicly accessible areas; and
- (b) be orientated to face a <u>road</u>, mall, laneway or arcade, except where the <u>development</u> is not visible from these locations.

P3

Buildings must be clearly visible from the road or publicly accessible areas, having regard to:

- (a) the safety and convenience of pedestrians; and
- (b) the existing streetscape.

A4

The total width of the door or doors on a garage facing a <u>frontage</u> must be no wider than 6m.

P4

Garage doors should not be a visually dominant element in the streetscape and must be designed, having regard to:

- (a) the location of existing buildings on the site;
- (b) the existing streetscape; and
- (c) the design and locations of garages in the surrounding area.

Assessment: Complies with A3, A4 and A1, A2 not applicable

The building is open to air on three sides and security screening does not obscure the ground floor façade. Direct access to the building is provided by the use of pedestrian pathways, pedestrian crossovers and vehicular driveways. The door on the frontage to Willis Street is less than 6m wide. Refer Appendix B – Architectural Drawings for further detail.

15.4.4 Pedestrian access to dwellings

Objective:		
o ensure pedestrian access to <u>residential</u> <u>development</u> is safe and convenient.		
Acceptable Solutions	eptable Solutions Performance Criteria	
A1.1	P1	
New dwellings or <u>residential</u> developments must be provided with a pedestrian access independent of the access to any ground floor use in the <u>building</u> , or tenancies on the same <u>site</u> or within the same <u>building</u> ; and	New dwellings or residential developments must be provided with appropriate pedestrian access for the future residents, having regard to: (a) the use of the ground floor frontage;	
A1.2	(b) accessibility arrangements;	





Pedestrian access directly onto a <u>road frontage</u> must be no wider than 4m.

- (c) the size and visibility of the proposed entrance; and
- (d) the opportunities for access onto roads and other publicly accessible areas.

Assessment: Not applicable

15.4.5 Daylight to windows

Objective:	
To allow adequate daylight into habitable room windows.	
Acceptable Solutions	Performance Criteria
A1	P1
Where the minimum distance between: (a) a new window in a habitable room and an existing building ; or	Buildings must provide for adequate levels of daylight to habitable rooms and existing windows within adjoining buildings, having regard to: (a) the level of daylight available to the habitable
(b) a new <u>building</u> constructed directly opposite an existing <u>habitable</u> <u>room</u> window,	rooms; (b) any existing vegetation; and
is less than 3m, a light court with an area of no less than 3m ² and dimension of no less than 1m clear to the sky must be provided.	(c) the topography of the site.

Assessment: Not applicable

15.4.6 Private open space

Objective:		
To provide adequate and useable private open	provide adequate and useable <u>private open space</u> for the needs of residents.	
Acceptable Solutions	eptable Solutions Performance Criteria	
A1	P1	
Dwellings must have an area of <u>private open</u> <u>space</u> with direct access from a <u>habitable</u> <u>room</u> other than a bedroom, comprising: (a) on the ground floor, 24m² with a horizontal dimension of no less than 3m; or	Dwellings must be provided with sufficient private open space to meet the reasonable needs of the residents having regard to: (a) the size and useability of the private open spaces; (b) the accessibility of the private open space;	





- (b) wholly above ground floor, 8m² with a minimum horizontal dimension of 2m; or
- (c) a roof-top area, $10m^2$ with a minimum horizontal dimension of 2m.
- (c) the availability of common open space;
- (d) the availability of and access to public open space;
- (e) the orientation of the lot to the road; and
- (f) the ability of the private open space to receive adequate solar access.

A2

Private open space must receive a minimum of 4 hours of direct sunlight on 21 June to 50% of the designated private open space area.

P2

Private open space must receive adequate sunlight having regard to:

- (a) the topography of the site;
- (b) site constraints, including any vegetation;
- (c) the orientation and shape of the site; and
- (d) the location and size of buildings on the site and adjoining lots.

Assessment: Not applicable

15.4.7 Overshadowing private open space

Objective:	
To ensure new buildings do not unreasonably	overshadow existing private open space.
Acceptable Solutions	Performance Criteria
A1.1	P1
Where new buildings reduce sunlight to the <u>private open space</u> of an existing <u>dwelling</u> , at least 75% of the <u>private open space</u> must receive no less than 4 hours of sunlight on 21 June; and	New buildings must not unreasonably overshadow existing private open spaces, having regard to: (a) the impact on the amenity of existing dwellings;
A1.2	(b) sunlight penetration to the private open space of the existing dwelling;
Where less than 75% of the existing <u>private</u> open space receives 4 hours of sunlight on 21 June, new buildings must not further reduce the amount of sunlight.	(c) the time of day and the duration that sunlight is available to the private open space of the existing dwelling; and





Assessment: Not applicable

15.4.8 Storage

Objective:	
To provide adequate storage facilities for each dwelling.	
Acceptable Solutions	Performance Criteria
A1	P1
Each <u>dwelling</u> must have access to 6 cubic metres of dedicated, secure <u>storage</u> space not located between the <u>primary frontage</u> and the facade of a <u>dwelling</u> .	Each dwelling must provide adequate storage for the reasonable needs of residents, having regard to: (a) size and type of dwelling proposed; (b) the location, type, and size of storage proposed; (c) the availability, accessibility and convenience of the storage proposed; (d) any common or other types of storage on the site; and (e) the existing streetscape.

Assessment: Not applicable

15.4.9 Common property

15.4.9 Collinion property	
Objective:	
o ensure that common areas are easily identified.	
Acceptable Solutions	Performance Criteria
A1	P1
Site drawings must clearly delineate private and common areas, including:	No performance criteria.
(a) driveways;	





(b) parking spaces, including visitor parking spaces;
(c) landscaping and gardens;
(d) mailboxes; and
(e) storage for waste and recycling bins.

Assessment: Complies with A1

Attached is a Plan of the Subdivision detailing the private Right of Way. Refer Appendix F – Subdivision Plan for further detail.

15.4.10 Lot size and dimensions

Objective:

To ensure:

- (a) the area and dimensions of lots are appropriate for the zone; and
- (b) adjoining land, especially <u>residential</u> zones, is protected from adverse impacts on <u>amenity</u>.

Acceptable Solutions	Performance Criteria
A1.1	P1
Each <u>lot</u> , or a <u>lot</u> proposed in a plan of <u>subdivision</u> , must:	Each lot, or a lot proposed in a plan of subdivision, must have sufficient useable area and dimensions suitable for its intended use having regard to:
(a) have a minimum area of no less than 100m ² ; and	(a) the relevant acceptable solutions for development of buildings on the lots;
(b) be able to contain 5m diameter circle with the centre of the circle no more than 5m from the frontage; or	(b) the likely location of buildings on the lots;
A1.2	(c) the accessibility for vehicles providing for supplies, waste removal, emergency services and public transport;
Each <u>lot</u> , or a <u>lot</u> proposed in a plan	(d) the topography of the site;
of <u>subdivision</u> , must: (a) be required for public use by the	(e) the presence of any natural hazards; and
Crown, an <u>agency</u> , or a corporation all the shares of which are held by Councils or a municipality; or	(f) the existing pattern of development in the area.





- (b) be required for the provision of public <u>utilities</u>; or
- (c) for the consolidation of a <u>lot</u> with another <u>lot</u>, provided each <u>lot</u> is within the same zone; and

A1.3

Each <u>lot</u>, or a <u>lot</u> proposed in a plan of <u>subdivision</u>, must have new boundaries aligned from buildings that satisfy the relevant acceptable solutions for setbacks.

A2

<u>Subdivision</u> must not be located on the boundary of the General <u>Residential</u> or Inner <u>Residential</u> zones.

P2

Each lot, or a lot proposed in a plan of subdivision, must be designed to minimise the potential for nuisance or loss of amenity for adjacent lots, having regard to:

- (a) lot layout and design;
- (b) the existing pattern of development in the area;
- (c) the ability for buildings to be erected in accordance with the development standards;
- (d) the proposed use of the lot;
- (e) the future use of the subject or adjoining land;
- (f) the topography of the site;
- (9) the physical separation to surrounding sensitive land uses;
- (h) compatibility with the existing pattern of development in an area;
- (i) the orientation of the lot;
- (j) access considerations; and





(k) the accessibility for vehicles providing for supplies, waste removal, emergency services and public transport.

Assessment: Complies A1.1, A1.2 and A1.3. A2 Not applicable

Lot one is $^{\sim}2248m^2$, Lot two is $^{\sim}1110m^2$, and Lot three balance of title is $^{\sim}2760m^2$. Refer Appendix F – Subdivision Plan for further detail.

15.4.11 Frontage and access

Objective:

To ensure that lots:

- (a) provide appropriate frontage to a road; and
- (b) maintain laneway and rear access patterns; and
- (c) provide safe and appropriate access suitable for the intended use.

Acceptable Solutions	Performance Criteria
A1	P1
Each <u>lot</u> , or a <u>lot</u> proposed in a plan of <u>subdivision</u> , must have a <u>frontage</u> to a <u>road</u> maintained by a <u>road authority</u> of no less than 5m.	Each lot, or a lot proposed in a plan of subdivision, must be provided with a frontage, or legal connection to a road by a right-of-carriageway, of no less than 3.6m width, having regard to:
	(a) the width of frontage proposed, if any;
	(b) whether any other land has a right-of- carriageway as its sole or principal means access over the frontage;
	(c) the number of immediately adjacent rights- of-carriageway;
	(d) the topography of the site;
	(e) the proposed use of the lot;
	(f) the construction and maintenance of the road;
	(g) the existing pattern of development in the surrounding area;





	 (h) the functionality and usability of the frontage; (i) the anticipated nature of the vehicles likely to access the site; (j) the ability to manoeuvre vehicles on the site; (k) the existing pattern of laneways and rear accesses; and (l) the advice of the road authority.
A2	P2
No acceptable solution.	Each lot, or a lot proposed in a plan of subdivision, must be capable of being provided with reasonable vehicular access to a boundary of a lot or building area on the lot, if any, having regard to:
	(a) the topography of the site;
	(b) the distance between the lot or building area and the carriageway;
	(c) the nature of the road and the traffic;
	(d) the character of the area; and
	(e) the advice of the road authority.

Assessment: Complies P1 and P2.

Lot 1 Frontage is via an existing 3.6m right-of-carriageway to Willis Street. Refer Appendix B – Architectural Drawings and Appendix F – Subdivision Plan for further detail.

15.4.12 Discharge of stormwater

15.4.12 Discharge of Stormwater		
Objective:		
To ensure that the <u>subdivision</u> layout, including roads, provides that stormwater is satisfactorily drained and discharged.		
Acceptable Solutions	Performance Criteria	
A1	P1	
Each <u>lot</u> , or a <u>lot</u> proposed in a plan of <u>subdivision</u> , including roads, must be	No performance criteria.	





capable of connecting to a <u>public stormwater</u> <u>system</u> .	
A2	P2
The Council's General Manager has provided written advice that the <u>public stormwater</u> <u>system</u> has the capacity to accommodate the stormwater discharge from the <u>subdivision</u> .	No performance criteria.

Assessment: Complies A1.

The existing or proposed stormwater connection point with a nominated size included in the Subdivision Plan. Refer to Appendix F - Subdivision Plan for further details

15.4.13 Water and sewerage services

Objective:		
To ensure each <u>lot</u> provides for appropriate water supply and wastewater disposal.		
Acceptable Solutions	Performance Criteria	
A1	P1	
Each <u>lot</u> , or a <u>lot</u> proposed in a plan of <u>subdivision</u> , must be connected to a reticulated water supply.	No performance criteria.	
A2	P2	
Each <u>lot</u> , or a <u>lot</u> proposed in a plan of <u>subdivision</u> , must be connected to a reticulated sewerage system.	No performance criteria.	

Assessment: Complies A1 and A2.

Attached Plan of Subdivision details the existing or proposed reticulated water supply and sewerage connection point with a nominated size included in the Subdivision Plan. Refer to Appendix F - Subdivision Plan for further details

4. Request Further Information

The Requests made under the original application have been incorporated into the application.

Note Appendix F - Subdivision Plan, Plan of Subdivision - 43682J-P04 is provided for Taswater assessment.

5. Conclusion

The Launceston Gasworks Site under the ownership of the applicant, has been redeveloped to preserve the heritage, industrial heritage and culture of the site. This is evident as you walk around the streetscape of Boland Street, Willis Street and Cimitiere Street. The proposed carpark has no





street frontage and doesn't obstruct any streetscape view of the existing heritage buildings on the site from their individual street frontage.

Part of the greater precinct redeveloped over the coming years on the adjacent UTAS site will eliminate approximately 200 existing car parks off Willis Street.

The Verge Hotel currently under construction, Albert Hall future development, City Park events, Fragrance group future development, UTAS in Willis St, the new walking bridge connection from and to Inveresk/Boland St and other smaller business operators in this rapidly developing area will increase the demand for parking quite significantly. Special events in the area are becoming more frequent as Inveresk, City Park, UTAS stadium and Albert Hall are all directly in this precinct and each year increase their individual events programmes.

The DA approved Art Gallery designed to display Local, Indigenous and private Art collections adjoins the carpark. The gallery will be of major cultural and heritage importance to the region and relies totally on the car park approval. The Art Gallery development cannot proceed without approval of the car park development application.

Any future development considered for the balance of title within the site and any future proposed developments adjoining the site will also require parking. Adjoining properties have been developed due to parking agreements allowing parking at the Launceston Gas works site.

The applicant has compromised with the height of the car park reducing it to enhance the view from the adjoining proposed Art Gallery top level. This did reduce the number of parking bays from 400 to 288 which was well under the number required to enable the project in isolation to be economically viable so consideration has been given to the greater precinct and its future success.

A carpark has extreme practical value, however there is a limited amount of visual appeal that can be built into a development of this nature. It has been tucked away behind the proposed Art Gallery, the new Heritage Award winning Horizontal Retort development for Tasports and the Heritage Award winning Vertical Retort, well designed and positioned to enhance the sites industrial heritage.

We considered the view east from William Street which was extremely minimal as the property directly behind the proposed carpark in Tamar Street was not heritage listed and cherry ripe for development of a six storey building as the area rapidly increases for demand. When developed it would totally block the already limited view of the Vertical Retort and unfortunately also minimise the improved carpark view.

There are young trees along William Street which have also affected the current view East towards the Vertical Retort and adjoining nonheritage listed property on Tamar Street prime for development of a 6 storey building or building exceeding 12m in height will prevent any view of the site from William Street.

The Vertical and Horizontal Retorts at the Gasworks site have tremendous visual appeal from the street frontages in Willis Street, Boland Street and Cimitiere Street by way of clear vision and millions of dollars that have already been spent preserving the industrial heritage, integrity and culture of the site. Many hours working closely with stakeholders like the Launceston City Council, Tasmanian Heritage Council, Consultancy firms and Private enterprise to bring major





cultural and heritage importance/value onto the site designing for the very best outcome possible for the THC, the people of Launceston and the Tasmania visitor economy.

As the last remaining Industrial Heritage gasworks site in Tasmania and increasingly rare in an Australian context every effort has been made to have the site remain functional to ensure its longevity well in to the future.

6. Appendix





Appendix A - Certificates of Titles

- Folio FR156397-0
- Folio CT160548-2
- Folio FR166920-1





Appendix B - Architectural Drawings

Drawings:

- A7000-DA06 LOCATION PLAN & GROUND FLOOR PLAN
- A7001-DA03 LEVELS 1-6 FLOOR PLANS
- A7002-DA03 SECTIONS
- A7003-DA04 EXTERNAL ELEVATIONS
- A7004-DA03 3D VISUALISATIONS
- A7005-DA01 SUN STUDY 1
- A7006-DA01 SUN STUDY 2
- A7008-DA01 SITE VIEWS
- Finishes Board P02





Appendix C - Site Contamination Assessment

Environmental services & design



PLANNING EXHIBITED DOCUMENTS

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Appendix D - Heritage Impact Assessment

PLICO DESIGN STUDIO 20th November 2019



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Appendix E - Traffic Impact Assessment

Traffic & Civil Services



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Appendix F - Subdivision Plan

- Proposed Subdivision plan 43682J-P04
- Proposed Subdivision plan 43682J-P05





HERITAGE IMPACT ASSESSMENT

Project	90-110 Cimitiere Street Launceston	Project No.	1943
Development Application No	TBC	Date	30.11.19
Heritage Place No.	4205	Revision	2
	Architectural Drawings		
	A7000 LOCATION PLAN & GROUND FLOOR PLAN		DA06
	A7001 LEVELS 1-6 FLOOR PLANS		DA03
	A7002 SECTIONS		DA03
	A7003 EXTERNAL ELEVATIONS		DA04
	A70043D VISUALISATIONS		DA03
Desuments Deviewed	A7005 SUN STUDY 1		DA01
Documents Reviewed	A7006 SUN STUDY 2		DA01
	A7008 SITE VIEWS		DA02
	Finishes Schedule		P02
	Heritage Documents		
	Datasheet THR_4205		
	2003-06_CMP Launceston Gasworks_Davies		
Doscription	Proposed multi-level carpark building within the Launceston Gasworks site,		
Description	accessed via a service lane from Cimitiere Street		

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DESCRIPTION OF THE PROPOSAL	29
EVALUATION OF THE PROPOSAL	35
RECOMMENDATIONS	41

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ST301119 - 1943_90-110Cimitiere_Heritage Impact Assessment_191130.docx



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INTRODUCTION

The proposal is for the construction of a multi-level (6) carpark, within a vacant part of the Launceston Gasworks site, situated behind the Gasometer structure on Cimitiere Street, off the street frontage.

Our clients previously submitted an application to council for planning approval however this was withdrawn after preliminary feedback from Launceston City Council and refusal by the Tasmanian Heritage Council was received.

The precinct where the proposed building is located is undergoing adaption from the former use of Gas production and reticulation, into an arts and tourism area incorporating Art Gallery, Restaurant, University spaces, Offices and Accommodation. It is important that the industrial heritage buildings are provided with a new purpose to ensure activity on the site continues, which in turn will require ongoing conservation of the buildings to safeguard their integrity and future longevity.

An important part of this significant increase in activation and occupation is the provision of carparking facilities. Our clients discussed the provision of a multi-level carpark with Launceston City Council and the Heritage Council officers in multiple meetings, in which this was acknowledged as being a critical component in the future success of the precinct redevelopment as a whole. Our clients have made it clear that reducing the capacity of the carpark would be inadequate for the precinct and render these works financially unviable. As such no reduction to the overall height nor setbacks would be possible as the layout is already at peak efficiency.

Council planners and the Heritage Council officers requested to see specific views towards the proposed building from key vantage points. An emphasis was placed on the views from William and Tamar Streets however those views are towards sites that are considered to be prime location for potential (non-heritage listed) multi-storey developments that are likely to block views of the industrial heritage site. A series of 3d views have been prepared by Artas Architects utilising actual street photos and accurate scaling of the proposed building to assess each view of the proposed building. We have evaluated these views to determine what changes to the design were required to further minimise impact to nearby heritage buildings. Refinement to all visible facades were made, utilising a new strategy to lower the perceived height of the building, along with further refinement to the façade design and material selection to better relate to the nearby heritage context.

Formal Heritage assessments for the Gasworks site, including a Conservation Management Plan (CMP) by Paul Davies in 2003 and the Tasmanian Heritage Register Entry 4205, were reviewed extensively as part of our Heritage Impact Statement report. I have referred to relevant sections and included examples from the CMP with our evaluation and recommendation.





HISTORY & DESCRIPTION OF THE PROPERTY

On 15 June 1854 The Examiner urged its readers to consider the formation of a gas company to provide street lighting in Launceston¹. In 1856 the Launceston City Council engaged Scottish born engineer **William Falconer**² to prepare plans for the proposed gas works. He had been involved in the construction of gas works in Canada, before overseeing the establishment of the Hobart Gas Company. A prospectus for the **Launceston Gas Company** appeared in January 1858 seeking capital. The company was formed in May 1858 at the Cornwall Hotel (Batman & Fawkner Inn)³.

In October 1858 nearly a hectare of land was bought for £750, along Cimitiere Street fronting the North Esk River. In January 1859 tenders were called for the construction of the gas works building and equipment started arriving from England. By the end of 1859 the company's brick and stone retort house, gasometer, offices and storerooms had taken shape⁴. The gas was obtained from coal which was roasted in retorts and stored in airtight gasometers. Gas street lamps were lit for the first time in April 1860⁵. There were initially 123 gas lamps. The Mechanics' Institute in Cameron Street was the first building to be supplied with gas lighting⁶. By June 1860 238 homes were connected to the gas mains⁷.

Most of the coal for the gasworks came by sea from Newcastle. By 1900 3,500 houses were connected to 60 kms of gas mains⁸. The original retort house was replaced in 1932 with the present four storey red brick structure where gas was produced in vertical retorts⁹. In the 1950s the plant was modified to use coal from the Fingal Valley¹⁰. The change to butane saw the end of coal gas in the late 1970s. In 1984 the company's name was changed to the **Gas Corporation of Tasmania**. In 1988 the company was sold to **Boral** and the manufacture of gas ceased¹¹.

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¹ "[...] The cost of oil, and the high price of sperm composition, and tallow candles, naturally suggests the substitution of a cheaper artificial light, and we seem to possess it in gas from dysodile. Might not a Launceston Gas Company be formed, now that labour is plentiful? Labor will be more abundant before the material could be procured from England; and in the meantime it would be only necessary to erect the buildings required for the reception of the apparatus [...]" Gas Light, p.2.

² See: http://adb.anu.edu.au/biography/falconer-william-rose-3494

³ Julian Burgess, <u>The Examiner saw the early gaslight</u>, 27 July 2012, Launceston Gas Works Pty Ltd

⁴ Ibid

⁵ (1858). <u>Launceston Gas Company</u> NG2740 [Records]. Libraries Tasmania

⁶ Ibid

⁷ Ibid

^{8 (1858). &}lt;u>Launceston Gas Company</u> NG2740 [Records]. Libraries Tasmania

⁹ Julian Burgess, <u>The Examiner saw the early gaslight</u>, 27 July 2012, Launceston Gas Works Pty Ltd

¹¹ (1858). <u>Launceston Gas Company</u> NG2740 [Records]. Libraries Tasmania

Historical Images



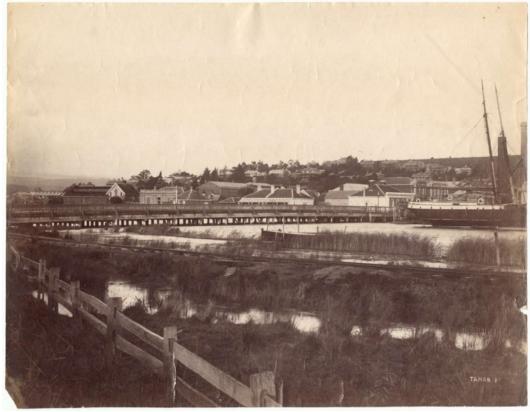


Figure 1 Spurling, Tamar Street Bridge, Launceston with gas works and cottages in background, pre 1890: https://stors.tas.qov.au/LPIC147-1-171



Figure 2 William Cawston, Launceston with view south from North Esk River to Launceston Gas Company and Windmill Hill, reproduced in Tasmanian Mail 17/03/1906: https://stors.tas.gov.au/LPIC147-4-200

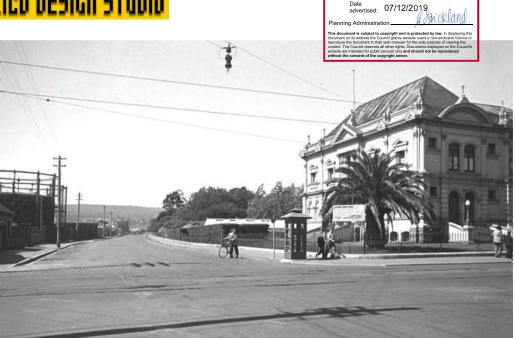




Figure 3 Launceston view north from Windmill Hill over City Park to Gas Works and Inveresk, author & date unidentified: https://stors.tas.gov.au/LPIC147-4-205



Figure 4 QMAG, Clyde V. Coombe, View of Gas Company Buildings and the corner of Cimitiere and Tamar Street Launceston, 7 December 1980: http://fmpweb.qvmag.tas.gov.au/fmi/webd#QVMAGweb



PLANNING EXHIBITED DOCUMENTS DA 0679/2019

Figure 5: QVM, By Douglas Grant Wherrett. View of Cimitiere Street and Tamar Street Launceston, looking southeast. Right of photo shows Albert Hall with palm tree on corner. Iron spike fence around perimeter. Telephone booth on corner. Two gents walking past booth. Third gent wheeling bicycle across Cimitiere Street near booth. Extreme right of photo shows two gents on Tamar Street. City park visible along Cimitiere Street. Left of photo shows large gasworks cylinder. Eastern hills visible in background: http://fmpweb.qvmag.tas.gov.au/fmi/webd#QVMAGweb NB: Registration number is QVM:1986:P:0146 for the QVMAG site, however several photos were uploaded online of this photographers work, all listed as 1986.



Figure 6 Launceston Gasworks [picture] by Mike Key 1995: https://trove.nla.gov.au/version/27139386





HISTORICAL SIGNIFICANCE AND HERITAGE LISTING

HERITAGE IMPACT ASSESSMENT

This Heritage Impact Assessment is in accordance with the requirements of Heritage Tasmania's Heritage Impact Statement requirements.

(i) what is significant about the place in terms of its heritage values and are some part more significant than others?

The following is the statement of significance from the Tasmanian Heritage Register Data Sheet #4205;

Launceston Gasworks demonstrates the development of services in early Launceston and northern Tasmania to provide light and power both publicly and privately. The site demonstrates the pattern of development of Launceston. The Launceston Gasworks was one of two major gasworks in Tasmania and is the only surviving plant in the State that retains buildings, engineering works and infrastructure in a largely intact form. The surviving buildings and elements are rare and uncommon in Tasmania, and increasingly rare in an Australian context, as gas production has changed from coal based to natural.

The Launceston Gasworks has archaeological potential, due to the density and continuity of industrial and cultural activity on the site for over 150 years. The extant elements of the site have the potential to tell the story of gas production and reticulation from the earliest production in 1859 through to the 1960s, when coal powered production ceased, and to the 2000s, when only gas supply is provided at the site. The built structures in the Launceston Gasworks site demonstrate the traditional methods of gas production that were widespread throughout Australia and the Western world.

Various elements of the Launceston Gasworks demonstrate high levels of technical achievement shown through the Horizontal and Vertical Retorts, equipment housed in various buildings, site layout and engineering works including Gasholders and reticulation infrastructure. Community association with the Launceston Gasworks site is largely associated with the landmark status that the site has within the townscape, particularly the prominent Vertical Retort building with its distinctive 'Cook With Gas' logo in the brickwork of the clerestory level. The Launceston Gas Company, in its various forms, has been a pivotal industry for Launceston, occupying the same site since 1859 with continuous manufacture of gas for approximately 100 years, and distribution for over 150 years. The long term association with the site and continuity of occupation mark the company as one of the few such industrial enterprises to remain in Launceston.

a) The place is important to the course or pattern of Tasmania's history

Launceston Gasworks demonstrates the development of services in early Launceston and northern Tasmania to provide light and power both publicly and privately. The Launceston Gas Company was an early energy provider in the State, started by a group of civically concerned residents, that grew to be the principal power generator in the city until the completion of the Duck Reach Power Station. The site demonstrates the pattern of development of Launceston.



b) The place possesses uncommon or rare aspects of Tasmania's history.

The Launceston Gasworks was one of two major gasworks in Tasmania and is the only surviving plant in the State that retains buildings, engineering works and infrastructure in a largely intact form. The surviving buildings and elements are rare and uncommon in Tasmania, and increasingly rare in an Australian context, as gas production has changed from coal based to natural.

c) The place has the potential to yield information that will contribute to an understanding of Tasmania's history.

The Launceston Gasworks has archaeological potential, due to the density and continuity of industrial and cultural activity on the site for over 150 years. Areas of the site that have been identified as having high archaeological potential associated with significant aspects of gas production are directly surrounding the CMG Plant, Vertical Retort, Workshop and the area directly behind the Meter Shop. Areas that have been identified as having moderate archaeological potential association with gas production are those surrounding the Engineer's Quarters, Meter Shop, Administration Building, and the strip of land between the eastern elevation of the Horizontal Retort and the site boundary with Willis Street (see Williams 2007:45).

The extant elements of the site have the potential to tell the story of gas production and reticulation from the earliest production in 1859 through to the 1960s when coal powered production ceased, and to the 2000s when only gas supply was provided at the site. The various production plants tell the story of the development of gas production and its role in the development of Launceston.

d) The place is important in demonstrating the principal characteristics of a class of place in Tasmania's history.

The built structures in the Launceston Gasworks site demonstrate the traditional methods of gas production that were widespread throughout Australia and the Western world.

e) The place is important in demonstrating a high degree of creative or technical achievement.

Various elements of the Launceston Gasworks demonstrate high levels of technical achievement shown through the retort building, equipment housed in various buildings, site layout and engineering works including gasholders and reticulation infrastructure. The collection of buildings and structures demonstrate most aspects of historical development of the site and gas production.

f) The place has a strong or special association with a particular community or cultural group for social or spiritual reasons.

Community association with the Launceston Gasworks site is largely associated with the landmark status that the site has within the townscape, particularly the prominent Vertical Retort building with its distinctive 'Cook With Gas' logo in the brickwork of the clerestory level.



g) The place has a special association with the life or works of a person, or group of persons, of importance in Tasmania's history.

The early history of the Launceston Gasworks is related to a number of prominent Launceston citizens who were trustees, managers and board members of the company. In particular, the Green family had a long association with the plant, acting as managers, secretaries and board members over a 50-year period. The Launceston Gas Company, in its various forms, has been a pivotal industry for Launceston, occupying the same site since 1859 with continuous manufacture of gas for approximately 100 years, and distribution for over 150 years. The long-term association with the site and continuity of Occupation mark the company as one of the few such industrial enterprises to remain in Launceston.

h) The place is important in exhibiting particular aesthetic characteristics.

The key heritage buildings on the Gasworks site are the Horizontal and Vertical Retort buildings along with the No. 4 Gasholder which can be easily identified from vantage points surrounding the site. The Vertical Retort building also includes the iconic 'COOK WITH GAS' logo that was constructed as part of the brick clerestory section of the building. This facade of this building is perhaps the most identifiable part of the Gasworks site.

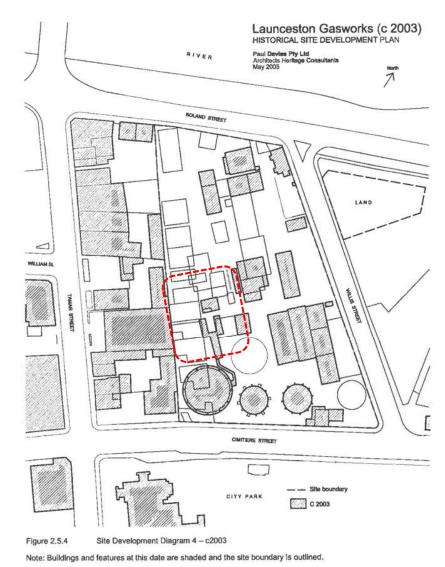
The Launceston Gasworks site has been at the forefront of development and advancement of the city of Launceston. The past development of the site can be seen in distinct generations.

(ii) will the proposed works adversely affect the significance and if so how?

The proposed building has been positioned in a vacant part of the site to avoid any physical impact on key heritage buildings. The location is off the street frontage at the rear of the site so there is no reduction in the view towards heritage buildings from Willis and Cimitiere Streets.







Red dashed box shows approximate of proposed building overlaid on the Historical Site Development plan prepared by Paul Davies within his Conservation Management Plan 2003.

Note: buildings shown as present in 2003 in the vicinity of the proposed building have previously been removed.

(iii) what measures, if any, are proposed to avoid or ameliorate any adverse impacts

By ensuring that no key views towards the heritage buildings are obstructed by the proposed building. The revised design of the façade provides a neutral backdrop to heritage buildings using contrasting materials at the topmost level. This reduces the perceived height of the building to minimise any adverse effects on the heritage significance of the place.

The scale of the building has been designed at a height lower than the Vertical Retort building and the Gasholder No. 4 structure to ensure that these buildings retain the visual dominance of the key heritage buildings on the site.

A comparison between the original proposed drawings and the revised proposed drawings is included to the end of this report.

(iv) will the proposal result in any heritage conservation benefits that might offset any adverse impacts?

The selected location for the carpark is the most suitable within the Gasworks site due to its position behind significant heritage structures. The proposed carpark will condense the carparking in the area

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and cater to the increase in patronage to the precinct, into one compact and efficient carpark building behind significant heritage buildings. By providing carparking in this manner the whole precinct will benefit from having unencumbered space between heritage buildings to allow visitors to experience the industrial setting. This is preferable to providing infill carparking within heritage buildings or the outdoor space between, to avoid detraction from the key heritage buildings.

New development adjacent to a heritage place

 How is the impact of the new development on the heritage significance of the place or area to be minimised?

The proposed carpark building has been designed with consideration for the adjacent heritage buildings and the potential views towards the new structure. This has resulted in a carpark with a high level of articulation and materials that are not commonly found on a building of this nature.

The design detail and the siting of the proposed building will minimise any potential impact on the significant heritage buildings and place so these can be experienced without detriment.

The Launceston Gasworks site has been at the forefront of development and advancement of the city of Launceston. The past development of the site can be seen in distinct generations and this proposed development relates to the current renewal and adaptive reuse of the site along with the other projects in the precinct.

The clients have undertaken extensive restoration to the Horizontal and Vertical Retort buildings as well as the chief engineer's cottage to preserve the industrial heritage of the site, whilst incorporating adaptive reuse techniques to ensure the use of the site continues in a positive manner.

Why is the new development required to be adjacent to a heritage place?

The Gasworks site is being adapted to form part of a wider arts and culture precinct which will require a large increase in the capacity for carparks in the near future. The proposed carpark building seeks to provide this essential service in the most appropriate way possible, by consolidating and positioning the carpark behind the significant heritage buildings on the site.

The carpark is important to the functionality and sustainability of the site to remain occupied and operational, ensuring this is well maintained to preserve the industrial heritage of the site for the future.

• How does the new development affect views to, and from, the heritage place?

The key view towards the Gasworks site are from the street frontages of Cimitiere, Boland and Willis Streets, with additional vantage points from further afield in William Street. These views are identified and explored in the Conservation Management Plan from Paul Davies in 2003¹², which included a site context study showing the key views towards the Gasworks site.

These key views that Davies has identified have been presented in the proposed Architectural drawings prepared by Artas Architects. The proposed 3d model has been included in a series of montage images utilising photos taken at street level. This clearly illustrates the potential impact of the proposed development on the surrounding heritage buildings and the streetscape alike. The key

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¹² Launceston Gasworks Conservation Management Plan – Paul Davies Pty Ltd June 2003



streetscape views towards the proposed building show that this will appear as a recessive element behind the heritage buildings, without domination nor significant distraction from the significant heritage buildings.

William Street which is framed by the heritage buildings at the rear of Boags Brewery, the view is already obstructed by buildings and trees along Tamar Street. The proposed montage views show that the western side of the proposed carpark building will partially obscure the view towards the Vertical Retort building.

A number of adjoining buildings in Tamar Street are not on heritage sites, however above 12m in height. Other adjoining properties in Tamar Street have the potential to be redeveloped into multistorey buildings which would have significant impacts on the current streetscape views towards the subject site, in particular along Tamar and William Streets. The adjoining building at Milledge Lane, a three-level building, is a relevant example. A concept image has been prepared to demonstrate the impact on the visibility of the Gasworks site from William Street if a 6-storey building is built on an adjoining site along Tamar Street.

• What has been done to minimise negative effects?

The views to the proposed building are limited, which is due to the design consideration for the surrounding heritage buildings. With the selected location and the limited height of the proposed building which is less than the significant heritage buildings on site, the potential for negative effects have been assessed and further minimised through the architecture of the building.

• Is the new development sympathetic to the heritage place? In what way (e.g. form, siting, proportions, design, materials)?

The material and detail of the proposed building has been refined to relate more closely to the heritage buildings on the Gasworks site. An important consideration was to respectfully reference certain materials, colours and proportions of the heritage buildings rather than reproduction of heritage details, which would detract from the integrity of the heritage site as a whole.

• will the new building(s) visually dominate the heritage place? How has this been minimised?

The new carpark will sit behind the significant heritage area, off the street frontage, allowing these important buildings to be experienced without compromise.

• Will the public and users of the place, still be able to view and appreciate its significance?

Yes, the public and users of the heritage place will have uncompromised views to and from the heritage place. The significance of the heritage place will be enhanced due to the provision of the carpark on the most appropriate location, the internal part of the site to allow a personal interface with the heritage buildings and place.

A map of the Heritage site was prepared by Paul Davies in his Conservation Management Plan in 2003. This has been included below to illustrate the key view lines towards the Gasworks site.

Following the Site Map, a series of photo-montages have been prepared by Artas Architects to illustrate the proposed building within the current streetscape.

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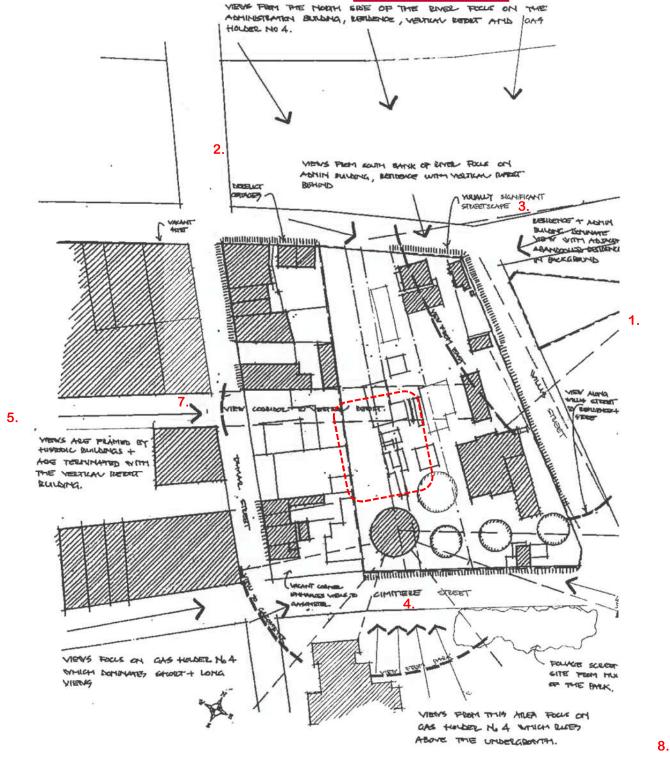


Figure 4.5.20 Site plan showing assessment of views and vistas to and from the site Paul Davies 2003

Red numbers indicate approximate locations of photo-montage views

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6.



1. Photomontage



2. Photomontage



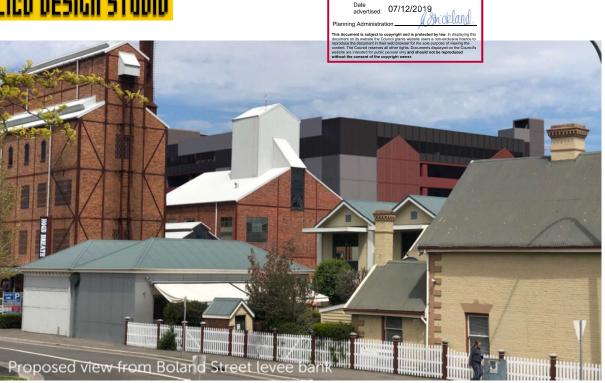


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3. Photomontage



4. Photomontage



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5. Photomontage





6. Photomontage



6. Photomontage - William and George Streets. This demonstrates the impact a 6-storey building would have if developed on an adjoining site along Tamar Street.



7. Photomontage



7. Photomontage - A comparison view from William Street shows the impact of the view based on a potential development of a six-storey building along Tamar Street which would significantly reduce the view towards the Gasworks Heritage site and also towards the proposed carpark building.





8. Photo-montage - Aerial view





REGULATORY CONTROLS

The site is evaluated in context of the relevant regulatory controls, these include:

- 1. LCC Historic Cultural Heritage Code E13.0
- 2. Historic Cultural Heritage Act 1995 section 16. Entry of Places in Heritage Register
- 3. Works Guidelines for Historic Heritage Places November 2015:
 - 5.2 Subdivision or boundary adjustment
 - o 8.1 New buildings (generally)
- 4. The Burra Charter, 2013:
 - o Article 5 Values
 - Article 8 Setting
 - o Article 11 Related places and objects
 - o Article 22 New work
- 1. Historic Cultural Heritage Code E13.0

E13.6 Development Standards

E13.6.1 Demolition

Objective:

To ensure that the demolition or removal of buildings and structures does not impact on the historic cultural heritage significance of local heritage places and their setting.

Acceptable Solutions	Performance Criteria
A4	D4
A1	P1
No acceptable solution.	Buildings or parts of buildings and structures
	may be demolished, provided there is no
	unreasonable impact on the historic cultural
	heritage significance of the local heritage place
	and setting, having regard to:
	(a) the physical condition of the local heritage
	place;
	(b) the extent and rate of deterioration of the
	building or structure;
	(c) the safety of the building or structure;
	(d) the streetscape or setting in which the
	building or structure is located;
	(e) the cultural heritage values of the local
	heritage place;
	(f) the need for the development;
	(g) any options to reduce or mitigate
	deterioration;
	(h) whether demolition is the most reasonable
	option to secure the long-term future of a
	building or structure; and
	(i) any overriding economic considerations.
	(i) any overhams economic considerations.
Response:	1

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No significant buildings or structures will be removed as part of these proposed works.





E13.6.2 Maintenance and repair

Objective:

To ensure that maintenance and repair of heritage buildings are constructed and undertaken to be sympathetic to, and not detract from the historic cultural heritage significance of local heritage places.

Acceptable Solutions	Performance Criteria
A1 New materials and finishes match or are similar to the materials and finishes that are being replaced.	P1 No performance criteria.
Response: No maintenance or repairs to Heritage buildings are proposed.	

E13.6.3 Lot size and dimensions and frontage

Objective:

To ensure that subdivision does not impact on the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1	P1
No acceptable solution.	Subdivision must not unreasonably impact on the historic cultural heritage significance of local heritage places or their settings, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the historic development pattern of the area; (c) the separation of buildings or structures from their original setting; (d) the lot sizes, dimensions, frontage, access and orientation; (e) the suitability of the proposed lots for their intended uses; and (f) the removal of vegetation, significant trees or garden settings.

Response:

The proposed site size and configuration is sensitive to the cultural heritage values due to its position behind the significant heritage buildings off the street frontage, which leaves the adjoining heritage buildings with some separation to the proposed building for maintenance access and some depth of perspective for the public to view the façade of the adjoining buildings.



The historic development pattern comprises large footprint buildings and smaller ancillary buildings, most of which have been removed previously. The introduction of a new large footprint building is consistent with this pattern.

The proposed boundaries have been positioned to allow the maximum separation between adjoining Carburetted Water Gas heritage Building and the proposed building. Whilst it would be preferable to see a greater amount of separation, the capacity of the carpark would be compromised with any further reductions to the building envelope.

There is no street frontage to the proposed site allotment as this would be accessed via a service road from Cimitiere and Willis Streets. This is appropriate for the intended use as a carpark on an internal site and does not compromise the setting of the heritage buildings on the site.

No significant vegetation, trees or garden areas are in the present or adjoining sites.

E13.6.4 Site coverage

Objective:

To ensure that site coverage is compatible with the historic cultural heritage significance of local heritage places.

Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	P1 The site coverage is compatible with the historic cultural heritage significance of local heritage places or their settings, having regard to: (a) the topography of the site; (b) the cultural heritage values of the local heritage place and setting; (c) the site coverage of buildings on sites in the surrounding area; and (d) the pattern of development in the surrounding area.

Response:

The proposed site coverage will increase due to the absence of any building on the site presently.

The topography of the site is relatively level.

The proposed site coverage is compatible with the historic cultural heritage of the place and setting as this provides a similar high ratio of coverage as these industrial buildings.







E13.6.5 Height and bulk of buildings Objective:

To ensure that the height and bulk of buildings are compatible with the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	P1 The height and bulk of buildings are compatible with the historic cultural heritage significance of a place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the character and appearance of the existing building or place; (c) the height and bulk of other buildings in the surrounding area; (d) the historic cultural heritage significance of adjacent places; and (e) the streetscape.

Response:

The scale of the building is compatible with the height and bulk of the industrial heritage buildings with the proposed height sitting mid-way between the Horizontal Retort Building and being substantially lower than the Vertical Retort building and the Gasholder No. 4 structure.

This balance between the proposed height is compatible with the varied height of the existing industrial heritage buildings on the site.

The cultural values of the heritage buildings will not be substantially impacted by the proposed carpark. The proposed photo montages from surrounding streetscapes demonstrate the visual impact of the proposed carpark within the heritage place, the position of the proposed building behind the lower heritage buildings retain the visual dominance of the key heritage buildings on the site when viewed from the street frontages.

Other buildings in the area including the recently approved Art Gallery within the Gasholder No. 4 structure will be higher than the proposed carpark.

E13.6.6 Site of buildings and structure

Objective:

To ensure that the siting of buildings are compatible with the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	P1 The front, side and rear setbacks must be compatible with the historic cultural heritage significance of a local heritage place and its setting, having regard to:





- (a) the cultural heritage values of the local heritage place and setting;
- (b) the topography of the site;
- (c) the size, shape, and orientation of the lot
- (d) the setbacks of other buildings in the surrounding area;
- (e) the historic cultural heritage significance of adjacent places; and
- (f) the streetscape.

Response:

The proposed Carpark building will be located internally from Cimitiere Street which provides a discreet entrance to the carpark, minimising impact on the character of the heritage place.

The proposed building responds to the shape and orientation of the lot, which contributes to the building being as compact as possible to become a recessive form behind the heritage buildings.

The siting of the proposed building is compatible with the cultural heritage values of the place by providing some separation between adjacent industrial heritage buildings.

The proposed building has been setback considerable from the Gasholder No. 4 frame to preserve the relationship of this key building on the site.

E13.6.7 Fences

Objective:

To ensure that fences are compatible with the historic cultural heritage significance of local heritage places and their setting.

Acceptable Solutions	Performance Criteria
A1 New fences must be designed and constructed to match existing original fences on the site.	P1 New fences must be compatible with the historic cultural heritage significance of a place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the architectural style of the dominant building on the site; (c) the dominant fencing style in the setting; and (d) the original or previous fences on the site.

Response:

No fences are proposed, however there will be boom gates fitted to the Carpark which are a contemporary and functional element. The boom gate is to be positioned as far back as possible from Cimitiere Street to avoid any visual obstruction of the existing Gasholder No. 4 structure when viewed from the street.





E13.6.8 Roof form and materials

Objective:

To ensure that roof form and materials are compatible with the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	P1 Roof form and materials are compatible with the historic cultural heritage significance of a place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the design, period of construction and materials of the dominant building on the site; (c) the dominant roofing style and materials in the setting; and (d) the streetscape.

Response:

The roof form of the proposed carpark at level 6 comprises 43 parking spaces, this will not be seen due to the parapet walls which extend above the finished top floor level of the Carpark. In lieu of a roof form, the facade of the building will be read as a simple box form that will sit recessively behind the heritage structures. An abstract interpretation of the gable roof ends has been incorporated into the detail of the façade on the north and south elevations of the building, this has been developed to utilize a similar design language as the heritage buildings. On the east and west elevations, the topmost parapet of the carpark wall has been contrasted with the dark steel mesh to give the impression of a roof protruding above the principal roofline. These details are intended to be subtle references to the heritage building context.

E13.6.9 Wall materials

Objective:

To ensure that wall materials are compatible with the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1	P1
No acceptable solution.	Wall material for buildings and structures must
	be compatible with the historic cultural
	heritage significance of a place and its setting,
	having regard to:
	(a) the cultural heritage values of the local
	heritage place and setting;
	(b) the design, period of construction and
	materials of the dominant building on the site;
	(c) the dominant wall materials in the setting;
	and



(d) the streetscape.

Response:

The material and detail of the proposed building has been refined to relate more closely the heritage buildings on the Gasworks site. An important consideration was to use respectful techniques to reference certain materials, colours and proportions of the heritage buildings rather than reproduction of heritage details which would detract from the integrity of the heritage site as a whole.

This was achieved through:

- using a colour palette that ties into the heritage bricks
- detailing the façade to include forms that reference the nearby heritage gable roof forms
- providing contrast materials at the parapets on the east and west sides of the building to reference the tallest section of roof that emerges above the predominant roof form of the Vertical Retort and Carburetted Water Gas building
- emphasizing the tower elements which project above the contrast line appearing as abstract chimneys
- using a fine-grain materials such as contrasting patterned concrete / exposed aggregate concrete, perforated mesh panels with expressed joints, fine steel blades with powdercoat finishes relating to heritage colours
- Providing articulation for the lower levels which allows people at ground level to encounter the building with human scale elements rather than broad precast panels devoid of context

The overall appearance of the building is refined and sits well in its place as a recessive element to the heritage structures in front.

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E13.6.10 Outbuildings and structures

Objective:

To ensure that the siting of outbuildings and structures are compatible with the historic heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 Outbuildings and structures must: (a) not be located in the front setback; (b) not visible from any road, or public park or reserve; (c) have no side longer than 3m; (d) have a gross floor area less than 9mÇ and a combined total area not exceeding 20mÇ; (e) have a maximum height less than 2.4m above natural ground level; (f) not have a maximum change of level as a	P1 Outbuildings and structures must be compatible with the historic cultural heritage significance of a place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the location of existing infrastructure services; (c) the bulk, form and size of buildings on the site;
result of cut or fill of greater than 1m; and	(d) the bulk, form and size of the outbuilding or
(g) not encroach on any service easement or be located within 1m of any underground service.	structure;
located within third any underground service.	

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	(e) the external materials, finishes and decoration of the outbuilding or structure; and (f) the visibility of the outbuilding or structure from any road, public park or reserve.
Response: No outbuildings are proposed	

E13.6.11 Driveways and parking

Objective:

To ensure that driveways and parking are compatible with the historic heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 Car parking areas for non-residential purposes must be located behind the primary buildings on the site.	P1 Driveways and car parking areas for non- residential purposes must be compatible with the historic cultural heritage significance of a local heritage place and its setting, having regard to:
PLANNING EXHIBITED DOCUMENTS Ref. No: DA 0679/2019 Date advortised: 07/12/2019 Planning Administration	 (a) the cultural heritage values of the local heritage place and setting; (b) the loss of any building fabric; (c) the removal of gardens or vegetated areas; (d) parking availability in the surrounding area; (e) vehicle and pedestrian traffic safety; and (f) the streetscape.

Response:

This proposal is for a commercial Carpark. Given the surrounding precinct with the Albert Hall, City Park, nearby cultural places and workplaces require adequate Carpark resources, the position of this building has been well considered.

Parking availability in the surrounding areas is largely limited to on street parking, particularly with the imminent UTas development that will remove approximately 200 off street parking bays in this location. The proposed carpark does not propose the loss of any built fabric or garden spaces or vegetated areas of the site.

The design has incorporated vehicle and pedestrian safety measures, via a Traffic Engineering solution. As mentioned previously the streetscape has been addressed with the siting of the proposed building behind the original Gasholder No. 4 structure.



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E13.6.12 Tree and vegetation removal

Objective:

To ensure that the removal, destruction or lopping of trees or the removal of vegetation does not impact on the historic heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 No acceptable solution.	The removal, destruction or lopping of trees or the removal of vegetation must not unreasonably impact on the historic cultural heritage significance of a local heritage place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the age and condition of the tree or vegetation; (c) the size and form of the tree or vegetation; (d) the importance of the tree or vegetation to the historic cultural heritage significance of a local heritage place or its setting; and (e) whether the tree or vegetation is located within a garden that is a listed as a local heritage place.
Response: No trees of vegetation is proposed to	

E13.6.13 Signage

Objective:

To ensure that signage is compatible with the historic cultural heritage significance of local heritage places and their settings.

Acceptable Solutions	Performance Criteria
A1 No more than one sign, not greater than 0.2mÇ, identifying the use, heritage significance, and the name and occupation of the owners of the property.	P1 New signs must be compatible with the historic cultural heritage of the local heritage place and its setting, having regard to: (a) the cultural heritage values of the local heritage place and setting; (b) the size and location of the proposed sign; (c) the area and location of existing signage on the site; (d) the period details, windows, doors and other architectural details of the building; (e) any destruction, removal or concealment of heritage fabric through attaching signage; and (f) the streetscape.

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Response:

Entry and Exit Signage has been incorporated which addresses wayfinding requirements for the building.

2. <u>Historic Cultural Heritage Act 1995</u>

Section 16. Entry of Places in Heritage Register

- (1) The Heritage Council may enter a place in the Heritage Register if it is satisfied that the place has historic cultural heritage significance.
- (2) For the purposes of subsection (1), the Heritage Council may determine that a place has historic cultural heritage significance if it is satisfied that the place meets one or more of the following criteria:
- (a) the place is important to the course or pattern of Tasmania's history;
- (b) the place possesses uncommon or rare aspects of Tasmania's history;
- (c) the place has the potential to yield information that will contribute to an understanding of Tasmania's history;
- (d) the place is important in demonstrating the principal characteristics of a class of place in Tasmania's history;
- (e) the place is important in demonstrating a high degree of creative or technical achievement;
- (f) the place has a strong or special association with a particular community or cultural group for social or spiritual reasons;
- (g) the place has a special association with the life or works of a person, or group of persons, of importance in Tasmania's history;
- (h) the place is important in exhibiting particular aesthetic characteristics.
- 3. Works Guidelines for Historic Heritage Places November 2015

5.2 Subdivision or boundary adjustment

Subdivisions or boundary adjustments that affect the place's:

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- setting; or
- cohesion as a collection of heritage elements (ie: separate but related buildings, plantings or other features); or
- historic lot curtilage (ie: title boundaries that are of historical significance).

Appropriate outcomes:



Reconfigured boundaries should ensure an adequate setting or context is provided for the registered place. The adequacy of this setting will vary from place to place and will depend on a number of factors such as:

- the size of the property;
- the existence of elements such as outbuildings, gardens, landscape features, or significant archaeological values; and
- the need to retain significant views to, and from, the registered place.

Retain all the main structures or significant elements associated with the place on a single title/s. For example, elements such as significant outbuildings, gardens or other features should be retained on the same, or adjacent, title as the main structure or building.

If a place has a significant historic lot curtilage, then any changes to the boundaries should aim to retain the integrity of the original boundaries.

Note: All of the areas affected by the subdivision will remain entered in the Tasmanian Heritage Register as part of the original entry for the site, and works to the new lots will require approval from the Tasmanian Heritage Council.

The proposed site size and configuration is sensitive to the cultural heritage values due to its position behind the significant heritage buildings on the site and is suitable for the historic development pattern on the site within the multiple allotments.

It is appropriate for the intended use as a carpark on an internal site and does not compromise the setting of the heritage buildings on the site nor remove any significant vegetation or garden areas.

The absence on the subject site of existing heritage outbuildings, garden spaces, and archaeological values provides a vacant site from which the impact on nearby heritage buildings is minimized through provision of separation to industrial heritage buildings. The closest of these is the Carburetted Water Gas office building which has a small separation to provide maintenance access and some depth of perspective for the public to view the façade of the adjoining buildings.

All existing heritage buildings are proposed to be retained on their individual titles. The proposed title boundaries provide some separation of the proposed carpark building to the other individual industrial heritage buildings. All proposed titles remain heritage listed.

8.1 New buildings (generally)

New buildings that affect the place's heritage values.

Appropriate outcomes:

Appropriate outcomes are new buildings that respond positively to:

• The character of the heritage place. This will normally require consideration of such aspects such as the siting and setting, scale, massing, form and style of historic buildings; materials, building techniques and details; and significant views of these places. At some places, understanding this character may require an analysis of broader qualities related to streetscape, townscape or landscape contribution.



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- The scale of the heritage place and its setting. This will mean different things in different contexts. For example, a large multi-storey development is likely to be of an appropriate scale in the central business district of a town or city, more so than in a suburban area characterised by single or two storey houses. New buildings that are larger than the heritage place can have the visual impact of their scale reduced through various design techniques, for example, breaking long walls into bays; reflecting the historic arrangement, proportion and location of windows and openings; breaking up roof forms into smaller elements; and stepping or adopting setbacks for upper levels of buildings.
- The form of the heritage place and setting. Aspects to consider include roofline and roof forms; choice of materials; and the design and arrangement of facades and their window and door arrangement.
- Established and important streetscapes or significant views. Aspects such as orientation, location and set- backs should be considered. Significant landscape and landform elements and/or significant archaeological values should also be considered when selecting the location for a new building.
- Existing historic building materials, textures and colour. These characteristics can be creatively reinterpreted as part of a new building.
- Details that contribute to the character of a place
 or an area, including things such as predominate building materials; roof forms and
 materials; chimneys, parapets and so on. Such details do not need to be replicated, but can
 act as cues for the design details in new buildings.

The proposed carpark has been designed in reference to the character of the heritage place. We have consulted with Artas Architects to ensure that the setting of the building, materials, forms and overall appearance of the proposed building responds positively to the heritage place.

The scale of the building has been considered within the heritage context by keeping this lower than the highest buildings on the site. In addition, the perceived height of the proposed building has been reduced through the introduction of a contrasting level to keep the more detailed elements lower and the top becomes a visually recessive element.

The formulation of the façade includes references to the roof forms, materials and proportions of the heritage buildings to respect the scale of the heritage place.

Streetscape views have been evaluated to establish the key views from vantage points. Design decisions were made to ensure that the proposed building minimises visual impact on the industrial heritage place.

A map of the Heritage site was prepared by Paul Davies in his Conservation Management Plan in 2003. This has been included above to illustrate the key view lines towards the Gasworks site.

Following the Site Map, a series of photo-montages have been prepared by Artas Architects to illustrate the proposed building within the current streetscape. These demonstrate that the proposed building sits in the background of the heritage buildings. Although this does add new elements to the view above some of the lower heritage buildings this is clearly a recessive form which does not overly impact on the heritage character of the site. The design takes cues from the heritage buildings and this is expressed as forms, proportions and materials that relate to the heritage context.

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4. The Burra Charter, 2013



Article 5 - Values

- 5.1 Conservation of a place should identify and take into consideration all aspects of cultural and natural significance without unwarranted emphasis on any one value at the expense of others.
- 5.2 Relative degrees of cultural significance may lead to different conservation actions at a place.

The values of the industrial heritage place have been carefully considered to ensure that all key aspects are considered equally. The various heritage buildings on the site, predominant views, knowledge of the working history of the site and importance to the development of Launceston from an early part of the city's history are all culturally significant aspects that need to be respected.

The proposed design does this through the siting of the proposed building within the rear part of the site. Providing some separation to adjoining heritage buildings allows the full heritage building to be experienced, with no reduction is access to external walls. The proposed carpark is important to the overall Gasworks precinct, to provide a practical function to allow the heritage buildings to be experienced and provided with a continued life.

Article 8 - Setting

Conservation requires the retention of an appropriate setting. This includes retention of the visual and sensory setting, as well as the retention of spiritual and other cultural relationships that contribute to the cultural significance of the place.

New construction, demolition, intrusions or other changes which would adversely affect the setting or relationships are not appropriate.

The setting of the Gasworks site has been evaluated from visual and sensory setting and cultural relationship to the wider context. The internal siting position of the proposed building will not disrupt this setting or relationship.

Article 11 - Related places and objects

The contribution which related places and related objects make to the cultural significance of the place should be retained.

All related places and objects that contribute to the cultural significance of the place are proposed to be retained and protected.

Article 22 - New work

22.1 New work such as additions or other changes to the place may be acceptable where it respects and does not distort or obscure the cultural significance of the place, or detract from its interpretation and appreciation.





The proposed building does not distort of obscure the cultural significance of the industrial heritage place. This includes the views to the heritage buildings, which have been preserved without obscurity to allow the interpretation of the heritage setting.

22.2 New work should be readily identifiable as such, but must respect and have minimal impact on the cultural significance of the place.

The detail of the proposed building is clearly a contemporary building to ensure that there is no dilution of the heritage place through reproduction of heritage detail. The proposed design includes forms and materials which reference the heritage buildings on the site respectfully.





DESCRIPTION OF THE PROPOSAL

The proposed development is for a commercial carpark within the industrial heritage context of the Gasworks site. The nature of the project presented challenges to ensure that the pragmatic nature of a carpark does not detract from the sensitive heritage context of this important site.

The construction of the carpark will require adherence to regulatory requirements for fire protection, access and egress, ventilation and general robust construction to ensure safety for all occupants and maximise durability. The aesthetic reading of the carpark has been presented honestly and in an interesting way, utilising the expression of the carpark ramps, pedestrian circulation towers and balustrades to good effect to create a simple but well resolved proposal. Incorporated into the design is a strong sense of place within the industrial heritage context, by using materials, forms and colours that relate back to the adjoining heritage buildings on the site.

The revised Architectural drawings as part of the re-application for this development include a series of revisions that have been workshopped between Artas Architects and myself. We have evaluated the feedback provided by Launceston City Council planners, Heritage Tasmania officers and the clients to determine what revisions should be provided in the amended drawings, including:

Reduction in the perceived height of the building

This was addressed through the demarcation of the top 1.5 levels as a contrasting element, which relates to the relative level of the adjoining Carburetted Water Gas building's predominant roof. This contrast is enhanced with the use of dark colour open steel mesh and dark paint finish to precast concrete walls. The effect reduces the perceived height when viewed from near and far, due to the visual pre-dominance at the lower levels.

In addition, the facades visible from vantage points have been detailed to emphasize the horizontal rather than vertical features which assists to make the building appear lower.

Façade treatment

The material and detail of the proposed building was identified as being too dissimilar in relationship to the heritage buildings on the Gasworks site. An important consideration was to use respectful techniques to reference certain materials, colours and proportions of the heritage buildings rather than reproduction of heritage details which would detract from the integrity of the heritage site as a whole.

This was achieved through:

- using a colour palette that ties into the heritage bricks
- detailing the façade to include forms that reference the nearby heritage gable roof forms
- providing contrast materials at the parapets on the east and west sides of the building to reference the tallest section of roof that emerges above the predominant roof form of the Vertical Retort and Carburetted Water Gas building
- emphasizing the tower elements which project above the contrast line appearing as abstract chimneys
- using a fine grain of material articulation for the lower levels which allows people at ground level to encounter the building with human scale elements rather than broad precast panels devoid of context





EVALUATION OF THE PROPOSAL

The proposed carpark building is positioned behind the significant industrial heritage buildings of the Gas Company site on Cimitiere and Willis Streets. The design appears as a simple backdrop to the heritage buildings on the adjoining site when viewed from a distance, set well back from the street frontage.

When viewed up close the finer grain of detail in the materials including contrasting patterned concrete / exposed aggregate concrete, perforated mesh panels with expressed joints, fine steel blades with powdercoat finishes relating to heritage colours, are evident so the experience is not only about form but also texture meaning the experience of the carpark building is positive from near and afar. The composition of the precast walls allows the building to be read with depth and vantage points from the carpark towards the heritage buildings will be an added advantage to people using the space, providing unique views from this space.

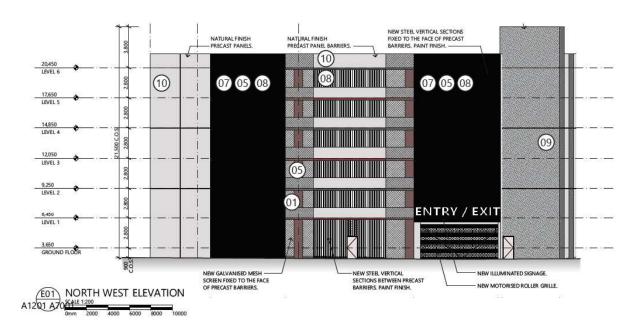
Our clients and Artas Architects have evaluated the site to determine the best location for the proposed carpark to be positioned. The site for the proposed carpark was selected due to its appropriate position behind the significant heritage buildings and away from the street frontage when viewed from the key locations surrounding the Gasworks site. This ensures that it is viewed as a recessive building in context of the heritage buildings.

There is always sensitivity when building new buildings on industrial heritage sites. There is no doubt that the proposed building will be visible from vantage points surrounding the Gasworks site, however the predominant views show the significant industrial heritage buildings in front of the proposed carpark.

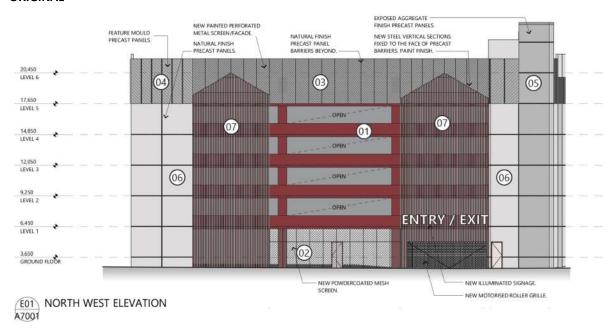
The revised design ensures that measures have been taken to reduce impact on the significance of the heritage site. The benefit of consolidating the requirement for carparking to a site that is the least sensitive on the heritage site, will outweigh any impact that this will have on the heritage site.

Views towards the proposed building will be reduced in future with developments along Tamar Street in particular, which is demonstrated through the comparison view with a 6-storey building envelope shown on the photomontage. As such the primary views towards the industrial heritage buildings which should be protected are through Cimitiere Street, Willis Street and Boland Street.

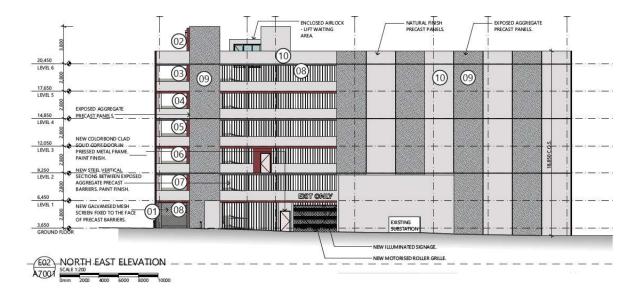
A comparison between the original drawings that were submitted for development approval, with the revised drawings that have been prepared for resubmission are in the pages following:



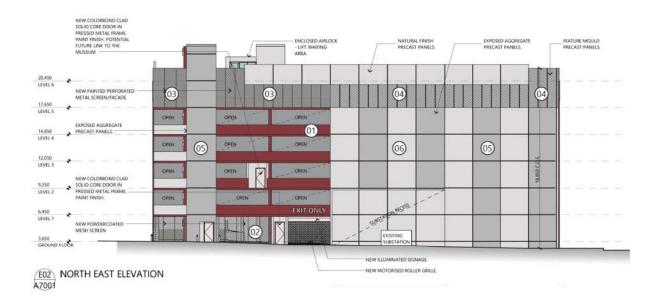
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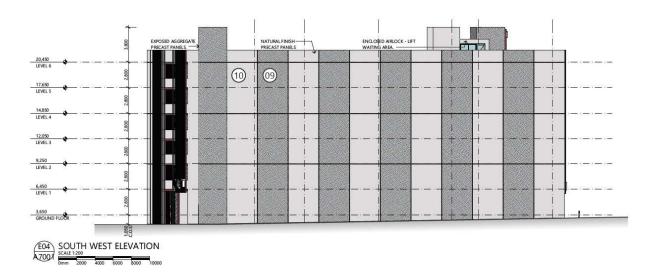




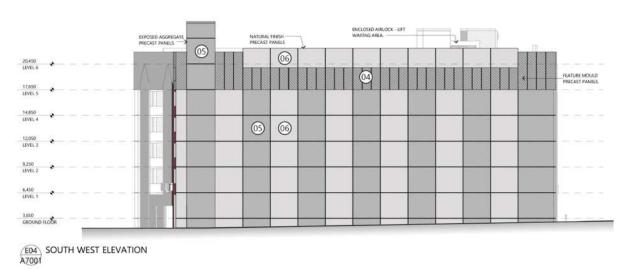
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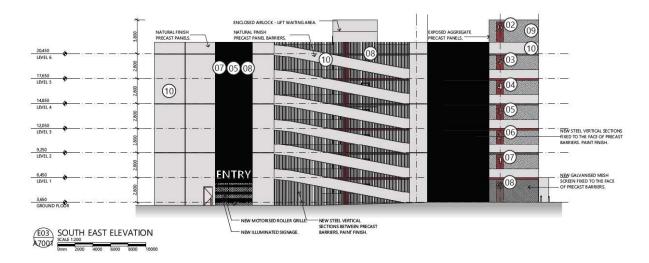




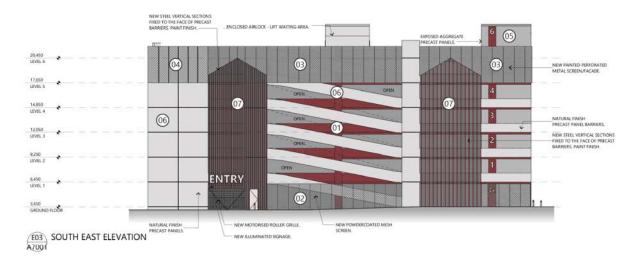
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RECOMMENDATIONS

For approval of the current design.









90-110 WILLIS STREET, LAUNCESTON

PROPOSED MULTI - STOREY CARPARK

TRAFFIC IMPACT ASSESSMENT

JULY 2019

Document Set ID: 4256260 Version: 1, Version Date: 09/03/2020







90-110 Willis Street, Launceston Proposed Multi storey Carpark

TRAFFIC IMPACT ASSESSMENT

- Draft #2
- July 2019

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1. Introduction

1.1 Background

This TIA reviews the proposed development of a multi-storey carpark at 90-110 Willis Street, Launceston.

This Traffic Impact Assessment (TIA) should be submitted with the development application for the proposal and has been prepared based on Department of State Growth guidelines and provides details as follows:

- Anticipated additional traffic and pedestrian movements
- The significance of the impact of these movements on the existing road network
- Any changes required to accommodate the additional traffic and pedestrians

1.2 Objectives

A traffic impact assessment is a means for assisting in the planning and design of sustainable development proposals that consider:

- Safety and capacity
- Equity and social justice
- Economic efficiency and the environment and
- Future development with traffic projections for 10 years

1.3 Scope of Traffic Impact Assessment (TIA)

This TIA considers in detail the impact of the proposal on the surrounding road network, including:

- Cimitiere Street entrance to the carpark
- Carpark exit onto Willis Street via R.O.W.
- Ground floor carpark access via Wescombe Lane
- Junction of Willis Street and Cimitiere Street

1.4 References

- AS 1742.1 2014 General introduction and index of signs
- AS 1742.10 Pedestrian Control and Protection
- RTA Guide to Traffic Generating Developments 2002
- Austroads Guide to Road Design Part 4A Unsignalised and Signalised Intersections 2017
- Austroads Guide to Traffic Man. Part 6 Intersections, Interchanges & Crossings 2019
- Launceston Interim Planning Scheme 2015
- City of Launceston Strategic Plan 2014-2024





2. Site Description

The proposed development is located at the north-eastern outskirts of the Launceston CBD. Figures 1- 4 show the location of the proposed development, the surrounding local road network, the proposed access points and the concept plan for the proposed carpark.

Figure 1 - Location of proposed development

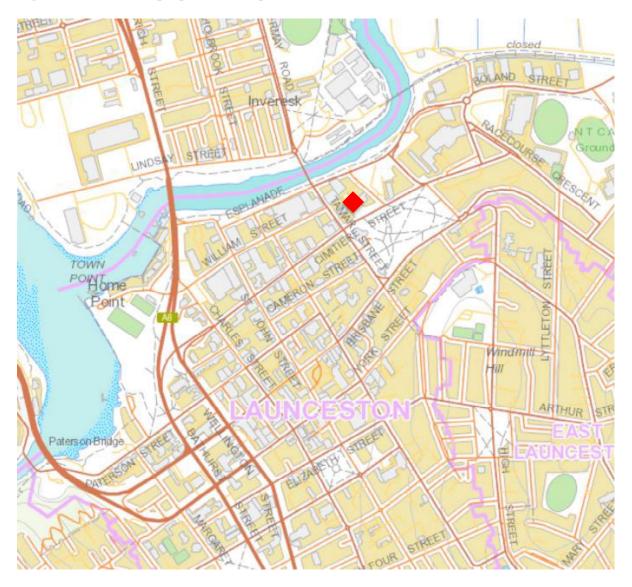
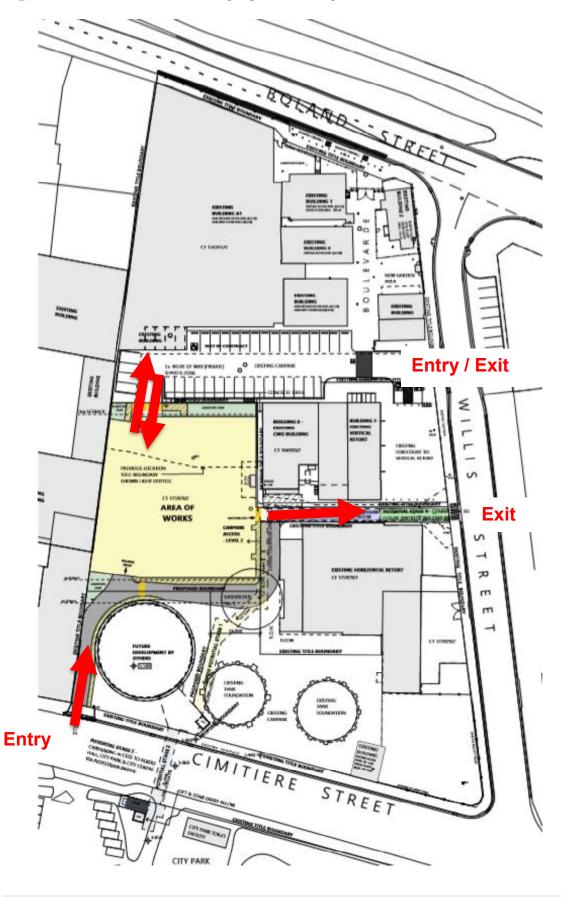






Figure 2 – Local road network and proposed access points



PLANNING EXHIBITED DOCUMENTS DA 0679/2019 The green and red arrows show **Traffic Impact Assessment** Date advertised: 07/12/2019 directions for entering and ng traffic respectively Figure 3 – Ground Floor Concept Plan ENTRY /EXIT (A) B 38 No. CARPARKS 0 E 6 4 LEGEND: PROPOSED PEDESTRIAN PATHWAY PROPOSED PEDESTRIAN CROSSOVER APPROX RL 3,00
CONNECTION FUTURE BRIDGE OUTLINE ABOVE, DEVELOPMENT BY OTHERS TICKET EXISTING TITLE BOUNDARY



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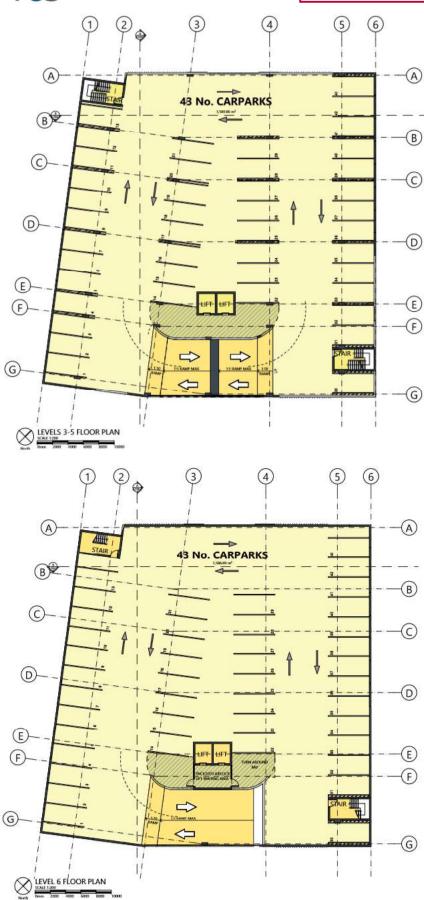
Figure 4 Floor Plans



Traffic Impact Assessment











3. Development, Planning Scheme and Road Owner Objectives

3.1 Description of Proposed Development

The proposal is to develop a 6 floor multi storey carpark with capacity for 290 parking spaces with entry from Cimitiere Street and exit onto Willis Street. The 38-space ground floor carpark also has two-way access from Willis Street via Wescombe Lane.

3.2 Council Planning Scheme

The proposed development involves land currently zoned *Urban Mixed Use* in accordance with the Launceston Interim Planning Scheme 2015 shown in Figure 5.



Figure 5 – Launceston Interim Planning Scheme 2015

3.3 Local Road Network Owner Objectives

The City of Launceston's ten-year goal (from the City of Launceston Strategic Plan 2014-2024) is to ensure Launceston is accessible and connected through efficient transport and digital networks, and to drive appropriate development opportunities as well as infrastructure, land use planning and transport solutions.

Cimitiere Street and Boland Street are both part of the Tasmanian 26m B Double network, see Appendix K. Cimitiere Street has a typical width of 12.7m with on street parking both sides leaving 8.5m of width for a traffic lane in each direction. The west bound traffic lane is 4.4m wide and the east bound lane is 4.0m wide. See figures 7 and 8. A traffic lane width of 4m is adequate for 26m B Double operation. Department of State Growth minimum trafficable width for B Double operation is 4.0m.





4. Existing Conditions

4.1 Transport Network

4.1.1 The proposed primary carpark entrance and Cimitiere Street

The proposed entrance site currently provides two-way access to a ground level off street carpark. The access width at the narrowest point is 3.8m, see figure 6. Cimitiere Street is 12.7m wide near the entrance. In the west bound direction Cimitiere Street is 6.6m wide and supports on street parking and one through lane of traffic as shown in figure 7. In the east bound direction Cimitiere Street is 6.1m wide with Yellow Line and supports a lane for turning left into the car park and an east bound through lane as shown in figure 8. Bus stops are present on Cimitiere Street east of the car park access.

The access site is some 50m east of the Cimitiere / Tamar Street signalised intersection and Cimitiere street functions as a sub arterial road and has a 50km/h speed limit.

Figure 6 – Looking north into the carpark entrance from Cimitiere Street



Figure 7 – Approaching the carpark entrance from the east along Cimitiere Street



Figure 8 – Approaching the carpark entrance from the west along Cimitiere Street



- No on-street parking as at Feb 2019.
- On-street parking as at July 2019.





4.1.2 Proposed primary carpark exit and Willis Street

The proposed exit site on Willis Street is currently two-way providing access to several businesses and offices The R.O.W. between the building shown in figure 9 is 4.8m wide, note the existing crossover is not aligned with the ROW.

Willis Street is characteristically 9.9m wide along the southern end with on street parking on the western side of the road either side of the access as can be seen in figure 10 and 11.

Willis Street is a local access road and access to a 200space off streets car park on the eastern side. The General Urban Speed Limit of 50km/h applies and the Willis Street junctions with Boland Street and Cimitiere Street are both basic T Junctions.

Figure 9 – Looking west into the carpark exit from across Willis Street



Note that the ROW does not align with the crossover.

Figure 10 - Looking right along Willis Street from the Willis Street exit



Sight distance to the right is 90m to the Cimitiere St junction though this is limited due to on street parking

Figure 11 - Looking left along Willis Street from the Willis Street exit



Sight distance to the left is 85m to the Boland St junction though this is limited due to on street parking





4.1.3 Wescombe Lane junction with Willis Street

Wescombe Lane is 6.5m wide and provides two-way access to the 50 space off street carpark at the north west end of Willis Street. The Wescombe Lane / Willis Street junction has a simple layout with a driveway crossover. Sight distances to the right and left are shown in figures 13 and 14. Willis Street narrows to 6.9m at Wescombe lane and continues north a further 50m to the junction with Boland Street. On street parking is prohibited from north of the Hogs Breath Restaurant access both sides of the road except for some indented parking on the opposite side of the road shown in figure 14.

Figure 12 - Looking across Willis Street at Wescombe Lane



Figure 13 – Looking right along Willis Street from Wescombe Lane



Sight distance to the right is 130m to the Cimitiere St junction, this may be reduced due to on street parking

Figure 14 – Looking left along Willis Street from Wescombe Lane



Sight distance to the left is 50m to the Boland St intersection.





4.1.4 Willis Street / Cimitiere Street Junction

Cimitiere Street is 12.5m wide at the Willis Street junction with on street parking and wide footpaths both sides of the road. The intersection has a basic junction layout and sight distances to the right and left are shown in figure 15 and 16.

Figure 15 – Looking right along Cimitiere Street from Willis Street



Sight distance to the right is 175m to the Tamar St junction, however this may be limited by on- street parking

Figure 16 – Looking left along Cimitiere Street from Willis Street



Sight distance to the left is 160m to the Lawrence St junction, however this may be limited by on- street parking





4.2 Traffic Activity

Traffic turning count surveys were conducted by TCS on Thursday 7th and Friday 8th February 2019 revealing traffic activity at the proposed access sites as shown in figure 17.

Figure 17 – Estimated peak hour traffic for Cimitiere and Willis Street

Cimitiere Street	Am peak hour	Pm peak hour
Eastbound	346	324
Westbound	218	314
Total	564	638

Willis Street	Am peak hour	Pm peak hour
Southbound	22	56
Northbound	84	26
Total	106	82

As a guide annual average daily traffic is in the order of 10 times the peak hour traffic. These counts provide evidence that the daily traffic volume on Cimitiere and Willis Streets are in the order of 6,000 and 1,000 vehicles per day respectively. See Appendices A, B, C and D for count details.

4.3 Pedestrian Activity

There is evidence of several pedestrian desire lines:

- As Willis Street is directly opposite a pedestrian gate to City Park, some 30 pedestrians per hour (pph) cross Cimitiere Street during the pm traffic peak, emerging from between parked cars to cross the road.
- There is a walkway between the Hog's Breath Café' and Boland Street and some 50pph cross Willis Street to towards the Café or proceed to Cimitiere Street during the am peak

4.4 Crash History

The Department of State Growth is supplied with reported crashes by Tasmania Police. The Department maintains a crash database from the crash reports which is used to monitor road safety, identify problem areas and develop improvement schemes.

The crash history along Willis Street and Cimitiere Street (Tamar Street to Lawrence Street), has been reviewed as part of this traffic impact assessment.

Figures 18 summarises the 5year crash history for the various links and intersections of interest. See Appendix F for full crash history details.





Figure 18 - Cimitiere and Willis Street Crashes

5 Year Crash Reported Crash History Summary

614	17212	Crash Severity			everity		FOR THE POST POST		Vulnerable		
Site	Veh.	PDO	FA	Minor	Serious Fat	Fatal	Frequent Crash Types	MC	Cyclist	Ped	
Cimitiere(Tamar-Lawrence)	14	7	2				Parking (4), Driveways (2)				
Cimitiere / Tamar	36	9	4	4	1		Cross traffic (8), Right/through(5)		1	2	
Cimitiere / Willis	9	3		3			Cross traffic (3)	1			
Cimitiere / Lawrence	14	6		1			Cross traffic (3), Rear End (2)			1	
Boland / Willis	4	1	1				Market Market		1		
Willis(Cimitiere-Boland)	2	1									

Where MC = Motorcyclists, Ped = Pedestrian, PDO = Property Damage Only, FA = First Aid

Cimitiere Street (Tamar Street to Lawrence Street)

The Cimitiere Street link appears to have typical crash rate and crash profile featuring parking and driveway related crashes which should be expected with the on and off-street parking either side of the road.

Cimitiere Street /Tamar Street intersection

18 crashes over 5 years is a typical crash rate for a busy signalised intersection on the edge of the CBD.

Cimitiere Street / Willis Street intersection

This intersection has had 6 crashes over the last 5 years with 3 of these involving minor injury crashes and cross traffic.

Cimitiere Street / Lawrence Street intersection 7 crashes over 5 years is a relatively low crash rate for a busy signalised intersection.

Boland Street / Willis Street intersection

2 crashes over 5 years is a low crash rate given the function of Boland Street.

Willis Street (Cimitiere Street to Boland Street)

1 crash over 5 years is a low crash rate.

The crash history indicates a typical to low crash rate in the area.





5. Traffic Generation and Assignment

This section of the report describes how traffic generated by the proposal is distributed within the adjacent road network now and in ten years (2029).

5.1 Traffic Growth

An estimated background traffic growth rate for the area of 1% per annum has been assumed.

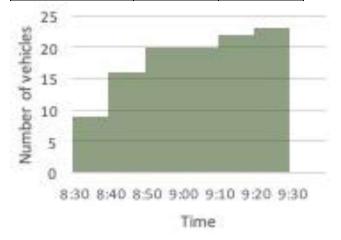
- Traffic on Cimitiere Street is currently in the order of 6,000vpd and projected to increase to 6,600vpd by 2029.
- Traffic on Willis Street is currently in the order of 1,000vpd and projected to increase to 1,100vpd by 2029.

5.2 Trip Generation

For benchmarking purposes and to estimate entering and existing traffic rates at peak periods traffic activity surveys were conducted by TCS on Monday 18th and Tuesday 19th February 2019 at the Paterson Street East carpark (244 public spaces, 7 accessible bays and 4 motorcycle bays) which has a similar size to the proposed 290 space carpark. The data reveals 110 vehicles entering the carpark in the AM peak hour and 74 vehicles exiting the carpark in the PM peak hour. Figure 19 shows the distribution of traffic entering the carpark in the AM peak hour. See Appendix E for Paterson Street East carpark turning count survey details.

Figure 19 - Distribution of traffic entering the carpark in the AM peak hour

Carpark Traffic	Am Peak	Pm Peak		
Entering	110 vph	14 vph		
Exiting	13 vph	74 vph		



Based on this data and the different access arrangements and traffic projections for 2029, the proposed multi storey carpark is estimated to generate 130 vph during the AM peak and 88 vph during the PM peak. A 8:1 and 1:6





split between entering and exiting during the AM and PM peak is assumed respectively.

5.3 Trip Assignment

The following trip assignment assumptions have been made:

Entering traffic:

- 50% of traffic will arrive on the western approach to the Cimitiere Street entrance.
- 25% of traffic will arrive on the eastern approach to the Cimitiere Street entrance.
- 25% of traffic will arrive via Willis Street, of which 15% turns right into Wescombe Lane and 10% turns right into Cimitiere Street and arrives on the eastern approach to the Cimitiere Street entrance.

Exiting traffic:

- All traffic will exit onto Willis Street, with 90% using the direct exit onto Willis Street and 10% using Wescombe Lane.
- 50% of traffic will turn right onto Cimitiere Street from Willis Street
- 25% of traffic will turn left onto Cimitiere Street from Willis Street
- 25% of traffic will head north along Willis Street to enter Boland Street.

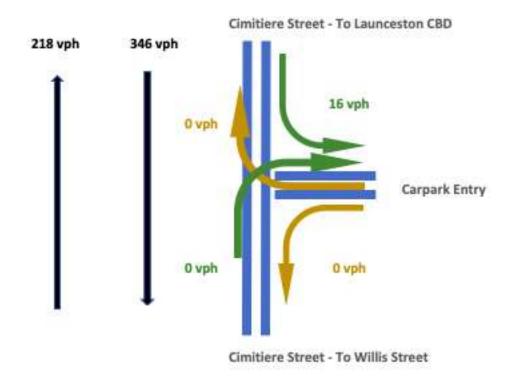
Traffic assignments at the accesses and junctions are illustrated in Figures 20-25.



PLANNING EXHIBITED DOCUMENTS

Figure 20 – Cimitiere Street carpark entrance am peak

am peak - 2019



am peak - 2029 with development

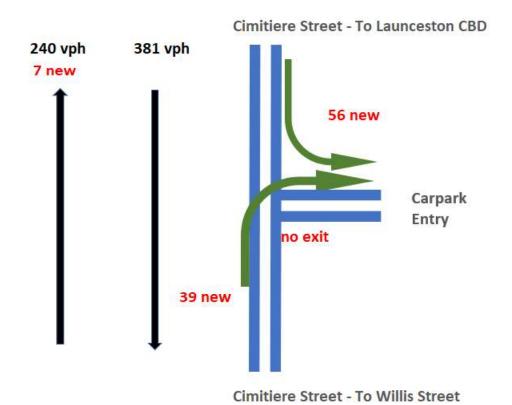
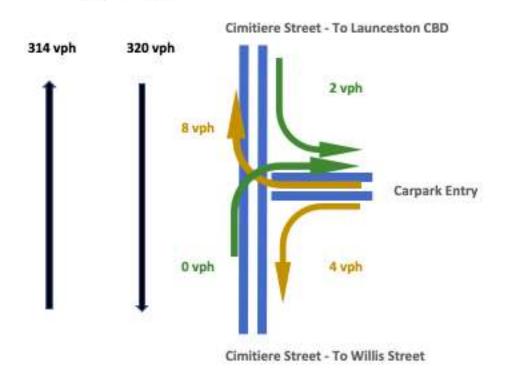






Figure 21 – Cimitiere Street carpark entrance pm peak

pm peak - 2019



pm peak - 2029 with development

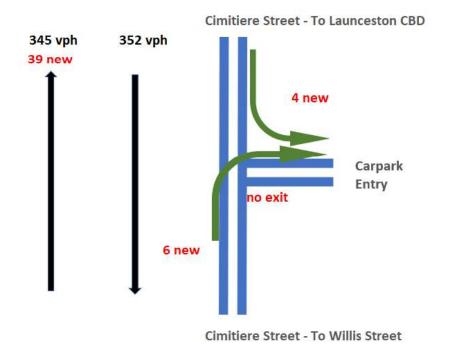






Figure 22 – Wescombe Lane and Willis Street am peak

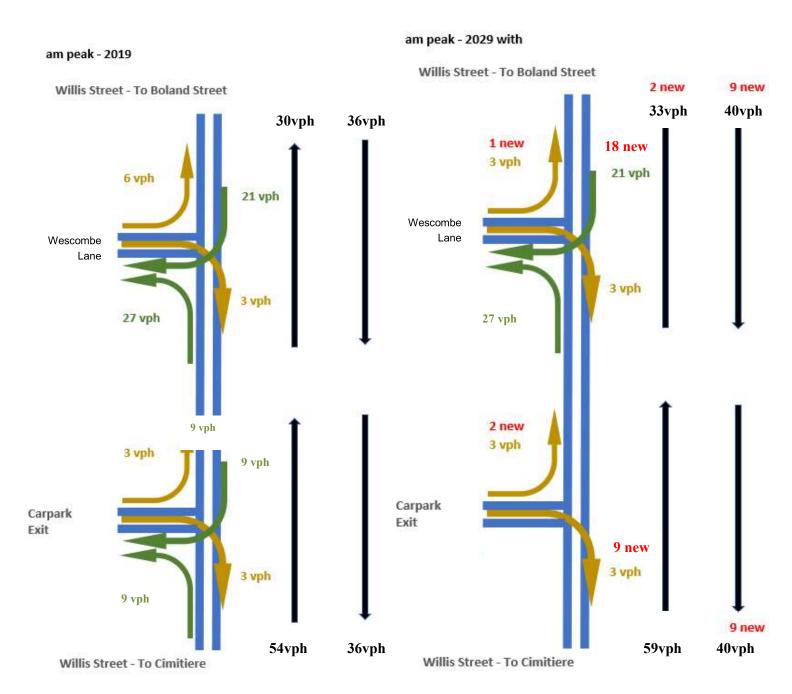






Figure 23 – Wescombe Lane and Willis Street pm peak

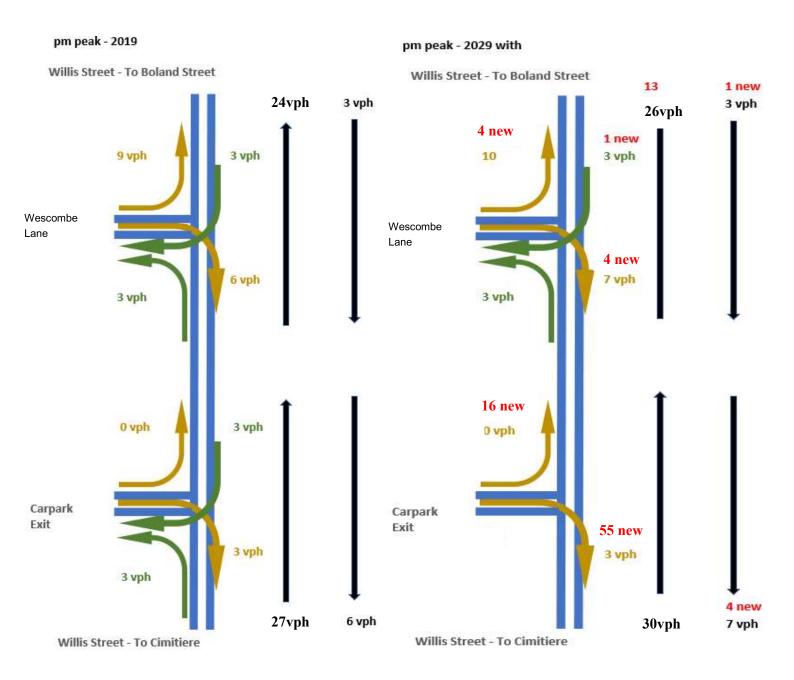




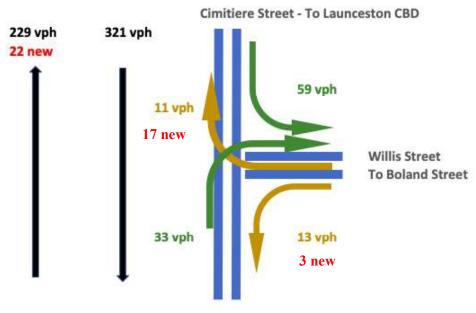


Figure 24 – Cimitiere Street / Willis Street junction am peak

am peak - 2019



am peak - 2029 with development



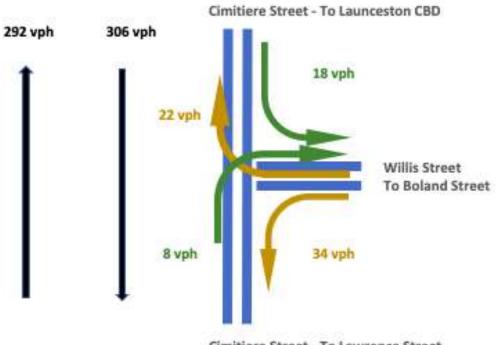
Cimitiere Street - To Lawrence Street



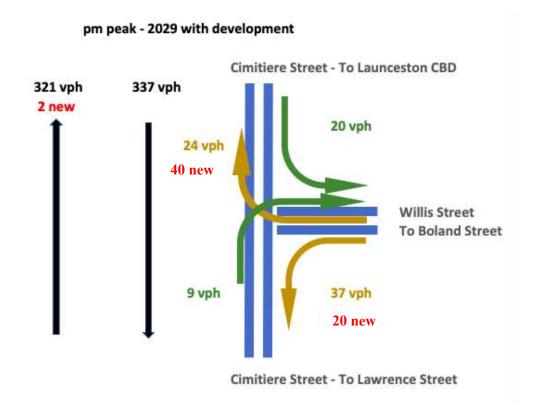


Figure 25 - Cimitiere Street - Willis Street junction pm peak hour

pm peak - 2019







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6. Impact on Road Network

6.1 Sight distance

The Launceston Interim Planning Scheme 2015 requires a minimum sight distance of 80m for a speed environment of 50km/h. Figure 26 shows a summary of available sight distances and the minimum requirements.

Figure 26 – Summary of sight distances

Junction	Speed	Speed	Road frontage sight distance			
Major Rd - Minor Rd	Limit	Environment	Table E4.6.4	Available		
	(km/h)	(km/h)	SISD (m)	Left(m)	Right(m)	
Cimitiere Street - Willis Street	50	50	80	160	175	
Willis Street - Wescombe Lane Access	50	50	80	50*	130	
Willis Street - Carpark Exit	50	50	80	85	90	



^{*}From the existing access, vehicles approaching from the left along Willis Street will be travelling no more than 30km/h as all traffic will be turning in from Boland Street. This corresponds to a minimum sight distance requirement of **49m**, and the available sight distance is therefore deemed to be compliant. The calculation assumes an observation time of 3 seconds, reaction time of 2 seconds, longitudinal grade of 0% (i.e. flat terrain), and coefficient of deceleration of 0.46 (Obtained from *Austroads Guide to Road Design Part 3 2016*).

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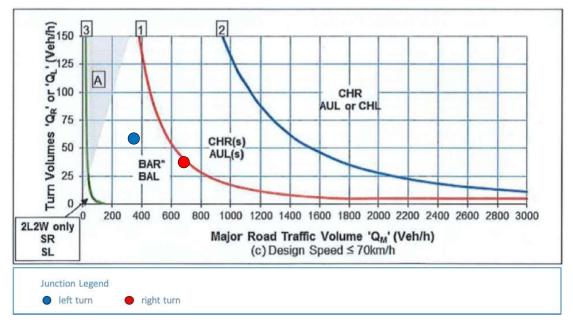




6.2 Junction warrants

Junction layouts should be based on Austroads Guidelines which take into account the speed environment and volume of through and turning traffic. Figures 27-29 show the applicable warrant chart and the marked zones indicate the junction type required for the projected traffic activity in 2029.

Figure 27 – Cimitiere Street carpark entrance layout required for 2029



The carpark entry peak hour flow case

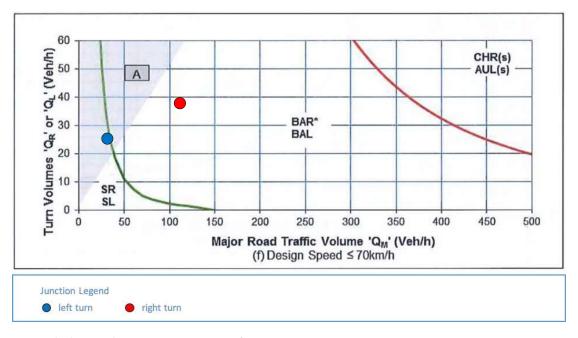
- For left turning movements
 - o Through traffic on Cimitiere Street is 381vph in the am peak
 - o Left turn traffic into the carpark entrance is 56vph in the am peak
 - o From figure 27 a BAL junction layout is warranted
 - o The existing west bound lane effectively functions as a BAL facility
- For right turning movements
 - o Through traffic on Cimitiere Street is 677vph in the am peak
 - o Right turn traffic into the car park is 39 vph in the am peak
 - o From figure 27 a BAR junction layout is warranted
 - o The existing lane width effectively functions as a BAR facility

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Figure 28 – Wescombe Lane / Willis Street junction requirements by 2029



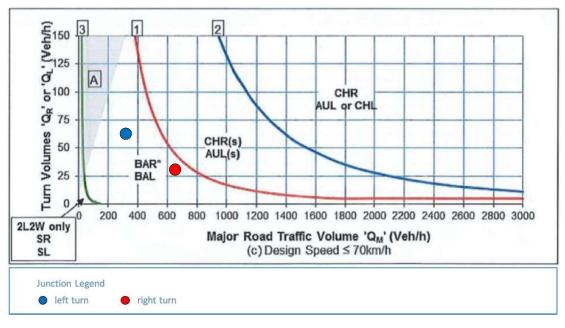
The existing main access peak hour flow case

- For left turning movements
 - O Through traffic on Willis Street is 35vph in the am peak
 - Left turn traffic into the existing main access is 27vph in the am peak
 - o From figure 28 a simple left junction layout is adequate
- For right turning movements
 - O Through traffic on Willis Street is 111vph in the am peak
 - o Right turn traffic into the existing main access is 39vph
 - o From figure 28 a BAR junction layout is warranted





Figure 29 – Cimitiere Street / Willis Street junction requirements by 2029



Cimitiere Street / Willis Street peak hour flow case

- For left turning movements
 - Through traffic on Cimitiere Street is 321vph in the am peak
 - o Left turn traffic onto Willis Street is 59vph in the am peak
 - o From figure 29 a BAL junction layout is warranted
- For right turning movements
 - o Through traffic on Cimitiere Street is 631vph in the am peak
 - o Right turn traffic onto Willis Street is 33vph in the am peak
 - o From figure 29 a BAR junction layout is warranted





6.3 Intersection Analysis

The potentially most impacted locations due to the proposal are the Cimitiere Street carpark access and Willis Street junction during the 2029 am and pm peaks respectively. These intersections have been analysed with SIDRA 8.0 Intersection analysis software to determine magnitude of delays and queueing likely.

The results are summarised as follows:

Cimitiere St. carpark access during the 2029 am peak

- o Left turn entries will experience an average delay of 5.5 secs and 0.0 vehicle queue length
- o Right turn entries will experience average delay of 7.6 secs and 0.1 vehicle queue length
- See Appendix H for the intersection layout model and movement summaries for 2019 and 2029 pm peaks.

Cimitiere St. / Willis St Junction during the 2029 pm peak

- o Left turn movements onto Cimitiere Street will experience an average delay of 6.8 secs and 0.5 vehicle queue length.
- O Right turn movements onto Cimitiere Street will experience an average delay of 9.4 secs and 0.5 vehicle queue length. This analysis does not account for the extent of queuing on the eastern approach to the Cimitiere / Tamar Street traffic signals. The traffic signals will also provide gaps in west bound flow along Cimitiere Street that right turner from Willis Street should enjoy.
- See Appendix I for the intersection layout model and movement summaries for 2019 and 2029 pm peaks.

To summarise, intersection analysis indicates that delays and queuing at the primary entrance and departure points from the proposal will be minimal.

6.4 Pedestrian Linkages

Pedestrian linkages from the Council Streets to the proposed car park have been considered in the provision of pedestrian access to the proposed public lifts and stairwells.

6.4.1 General considerations

Footpaths

Footpaths will be characteristically a minimum width of 1.5m. There may be the odd pinch point due to above ground services e.g. poles, where widths may be restricted to ~1m in width. Footpaths will be constructed to City of Launceston standard.





Pedestrian Crossings

All proposed pedestrian crossings (Zebra) will be signed and line marked in accordance with AS1742.10: Pedestrian control and protection and figure 1 of the standard where appropriate.

Pedestrian Crossing sign R3-1A and Pedestrian Crossing Ahead sign W6-2A will be in retroreflective fluorescent yellow green, see figure 30.

Figure 30 – Pedestrian Crossing signs R3-1A in retroreflective fluorescent yellow green



6.4.2 Northern Access from Private ROW (Wescombe Lane)

On the Northern approach to the proposed carpark access is provided via the existing car park and private ROW (Wescombe Lane) to the stairwell at the northwest corner of the proposal and to the central Lift well as shown in figure 31.

Pedestrian safety could be improved on the northern approach with installation of Share Way signs with a 10Km/h speed limit.

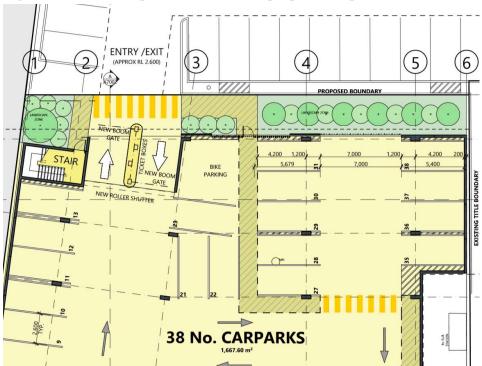


Figure 31 - Northern pedestrian access to proposed carpark

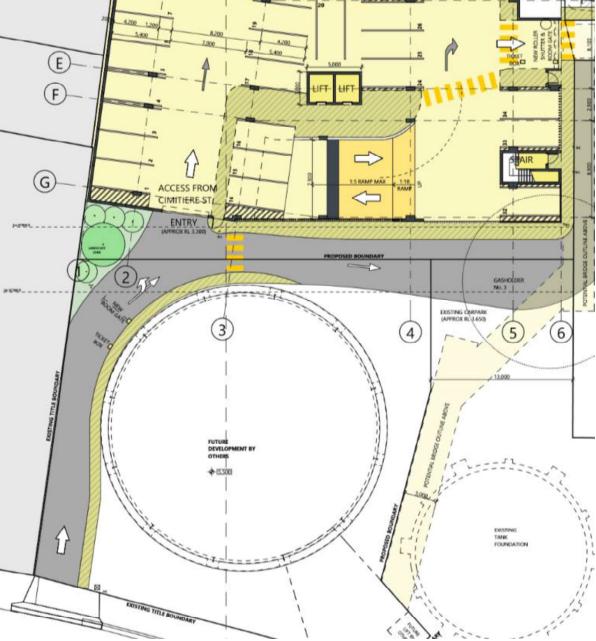




6.4.3 **Southern Access from Cimitiere Street**

It is anticipated there will be a strong desire line for pedestrians between the central lift well & stairwell to the southeast and the city to the south west of the facility . Accordingly, the design for pedestrians includes direct links to Cimitiere Street as shown in figure 32. The layout also keeps pedestrians separate from vehicular traffic which is considered a necessary safety provision with the traffic activity expected at peak times.

Figure 32 – Southern pedestrian access to proposed carpark



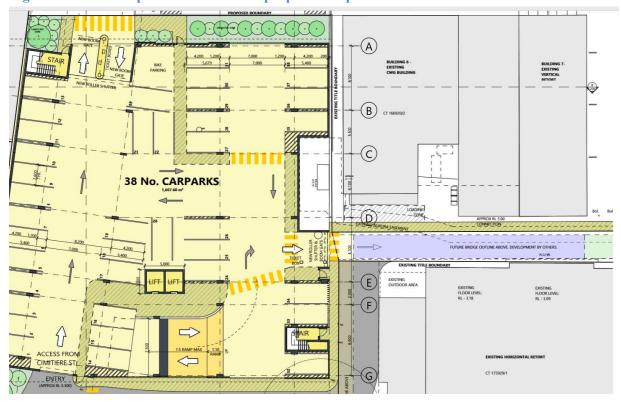




6.4.4 Eastern Access from Willis Street

It is anticipated there will be some pedestrian activity between the carpark and destinations on Willis Street. Accordingly, the design for pedestrians includes a direct link to Willis Street via the existing Right of Way as shown in 33. The proposed links keep pedestrians separate from vehicular traffic which is considered a necessary safety provision with the traffic activity expected at peak times.

Figure 33 – Eastern pedestrian access to proposed carpark



6.5 Impact on on-street parking

The BAR required for the Cimitiere Street access to the carpark is accommodated by the existing parking controls and situation without loss of on-street parking. See Appendix L.

The BAL required for the Cimitiere Street access to the carpark can be accommodated by reinstating the No Stopping (Yellow Line) that existed in February 2019.

The BAR recommended for The Cimitiere / Willis Street junction based on existing traffic use and Austroads Guidelines (but not due to the development) would require loss of 11 on street parking spaces. See Appendix L.





6.6 Other impacts

6.6.1 Environmental

No adverse environmental impacts were identified in relation to:

- Noise, Vibration and Visual Impact
- Community Severance and Pedestrian Amenity
- Hazardous Loads, Air Pollution, Dust and Dirt and Ecological Impacts
- Heritage and Conservation values

6.6.2 Street Lighting and Furniture

Additional street lighting is only required where solid islands are retrofitted to the road.

6.7 Safe Systems Assessment

This approach involves application of the Austroads Safe System assessment framework. This framework involves consideration of risk exposure, likelihood and severity to yield a risk framework score. The risk scores for high risk crashes and vulnerable road users are calculated as follows and aggregated to give an overall crash risk rating e.g. for an intersection or link crashes are considered in terms of three components as follows:

- Exposure is low (low volumes of through and turning traffic) i.e.1 out of 4
- Likelihood is low (e.g. adequate sight distances) i.e. 1 out of 4
- Severity is low (low speed environment) i.e. 1 out of 4

6.7.1 Cimitiere Street (Tamar Street – Willis Street)

The following SSA crash risk scores were determined:

- Existing situation: 59/448 (this low to medium risk score)
- Proposed situation: 86/448 (this is a medium risk score)

The pedestrian risk score was 27/64 and 48/64 with the existing situation and proposal. The existing pedestrian risk score at 27/64 is a relatively high-risk score and supports treatment. The proposal will likely increase pedestrian activity further supporting the need for pedestrian safety improvements. It is suggested that there is a pedestrian safety issue as is which is the responsibility of the road authority.

A CHR(S) right turn lane with island protection is recommended to cater for proposed right turners entering the carpark. The CHR(s) could include a midblock pedestrian refuge island to reduce crash risk. See Appendix G, G.1 and G.2.

A BAR right turn facility is recommended to cater for existing operation of the Cimitiere St/Willis Street junction. This can be achieved with line marking and removal of 10-11 on street parking spaces. The existing traffic activity supports this change, it is not due to traffic activity generated by the proposal.





6.7.2 Willis (Cimitiere – Boland)

The following SSA crash risk scores were determined:

• Existing situation: 28/448 (this is a very low score)

• Proposed situation: 32/448 (this is a very low score)

The right turn from Willis onto Cimitiere Street is the main issue. The existing low volume junction has 3 reported cross intersection crashes in 5 years and the proposal is expected to double the number of right turners during the pm peak. See Appendix G, G.3 and G.4.

6.8 Launceston Interim Planning Scheme 2015

6.8.1 Road and Railway Assets Code E4

E4.5.1 Existing road accesses and junctions

The objective is to ensure that the safety and efficiency of roads is not reduced by the increased use of existing accesses and junctions.

Acceptable solution A3: The annual average daily traffic (AADT) of vehicle movements, to and from a site, using an existing access or junction, in an area subject to a speed limit of 60km/h or less, must not increase by more than 20% or 40 vehicle movements per day, whichever is the greater.

The proposed development does not satisfy acceptable solution A3 because the traffic generated is more than 20% and 40 vehicle movements per day.

Performance criteria P3: Any increase in vehicle traffic at an existing access or junction in an area subject to a speed limit of 60km/h or less, must be safe and not unreasonably impact on the efficiency of the road, having regard to: (a) the increase in traffic caused by the use; (b) the nature of the traffic generated by the use; (c) the nature and efficiency of the access or the junction; (d) the nature and category of the road; (e) the speed limit and traffic flow of the road; (f) any alternative access to a road; (g) the need for the use; (h) any traffic impact assessment; and (i) any written advice received from the road authority.

The impacts of the proposal are reviewed through this Traffic Impact Assessment. The proposed development satisfies P3 as it is deemed to be safe and does not unreasonably impact on the efficiency of the road network.

E4.6.2 Road Accesses and Junctions

The objective is to ensure that the safety and efficiency of roads is not reduced by the creation of new accesses and junctions.

Acceptable solution A2: No more than one access providing both entry and exit, or two accesses providing separate entry and exit, to roads in an area subject to a speed limit of 60km/h or less

The proposed development satisfies A2 as it does not create any new accesses.





E4.6.4 Sight Distance at Accesses, Junctions and Level Crossings

The objective is to ensure that accesses, junctions and level crossings provide sufficient sight distance between vehicles and between vehicles and trains to enable safe movement of traffic.

Acceptable solution A1: Sight distances at an access or junction must comply with the Safe Intersection Sight Distance (SISD) shown in Table E4.6.4 of the Launceston Interim Planning Scheme 2015.

Acceptable solution A1 is not satisfied for the Wescombe Lane / Willis Street access as available sight distance to the left does not comply with the SISD shown in Table E4.6.4.

Performance criteria P1: The design, layout and location of an access, junction or rail level crossing must provide adequate sight distances to ensure the safe movement of vehicles.

Performance criteria P1 is satisfied as the sight distance is deemed to comply with Austroads Guidelines having regard to the reduced speed environment of approaching vehicles. See section 6.1 of this report.

6.8.2 Parking and Sustainable Transport Code E6

The proposed multi-storey carpark will be designed in accordance with AS1742.11 standards for off street parking garages.





7. Recommendations and Conclusions

This traffic impact assessment has been prepared to review the proposed development for a multi storey car park at 90-110 Willis Street. The proposal if for a 7-level facility including ground floor and capacity for 290 parking spaces.

The assessment includes review of in points in the road network directly affected and includes considerations of the existing roads, reported five-year crash history, safe system assessment, intersection analysis and review of proposed pedestrian linkages with the surrounding streets.

Traffic turning count surveys were undertaken at the car park entrance, exit and Willis Street junction with Cimitiere Street. Turning counts were also taken at the Paterson Street East Multistorey carpark, which is similar in size to the proposal, to establish a benchmark for expected arrival and departure rates at peak times.

Overall the five-year crash history for the road network surrounding the proposal does not indicate any existing crash propensity that would be worsened by the proposal.

- There is an existing crash propensity at the Cimitiere Street/ Tamar Street signalised intersection (see section 4.3) with Cross Traffic and Right / Through crashes prevalent.
 These crash types are a separate issue and common with signalised intersections and the crash rate at this site is not high compared with typical crash rates in similar situations.
- There is a minor crash concern with the Cimitiere / Willis Street junction with 3 casualty crashes over 5 years.

From review of projected traffic activity:

- Peak hour traffic on Willis Street is in the order of 100 vph as of 2019 and is projected to increase to 180 vph by 2029 due to the proposal.
- Peak hour traffic on Cimitiere Street is in the order of 600 vph as of 2019 and is projected to increase to 700 vph due to the proposal.

Intersection analysis demonstrates that the increased traffic experienced by Willis and Cimitiere Streets is negligible in terms of impact on safety and efficiency.

- Delays and queue lengths at the Cimitiere Street Carpark entrance will be in the order of 5-8 seconds with average queue length of 0.1 vehicles.
- Delays and queue lengths at the Cimitiere Street / Willis Street junction will be in the order of 7-9 seconds with average queue length of 0.5 vehicles.

From review of Austroads junction warrants for the volume of turning traffic expected:

• The carpark entrance on Cimitiere Street warrant BAL and BAR facilities. The BAR is achieved without loss of on street parking and crossovers and parking restrictions would enable a west bound vehicle to pass a right turner to the car park. A BAL previously existed but it is noted that since the first edition of this report the yellow line shown in figure 8 has been replace with two parking spaces. To achieve the required BAL the recently installed parking spaces need to be removed and yellow line reinstated.





The Cimitiere / Willis Street junction currently warrants BAL and BAR facilities though
none are provided, and the road is part of the Tasmanian 26m B Double route. To create a
BAR some 70m of on street parking would need to be removed i.e 11 parking spaces.
This is a suggestion only, based on Austroads Guidelines, and is a matter for City of
Launceston to consider.

From Austroads Safe System Assessment the existing situation on Cimitiere Street near Willis Street has a medium risk score and more particularly a high-risk score for pedestrians. Pedestrians cross Cimitiere Street at the rate of some 30pph as there is a gate in the City Park fence. There are no adjacent pedestrian facilities across Cimitiere Street. The street is 12.5m wide, a busy road a B Double route and a 50km/h zone. It is feasible to provide a pedestrian refuge island and turn lane for Willis Street while catering for B Double Traffic but would involve loss of on-street parking as discussed in the dot point above. This is an issue for City of Launceston to consider and the suggestions offered in this report are not triggered by the proposal but would fit well.

From review of the proposed pedestrian lift and stairwell locations shown with the proposal and orientation and location with respect to the adjacent streets, the proposed pedestrian linkages are considered safe and efficient.

Evidence is provided that demonstrates the proposal can comply with the Launceston Interim Planning Scheme 2015 - Road and Railway Assets Code E4.

Recommendations:

- Realign the crossover at the proposed carpark exit onto Willis Street (this may require changing the side entry pit to a grated stormwater pit)
- BAR for right turn into the carpark entrance from Cimitiere Street, a form exists so no changes are required.
- BAL for the left turn into the carpark entrance from Cimitiere Street. This can be achieved by reinstating the Yellow Line as was present in February 2019. See figure 8.
- Council consider a BAR for right turn into Willis Street from Cimitiere Street, see Appendix L. A BAR is warranted in terms of Austroads guidelines. The footprint for an urban BAR would require removal of 70m of on street parking (i.e approximately 11 on street parking spaces). Note that the BAR is not triggered by the proposal.
- Provide characteristically 1.5m wide footpath linkages with Cimitiere & Willis Streets.
- Retrofit Shared Zone 10Km/h signage to the carpark road north of the proposal i.e
 Wescombe Lane.

Overall, it is concluded that the proposed development will not create any traffic or safety issues and traffic will continue to operate safely and efficiently along Willis Street and Cimitiere Street.

Based on the findings of this report and subject to the recommendations above, the proposed development is supported on traffic grounds.

Traffic Impact Assessment



Appendices







Appendix A – Cimitiere Carpark Entrance Traffic Turning Count Survey

Appendix A1 - Am peak Fri 8th Feb 2019

Intersection Count Summary

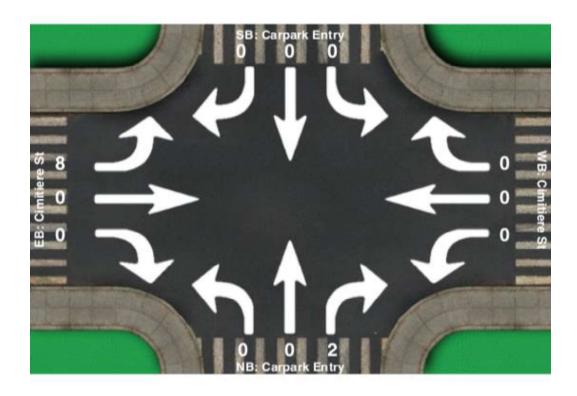
Location: Carpark Entry at Cimitiere St, Launceston

GPS Coordinates: Lat=-41.432085, Lon=147.142229

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

08:30 - 09:00

	S	outhBou	ind	W	estbour	d	N	orthbou	nd	E	astboun	d	****
	Left	Thru	Right	Iotai									
Vehicle Total	0	0	0	0	0	0	0	0	2	8	0	0	10





08:30 - 09:00

	80	uthBou	ind	W	estboun	d	No	orthbou	nd	E	astboun	d	Total
	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Left	Thru	Right	iotal
Vehicle Total	0	0	0	0	0	0	0	0	2	8	0	0	10

Vehicle Summary

Methodo	5	outhBou	ind	W	lestbour	nd	N	orthbou	nd .	E	astbour	ıd	
Vehicle	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thu	Right	Total
Car	0	0	0	0	0	0	0	0	2	8	0	0	10
Truck	0	0:	0	0	0	0	0	0	0	0	0	0	.0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians Summary

Ī			NE			NW			SW			SE		****
l		Let	Right	Total	Left	Right	Total	Let.	Right	Total	Let	Right	Total	Total
ĺ	Pedestrians	0	15	15	2	0	2	0	0	0	0	. 0	0	17

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Document Set ID: 4256260 Version: 1, Version Date: 09/03/2020





Turn Count Summary

Location: Carpark Entry at Cimitiere St, Launceston

GPS Coordinates: Lat=-41.432085, Lon=147.142229

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

	S	outhBou	ind	W	lestbour	nd	N	orthbou	nd	E	astbour	nd	
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Let	Thru	Right	Total
08:30	0	0	0	0	0	0	0	0	0	3	0	0	3
08:45	0	0	0	0	0	0	0	0	2	5	0	0	7
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Car traffic

and the second	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	ıd	****
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Let	Thru	Right	Total
08:30	0	0	0	0	0	0	0	0	0	3	0	0	3
08:45	0	0	0	0	0	0	0	0	2	5	0	0	7
09:00	0	0	0	. 0	0	0	0	0	0	0	0	0	0

Truck traffic

Internal about	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astboun	ıd	****
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
08:30	0	0	0	0	0:	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	ıd	
Interval starts	Lett	Thru	Right	Lett	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

to to a collection.		NE	- 1		NW			SW			SE		Total
Interval starts	Left	Right	Total	Left	Right	Total	Left	Right	Total	Let	Right	Total	locas
08:30	0	9	9	0	0	0	0	0	0	0	0	0	9
08:45	0	6	6	0	0	0	0	0	0	0	0	0	6
09:00	0	0	0	2	0	2	0	0	0	0	0	0	2





Appendix A2 – Pm peak Thurs 7th Feb 2019

Intersection Count Summary

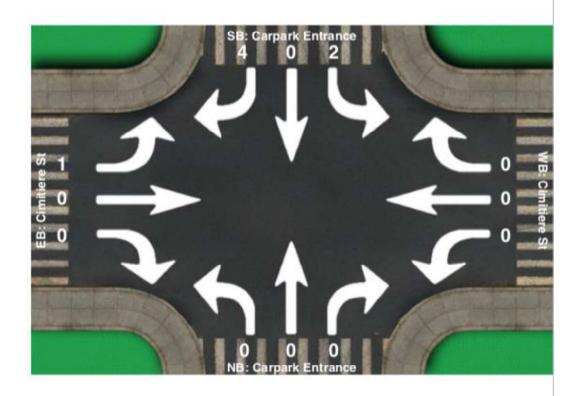
Location: Carpark Entrance at Cimitiere St, Launceston

GPS Coordinates: Lat=-41.431897, Lon=147.143239

Date: 2019-02-07 Day of week: Thursday

Weather:

Analyst: Daniel



Intersection Count Summary

17:21 - 17:51

	Se	outhBou	ind	W	estboun	d	No	rthbou	nd	E	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
Vehicle Total	2	0	4	0	0	0	0	0	0	1	0	0	7





17:21 - 17:51

	Sc	outhBou	nd	W	estboun	d	No	orthbou	nd	E	astboun	d	*****
	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	HOUSE
Vehicle Total	2	0	4	0	0	0	0	0	0	1	0	0	7

Vehicle Summary

Makada	Se	outiBou	ind	W	lestbour	nd	N	orthbou	nd	E	astbour	ıd	****
Vehicle	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
Car	2	0	4	.0	0	0	0	0	0	1	0	0	7
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicyde	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians Summary

		NE			NW			SW			SE		
	Lett	Right	Total	Left	Right	Total	Let	Right	Total	Let	Right	Total	HOSSI
Pedestrians	0	1	1	16	0	16	0	0	0	0	0	0	17





Turn Count Summary

Location: Carpark Entrance at Cimitiere St, Launceston

GPS Coordinates: Lat=-41.431897, Lon=147.143239

Date: 2019-02-07 Day of week: Thursday

Weather:

Analyst: Daniel

Total vehicle traffic

Test control to brook	S	outhBou	ind	W	estbour	nd	No	orthbou	nd	E	estboun	ď	****
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
17:21	0	0	t	0	0	0	0	0	0	0	0	0	11
17:30	1	0	1	0	0	0	0	0	0	. 1	0	0	3
17:45	1.	0	2	0	0	0	0	0	0	0	0	0	3

Car traffic

Internal attack	Se	outhBou	ind.	W	estbour	1d	N.	orthbou	nd	E	astbour	d	
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
17:21	0	0	10	0	0:	0	0:	0	0	0	0	0	36
17:30	1	0	1	0	0	0	0	0	0	1	0	0	3
17:45	1	0	2	0	0	0	0	0	0	0	0	0	3

Truck traffic

Endough by Books	Sc	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	estboun	ď	****
Interval starts	Lett	Thru	Right	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Total
17:21	0	0	0	0	0:	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

Test contract a brooks	S	outhBou	ind	W	estbour	nd.	N	orthbou	nd	E	astbour	ıd	7111
Interval starts	Lett	Thru	Right	Let	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
17:21	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

Internal study		NE			NW			sw			SE		Total
Interval starts	Left	Right	Total	Left	Right	Total	Left	Right	Total	Let	Right	Total	Total
17:21	0	0	0	5	0:	5	0	0	0	0	0	0	5
17:30	0	0	0	9	0	9	0	0	0	0	0	0	9
17:45	0	1	1	2	0	2	0	0	0	0	0	0	3





Appendix B – Carpark Exit Traffic Turning Count Survey Appendix B.1 Am peak Fri 8th Feb 2019

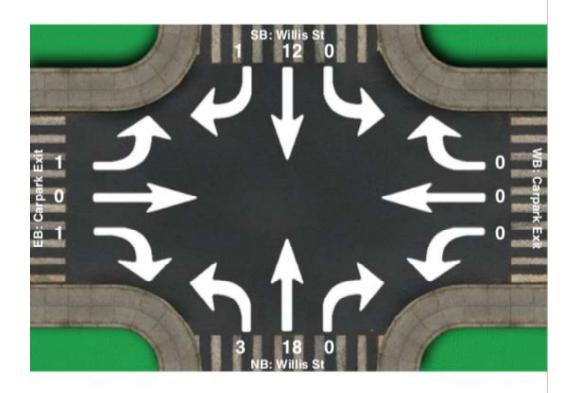
Intersection Count Summary

Location: Willis St at Carpark Exit, Launceston GPS Coordinates: Lat=-41.431161, Lon=147.141639

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

08:05 - 08:25

Γ		Sc	uthBou	ind	We	estboun	d	No	rthbour	nd	E	astboun	d	Total
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
	Vehicle Total	0	12	1	0	0	0	3	18	0	1	0	1	36





08:05 - 08:25

	Sc	outhBou	ind	W	estboun	d	No	rthbour	nd	E	astboun	d	****
	Let	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Let	Thru	Right	lotai
Vehicle Total	0	12	1	0	0	0	3	18	0	1	0	.1	36

Vehicle Summary

Mahiaha	Se	outhBou	ind	W	estbour	ıd	N	orthbou	nd	E	astbour	nd	Total
Vehicle	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	lous
Car	0	12	1	0	0	0	3	18	0	- 1	0	-1	36
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians Summary

		NE			NW			5W			SE		****
	Let	Right	Total	Left	Right	Total	Let	Right	Total	Left	Right	Total	lotal
Pedestrians	0	1	1	0	1	1	10	0	10	0	0	0	12

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Document Set ID: 4256260 Version: 1, Version Date: 09/03/2020





Turn Count Summary

Location: Willis St at Carpark Exit, Launceston GPS Coordinates: Lat=-41.431161, Lon=147.141639

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

	Sc	outhBou	ind	W	estboun	d	No	orthbour	nd .	E	astboun	d	
Interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
08:05	0.	8	0	0	0	0	1	10	0	0	0	- 3	20
08:15	0:	4	.1:	0	0	0	2	8	0	.11	0	0	16

Car traffic

bet a media basis	So	outhBou	ind	W	estboun	d	No	rthbour	nd	E	astboun	ď	Total
enterval starts	Let	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Lett	Thru	Right	HOSAL
08:05	0:	8	0	0	0	0	1	10	0	0	0	(3	20
08:15	0	4	1	0	0	0	2	8	0	-1	0	0	16

Truck traffic

hat a moral of targets	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	T-1-1
niervai starts	Let	Thru	Right	Left	Thru	Right	Left	Thru	Right	Let	Thru	Right	losai
08:05	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	42.
Interval starts	Lett	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
08:05	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

		NE			NW			SW			5E		
interval starts	Let	Right	Total	Left	Right	Total	Let	Right	Total	Lett	Right	Total	HOSSI
08:05	0	0	0	0	0	0	5	0	5	0	0	0	5
08:15	0	1	1	0	1	1	5	0	5	0	0	0	7





Appendix B.2 – Pm peak Fri 8th Feb 2019

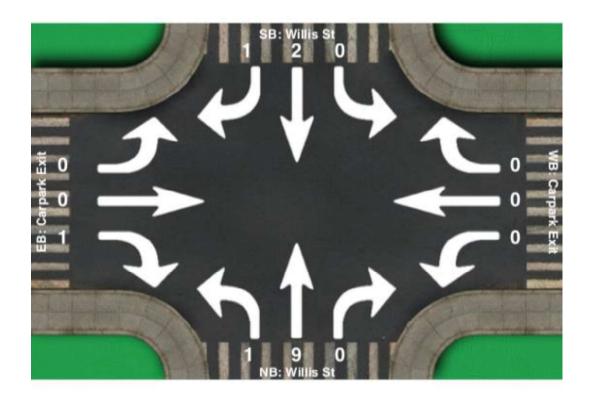
Intersection Count Summary

Location: Willis St at Carpark Exit, Launce ston GPS Coordinates: Lat=-41.431264, Lon=147.141639

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

17:20 - 17:40

	Se	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	Total
	Left	Thru	Right	iotai									
Vehicle Total	0	2	1	0	0	0	1.	9	0	0	0	1	14





17:20 - 17:40

	Sc	uthBou	nd	W	estbaun	d	No	orthbour	nd	E	astbour	ıd	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Let	Thru	Right	TOGEL
Vehicle Total	0	2	1	0	0	0	1	9	0	0	0	1	14

Vehicle Summary

Makana.	S	outhBou	und .	W	lestbour	nd	N	orthbou	nd	E	astbour	nd	Was and
Vehicle	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Lett	Thru	Right	Total
Car	0	2	1	0	0	0	1	9	0	0	0	1	14
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicyde	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrians Summary

		NE			NW			sw			SE		
	Let	Right	Total	Left	Right	Total	Let	Right	Total	Let	Right	Total	Total
Pedestrians	0	0	0	0	1	1	3	0	3	0	0	0	4





Turn Count Summary

Location: Willis St at Carpark Exit, Launceston GPS Coordinates: Lat=41.431264, Lon=147.141639

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

and the same	S	outiBou	ind	W	Vestbour	nd	N	orthbou	nd	E	astbour	id .	+11
interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
17:20	0	2	0	0	0	0	0	6	0	0	0	0	a
17:30	0	0	1	0	0	0	1	3	0	0	0	1	6

Car traffic

to the second settleden	S	outiBou	nd	W	estbour	nd	No	orthbou	nd	E	astbour	nd	****
interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	lotal
17:20	0	2	0	0	0	0	0	6	0	0	0	0	8
17:30	0	0	1	0	0	0	1	3	0	0	0	1	6

Truck traffic

hat a more a tracks	S	outiBou	ind	W	estbour	nd .	N	ortibou	nd	E	astbour	d	Total
interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	losai
17:20	0	0	0	0	0	0	0	. 0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

fator of state	Sc	outiBou	ind	W	estbour	ıd	No	orthbou	nd	E	astbour	d	Was and
Interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Lett	Thru	Right	total
17:20	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

Literature de		NE			NW			sw			SE		T-1-1
interval starts	Let	Right	Total	Left	Right	Total	Left	Right	Total	Let	Right	Total	IOSM
17:20	0	0	0	0	-1-	1	2	0	2	0	0	0	3
17:30	0	0	0	0	0	0	11	0	1	0	0	0	1





Appendix C – Wescombe Lane Access Traffic Turning Count Survey Appendix C.1 Am peak Fri 8th Feb. 2019

Intersection Count Summary

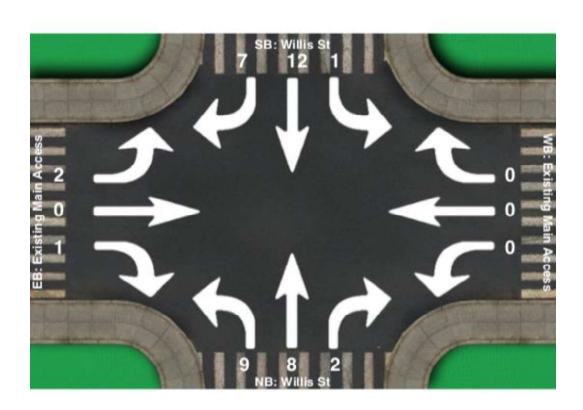
Location: Willis St at Existing Main Access, Launceston

GPS Coordinates: Lat=-41.431458, Lon=147.141968

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

08:05 - 08:24

	Se	outhBou	ind	W	estboun	d	No	orthbou	nd	E	astbour	d	Total
	Left	Thru	Right	Iotai									
Vehicle Total	1	12	7	0	0	0	9	8	2	2	0	1	42





08:05 - 08:24

	Se	outhBou	ind	W	estboun	d	No	orthbou	nd	E	Eastbound Left Thru Right		
	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	losai
Vehicle Total	1	12	7	0	0	0	9	8	2	2	0	.1	42

Vehicle Summary

Mariata	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	Time
Vehicle	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
Car	1	12	7	0	0	0	9	8	2	2	0	1	42
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0.	0	0	0	0	0	0	0	0	.0	0

Pedestrians Summary

		NE			NW			SW			SE		
	Let	Right	Total	Left	Right	Total	Let	Right	Total	Let	Right	Total	HOUSE.
Pedestrians	0	5	5	0	1	1	15	1	16	6	0	6	28





Turn Count Summary

Location: Willis St at Existing Main Access, Launceston

GPS Coordinates: Lat = 41.431458, Lon=147.141968

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

	S	outhBou	ind	W	lestbour	ıd	N	orthbou	nd	E	astbour	nd	-
Interval starts	Let	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
08:05	0	8	4	0	0	0	7	2	1	2	0	0	24
08:15	1	4	3	0	0.	0	2	- 6	1	0	0	1	18

Car traffic

	S	outhBou	ind	W	lestbour	nd .	N	orthbou	nd	E	astbour	nd	900
interval starts	Let	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Let	Thru	Right	TOTAL
08:05	0	8	4	0	0	0	7	2	1	2	0	0	24
08:15	1	4	3	0	0	0	2	6	1	0	0	1	18

Truck traffic

lates of state	S	outhBou	ind	W	lestbour	ıd	N	orthbou	nd	E	astbour	nd	Time
Interval starts	Lett	Thru	Right	Left	Thru	Right	Let	Thru	Right	Let	Thru	Right	Total
08:05	0	0	0	0	0	0	0	0	0	0	0	0.	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

	S	outhBou	ind	W	lestbour	nd	N	orthbou	nd	£	astbour	nd	-
interval starts	Let	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
08:05	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

hat a series of a fee also		NE			NW			SW			SE		****
Interval starts	Lett	Right	Total	Left	Right	Total	Let	Right	Total	Let	Right	Total	Total
08:05	0	3	3	0	0	0	7	0	7	2	0	2	12
08:15	0	2	2	0	1	1	8	1	9	4	0	4	16





Appendix C.2 – Pm peak Fri 8th Feb 2019

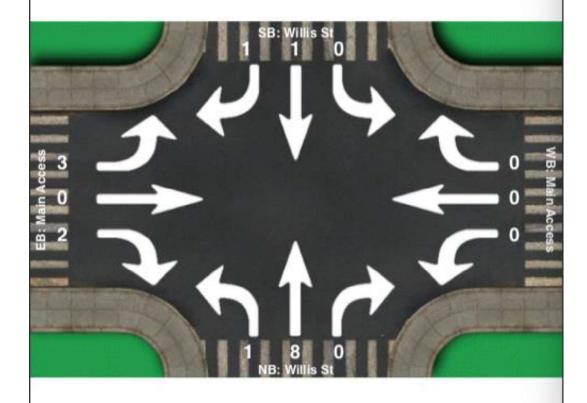
Intersection Count Summary

Location: Willis St at Main Access, Launceston GPS Coordinates: Lat=-41.431421, Lon=147.141450

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

17:20 - 17:40

ſ		Sc	utiBou	nd	W	estbour	d	. N	orthbour	nd	E	astboun	id	Total
l		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Laft	Thru	Right	Total
	Vehicle Total	0	1	1	0	0	0	1	8	0	3	0	2	16





17:20 - 17:40

1	Sc	outiBou	nd	W	estbour	d	N	uoditto	nd	E	astbour	d	400
	Left	Thru	Right	Total									
Vehicle Total	0	. 1	. 1	0	0	0	. 1		0	3	0	2	16

Vehicle Summary

and a	S	outhBou	nd	W	estbour	vd:	N	orthbou	nd	E	astbour	nd	2422
Vahicle	Left	Thru	Right	Total									
Car	0	1	ЭĖ,	0	0	0	1	8	0	3	0	2	1.6
Truck	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycle	0	0	0	a	0	O	0	0	0	0	0	0	0

Pedestrians Summary

,	1	NE			NW			SW			SE		
	Left	Right	Total	Left	Right.	Total	Left	Right	Total	Left	Right	Total	Total
Pedestrians	0	6		0	12	12	19	- 5	6	0	0	0	24

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Turn Count Summary

Location: Willis St at Main Access, Launceston

GPS Coordinates: Lat > 41.431421, Lon=147.141450

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

tors was a series	S	outhBou	nd	W	lestbour	id	N	orthbou	nd	E	astbour	id:	7.60
Interval starts	Left	Thru	Right	Left	Thru	Right	Laft	Thru	Right	Left	Thru	Right	Total
17:20	0	0	0	0	0	0	1	5	0	1	0	2	9
17:30	0	1	100	0	0	0	0	3	0	2	0	0	7

Car traffic

	S	ou#iBou	ind	W	astbour	nd	N	orthbou	nd	E	astbour	ıd	
Interval starts	Left	Thru	Right	Lalt	Thru	Right	Left	Thru	Fight	Loft	Thru	Right	Total
17:20	0	0	0	0	0	0	1	5	0	1	0	2	9
17:30	0	1	1	0	0	0	0	3	0	2	0	0	7

Truck traffic

WY 0460	5	outhBou	ind	W	lestbour	vd	N	orthbou	nd	E	astbour	nd	
Interval starts	Loft	Thru	Right	Loft	Thru	Right	Left	Thru	Right	Laft	Thru	Right	Total
17:20	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

According to	5	outhBou	ind	W	festbour	id	N	orthbou	nd	E	astbour	nd	7.50
Interval starts	Left	Thru	Right	Laft	Thru	Right	Laft	Thru	Right	Left	Thru	Right	Total
17:20	0	0	0	0	0	0	0	0	. 0	0	0	0	0
17:30	0	0	0	0	0	٥	0	0	0	0	0	0	0

Pedestrian volumes

440.000.000		NE	į.		NW			SW			SE		***
interval starts	Laft	Right	Total	Left	Right	Total	Left	Right	Total	Left	Right	Total	Total
17:20	0	0	0	0	- 5	5	0	5	- 5	0	0	0	10
17:30	0	6	6	0	7	7	1	0	1	0	0	0	14





Appendix D – Cimitiere / Willis Street Traffic Turning Count Survey

Appendix D.1 Am peak Fri 8th Feb 2019

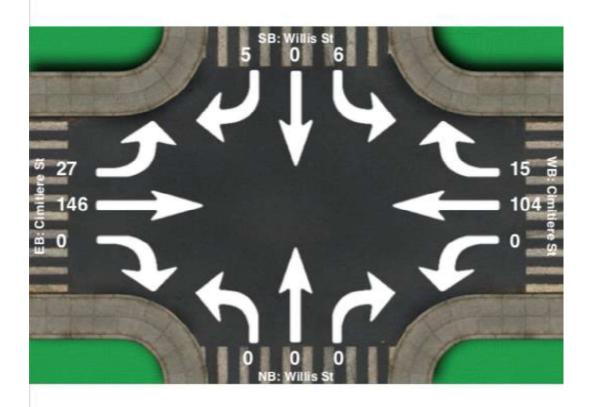
Intersection Count Summary

Location: Willis St at Cimitiere St, Launceston GPS Coordinates: Lat=-41.432294, Lon=147.141060

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel



Intersection Count Summary

08:30 - 09:00

	Sc	uthBou	nd	W	estboun	d	No	nthbour	nd	E	astooun	d	Total
	Left	Thru	Right	Left	Thru	Right.	Left	Thru	Right	Left	Thru	Right	local
Vehicle Total	6	0	5	0	104	15	0	0	0	27	146	0	303





08:30 - 09:00

	Sk	outhBou	ind	W	estbour	nd	N	odfbou	nd	E	astbour	ıd.	
	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Left	Thru	Right	Total
Vehicle Total	6	0	5	0	104	15	0	0	0	27	146	0	303

Vehicle Summary

Visib Infla	S	outhBou	nd	W	estour	nd	N	orthbou	nd	E	asbour	d	Tital
Vehicle	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Lett	Thru	Right	Tota
Car	6	0	5	0	96	15	0	0	0	26	133	0	280
Truck	0	0	0	0	9	0	0	0	0	1	12	0	22
Bicycle	0	0	0	0	0	0	0	0	0	0	1	0	1

Pedestrians Summary

		NE			NW			SW			SE		
	Left	Right	Total	Left	Right	Total	Let	Right	Total	Left	Right	Total	Total
Pedestrians	10	1	11	0	5	5	3	0	3	0	9	9	28





Turn Count Summary

Location: Willis St at Cimitiere St, Launceston GPS Coordinates: Lat=-41.432294, Lon=147.141060

Date: 2019-02-08 Day of week: Friday

Weather:

Analyst: Daniel

Total vehicle traffic

between tetrodo	S	outhBou	nd .	W	estbour	nd	, N	orthbou	nd	6	astoour	nd	
Interval starts	Left	Thru	Right	Total									
08:30	2	0	0	0	50	8	0	0	0	13	59	0	132
08:45	4	0	5	0	54	7	0	0	0	14	84	0	168
09:00	0	0	0	0	0	0	0	0	0	0	3	0	3

Car traffic

	S	outhBou	ind	W	estbour	vd	N	orthbou	nd	6	anthour	nd	*****
Interval starts	Left	Thru	Right	Left	Thru	Right	Lett	Thru	Right	Lett	Thru	Right	Total
08:30	2	0	0	0	45	8	0	0	0	13	55	0	123
08:45	-4	0	5	0	50	7	0	0	0	13	75	0	154
09:00	0	0	0	0	0	0	0	0	0	0	3	0	3

Truck traffic

Interval starts	SouthBound			Westbound			Northbound			E	Total		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	FOLIE
08:30	0	0	0	0	5	0	0	0	0	0	-4	0	9
08:45	0	0	0	0	4	0	0	0	0	1	8	0	13
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Bicycle traffic

Interval starts	SouthBound			Westbound			Northbound			E	Total		
	Left	Thru	Right	Lett	Thru	Right	Lett	Thru	Right	Let	Thru	Right	FOLUE
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	. 1	0	1
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

Interval starts	NE				NW.			SW			SE			
	Left	Right	Total	Total										
06:30	3	1	4	0	2	2	1	0	1	0	2	2	9	
08:45	7	0	7	0	3	3	2	0	2	0	7	.7	19	
09:00	.0	0	0	0	0	0	0	0	0	0	.0	0	0	





Appendix D.2 – Pm peak Thur 7th Feb 2019

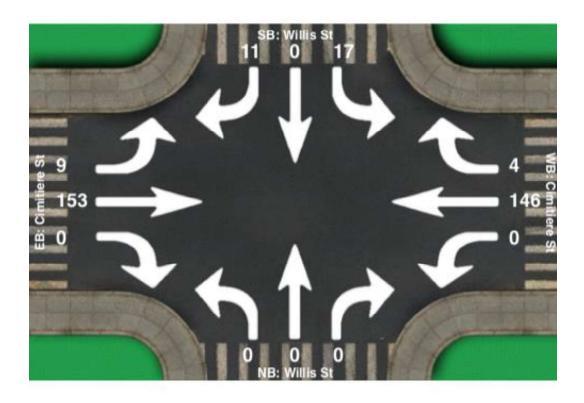
Intersection Count Summary

Location: Willis St at Cimitiere St, Launceston GPS Coordinates: Lat=-41.432080, Lon=147.143084

Date: 2019-02-07 Day of week: Thursday

Weather:

Analyst: Daniel



Intersection Count Summary

17:21 - 17:50

	SouthBound			Westbound			Northbound			E	***		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru .	Right	Total
Vehicle Total	17	0	11	0	146	4	0	0	0	9	153	0	340





17:21 - 17:50

	SouthBound		Westbound			Northbound			E	400			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right.	Left	Thru	Right	lotai
Vehicle Total	17	0	11	0	146	4	0	0	0	9	153	0	340

Vehicle Summary

VI. 45.5	SouthBound			Westbound			Northbound			E	Total		
Vahicla	Lalt	Thru	Right	Loft	Thru	Right	Loft	Thru	Right	Left Thru	Right	Total	
Car	16	0	11	0	143	3	0	0	0	9	148	0	330
Truck	1	0	0	0	2	1	0	0	0	0	2	0	- 6
Bicycle	0	0	0	0	1	0	0	0	0	0	3	· a	. 4

Pedestrians Summary

	NE			NW			SW						
	Left	Right	Total	Left	Right	Total.	Loft	Right	Total	Left	Right	Total.	Total
Pedestrians	2	4	6	10	2	12	2	0	2	0	7	7	27





Turn Count Summary

Location: Willis St at Cimitiere St, Launceston GPS Coordinates: Lat=41.432080, Lon=147.143084

Date: 2019-02-07 Day of week: Thursday

Weather:

Analyst: Daniel

Total vehicle traffic

	S	outhBou	ind	W	estbour	nd	N	uodifino	nd	E	astbour	rd .	The same
PRETYR STATE	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
17:21	10	0	9	0	44	2	0	0	0	4	46	0	115
17:30	6	0	2	0	69	3 1	0	0	0	4	77	0	159
17:45	1	0	0	0	33	1	0	0	0	11	30	0	66

Car traffic

tar contains	S	outhBou	ind	W	festbour	vid	N	orthbou	nd	E	astbour	vd	a markani
Interval starts	Left	Thru	Right	Loft	Thru	Right	Left	Thru	Right	Loft	Thru	Right	Total
17:21	10	0	9	0	44	11	0	0	0	4	44	0	112
17:30	-6	0	2	0	67	1	a	0	0	4	75	0	155
17:45	0	0	0	0	32	1	0	0	0	1	29	0	63

Truck traffic

100 1000		uo Brituo	nd	W	lestbour	vd	N	orthbou	nd	E	astbour	nd .	Ŧ.
Interval starts	Left	Thru	Right	Left	Thru	Right	Laft	Thru	Right	Left	Thru	Right	Total
17:21	0	0	0	0	0	á,	0	0	0	0	. 1	0	2
17:30	0	0	0	٥	. 1	0	0	0	0	0	0	0	1
17:45	1	0	0	0	1	0	0	0	0	0	1	0	3

Bicycle traffic

A ADDRESS OF THE	S	outhBou	ind	W	festbour	nd	N	orthbour	nd	E	astbour	vd .	Carlo Carlo
Interval starts	Left	Thru	Right	Lalt	Thru	Right	Left	Thru	Right	Left.	Thru	Right	Total
17:21	0	0	0	0	0	0	0	0	0	0	1	0	-21
17:30	0	0	0	0	3.	0	0	0	0	0	2	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

100 10000	-	NE	-		NW			SW			SE	- 6	T
Interval starts	Left	Right	Total	Left	Right	Total	Loft	Right	Total	Laft	Right	Total	Total
17:21	0	0	0	4	2	6	2	0	2	0	5	5	13
17:30	2	3	5	4	0	4	0	0	0	0	2	2	-11
17:45	0	1	1	2	0	2	0	0	0	0	0	0	3





Appendix E – Paterson Street East Carpark Traffic Activity Survey

Appendix E.1 Am peak Tues 19th Feb 2019

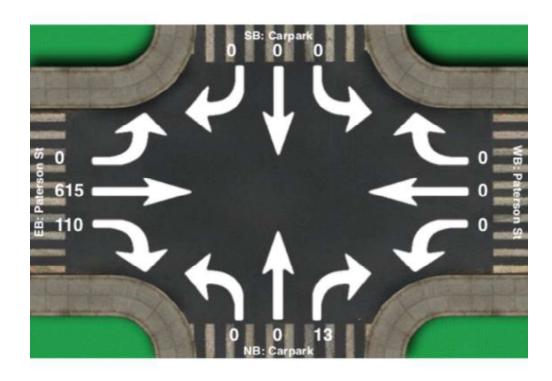
Intersection Peak Hour

Location: Carpark at Paterson St, Launceston GPS Coordinates: Lat=-41.435739, Lon=147.138807

Date: 2019-02-19 Day of week: Tuesday

Weather:

Analyst: Daniel



Intersection Peak Hour

08:30 - 09:30

-	Sc	outhBou	ind	W	estbour	d	No	orthbou	nd	E	astbour	d	
	Lett	Thru	Right	Lett	Thru	Right	Left	Thru	Right	Let	Thru	Right	Total
Vehicle Total	0	0	0	0	0	0	0	0	13	0	615	110	738
Factor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.75	0.57	0.80
Approach Factor		0.00			0.00			0.36			0.78		





Intersection Peak Hour

08:30 - 09:30

	Sc	outhBou	ınd	W	estbour	nd	No	rthbou	nd	E	astbour	nd	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	iotai
Vehicle Total	0	0	0	0	0	0	0	0	13	0	615	110	738
Factor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.75	0.57	0.80
Approach Factor		0.00			0.00			0.36			0.78		

Peak Hour Vehicle Summary

Mahilata	S	outhBou	und	W	estbour/	nd	N	orthbou	nd	E	astbour	nd	
Vehicle	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total
Car	0	0	0	0	0	0	0	0	13	0	596	110	719
Truck	0	0	0	0	0	0	0	0	0	0	16	0	16
Bicycle	0	0	0	0	0	0	0	0	0	0	3	0	3

Peak Hour Pedestrians

		NE			NW			SW			SE		T-1-1
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	19	19	18	0	18	37

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Turn Count Summary

Location: Carpark at Paterson St, Launceston GPS Coordinates: Lat=-41.435739, Lon=147.138807

Date: 2019-02-19 Day of week: Tuesday

Weather:

Analyst: Daniel

Total vehicle traffic

	S	outhBou	ind	W	estbour/	nd	N	orthbou	nd	E	astbour	nd	4.00
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Tota
08:30	0	0	0	0	0	0	0	0	0	0	68	5	73
08:35	0	0	0	0	0	0	0	0	1	0	62	4	67
08:40	0	0	0	0	0	0	0	0	2	0	60	7	69
08:45	0	0	0	0	0	0	0	0	0	0	57	9	66
08:50	0	0	0	0	0	0	0	0	2	0	45	5	52
08:55	0	0	0	0	0	0	0	0	1	0	52	15	68
09:00	0	0	0	0	0	0	0	0	1	0	46	12	59
09:05	0	0	0	0	0	0	0	0	1	0	43	8	52
09:10	0	0	0	0	0	0	0	0	0	0	61	16	77
09:15	0	0	0	0	0	0	0	0	3	0	35	6	44
09:20	0	0	0	0	0	0	0	0	1	0	53	12	66
09:25	0	0	0	0	0	0	0	0	1	0	33	11	45
09:30	0	0	0	0	0	0	0	0	0	0	1	0	1

Car traffic

lates of starts	S	outhBou	und	W	/estbou	nd	N	orthbou	nd	E	astbour	nd	70.4
Interval starts	Left	Thru	Right	Tota									
08:30	0	0	0	0	0	0	0	0	0	0	67	5	72
08:35	0	0	0	0	0	0	0	0	1	0	59	4	64
08:40	0	0	0	0	0	0	0	0	2	0	59	7	68
08:45	0	0	0	0	0	0	0	0	0	0	57	9	66
08:50	0	0	0	0	0	0	0	0	2	0	44	5	51
08:55	0	0	0	0	0	0	0	0	1	0	52	15	68
09:00	0	0	0	0	0	0	0	0	1	0	44	12	57
09:05	0	0	0	0	0	0	0	0	1	0	41	8	50
09:10	0	0	0	0	0	0	0	0	0	0	59	16	75
09:15	0	0	0	0	0	0	0	0	3	0	31	6	40
09:20	0	0	0	0	0	0	0	0	1	0	52	12	65
09:25	0	0	0	0	0	0	0	0	1	0	31	11	43
09:30	0	0	0	0	0	0	0	0	0	0	1	0	1





Truck traffic

lateral state	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	Total
Interval starts	Left	Thru	Right	Tota									
08:30	0	0	0	0	0	0	0	0	0	0	t	0	1
08:35	0	0	0	0	0	0	0	0	0	0	3	0	3
08:40	0	0	0	0	0	0	.0	0	0	0	1	0	1
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0	1	0	1
08:55	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	2	0	2
09:05	0	0	0	0	0	0	0	0	0	0	1	0	. 1
09:10	0	0	0	0	0	0	0	0	0	0	2	0	2
09:15	0	0	0	0	0	0	0	0	0	0	2	0	2
09:20	0	0	0	0	0	0	0	0	0	0	1	0	1
09:25	0	0	0	0	0	0	0	0	0	0	2	0	2
09:30	0	0	.0	0	0	0	0	0	0	0	0	0	.0

Bicycle traffic

	S	outhBou	nd	W	estoou	nd	N	orthbou	nd	E	astbour	nd	
Interval starts	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Tota
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0
08:35	0	0	0	0	0	0	0	0	0	0	0	0	0
08:40	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0
08:50	0	0	0	0	0	0	0	0	0	0	0	0	.0
08:55	0	0	0	0	0	0	0	0	0	0	0	0	0
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0
09:05	0	0	0	0	0	0	0	0	0	0	1	0	1
09:10	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15	0	0	0	0	0	0	0	0	0	0	2	0	2
09:20	0	0	0	0	0	0	0	0	0	0	0	0	0
09:25	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

and a second second second second		NE			NW			SW			SE		
Interval starts	Left	Right	Total	Tota									
08:30	0	0	0	0	0	0	0	0	0	1	0	1	1
08:35	0	0	0	0	0	0	0	0	0	2	0	2	2
08:40	0	0	0	0	0	0	0	2	2	2	0	2	4
08:45	0	0	0	0	0	0	0	6	6	0	0	0	6
08:50	0	0	0	0	0	0	0	3	3	2	0	2	5
08:55	0	0	0	0	0	0	0	0	0	2	0	2	2
09:00	0	0	0	0	0	0	0	3	3	-1	0	1	4
09:05	0	0	0	0	0	0	0	0	0	3	0	3	3
09:10	0	0	0	0	0	0	0	0	0	2	0	2	2
09:15	0	0	0	0	0	0	0	0	0	0	0	0	.0
09:20	0	0	0	0	0	0	0	3	3	3	0	3	6
09:25	0	0	0	0	0	0	0	2	2	0	0	0	2
09:30	0	0	0	0	0	0	0	0	0	0	0	0	0





Appendix E.2 – Pm peak Mon 18th Feb 2019

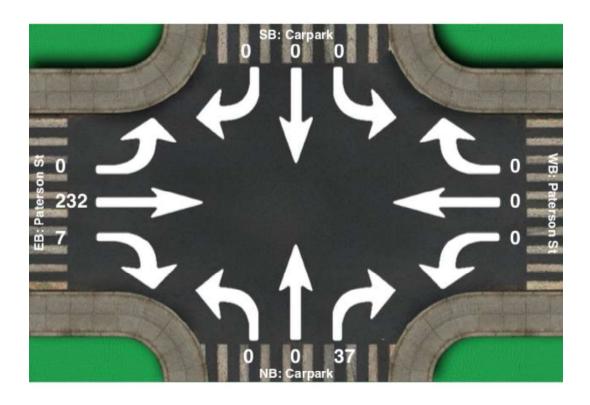
Intersection Count Summary

Location: Carpark at Paterson St, Launceston GPS Coordinates: Lat=-41.435913, Lon=147.138878

Date: 2019-02-18 Day of week: Monday

Weather:

Analyst: Daniel



Intersection Count Summary

17:08 - 17:38

	Sc	outhBou	ind	We	stboun	d	No	rthbour	nd	E	astboun	d	Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	iotai
Vehicle Total	0	0	0	0	0	0	0	0	37	0	232	7	276





Intersection Count Summary

17:08 - 17:38

	Sc	outhBou	ind	W	estbour	nd	No	orthbou	nd	E	astbour	nd	Total
	Left	Thru	Right	iotai									
Vehicle Total	0	0	0	0	0	0	0	0	37	0	232	7	276

Vehicle Summary

Vahiola	Sc	outhBou	ınd	W	estbour	nd	N	orthbou	nd	E	astbour	nd	Total
Vehicle	Left	Thru	Right	Total									
Car	0	0	0	0	0	0	0	0	37	0	228	7	272
Truck	0	0	0	0	0	0	0	0	0	0	3	0	3
Bicycle	0	0	0	0	0	0	0	0	0	0	1	0	1

Pedestrians Summary

		NE			NW			SW	10		SE		
	Left	Right	Total	Total									
Pedestrians	0	0	0	0	0	0	0	20	20	16	0	16	36

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Turn Count Summary

Location: Carpark at Paterson St, Launceston GPS Coordinates: Lat=-41.435913, Lon=147.138878

Date: 2019-02-18 Day of week: Monday

Weather:

Analyst: Daniel

Total vehicle traffic

Lanca and the state of	S	outhBou	ınd	W	estbour	nd	N	orthbou	nd	E	astboun	ıd	7.1.1
Interval starts	Left	Thru	Right	Total									
17:08	0	0	0	0	0	0	0	0	10	0	63	1	74
17:15	0	0	0	0	0	0	0	0	20	0	120	5	145
17:30	0	0	0	0	0	0	0	0	7	0	49	1	57

Car traffic

e e e e e e e e e e e e e e e e e e e	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	Е	astbour	nd	
Interval starts	Left	Thru	Right	Total									
17:08	0	0	0	0	0	0	0	0	10	0	61	1	72
17:15	0	0	0	0	0	0	0	0	20	0	119	5	144
17:30	0	0	0	0	0	0	0	0	7	0	48	1	56

Truck traffic

	S	outhBou	ınd	W	estbour	nd	N	orthbou	nd	E	astbour	nd	7.14
Interval starts	Left	Thru	Right	Total									
17:08	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	0	0	0	0	0	0	0	0	1	0	1
17:30	0	0	0	0	0	0	0	0	0	0	1	0	1

Bicycle traffic

	S	outhBou	ind	W	estbour	nd	N	orthbou	nd	E	astbour	nd	÷
Interval starts	Left	Thru	Right	Total									
17:08	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian volumes

ELECTRONIC CONTROL OF THE CONTROL OF		NE			NW			SW			SE		
Interval starts	Left	Right	Total	Total									
17:08	0	0	0	0	0	0	0	6	6	2	0	2	8
17:15	0	0	0	0	0	0	0	12	12	11	0	11	23
17:30	0	0	0	0	0	0	0	2	2	3	0	3	5





Appendix F – 5 Year Reported Crash Histories

Appendix F.1– Cimitiere St (Tamar to Lawrence)

Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
1999898	24/01/2017 17:30 TUE	PDO	130 - Vehicles in same lane / rear end	Cimitiere Street, between Lawrence Street and Willis Street	Clear	Dry	Daylight	2xLV
1980734	12/12/2016 10:00 MON	First Aid	142 - Leaving parking	Cimitiere Street, between Lawrence Street and Willis Street	Clear	Dry	Daylight	2xLV
1989932	29/12/2016 11:42 THU	First Aid	143 - Entering parking	Cimitiere Street, between Lawrence Street and Willis Street	Clear	Dry	Daylight	3xLV
1694104	27/04/2016 11:50 WED	PDO	144 - Parking vehicles only	Cimitiere Street, between Tamar Street and Willis Street	Clear	Dry	Daylight	2xLV
49691914	30/11/2018 16:10 FRI	PDO	144 - Parking vehicles only	Cimitiere Street, between Tamar Street and Willis Street	Clear	Dry	Daylight	2xLV
1896871	28/08/2016 12:00 SUN	PDO	147 - Emerging from driveway or lane	Cimitiere Street, between Lawrence Street and Willis Street	Clear	Dry	Daylight	2xLV
49613583	27/09/2018 14:00 THU	PDO	147 - Emerging from driveway or lane	Cimitiere Street, between Tamar Street and Willis Street	Clear	Dry	Daylight	2xLV
333288	02/07/2014 17:18 WED	PDO	159 - Other overtaking	Cimitiere Street, between Tamar Street and Willis Street	Clear	Dry	Darkness (with street light)	2xLV
48803702	11/12/2017 15:10 MON	PDO	163 - Vehicle door	Cimitiere Street, between Tamar Street and Willis Street	Clear	Dry	Daylight	1xLV 1xHV

Appendix F.2 – Cimitiere /Tamar Intersection



Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
49277207	30/05/2018 17:00 WED	Minor	102 - Far side	Tamar Street / Cimitiere Street intersection	Light rain, drizzle	Wet	Daylight	1xPed 1xLV
49135355	26/02/2018 08:49 MON	Minor	109 - Other pedestrian	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	1xPed 1xLV
291045	09/05/2014 17:50 FRI	Serious	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Darkness (with street light)	2xLV
404113	27/09/2014 09:05 SAT	PDO	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
568074	17/05/2015 15:15 SUN	PDO	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
891854	05/08/2015 12:00 WED	PDO	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
1703855	04/05/2016 14:11 WED	PDO	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
1999723	23/01/2017 19:46 MON	First Aid	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
2007938	13/02/2017 09:45 MON	Minor	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
49071644	21/01/2018 09:00 SUN	PDO	110 - Cross traffic	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	3xLV
397270	20/09/2014 16:30 SAT	First Aid	121 - Right through	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	1xCyc 1xLV
765652	25/06/2015 08:49 THU	PDO	121 - Right through	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
1385048	06/02/2016 21:20 SAT	Minor	121 - Right through	Tamar Street / Cimitiere Street intersection	Clear	Dry	Darkness (with street light)	2xLV
48783761	01/12/2017 13:45 FRI	PDO	121 - Right through	Tamar Street / Cimitiere Street intersection	Light rain, drizzle	Wet	Daylight	2xLV
49634394	29/09/2018 12:10 SAT	First Aid	121 - Right through	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
443356	18/11/2014 11:38 TUE	PDO	130 - Vehicles in same lane / rear end	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
634675	09/06/2015 08:15 TUE	PDO	139 - Other same direction (inc. vehicle rolling backwards)	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	1xLV 1xHV
468134	08/11/2014 10:20 SAT	First Aid	145 - Reversing	Tamar Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV

DA 0679/2019

Appendix F.3 – Cimitiere /Willis Intersection

Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
502636	21/01/2015 16:50 WED	PDO	110 - Cross traffic	Cimitiere Street / Willis Street intersection	Clear	Dry	Daylight	2xLV
1091997	17/09/2015 11:00 THU	PDO	110 - Cross traffic	Cimitiere Street / Willis Street intersection	Clear	Dry	Daylight	2xLV
1531123	18/03/2016 16:00 FRI	PDO	132 - Vehicles in same lane / right rear	Cimitiere Street / Willis Street intersection	Heavy rain, hail	Wet	Daylight	2xLV
1695085	29/04/2016 14:30 FRI	Minor	110 - Cross traffic	Cimitiere Street / Willis Street intersection	Heavy rain, hail	Wet	Daylight	2xLV
49837805	03/02/2019 15:39 SUN	Minor	174 - Out of control on carriageway	Cimitiere Street / Willis Street intersection	Clear	Dry	Daylight	1xMC

Appendix F.4 –Cimitiere / Lawrence Intersection

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Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
49655056	26/10/2018 17:30 FRI	Minor	102 - Far side	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	1xPed 1xLV
233030	10/03/2014 13:00 MON	PDO	110 - Cross traffic	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
1055863	30/10/2015 11:05 FRI	PDO	110 - Cross traffic	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
49526348	20/08/2018 10:45 MON	PDO	110 - Cross traffic	Lawrence Street / Cimitiere Street intersection	Light rain, drizzle	Wet	Daylight	2xLV
1089755	10/11/2015 14:00 TUE	PDO	121 - Right through	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
213332	10/02/2014 09:20 MON	PDO	130 - Vehicles in same lane / rear end	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV
49611725	25/09/2018 16:45 TUE	PDO	130 - Vehicles in same lane / rear end	Lawrence Street / Cimitiere Street intersection	Clear	Dry	Daylight	2xLV

Appendix F5 - Boland / Willis Intersection

Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
532314	25/02/2015 08:50 WED	PDO	121 - Right through	Boland Street / Willis Street intersection	Clear	Dry	Daylight	1xCyc 1xLV
1648349	13/04/2016 12:50 WED	First Aid	130 - Vehicles in same lane / rear end	Boland Street / Willis Street intersection	Clear	Dry	Daylight	2xLV

Appendix F6 – Willis Street (Cimitiere to Boland)

Crash No.	Crash Date	Severity	Description	Location	Visibility	Surface Condition	Light Condition	Units
48776495	22/11/2017 15:05 WED	PDO	147 - Emerging from driveway or lane	Willis Street outside existing main access	Clear	Dry	Daylight	2xLV

Appendix F7 - Crash Map

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Traffic Impact Assessment









Appendix G – Safe System Assessments Appendix G.1 Cimitiere (Tamar – Willis) Existing

Existing situation on Cimitiere Street (Tamar - Willis)

		Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclist	Motorcyclist
Exposure	Justification	Moderate Volume (6,000 vpd)	Moderate Volume (6,000 vpd)	Moderate volume on Car Park Access Medium levels of CimitiereStreet (6,000), involves low volumes pedestrian activity low volume on Willis street (1,000vpd), 30-50 pph)	Car Park Access involves low volumes	eet (Some cyclist use expected as route is straight and flat and provides access to the CBD	Some motorcylist use expected as route is straight and flat and provides access to the CBD
	Score /4	2	2	2	2	3	7	2
Likelihood	Justification	Staight alignment, unrestricted forward sight distance, adequate sigange and delineation, parked cars either side of road	Staight alignment, Staight alignment, Signalised intersection unrestricted forward unrestricted forward sight distance, sight distance, adequate signage over 5 years involing 5 and delineation, and delineation parked cars either signage and formation casualty crashes parked cars either injuries and a cyclist crash requiring first alignment.	70	pu Bu	Pedestrian crash record No bicycle facilities involves 2 crashes with have been provided minor injury in each case, no midblock pedestrian facilities on desire line to City Park gate.		Consisted, smooth riding surface provided with recent road reconstruction.
	Score /4	1	1	4	2	3	7	1
Severity	Justification	Low speed environment (50km/h)	Low speed environment. (50km/h)	Low speed environment Low speed (50km/h) (50km/h)	Low speed environment (50km/h)	medium-high speed (SOkm/h)	medium-high speed Low speed (50km/h) environme (50km/h)	Low speed environment (50km/h)
	Score /4	1	Ţ	1	1	3	8	2 Total
Product	Total Score /64	2	2	8	4	77	77	4

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Safe System Assessment





Appendix G.2 Cimitiere (Tamar – Willis) Prop.

		Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclist	Motorcyclist	
Exposure	Justification	Moderate Volume (6,000 vpd)	Moderate Volume (6,000 vpd)	Moderate volume on Car park will attract CimitiereStreet (6,000), traffic up to 100vph low volume on Willis Street (1,000vpd). More vehicle and pedestrian activity is forecast.	Car park will attract traffic up to 100vph	Car park will attract Proposal will increase Some cyclist use traffic up to 100vph pedestrian activity expected as route is across Cimitiere Street, straight and flat and possibly up to 100 pph. provides access to the CBD	Some cyclist use expected as route is expected as route is straight and flat and provides access to provides access to the CBD	Some motorcylist use expected as route is straight and flat and provides access to the CBD	
	Score /4	2	2	e e	3	4	2	2	
Likelihood	Justification	Staight alignment, unrestricted forward sight distance, adequate sigange and delineation, parked cars either side of road	Staight alignment, unrestricted forward sight distance, adequate sigange and delineation	Staight alignment, Staight alignment, Signalised intersection unrestricted forward unrestricted forward with Taman Street has sight distance, sight distance, adequate signage adequate signage and delineation, and delineation parked cars either side of road side of road are signage and delineation and delineation are side of road are signage are signage.	No protection for vehciles propped to turn right into access	No midblock pedestrian No bicycle facilities faciolities are shown on have been provided the design plans and Cimitiere Street is wide and pedestrians can emerge suddenly from between parked cars and surprise traffic.	No bicycle facilities have been provided	Consisted, smooth riding surface provided with recent road reconstruction.	
	Score /4	1	1	3	3	4	2	1	
Severity	Justification	Low speed environment (50km/h)	Low speed environment (50km/h)	Low speed environment Low speed (50km/h) environme (50km/h)	Low speed environment (50km/h)	medium -high speed (50km/h)	medium -high speed Low speed (SOkm/h) environme (SOkm/h)	Low speed environment (50km/h)	
	Score /4	1	1	1	1	3	3	2	Total /448
Product	Total Score /64	2	2	6	6	48	12	4	98

Safe System Assessment

Situation on Cimitiere Street (Tamar - Willis) with proposal





Appendix G.3 Willis (Cimitiere – Boland) Exist.

		Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclist	Motorcyclist	
xposure	Justification	(1,000vpd)	(1,000vpd)	Low volume on Willis Street (1,000vpd), low turning volumes at Boland and Cimitiere Street junctions and low crash rate	Low volume car park accesses (1,000vpd)	Medium-high levels of pedestrian activity on Willis Street (50 per hour)	Low volumes	Low volumes	
	Score /4	2	2	2	2	3	1	н	
ikelihood	Justification	Short street length with local access road function	Short street length with local access road function	3 cross traffic crashes at the Cimitiere / Willis Street junction . Basic layout.	Bus stop nearby (Tiger Bus, approx. once per hour), no truck stops	wide footpaths,open space, good sight lines between pedestrians and vehicles	No bicycle facilities	Good surface condition	
	Score /4	1	1	2	2	1	2	1	100
Severity	Justification	Low speed environment < 50km/h.	Low speed environment < 50km/h.	Low speed environment < 50km/h.	Low speed environment < 50km/h.	medium speed (50km/h)	(50km/h)	Low speed environment < 50km/h.	
	Score /4	-	1	2	1	2	2	2	Total
Product	Total Score /64	1 2	2	œ	4	9	4	2	28

Safe System Assessment

Existing situation on Willis Street





Appendix G.4 Willis (Cimitiere – Boland) Prop.

Situation on Willis Street with proposal

		Run-off-road	Head-on	Intersection	Other	Pedestrian	Cyclist	Motorcyclist	
Exposure	Justification	Low volume (1,000vpd)	Low volume (1,000vpd)	Increased traffic on Increased volume Willis Street exiting carpark (2,000vpd), (500vpd) increased turning volumes at Boland and Cimitiere Street junctions	Increased volume exiting carpark (500vpd)	Medium-high levels of pedestrian activity on Willis Street (50 per hour)	Low volumes	Low volumes	
	Score /4	2	2	2	2	3	1	1	200
Likelihood	Justification	Short street length with local access road function	Short street length with local access road function	3 cross traffic crashes at the Cimitiere / Willis Street junction . Hardiy Basic layouts provided.	Bus stop nearby (Tiger Bus, approx. once per hour), no truck stops	wide footpaths,open space, good sight lines between pedestrians and vehicles	No bicycle facilities	Good surface condition	
	Score /4	FI	1	ж	2	1	2	1	405 300
Severity	Justification	Low speed environment < 50km/h.	Low speed environment < 50km/h.	Low speed environment < 50km/h.	Low speed environment < 50km/h.	(50km/h)	medium speed (50km/h)	Low speed environment < 50km/h.	40
	Score /4	1	1	2	1	2	2	2	Total
Product	Total Score /64	1 2	2	12	4	9	4	2	33

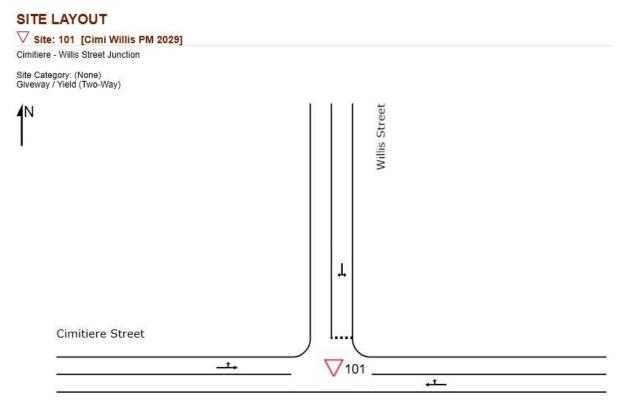
Safe System Assessment





Appendix H SIDRA Analysis Cimitiere/Willis Junction

Appendix H.1 Junction Layout



Cimitiere Street





Appendix H.2 2019 PM Peak as is

Movement F	Movement Performance - Vehicles							
Mov	Tum	Total veh/h	Demand Flows HV %	Deg. Sath v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance
East: Cimitiere Street	e Street							
5	I	307	0.0	0.157	0.1	LOSA	0.1	9.0
9	R2	60	0.0	0.157	6.9	LOSA	0.1	9.0
Approach		316	0.0	0.157	0.2	NA	0.1	9.0
North: Willis Street	treet							
7	77	36	0.0	0.063	9.9	LOSA	0.2	1.6
6	R2	23	0.0	0.063	9.8	LOSA	0.2	1.6
Approach		59	0.0	0.063	7.4	LOSA	0.2	1.6
West Cimiliere Street	re Street							
10	12	19	0.0	0.169	5.6	LOSA	0.0	0.0
Ŧ	T	322	0.0	0.169	0.0	LOSA	0.0	0.0
Approach		341	0.0	0.169	0.3	NA	0.0	0.0
All Vehicles		716	0.0	0.169	6.0	NA	0.2	1.6

MOVEMENT SUMMARY

∨ site: 101 [Cimi Willis PM 2019]

Cimitiere - Willis Street Junction

Site Category: (None) Giveway / Yield (Two-Way)





Appendix H.3 2029 PM Peak with development

Movement	lovement Performance - Vehicles							
Mov ID	Tum	Total veh/h	Demand Flows HV %	Deg. Safin Vic	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance
East: Cimitiere Street	are Street				COMMON			
ıc.	T	340	0.0	0.174	0.1	LOSA	0.1	0.7
9	R2	6	0.0	0.174	7.1	LOSA	0.1	0.7
Approach		349	0.0	0.174	0.3	NA	0.1	0.7
North: Willis Street	Street							
7	23	99	0.0	0.140	6.8	LOSA	0.5	3.5
6	R2	65	0.0	0.140	9.4	LOSA	0.5	3.5
Approach		115	0.0	0.140	8.1	LOSA	0.5	3.5
West: Cimitiere Street	ere Street							
10	77	21	0.0	0.186	5.6	LOSA	0.0	0.0
Ŧ	11	355	0.0	0.186	0.0	LOSA	0.0	0.0
Approach		376	0.0	0.186	0.3	NA	0.0	0.0
All Vehicles		840	0.0	0.186	1.4	NA	0.5	3.5

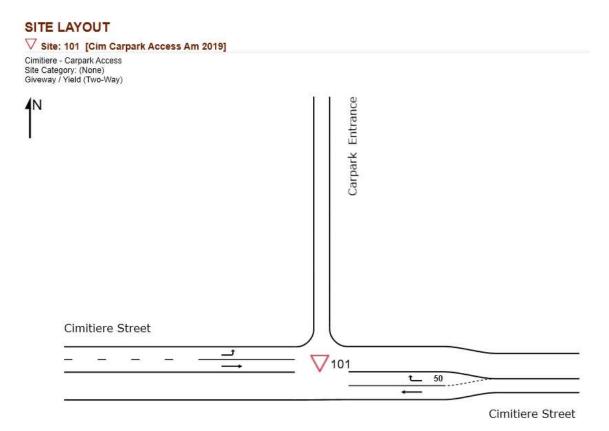
Site Category: (None) Giveway / Yield (Two-Way)





Appendix I SIDRA Analysis Cimitiere Carpark Access

Appendix I.1 Access Layout



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Appendix I.2 2019 AM Peak as is

Movement	vement Performance - Vehicles							
Mov	Tum	eQ De	emand Flows	Deg.	Average	Level of	95% Back of Queue	- CANA
₽		Total	≩	Sath	Delay	Service	Vehicles	Distance
		veh/h	*	V/C	sec		veh	E
East: Cimitiere Street	re Street							
5	11	229	0.0	0.118	0.0	LOSA	0.0	0.0
9	R2	.	0.0	0.001	7.1	LOSA	0.0	0.0
Approach		231	0.0	0.118	0.0	NA	0.0	0.0
West: Cimitiere Street	ire Street							
10	12	17	0.0	0.009	5.5	LOSA	0.0	0.0
11	Τ	364	0.0	0.189	0.0	LOSA	0.0	0.0
Approach		381	0.0	0.189	0.3	NA	0.0	0.0
All Vehicles		612	0:0	0.189	0.2	NA	0.0	0.0

MOVEMENT SUMMARY

Site: 101 [Cim Carpark Access Am 2019]

Cimitiere - Carpark Access Site Category: (None) Giveway / Yield (Two-Way)





Appendix I.3 2029 AM Peak with development

Movement Per	ovement Performance - Vehicles							
Mov	Tum		Demand Flows	Deg.	Average	Level of	95% Back of Queue	The second secon
₽		Total	H	Safin	Delay	Service	Vehicles	Distance
The second second		veh/h	×	v/c	Sec		veh	E
East: Cimitiere Street	treet			20000	-250004			1000
5	11	258	0.0	0.133	0.0	LOSA	0.0	0.0
9	R2	33	0.0	0.036	7.6	LOSA	0.1	1.0
Approach		291	0.0	0.133	6.0	NA	0.1	1.0
West: Cimitiere Street	Street							
10	77	47	0.0	0.026	5.5	LOSA	0.0	0.0
4	F	401	0.0	0.208	0.0	LOSA	0.0	0.0
Approach		448	0.0	0.208	9.0	NA	0.0	0.0
All Vehicles		739	0.0	0.208	2.0	NA	0.1	1.0

MOVEMENT SUMMARY

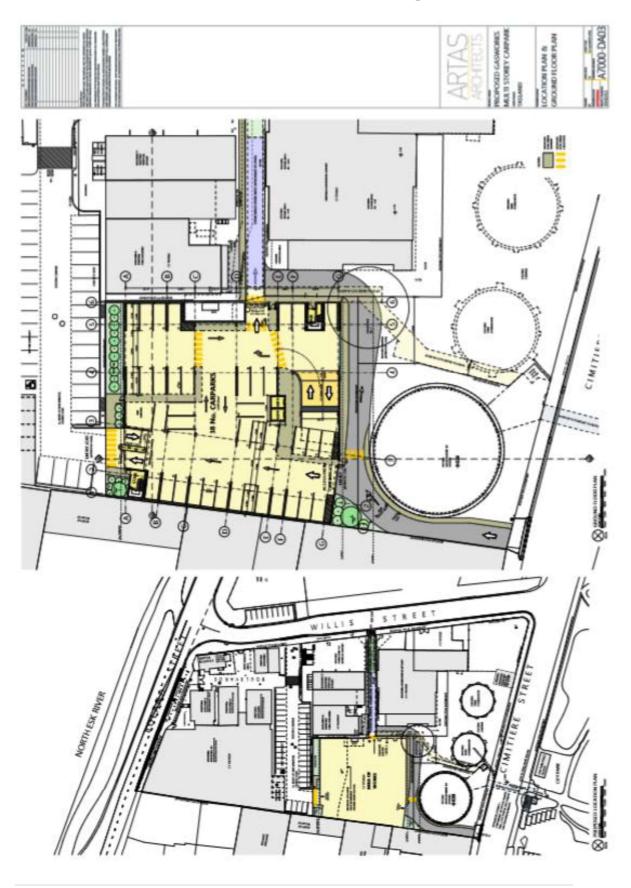
Site: 101 [Cim Carpark Access Am 2029]

Cimitiere - Carpark Access Site Category: (None) Giveway / Yield (Two-Way)





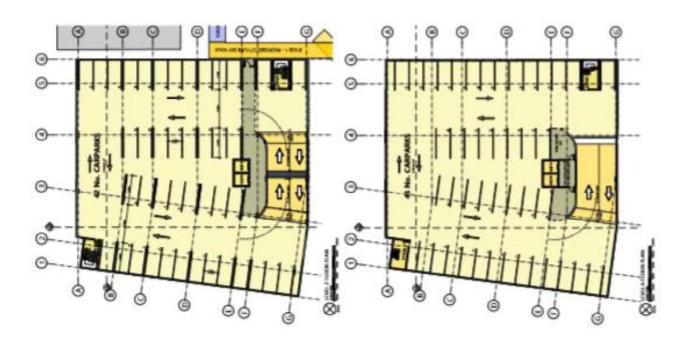
Appendix J Cimitiere Carpark Design Plans

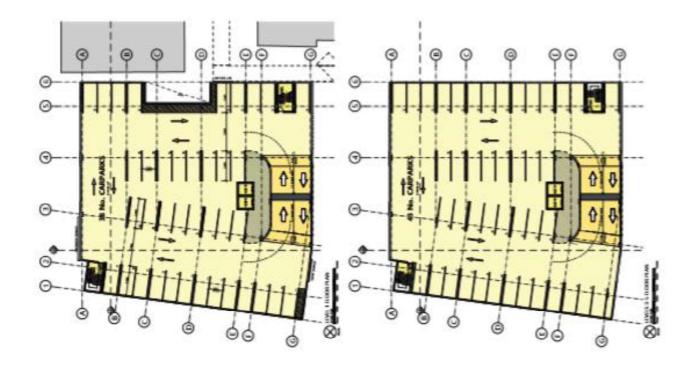




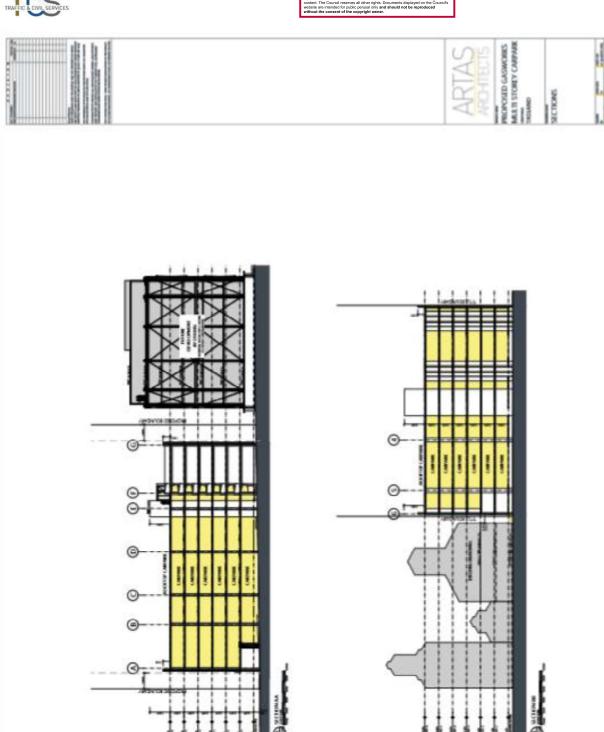




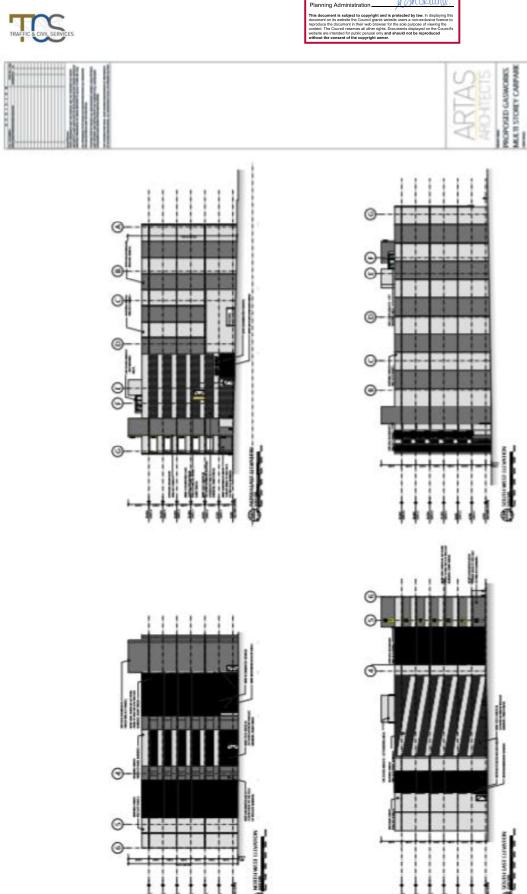












DOTTOWN ILLYANDES

Traffic Impact Assessment















Appendix K Tasmanian 26m B Double Network







Appendix L Impact on on-street parking

