



TITLE: Amendment 71 - Partial rezoning of land at Launceston Golf Club 27-99 Opossum Road, Kings Meadows from Recreation to General Residential and Development Application DA0760/2021 to Subdivide One Lot into Three Including the Construction of a Road.

FILE NO: SF7421 - Amendment 71

AUTHOR: Iain More (Town Planner)

GENERAL MANAGER: Dan Ryan (Community and Place Network)

ATTACHMENT 1

PART B - DEVELOPMENT APPLICATION

9. Planning Scheme Assessment

10.0 General Residential Zone

10.1.1 Zone Purpose Statements

10.1.1.1 To provide for residential use or development that accommodates a range of dwelling types at suburban densities, where full infrastructure services are available or can be provided.

10.1.1.2 To provide for compatible non-residential uses that primarily serve the local community.

10.1.1.3 Non-residential uses are not to adversely affect residential amenity, through noise, activity outside of business hours, traffic generation and movement, or other off site impacts.

10.1.1.4 To encourage residential development that respects the existing and desired neighbourhood character.

10.1.1.5 To encourage residential use and development that facilitates solar access, integrated urban landscapes, and utilisation of public transport, walking and cycling networks.

Consistent

The proposal seeks to establish a new 1.28ha residential lot which will have the capacity to provide for a range of residential types and densities, taking advantage of the existing infrastructure. It is considered the lot will encourage new residential development that will be compatible with the surrounding area. Accordingly, it is considered the proposal meets the zone purpose.

10.4 Development Standards for Dwellings

10.4.15 Lot size and dimensions

Objective:

To ensure the area and dimensions of lots are appropriate for the intended use of the lots.

Consistent

A1.1 Each lot, or a lot proposed in a plan of subdivision, must:

- (a) have a minimum area of no less than 500m²; and
- (b) be able to contain a rectangle measuring 10m by 15m; or

A1.2 Each lot, or a lot proposed in a plan of subdivision, must:

- (a) be required for public use by the Crown, an agency, or a corporation all the shares of which are held by Councils or a municipality; or



<p>(b) be required for the provision of public utilities; or (c) be for the consolidation of a lot with another lot, provided each lot is within the same zone; and A1.3 Each lot, or a lot proposed in a plan of subdivision, must have new boundaries aligned from buildings that satisfy the relevant acceptable solutions for setbacks.</p>
<p>Complies The new residential lot will be 1.28ha in size and able to contain a rectangle measuring 10m x 15m. As the lot is currently vacant A1.3 is not applicable.</p>

<p>10.4.16 Frontage and access Objective: To ensure that lots provide: (a) appropriate frontage to a road; and (b) safe and appropriate access suitable for the intended use.</p>
<p>Consistent Consistency with the objective has been achieved as the proposal ensures adequate access is available.</p>
<p>A1 Each lot, or a lot proposed in a plan of subdivision, must have a frontage to a road maintained by a road authority of no less than 3.6m.</p>
<p>Complies The new residential lot will have a frontage greater than 3.6m to a Council maintained road.</p>
<p>A2 No acceptable solution.</p>
<p>Relies on Performance Criteria P2 Each lot, or a lot proposed in a plan of subdivision, is 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.</p>
<p>Complies The new lot will be capable of containing reasonable vehicle access through the creation of a new public toad. The new road will be capable of permitting access for both the new residential lot, as well as the existing golf club use. The access for this road will be upgraded to the relevant standards required by the Council to ensure safe access onto Opossum Road. There will be no change of character as a result of any new access. The proposal complies with the performance criteria.</p>

<p>10.4.17 Discharge of stormwater Objective: To ensure that the subdivision layout, including roads, provides that stormwater is satisfactorily drained and discharged.</p>
<p>Consistent</p>
<p>A1 Each lot, or a lot proposed in a plan of subdivision, including roads, must be capable of connecting to a public stormwater system.</p>
<p>Complies The new lot will connect into the reticulated stormwater system.</p>
<p>A2 The Council's General Manager has provided written advice that the public stormwater system has the capacity to accommodate the stormwater discharge from the subdivision.</p>



Complies
Written consent has been provided demonstrating the new lot will have capacity to accommodate the stormwater discharge from the subdivision.

10.4.18 Water and sewerage services

Objective:
To ensure each provides for appropriate water supply and wastewater disposal.

Consistent
A1 Each lot, or a lot proposed in a plan of subdivision, must be connected to a reticulated water supply.

Complies
The new lot will be connected into the reticulated water supply.

A2 Each lot, or a lot proposed in a plan of subdivision, must be connected to a reticulated sewerage system.

Complies
The new lot will be connected into the reticulated sewerage system.

10.4.19 Integrated urban landscape

Objective:
To provide landscaping of lots, roads and public open spaces that contributes to the character and identity of urban places and the character of the surrounding area.

Consistent
A1 Subdivision does not create any new road, public open space or other reserves.

Complies
Whilst a new road is proposed, it will fall within the Recreation zone. As such, the acceptable solution has been met.

10.4.20 Walking and cycling network

Objective:
To:
(a) provide safe and convenient movement through and between neighbourhoods by pedestrians and cyclists;
(b) design footpaths, shared path and cycle path networks that are safe and accessible; and
(c) accommodate wheelchairs, prams, scooters and other footpath bound vehicles.

Consistent
A1 Subdivision does not create any new road, footpath or public open space.

Complies
Whilst a new road is proposed, it will fall within the Recreation zone. As such, the acceptable solution has been met.

10.4.21 Lot diversity

Objective:
To provide a range and mix of lot sizes to suit a variety of dwelling and household types.

Consistent
A1 Subdivision is for 10 lots or less.

Complies
The subdivision will result in three lots in total, with only one being within the General Residential zone.

10.4.23 Neighbourhood road network

Objective:



To provide for convenient and safe movement, through and between neighbourhoods, for motor vehicles, pedestrians, cyclists and public transport using the road network.
Consistent A1 Subdivision does not create any new road.
Complies Whilst a new road is proposed, it will fall within the Recreation zone. As such, the acceptable solution has been met.

10.4.24 Public transport network
A1 Subdivision does not create any new road.
Complies Whilst a new road is proposed, it will fall within the Recreation zone. As such, the acceptable solution has been met.

18.0 Recreation Zone
18.1.1 Zone Purpose Statements
18.1.1.1 To provide for a range of active and organised recreational use or development and complementary uses that do not impact adversely on the recreational use of the land.
18.1.1.2 To provide for the amenity of residential uses on land adjoining the zone.
Consistent Consistency with the zone purpose has been achieved as the proposal ensures the existing recreational use is maintained.

18.4.3 Lot size and dimensions
Objective: To ensure: (a) the area and dimensions of lots are appropriate for the zone; and (b) adjoining land, especially residential zones, is protected from adverse impacts.
Consistent Consistency with the objective has been achieved as the proposal ensures the lots within the Recreation Zone are of an appropriate size to protect adjoining land from adverse impacts.
A1.1 Each lot, or a lot proposed in a plan of subdivision, must: (a) be required for public use by the Crown, an agency, or a corporation all the shares of which are held by Councils or a municipality; or (b) be required for the provision of public utilities; or (c) be for the consolidation of a lot with another lot, provided each lot is within the same zone; and
A1.2 Each lot, or a lot proposed in a plan of subdivision, must have new boundaries aligned from buildings that satisfy the relevant acceptable solutions for setbacks.
Relies on Performance Criteria The subdivision will result in a total of three new lots from the existing one. The lots located within the Recreation Zone will be the new road lot, being 1,844m ² in size, and Lot 2, being the balance lot, 40.9ha in size. All existing buildings satisfy the relevant acceptable solutions for setbacks. However, as the subdivision is not required for public use by the Crown, required for the provisions of public utilities, and is not for consolidation, the application is unable to meet A1.1 and reliance on the performance criteria is required.
P1 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:



<p>(a) the relevant acceptable solutions for development of buildings on the lots;</p> <p>(b) the likely location of buildings on the lots;</p> <p>(c) the likely provision of onsite parking and manoeuvrability for vehicles;</p> <p>(d) the topography of the site;</p> <p>(e) the presence of any natural hazards;</p> <p>(f) the existing pattern of development in the area; and</p> <p>(g) public safety.</p>
<p>Complies</p> <p>It is considered that the lots zoned recreation are of a size that is sufficient for their intended use.</p> <p>The road lot will be 1,844m² in size, 70m in length and 18.3m at its most narrow point, with a 12m wide constructed road. The intention of the lot is to formalise and upgrade an existing access, into a public road. This will allow greater safety through upgrades to the relevant requirements. It will allow the existing access into the Golf Club to be maintained, while also allowing new access arrangements for the subsequent residential lot. It is of a sufficient size and dimensions to allow safe vehicular and pedestrian access.</p> <p>The balance lot, being lot 2, will have an area of 40.9ha. This lot will continue the existing Golf Course activities on site. The lot is of a sufficient size that would permit new development without significant land use conflicts should it be developed in the future. The existing buildings are setback far enough from the new lot boundaries as not to cause any land use conflicts, and the formalised access through a new public road will ensure greater vehicular and pedestrian safety.</p> <p>The proposal meets the performance criteria.</p>
<p>A2 Subdivision must not be located on the boundary of the General Residential, Inner Residential, Low Density Residential, Environmental Living, Rural Living, Urban Mixed Use or Village zones.</p>
<p>Complies</p> <p>Subdivision is not located on the boundary of the General Residential, Inner Residential, Low Density Residential, Environmental Living, Rural Living, Urban Mixed Use or Village zones.</p>

18.4.4 Frontage and access

<p>Objective:</p> <p>To ensure that lots provide:</p> <p>(a) appropriate frontage to a road; and</p> <p>(b) safe appropriate access suitable for the intended use of the new lot.</p>
<p>Consistent</p> <p>Consistency with the objective has been achieved as the proposal ensures adequate frontage to a road, suitable for its intended use.</p>
<p>A1 No acceptable solution.</p>
<p>Relies on Performance Criteria</p> <p>P1 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:</p> <p>(a) the width of frontage proposed, if any;</p> <p>(b) whether any other land has a right-of-carriageway as its sole or principal means of access over the frontage;</p> <p>(c) the number of immediately adjacent rights-of-carriageway;</p>



<p>(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 accessibility for vehicles; (l) public safety; and (m) the advice of the road authority.</p>
<p>Complies The balance lot will obtain access through the new proposed road lot. The road lot is of a sufficient size and dimensions to safely and adequately allow access to occur. This includes maintaining the access arrangements for the Golf Club users through an upgraded road access, as well as access to the new residential lot. Its size will allow two way vehicular access, as well as safe pedestrian access. The proposal meets the performance criteria.</p>
<p>A2 No acceptable solution.</p>
<p>Relies on Performance Criteria P2 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 length of the access; (c) the distance between the lot or building area and the carriageway; (d) the nature of the road and the traffic, including pedestrians; (e) the character of the area; and (f) the advice of the road authority.</p>
<p>Complies The balance lot for the recreation zone will have reasonable vehicular access from the end of the new public road. This also includes safe pedestrian access. This is consistent with the character of the area. The proposal meets the performance criteria.</p>

18.4.5 Discharge of stormwater

<p>Objective: To ensure that the subdivision layout, including roads, provides that stormwater is satisfactorily drained and discharged.</p>
<p>Consistent</p>
<p>A1 Each lot, or a lot proposed in a plan of subdivision, including roads, must be capable of connecting to a public stormwater system.</p>
<p>Complies Each lot will connect into the reticulated stormwater system.</p>
<p>A2 The Council's General Manager has provided written advice that the public stormwater system has the capacity to accommodate the stormwater discharge from the subdivision.</p>
<p>Complies Written advice has been provided that the public stormwater system has the capacity to accommodate the stormwater discharge from the subdivision.</p>

18.4.6 Water and sewerage services

<p>Objective: To ensure each lot provides for appropriate water supply and wastewater disposal.</p>
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Consistent A1 Each lot, or a lot proposed in a plan of subdivision, must be connected to a reticulated water supply.
Complies Each lot will connect into the reticulated water supply.
A2 Each lot, or a lot proposed in a plan of subdivision, must be connected to a reticulated sewerage system.
Complies Each lot will connect into the reticulated sewerage system.

E4.0 Road and Railway Assets Code

E4.1 The purpose of this provision is to: (a) protect the safety and efficiency of the road and railway networks; and (b) reduce conflicts between sensitive uses and major roads and the rail network.
Consistent Consistency with the code purpose has been achieved as the proposal will ensure the safety and efficiency of the road network is maintained, whilst reducing conflicts between sensitive uses and major roads.

E4.5 Use Standards

E4.5.1 Existing road accesses and junctions

Objective: To ensure that the safety and efficiency of roads is not reduced by increased use of existing accesses and junctions.
Consistent 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.
Complies The annual average daily traffic (AADT) of vehicle movements, to and from the sites, will not increase by more than 40 vehicle movements per day.

E4.6.2 Road accesses and junctions

Objective: To ensure that the safety and efficiency of roads is not reduced by the creation of new accesses and junctions.
Complies No new accesses are proposed.

E4.6.4 Sight distance at accesses, junctions and level crossings

Objective: 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.
Consistent A1 Sight distances at: (a) an access or junction must comply with the Safe Intersection Sight Distance shown in Table E4.6.4; and (b) rail level crossings must comply with AS1742.7 Manual of uniform traffic control devices - Railway crossings, Standards Association of Australia.
Complies Any widening of the existing access will comply with the Safe Intersection Sight Distance



shown in Table E4.6.4.

E7.0 Scenic Management Code

E7.1 The purpose of this provision is to:

- (a) ensure that siting and design of development protects and complements the visual amenity of scenic road corridors; and
- (b) ensure that siting and design of development in scenic management areas is unobtrusive and complements the visual amenity of the locality and landscape; and
- (c) ensure that vegetation is managed for its contribution to the scenic landscape.

Consistent
Consistency with the code purpose has been achieved as the proposal ensures that the visual amenity of the area will be retained.

E7.6 Development Standards

Objective:
The siting and design of development is to be unobtrusive in the landscape and complement the character of the scenic management areas.

Consistent
Consistency with the objective has been achieved as the proposed design of the subdivision is to be unobtrusive in the landscape and complement the character of the scenic management areas.

A3 Subdivision is in accordance with a specific area plan.

Relies on Performance Criteria
As the subdivision is not being undertaken in accordance with a specific area plan, reliance on the performance criteria is required.

P3 Subdivision must have regard to:

- (a) the scenic management precinct existing character statement and management objectives in clause E7.6.3;
- (b) the size, shape and orientation of the lot;
- (c) the density of potential development on lots created;
- (d) the need for the clearance or retention of vegetation;
- (e) the need to retain existing vegetation;
- (f) the requirements for any hazard management;
- (g) the need for infrastructure services;
- (h) the specific requirements of the subdivision;
- (i) the extent of works required for roads or to gain access to sites, including any cut and fill;
- (j) the physical characteristics of the site and locality;
- (k) the existing landscape character;
- (l) the scenic qualities of the site; and
- (m) any agreement under section 71 of the Act affecting the land.

Complies
The site is located within the scenic management area precinct 4 - Carr Villa and Punchbowl Reserve precinct. The management objectives of the precinct are to maintain and enhance vegetation, ensure development blends with the landscape, and increase residential density.

The upgrade of the access for a new road lot, as well as the maintenance and continued operation of the balance lot are not considered to have any detrimental impacts on the visual amenity of the area. They will continue to operate as they currently do.

The potential impact will be from the new 1.28ha residential lot. This site contains



several large trees, as well as an open grassed area, currently utilised as a driving range. No vegetation is proposed to be removed as part of this application. It will not be until such time that the residential lot is developed that vegetation will need to be removed and consideration of the natural environments visual appeal will need to be addressed.

Notwithstanding, the creation of the new lot will directly align with the objectives of the precinct to encourage residential density. Through detailed design, there will be opportunity to ensure that vegetation is maintained and increased.

Servicing will be able to occur without intrusion, cut and fill will be minimal, and the landscape character will be retained. The subdivision will ensure that the exiting character of the golf club is maintained.

The proposal complies with the performance criteria.

PART C Special Provisions

9.7 Access and provision of Infrastructure Across Land in Another Zone

9.7.1

If an application for use or development includes access or provision of infrastructure across land that is in a different zone to that in which the main part of the use or development is located, and the access or infrastructure is prohibited by the provisions of the different zone, the planning authority may at its discretion approve an application for access or provision of infrastructure over the land in the other zone, having regard to:

- (a) whether there is no practical and reasonable alternative for providing the access or infrastructure to the site;
- (b) the purpose and provisions of the zone and any applicable code for the land over which the access or provision of infrastructure is to occur; and
- (c) the potential for land use conflict with the use or development permissible under the planning scheme for any adjoining properties and for the land over which the access or provision of infrastructure is to occur.

Complies

The proposed new road lot will be zoned recreation, and will act as an access to the new General Residential zone lot. There will be no other means to access the proposed new residential lot, complying with (a). All relevant provisions of the zones and applicable codes have been assessed as compliant, complying with (b). There will be no impact or land use conflict with adjoining uses, as the road is simply formalising an existing access, complying with (c).



ALL MEASUREMENTS AND AREAS ARE SUBJECT TO SURVEY.

THIS PLAN WAS PREPARED AS A PRELIMINARY PROPOSAL PLAN FOR DISCUSSION AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

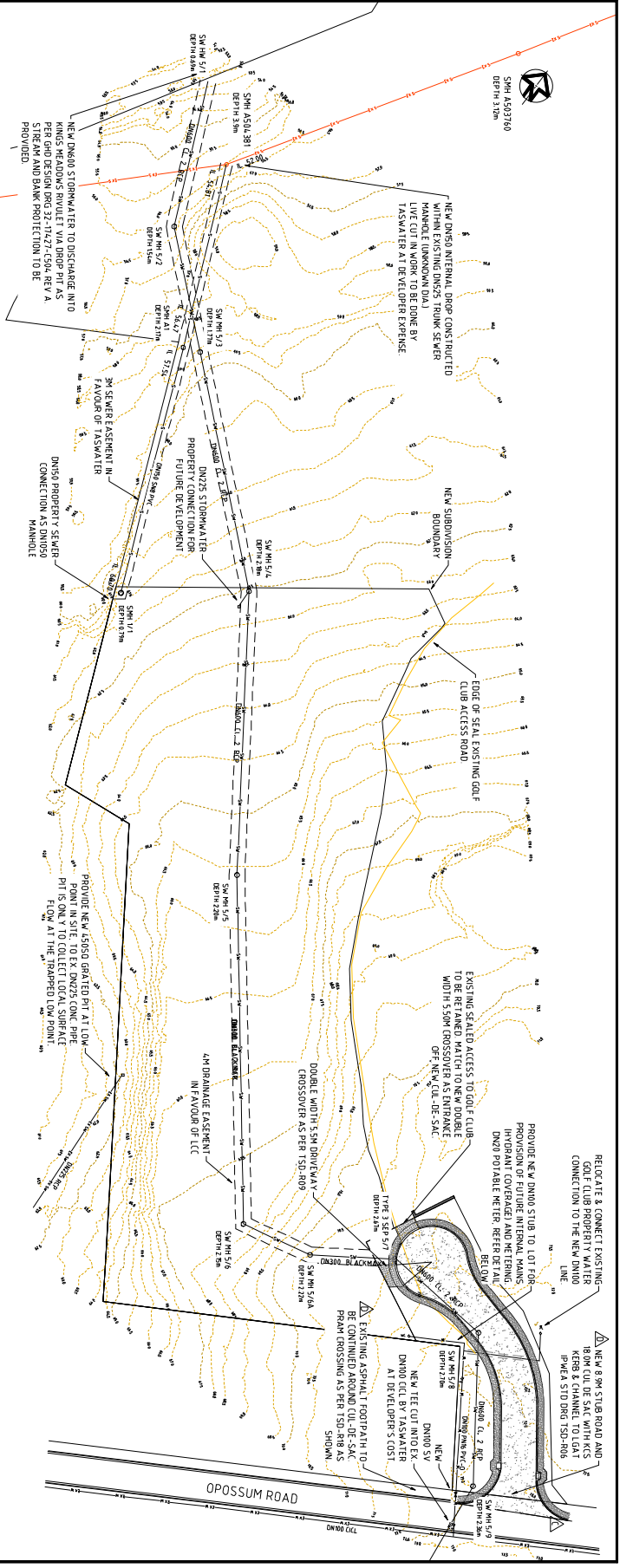
LAUNCESTON GOLF CLUB
STAGE 1 - PROPOSED 3 LOT SUBDIVISION
27-99 OPOSSUM RD, KINGS MEADOWS
C.T. 198059/1



WOOLCOTT SURVEYS
Drawn GM File name L191207-PROP LAYOUT1280121

10 Goodman Court, Invermay TAS 7248
PO Box 593 Mowbray Heights TAS 7248
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Email: office@woolcottsurveys.com.au

Job Number
L191207
Date 07/02/22
Scale 1:750@A3
Edition V03
Sheet 2/7



ROADWORKS AND STORMWATER DRAINAGE NOTES

NEW 800 VOLT ROAD LIGHT AND DRAINAGE COUPLER SHALL BE PROVIDED AT LOCATION OF PRESENT GOLF COURSE DRIVEWAY.

PROVIDE CEAN GUARD STORMWATER FILTER PIT INSERT FOR GROSS PROTECTIVE PURPOSES.

PROVIDE 500MM DEEP REINFORCED CONCRETE DRIVEWAYS TO THE NEW STAFF LANE ENTRANCE AND THE EXISTING GOLF COURSE ACCESS. PROVIDE 500MM DEEP ASPHALT DRIVEWAYS TO THE STAFF LANE TO MATCH THE EXISTING DRIVEWAY IN ACCORDANCE WITH TSD-2000-01.

DN200 STORMWATER PER MATERIAL CONNECTION.

DN200 500 PVC SWR FOR PROPERTY CONNECTION.

BACKCUT & RE-CLASS & RE-FINISH ALL ASSETS PRIVATE PROPERTY ROAD SERVICE DRAIN.

PROVIDE 500MM DEEP REINFORCED CONCRETE DRIVEWAYS TO THE NEW STAFF LANE ENTRANCE AND THE EXISTING GOLF COURSE ACCESS. PROVIDE 500MM DEEP ASPHALT DRIVEWAYS TO THE STAFF LANE TO MATCH THE EXISTING DRIVEWAY IN ACCORDANCE WITH TSD-2000-01.

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GENERAL NOTES

1. THIS DRAWING IS IN ACCORDANCE WITH THE STANDARD CODE OF AUSTRALIA 4531.2:2012 (AS/NZS 4531.2:2012) AND THE TASWATER CODE OF PRACTICE FOR THE DESIGN AND CONSTRUCTION OF STORMWATER SYSTEMS.

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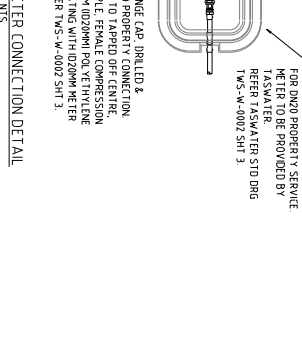
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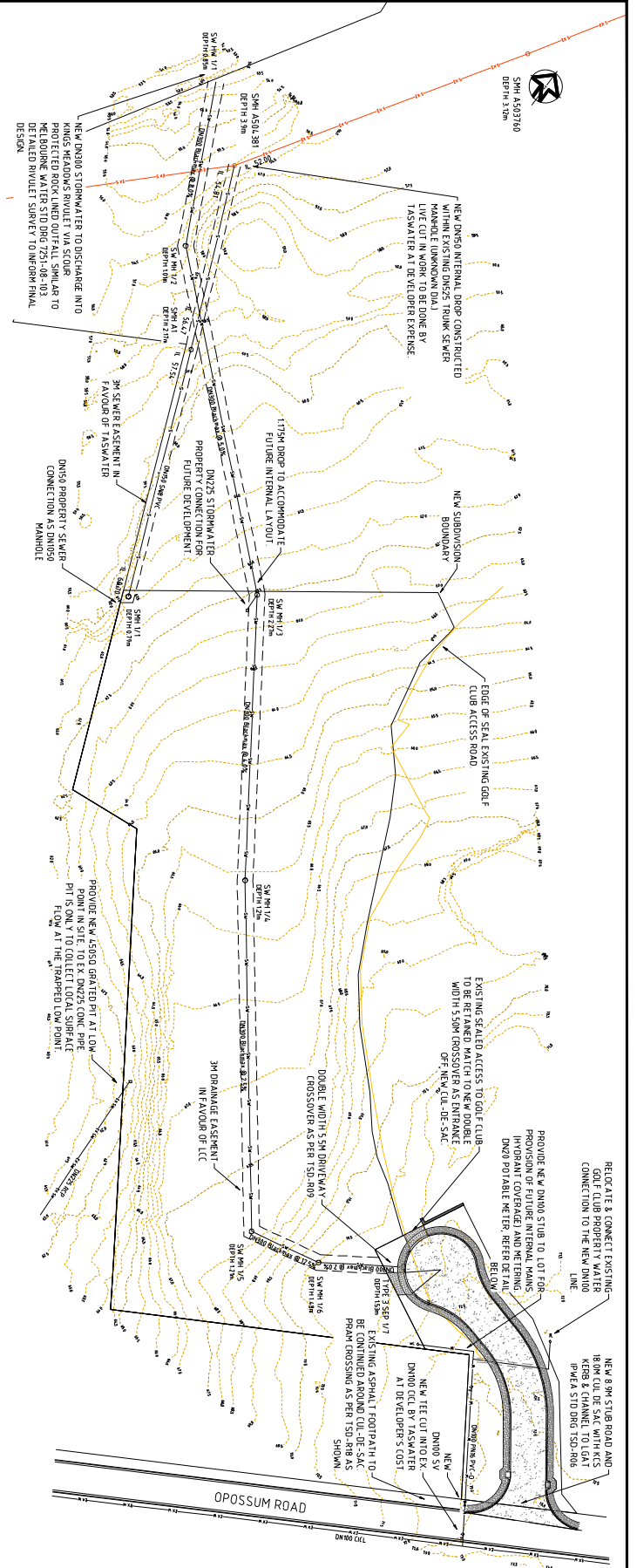
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NO.	REVISION	DATE	BY	CHECKED BY	DESCRIPTION
1	ISSUED FOR PRELIMINARY APPLICATION - LUL OF SITE REQUEST (NO. 101) OF DRAINAGE	04/04/2022	DA	CD	DAVID COOPER
2	ISSUED FOR DEVELOPMENT APPLICATION - LUL OF SITE REQUEST	23/03/2022	DA	CD	DAVID COOPER
3	ISSUED FOR DEVELOPMENT APPLICATION - LUL OF SITE REQUEST	23/03/2022	DA	CD	DAVID COOPER

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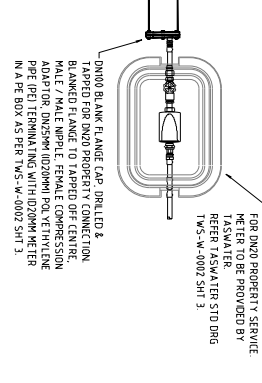
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3	ISSUED FOR DEVELOPMENT APPLICATION - LUL OF SITE REQUEST	23/03/2022	DA	CD	DAVID COOPER



- ### ROADWORKS AND STORMWATER DRAINAGE NOTES
1. NEW 800mm WIDE SETBACK ROADWAY AND DRAINAGE CUT DE-SALT AT LOCATION OF PRESENT GOLF COURSE DRIVEWAY.
 2. PROVIDE 'DE-FAN GARD' STORMWATER FILTER PIT INSERT FOR GROSS PRESSURE ROAD.
 3. PROVIDE 150mm WIDE REINFORCED CONCRETE DRIVEWAYS TO THE NEW START UP UNIT ENTRANCE AND THE EXISTING GOLF COURSE ACCESS.
 4. PROVIDE 150mm WIDE REINFORCED CONCRETE DRIVEWAYS TO JOIN TO AND MATCH THE EXISTING OPPOSSUM ROAD IN ACCORDANCE WITH TSD-300 DRAWINGS PER MATERIAL SPECIFICATION.
 5. DN200 SW PVC FOR PROPERTY CONNECTION.
 6. BACKCUT & RE-CLASS & RE-PAVE LIC ASSETS PRIVATE PROPERTY ROAD RESERVE DUAL.
 7. REFER TO DRG 3321-31-SK02 FOR DETAILS OF THE KINGS MEADOWS REFER TO DRG 3321-31-SK02 FOR DETAILS OF THE KINGS MEADOWS REFER TO DRG 3321-31-SK02 FOR DETAILS OF THE KINGS MEADOWS REFER TO DRG 3321-31-SK02 FOR DETAILS OF THE KINGS MEADOWS.

- ### GENERAL SEWER
1. REFER TO ACCORDANCE WITH THE STANDARD CODE OF AUSTRALIA WSA 02-2011:11:MMWA EDITION V12.0 AND THE TASWATER CODE OF PRACTICE.
 2. CONNECTION TO THE EXISTING SEWER MAIN TO BE CARRIED OUT BY THE EXISTING CONTRACTOR.
 3. NEW SEWER MAINS TO BE CONSTRUCTED IN ACCORDANCE WITH WSA 02-2011:11:MMWA EDITION V12.0 AND THE TASWATER CODE OF PRACTICE.
 4. PERMITS SHALL BE OBTAINED FROM THE APPROPRIATE AGENCIES PRIOR TO COMMENCEMENT OF WORKS.
 5. UNLESS EXPRESSED OTHERWISE, THE TRUNK DRAINAGE SYSTEM SHALL BE TYPE 'A' GRADED AS PER TABLE 1 FOR THE PROPOSED TRENCH/REPLENISHMENT SYSTEM TYPE 'A'.
 6. BEDDING SHALL BE AS PER TABLE 202-B ON STD DRG MMWA-5-202.
 7. ALL PRODUCTS USED MUST BE AS PER THE APPROVED PRODUCTS LIST.
 8. PROPOSED SW PVC CONNECTION FROM MANHOLE 1 TO THE PROPERTY SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSA 02-2011:11:MMWA EDITION V12.0 AND THE TASWATER CODE OF PRACTICE.

- ### GENERAL WATER
1. REFER TO ACCORDANCE WITH THE WATER SUPPLY CODE OF AUSTRALIA WSA 02-2011:31:MMWA EDITION V12.0 AND THE TASWATER CODE OF PRACTICE.
 2. CONNECTION TO THE EXISTING WATER MAIN TO BE CARRIED OUT BY THE EXISTING CONTRACTOR.
 3. CONTRACTOR TO PAY WATER METER TO TASWATER PRIOR TO COMMENCEMENT OF WORKS.
 4. PERMITS SHALL BE OBTAINED FROM THE APPROPRIATE AGENCIES PRIOR TO COMMENCEMENT OF WORKS.
 5. UNLESS EXPRESSED OTHERWISE, THE TRUNK DRAINAGE SYSTEM SHALL BE TYPE 'A' GRADED AS PER TABLE 1 FOR THE PROPOSED TRENCH/REPLENISHMENT SYSTEM TYPE 'A'.
 6. BEDDING SHALL BE AS PER TABLE 202-B ON STD DRG MMWA-5-202.
 7. ALL PRODUCTS USED MUST BE AS PER THE APPROVED PRODUCTS LIST.
 8. PROPOSED SW PVC CONNECTION FROM MANHOLE 1 TO THE PROPERTY SHALL BE CONSTRUCTED IN ACCORDANCE WITH WSA 02-2011:11:MMWA EDITION V12.0 AND THE TASWATER CODE OF PRACTICE.



1.1	EXISTING DEVELOPMENT PROJECTION	1:1	1:1	1:1	1:1
1.2	EXISTING	1:1	1:1	1:1	1:1
1.3	PROPOSED	1:1	1:1	1:1	1:1

DRAWING CHECK		DATE	
DATE	BY	DATE	BY
22/11/21	22/11/21	22/11/21	22/11/21

PROJECT	PROPOSED SUBDIVISION
CONCEPT SERVICES PLAN	ACCESS ROAD & CONCEPT SERVICES PLAN
PROPOSED DN300 STORMWATER	
STAGE 2, OPPOSSUM RD LOT	
27-99 OPPOSSUM ROAD	
KINGS MEADOWS, TAS 7249	

DATE	BY	DATE	BY
22/11/21	22/11/21	22/11/21	22/11/21

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27-99 OPPOSSUM ROAD	
KINGS MEADOWS, TAS 7249	



STORMWATER REPORT

Opossum Road, Kings Meadows DA0760/2021

March 2022

HYDRODYNAMICA
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Project: LGC Opossum Rd Kings Meadows
Stormwater Report

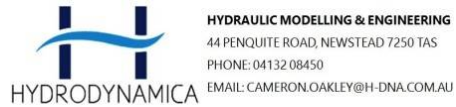
Author: Glenn Allen
Civil Engineer, BEng (Hons)
MIEAust 1140590
Building Services Provider No. CC7077
Engineer, unrestricted (civil, building services)



DATE	NATURE OF REVISION	REVISION NUMBER	PREPARED BY	APPROVED BY
31/03/2022	FINAL	0	Glenn Allen	Cameron Oakley

This document has been prepared in accordance with the scope of services agreed upon between Hydrodynamica (H-DNA) and the Client. To the best of H-DNA's understanding, this document represents the Client's intentions at the time of printing of the document. In preparing this document H-DNA has relied upon data, surveys, analysis, designs, plans and other information provided by the client, and other individuals and organisations referenced herein. Except as otherwise stated in this document, H-DNA has not verified the accuracy or completeness of such data, surveys, analysis, designs, plans and other information.

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1. STORMWATER OBJECTIVES

1.1 Scope of Document

This Stormwater Report is provided for the subdivision development at 27-99 Opossum Rd, Kings Meadows comprising a new kerbed and sealed access road and stormwater connection to the Kings Meadows Rivulet. The report has been prepared with reference to the City of Launceston RFI dated 7 January 2022, specifically Clause 9.6.3 of the Launceston Interim Planning Scheme 2015 (the Scheme).

Accordingly, this report covers management of stormwater rate of run-off and stormwater quality considerations. The Scheme refers to the State Policy for Water Quality Management 1997 for performance criteria for stormwater runoff and quality. This report will use the recommendations within the State Stormwater Strategy (SSS), with stormwater to be managed and treated at the source using best management design practices.

The design will apply the best practical measures within a limited available site area.

The report will:

- Compare the proposed engineered treatment measures against the unmitigated developed site condition to assess the effectiveness of runoff flow rate and pollutant reduction.

This report demonstrates the likely degree to which the proposed treatment measures and development layout will meet target pollutant and peak discharge reductions. The assessment will be based on the engineered treatment measures provided on site against the unmitigated development condition.

1.2 Reference Documents

- WSUD Engineering procedures for stormwater management in Tasmania, 2012
- Melbourne Water MUSIC Modelling Guidelines, 2016 and Sydney Metropolitan Catchment Management Authority 2015
- Subdivision proposal prepared by Woolcott Surveys, issue L191207 Sheet 2 Rev 3 dated 07/02/2022, and NTCADS lot servicing plans 332.31-SK02 Rev C and SK03 Rev A dated 23/03/2022.
- Australian Rainfall & Runoff 2019

1.3 Catchment Description

The pre-developed site is primarily grass with the Kings Meadows Rivulet passing along the northern boundary of the golf course, approx. 130m from the boundary of the proposed subdivision. The rivulet is vegetated within the channel but not beyond the top of bank into the lot. The subdivision site is approx. 14,700 sq.m, within the

total approx. 23,000sq.m catchment at the proposed point of discharge, as shown below in Figure 1.

Figure 1: Existing Site & Area of Development



The Kings Meadows Rivulet is highly modified in the vicinity of the proposed discharge point, effectively a formal grassed/unlined channel receiving runoff from the surrounding urban & commercial development. It is noted that a Landcare project has been established along the rivulet, with evidence of planting and bank stabilisation further along.

Figure 2 is a view looking downstream from the north west corner of the site, opposite the proposed discharge point.

Figure 2: Site Photo – Rivulet Bank



The proposed subdivision development comprises:

- 1,240sq.m of sealed & kerbed road, footpath and piped stormwater to the rivulet to City of Launceston standards, within a separate public road title of 1,844sq.m;
- 12,830sq.m of balance undisturbed site within the total catchment of 23,000sq.m.

The development will increase the proportion of impervious area associated with discharge to the rivulet, as it will collect runoff from the kerbed and sealed cul-de-sac. Discharge from the new impervious area will be piped to a new stormwater connection to the rivulet. A stormwater connection for the new lot will be provided on the new main at the lowest point on the boundary, for use in any future internal development of the lot. The public road will be provided with a drop in grated pit insert with 200 micron filter (EcoSol / Spelsack or similar) for gross pollutant removal.

There is an existing DN225 stormwater pipe at an internal low point in the proposed subdivision lot. This is to be retained as a local drainage point for the trapped low point at the rear of existing houses. No further discharge from the subdivided lot is directed to this point.

Lot servicing requirements are detailed on NTCADS drawing 332.32-SK02 Rev C and SK03 Rev A.

332.32-SK02 shows the proposed future layout of a DN600 flood mitigation line that may be incorporated into the subdivision, subject to CoL requirements.

332.32-SK03 shows the minimum stormwater servicing requirements for the new access road, lot connection and rivulet discharge.



2. STORMWATER DISCHARGE

2.1 Stormwater Discharge Point

Clause E9.6.1 defines the performance criteria which shall be met when considering development of the site and its impact on the watercourse.

E9.6.1 Development in the vicinity of a watercourses and wetlands	
Objective: To protect watercourses and wetlands from the effects of development and minimise the potential for water quality degradation.	
Acceptable Solutions	Performance Criteria
A1 No acceptable solutions.	P1 Development must not unreasonably impact the water quality of watercourses or wetlands, having regard to: (a) the topography of the site; (b) the potential for erosion; (c) the potential for siltation and sedimentation; (d) the risk of flood; (e) the impact of the removal of vegetation on hydrology; (f) the natural values of the vegetation and the land; (g) the scale of the development; (h) the method of works, including vegetation removal, and the machinery used; (i) any measures to mitigate impacts; (j) any remediation measures proposed; (k) any soil and water management plan; and (l) the requirements of the Department of Primary Industries, Parks, Water and Environment <i>Wetlands and Waterways Works Manual</i> .

The proposed development meets the criteria as follows:

- a) Topography: no change to the generally flat site layout, gradients of 2.5-5.0% are unchanged.
- b) Erosion: a new concentrated discharge point will be engineered to best practice standards (ref the Melbourne Water extract at Figure 3).
- c) Siltation: no disturbed surface will result from the final development, site sediment & erosion control will be implemented for construction. A gross pollutant trap is proposed for the side entry pit on the access road / turning head cul-de-sac.
- d) Flood risk: the new subdivision site level is some 8.5m above the rivulet. The catchment upstream and above Opossum Rd comprises approx. 6.45 hectares of the Carr Villa Cemetary. The proposed CoL flood mitigation project incorporating aDN600 stormwater main through the site is assumed to mitigate overland flows from this catchment. No adjustments to present overland flow paths are proposed with the subdivision.
- e) Vegetation removal: no vegetation within the watercourse of the banks is required to be removed.
- f) Natural values: the site is zoned Recreation as part of the existing golf course, and is within a fully developed urban setting. No disturbance to vegetation within the rivulet or the rivulet itself is required.



- g) Development scale: the proposed subdivision lot is approx. 3.4% of the total approx. 42.7 hectare title area, and is in keeping with the immediate adjacent use.
- h) Method of works: no vegetation is to be removed from the area excepting stripping of grass & topsoil under the road footprint.
- i) Impact mitigation: site sediment & erosion control measures will be applied during the construction.
- j) Remediation: not applicable.
- k) A site-specific soil and water management plan will be prepared for construction.
- l) Considered in the above and the design of the civil works.

Supporting information regarding the planning elements associated with the subdivision should be read from the Woolcott Surveys specific submission, this information is provided to generally respond to Clause E9.6.1.

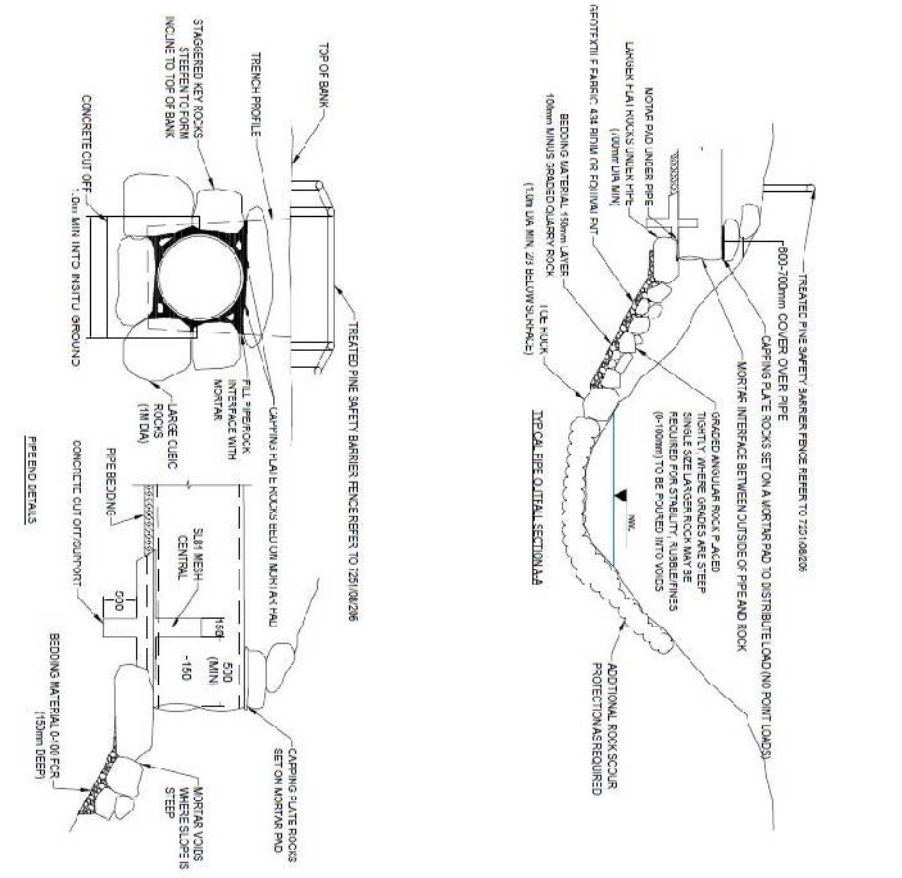
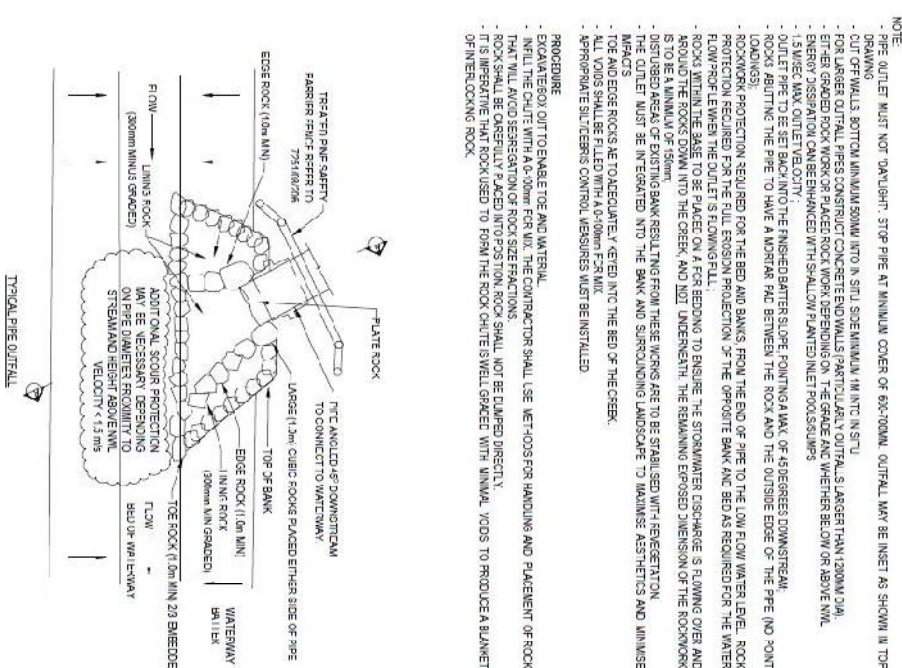
Figure 3 shows the typical headwall and apron structure proposed for discharge into the Kings Meadows Rivulet, reducing the scour potential at the bank. Additional placed rock rip rap may be warranted in maintaining the condition of the rivulet channel. Detailed design will be undertaken based on site survey.

The requirement under Clause E9.6.1 for the development minimise water quality degradation is therefore satisfied.

Clause E9.6.2 covers development within a watercourse or wetland, and for the reasons outlined in response to Clause E9.6.1 is not applicable to this development.

Figure 3: Proposed Rivulet Stormwater Connection (Typical)

- NOTE:
- PIPE OUTLET MUST NOT 'DARKEN'. STOP PIPE AT MINIMUM COVER OF 600-700MM. OUTFALL MAY BE INSET AS SHOWN IN TOP DRAWING.
 - CUT OFF WALLS BOTTOM MINIMUM 500MM INTO A SILT SIDE MINIMUM 1M INTO IN SILT.
 - FOR LARGER OUTFALL PIPES CONSTRUCT CONCRETE END WALLS PARTICULARLY OUTFALLS LARGER THAN 1200MM DIA.
 - EITHER GRADED ROCK WORK OR PLACED ROCK WORK DEPENDING ON THE GRADE AND WHETHER BELOW OR ABOVE WML.
 - ENERGY DISSIPATION CAN BE ENHANCED WITH SHALLOW PLANTED INLET POOLS/SLOPES.
 - OVERHEAD POWER CABLES TO BE PROTECTED BY A MINIMUM OF 300MM.
 - OVERHEAD POWER CABLES TO BE PROTECTED BY A MINIMUM OF 300MM.
 - OVERHEAD POWER CABLES TO BE PROTECTED BY A MINIMUM OF 300MM.
 - ROCKS ABOUTING THE PIPE TO HAVE A MORTAR PAD BETWEEN THE ROCK AND THE OUTSIDE EDGE OF THE PIPE (NO POINT LOADS).
 - ROCKWORK PROTECTION REQUIRED FOR THE BED AND BANKS FROM THE END OF PIPE TO THE LOW FLOW WATER LEVEL. ROCK PROTECTION REQUIRED FOR THE FULL EROSION PROJECTION OF THE OPPOSITE BANK AND BED AS REQUIRED FOR THE WATER FLOW PROFILE WHEN THE OUTLET IS FLOWING FULL.
 - ROCKS WITHIN THE BANK TO BE PLACED ON A FIRM BEDDING TO ENSURE THE STORMWATER DISCHARGE IS FLOWING OVER AND AROUND THE ROCKS DOWN INTO THE CREEK, AND NOT UNDERNTH. THE REMAINING EXPOSED DIMENSION OF THE ROCKWORK IS TO BE A MINIMUM OF 300MM.
 - THE OUTLET MUST BE IN 'ERATED' INTO THE BANK AND SURROUNDING LANDSCAPE TO MAXIMISE AESTHETICS AND MINIMISE IMPACTS.
 - TOE AND EDGE ROCKS ARE TO BE QUARTERLY 'KEYED' INTO THE BED OF THE CREEK.
 - ALL VOIDS SHALL BE FILLED WITH A 0-10MM FINE MIX.
 - APPROPRIATE SILT/SEDIMENT CONTROL MEASURES MUST BE INSTALLED.
- PROCEDURE
- EXCAVATION/OUT TO EXPOSE TOE AND WATER.
 - UNTIL THE OUTLET IS EXPOSED THE CONTRACTOR SHALL USE METHODS FOR HANDLING AND PLACEMENT OF ROCK.
 - ROCK SHALL BE OBSERVELY PLACED INTO POSITION. ROCK SHALL NOT BE CLIMBED DIRECTLY.
 - IT IS IMPERATIVE THAT ROCK USED TO FORM THE ROCK CHUTE IS WELL GRACED WITH MINIMAL VOIDS TO PRODUCE A BLANKET OF INTERLOCKING ROCK.





2.2 Stormwater Quantity

The CoL Further Information Request dated 07/01/2022 notes that a response to E9.6.3 P1 is required.

Clause E9.6.3 defines the performance criteria which shall be met when considering stormwater discharge from the site and its impact on the watercourse.

E9.6.3 Discharges to watercourses and wetlands

Objective:	
To manage discharges to watercourses and wetlands so as not unreasonably impact the water quality.	
Acceptable Solutions	Performance Criteria
A1	P1
All stormwater discharge must be:	Stormwater discharges must not unreasonably impact on the water quality of watercourses or wetlands, having regard to:
(a) connected to the public stormwater system; or	(a) the characteristics, volume and flow rates of the discharge;
(b) diverted to an on-site system that contains stormwater within the site.	(b) the characteristics of the receiving waters;
	(c) the potential for erosion;
	(d) the potential for siltation and sedimentation;
	(e) the impact on hydrology;
	(f) any measures to mitigate impacts; and
	(g) any soil and water management plan.

For Performance Criteria P1(a):

The subdivision increases the impervious fraction of the site as a result of the new public road cul-de-sac, hence the peak discharge will increase. The increase in impervious area is small in comparison with the catchment, but the piped discharge of the impervious area means all shorter duration events will see an increase.

Analysis of the subdivision site and total catchment to the point of discharge at the rivulet has been done using Australian Rainfall & Runoff 2019 methodologies. Pre-developed site runoff parameters are taken from the ARR data hub for the Tamar River Region (initial loss 18mm/hr, continuing loss 5mm/hr, reduced to 8mm/hr and 3.5mm/hr respectively for the urban pervious condition). Design rainfall values are obtained from the Bureau of Meteorology.

For the range of storm durations it can be seen that the short duration events for the developed AEP 5% and AEP 1% bursts have a numerical increase of approx 20 litres/sec, reducing to an increase of approx 5-10% for the critical duration peak events. These results are plotted as burst ensemble charts and tabulated below.

The rivulet capacity to manage the increased run off is approximately equal to an increase in water level in the vicinity of the discharge connection of 10-20mm (50-100 litres/sec in the flat trapezoidal channel, see Figure 2).

Figure 4: AEP 5% Pre-Developed Discharge

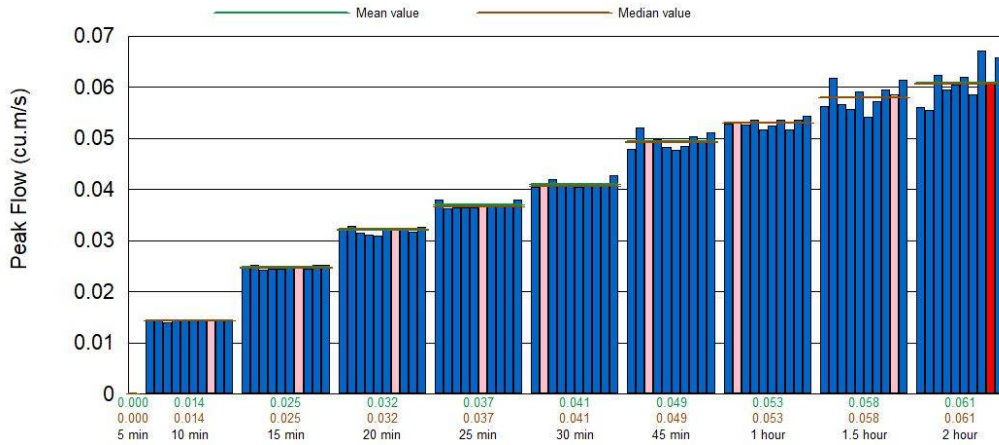


Figure 5: AEP 5% Post-Developed Discharge

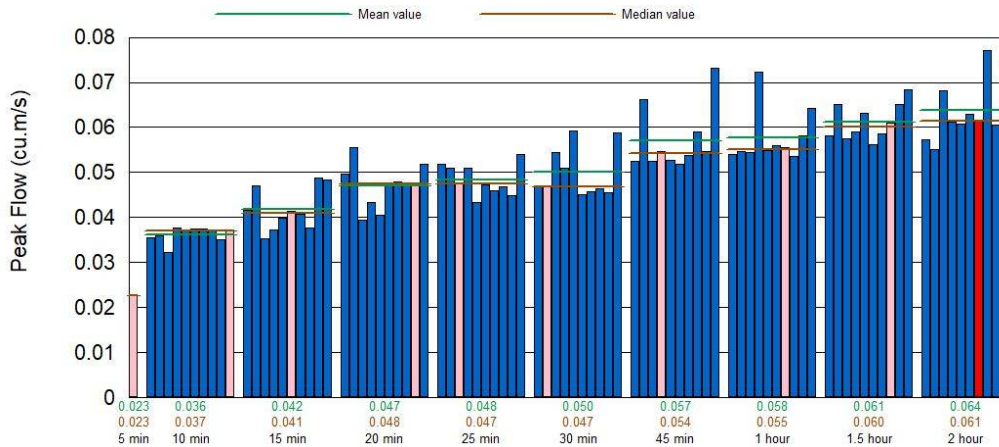


Figure 6: AEP 1% Pre-Developed Discharge

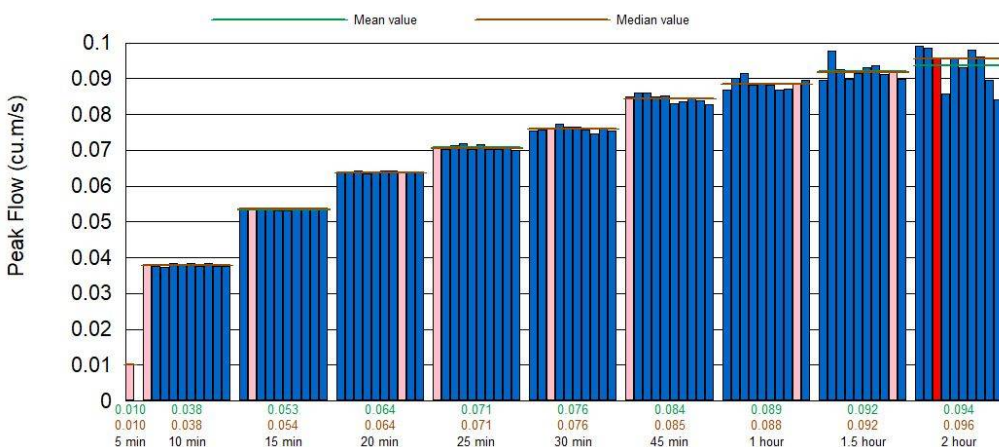




Figure 7: AEP 1% Post-Developed Discharge

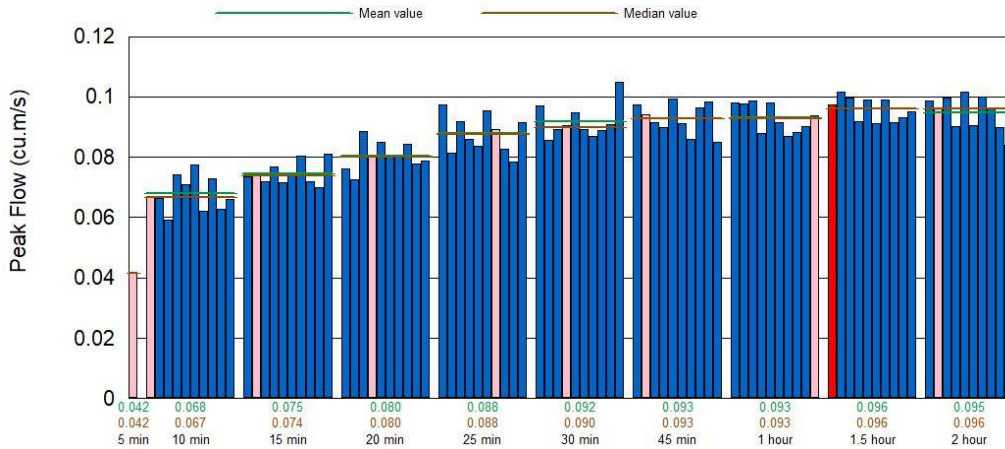


Table 1: Summary of Pre- and Post-Developed Discharges

T (min)	5% AEP Discharge			1% AEP Discharge		
	Pre-dev	Post-dev	% increase	Pre-dev	Post-dev	% increase
5	0	23		10	42	320%
10	14	36	157%	38	68	79%
15	25	42	68%	53	75	42%
20	32	47	47%	64	80	25%
25	37	48	30%	71	88	24%
30	41	50	22%	76	92	21%
45	49	57	16%	84	93	11%
60	53	58	9%	89	93	4%
90	58	61	5%	92	96	4%
120	61	64	5%	94	95	1%

No detention is proposed for the discharge of runoff from the cul-de-sac, as the overall increases are a small proportion of catchment presently passing to the rivulet.

For Performance Criteria P1(b):

Reference is made to the adjacent developed catchments which discharge directly into the rivulet. The immediate impervious areas consist of large sealed carpark areas surrounding fully developed commercial premises associated with the Kings Meadows shopping precinct. The current rivulet may be characterised as highly modified and impacted, notwithstanding the Landcare project which is establishing stream vegetation to improve water quality.

The provision of a gross pollutant trap insert for the new cul-de-sac side entry pit will reduce the impact of this development on the rivulet.

Any future development of the subdivided site will be responsible for meeting the requirements of the planning scheme with regard to these clauses.

Figure 8: Adjacent Catchment Rivulet Discharge



The remaining criteria noted in Clause E9.6.3 P1 are addressed previously in Section 2.1.

The requirement under Clause E9.6.3 for the development to not unreasonably impact water quality is therefore satisfied.



2.3 Stormwater Quality

Target pollutant reductions are noted in the SSS, reproduced below:

Figure 9: Acceptable Stormwater Quality and Quantity Targets

Operational stage

New developments should be designed to minimise impacts on stormwater quality and, where necessary, downstream flooding or flow regimes. Stormwater should be managed and treated at source using best management design practices (eg Water Sensitive Urban Design) to achieve the following stormwater management targets:

- ▶ 80 per cent reduction in the annual average load of total suspended solids
- ▶ 45 per cent reduction in the annual average load of total phosphorus
- ▶ 45 per cent reduction in the annual average load of total nitrogen

Analysis using MUSIC version 6.3 will compare the treatment train effectiveness of the proposed development, considering the new sealed surface and the impact on discharge rate and quality.

2.4 Music Modelling

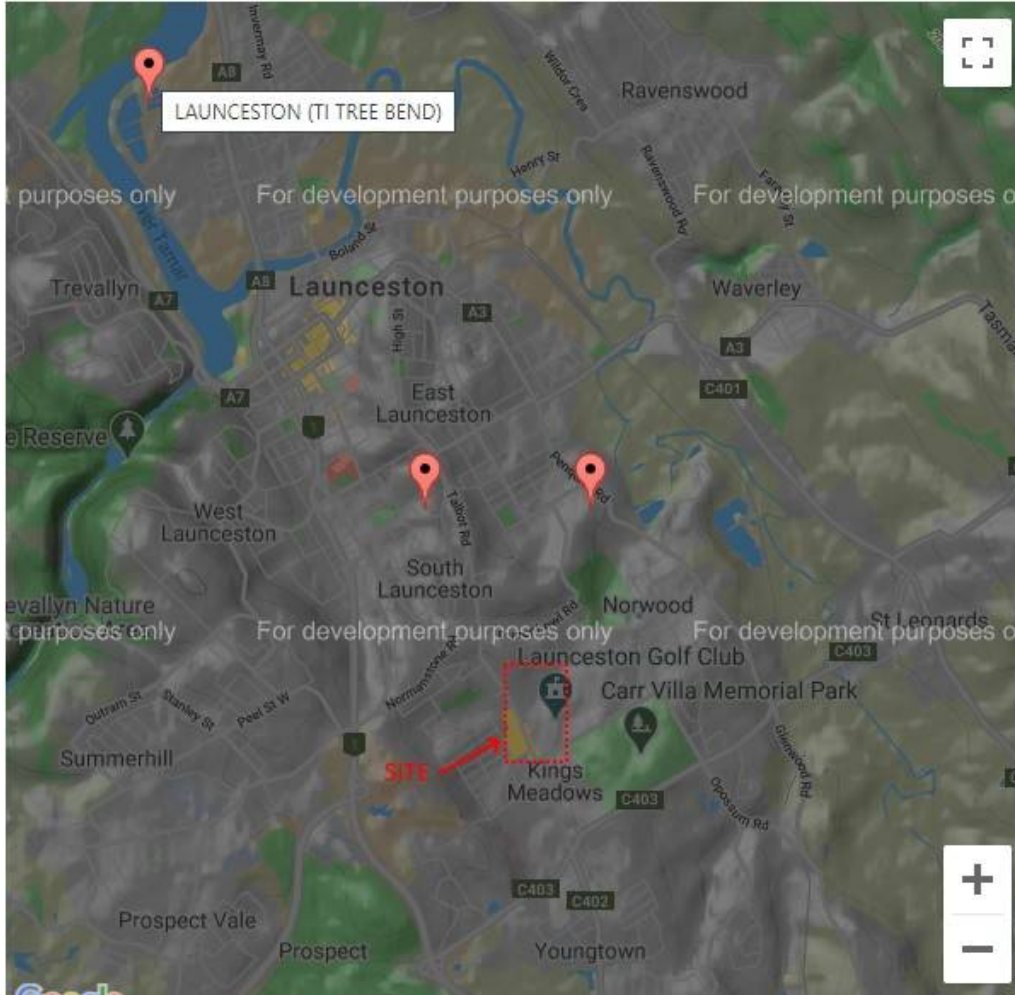
The MUSIC Model Version 6.3 was used to determine the pollutant load resulting from the development and the treatment effectiveness of the elements. The treatment train consists of:

- A grated pit gross pollutant trap with 200um liner (SPEL Stormsack, Ocean Guard or similar) to intercept runoff from the cul-de-sac.

2.5 Meteorological Data

The model was run using daily Bureau of Meteorology 6 minute pluviograph data and monthly areal PET values from the Ti Tree Bend Launceston 91237 station. The 20 year data period from 1990– 2010 was used for continuous modelling. The stations closer to the site did not have a suitable rainfall record.

Figure 10: Meteorological Station



2.6 Pollutant Input Parameters

Pollution generation node parameters were modelled in accordance with the Melbourne Water Guidelines 2016. The stochastic generation option has been used. The urban pollutant generation parameters below for Roof, Road & Paved and Urban Areas (Mixed) have been used.



Table 2: Source Nodes: Base and Storm Flow

Pollutant	Surface Type	Storm Flow		Base Flow	
		Mean (log mg/L)	SD (log mg/L)	Mean (log mg/L)	SD (log mg/L)
SS	Roof	1.301	0.333	n/a*	n/a
	Road and paved areas	2.431	0.333	n/a	n/a
	Urban area not covered by roof, road or paved areas	1.900	0.333	0.96	0.401
TP	Roof	-0.886	0.242	n/a	n/a
	Road and paved areas	-0.301	0.242	n/a	n/a
	Urban area not covered by roof, road or paved areas	-0.700	0.242	-0.731	0.360
TN	Roof	0.301	0.205	n/a	n/a
	Road and paved areas	0.342	0.205	n/a	n/a
	Urban area not covered by roof, road or paved areas	0.243	0.182	0.455	0.363

Table 2 - Pollutant concentration data for source nodes. * n/a indicates that base flow does not occur from these surfaces. (Source: Fletcher, 2007. Background Study for the revision of Melbourne Water’s MUSIC Input Parameter Guidelines. Not published)

2.7 Pervious Areas

Pre- and post-developed pervious surface parameters have been taken as the clay loam equivalent (Table 5.5 of the NSW Music Modelling Guidelines 2015 for soil storage and field capacity), based on a conservative approach for typically poorly draining soils in Tasmania, with a root zone of 0.5m.



Table 5-5 Pervious Area Rainfall-Runoff Parameters*
(Macleod, 2008)

Soil Texture	SSC (mm)	FC (mm)	Inf "a" (mm/d)	Inf "b"	DRR (%)	DBR (%)	DDSR (%)
Sand	175	74	360	0.5	100%	50%	0%
Loamy sand	139	69	360	0.5	100%	50%	0%
Clayey sand	107	75	250	1.3	60%	45%	0%
Sandy loam	98	70	250	1.3	60%	45%	0%
Loam	97	79	250	1.3	60%	45%	0%
Silty clay loam	100	87	250	1.3	60%	45%	0%
Sandy clay loam	108	73	250	1.3	60%	45%	0%
Clay loam	119	99	180	3.0	25%	25%	0%
Clay loam	133	89	180	3.0	25%	25%	0%
Silty clay loam	88	70	180	3.0	25%	25%	0%
Sandy clay	142	94	180	3.0	25%	25%	0%
Silty clay	54	51	180	3.0	25%	25%	0%
Light clay	98	73	135	4.0	10%	10%	0%
Light-medium	90	67	135	4.0	10%	10%	0%
Medium clay	94	70	135	4.0	10%	10%	0%
Medium-heavy	94	70	135	4.0	10%	10%	0%
Heavy clays	90	58	135	4.0	10%	10%	0%

2.8 Source and Treatment Node Modelling

Mean annual pollutant loads for the proposed development have been determined by running the model over the nominated timestep and rainfall interval period. The pollutant removal parameters adopted for the side entry pit are values provided by SPEL, and reflect accepted values as used by many Councils on the mainland. Minimal nutrient removal is applied, and is associated with recognised reductions in >200 micron particles.

Figure 11: MUSIC Model Setup – Post-development



The analysis results in the following mean average annual pollutant reduction for the proposed treatment train:

Figure 12: Post-development Treatment Train Effectiveness

	Sources	Residual Load	% Reduction
Flow (ML/yr)	2.65	2.65	0
Total Suspended Solids (kg/yr)	330	138	58.3
Total Phosphorus (kg/yr)	0.88	0.768	12.8
Total Nitrogen (kg/yr)	8.12	7.79	4.1
Gross Pollutants (kg/yr)	23.8	0.008	100

The reduction in nutrients is short of the recommended targets as expected through the pit GPT. Application of tertiary treatment (biofilter or proprietary filters) is not considered appropriate for a single roadside discharge point, as it is more efficiently and effectively applied as an end of line installation associated with the rivulet itself. Any future development within the subdivided lot must provide its own treatment for discharge.



Traffic Impact Assessment (TIA)

**Launceston Golf Club
27-99 Opossum Road, Kings Meadows**

Proposed 3-lot Subdivision Development

Dec 2021

Revision B

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



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Status Rev	Date	Author	Revision Details
A	3/12/2021	AH	TIA Draft for Comment
B	12/12/2021	AH	TIA Draft – Revised layout & details

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



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TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



1. Introduction

This report is provided as a Traffic Impact Assessment (TIA) relating to a proposed 3 lot subdivision development on land owned by and adjacent to the main entry of the Launceston Golf Club on Opossum Road, Kings Meadows.

The proposal is to utilize the existing golf club access point location on Opossum Road, which will be upgraded to create a new council road including cul-de-sac turning area and providing access to the Golf Clubrooms site via existing driveway entry and separately to the new lot. The new lot has future residential subdivision potential, and traffic generation and review has been completed on potential capacity for such development.

The general site location is as per Fig 1.1, and the proposed new arrangement is shown in APPENDIX A – PROPOSED SITE LAYOUT PLAN

1.1 Background & Project Scope

The creation of a new road and cul-de-sac may generate additional traffic, particularly if future residential development occurs on the subject site (new lot), which suggests that a TIA would be required to be undertaken to assess possible traffic impacts and identify any issues arising, and provide comment with reference to local Planning Scheme requirements.

This report addresses traffic related aspects where applicable and attempts to identify and comment on any potential impacts affecting, or arising from, the development and from possible future residential development. The author has been briefed of various future development opportunities and been provided with concept plans for possible future residential development for the purpose of preparing this assessment, however, it is noted that future residential development is not a part of this application which is for a 3 lot subdivision only at this time.

This report is prepared by Andrew Howell, a senior engineer with 20 years experience in development and municipal engineering, traffic and transport systems, and civil design. Andrew holds a Bachelor of Engineering (Honours) degree and a Master of Engineering Science with specializations in transport systems and management.

1.2 Objectives

The key objectives of this report are:

- Review of the existing road physical characteristics and arrangements in the vicinity of the site.
- Review of existing traffic conditions.
- Describe the development with regards to arrangements for access, including any implications for traffic efficiency, safety, and service.

1.3 Subject Site Location

The subject site of the new lot considered in this TIA is located at the western end of the Launceston Golf course, a site noted as 27-99 OPOSSUM ROAD, which is a link road between Kings Meadows and the Punchbowl/Norwood area.

Opossum Road carries around 3200 VPD on City of Launceston (CoL) council estimation, which is mostly through traffic to the EAST of the current access, with the Golf Club to the North and the Carr Villa Cemetery to the South meaning there are few turning traffic movements in this zone of golf club frontage. Residential development and several side streets off Opossum Road are found to the WEST of the current access to the golf club (Bavaria, Kanara and McHugh Streets), back to the main local collector HOBART ROAD.

The subject site itself is part of the current Launceston Golf Course, which abuts on external sides residential development in several areas, including the adjacent boundaries to the proposed new lot to the West and South. This area is similar in nature to much of the Norwood and Kings Meadows residential areas nearby in terms of lot size and density. Future residential development is likely to be similar.

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Existing access to the majority of the subject site is off the current Opossum Road main entry to the golf course proper. An upgraded access to any residential development for the subject site would be required, and the proposal to upgrade the golf course entry to a Council urban road standard with suitable turning facilities appears a logical and appropriate site access arrangement for such future development.



Fig 1.1 – Locality Plan

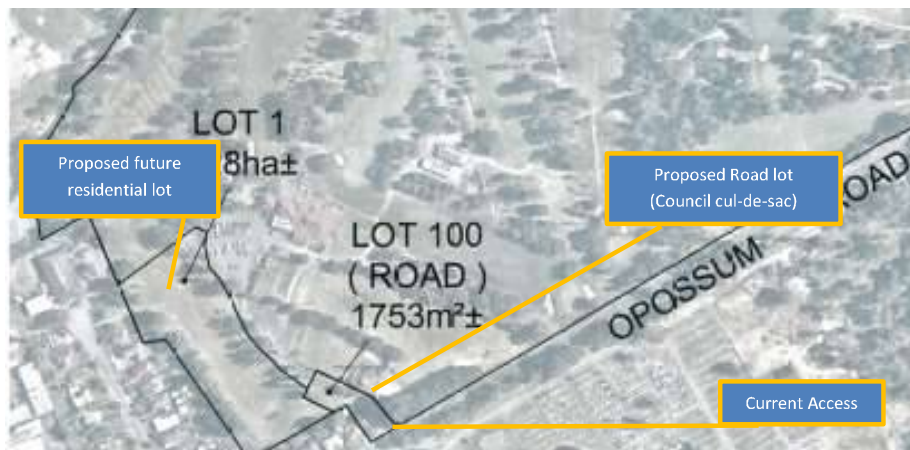


Fig 1.2 – Site Layout, Subdivision plan (extracted)

1.4 Information Sources & References

The author has been provided with relevant information from the proponent, including preliminary plans being prepared for development application. These details provide an outline of the proposed

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works and indicate that generally the development proposes limited change to the existing Opossum Road itself other than consideration of an upgraded junction arrangement at the current golf club access point.

The author has reviewed publicly available information including www.THELIST.tas.gov.au and other online mapping tools to ascertain any obvious issues relating to the development and has undertaken several inspections (at different periods of the day) to review site specifics and existing traffic arrangements.

Traffic data from the City of Launceston (CoL) has provided indicative vehicle movements, with notes provided in Section 5.

The report has utilized the DIER (now Department of State Growth / DSG) document "Traffic Impact Assessment (TIA) Guidelines" in the preparation of this report.

Further referenced documents include:

- DSG Tasmanian State Road Hierarchy
- LGAT Local Government Road Hierarchy 2015
- RTA Guide to Traffic Generating Developments
- Launceston Interim Planning Scheme 2015
- Specifically, E4 Road and Rail Assets Code & E6 Parking Code
- AUSTRROADS Publications (various)

1.5 Planning Scheme Aspects (CoL)

The Planning scheme applicable is the Launceston Interim Planning Scheme 2015.

The current zoning for the land and surrounding area is advised as **18.0 Recreation**.

It is understood a rezoning is being requested for the subject site, to change the possible residential area of land (new lot proposed) to **10.0 General Residential**, similar to other adjoining land abutting the golf course site to the West and South, including the subject area. The Road and Rail Assets Code (E4) from the planning scheme applies.

2. Existing Conditions

2.1 Transport Network

Opossum Road is a City of Launceston (CoL) street, and likely carries mainly residential traffic, being part of links between higher-priority Hobart Road and Norwood Avenue as the nearby main collector roads for the Norwood area and with link back to King Meadows precinct. The nearby and parallel Quarantine Road to the South is a noted heavy vehicle route providing similar directional service, and on this basis Opossum Road probably carries relatively few heavy vehicles by comparison.

Based on current function the road is likely considered a 2.0 COLLECTOR or 3.0 LINK Road under the Local Government Road Hierarchy 2015. No changes in function or capacity would be expected by future residential development accessing the road at this point.

Council estimates 3200 VPD are using this road.

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The speed limit for Opossum Road is signposted as 60km/hr, and it could reasonably be anticipated that 85th percentile vehicle speeds are probably similar based on observation.

2.2 Road Conditions & Road Safety Performance

Opossum Road appears to operate satisfactorily from inspection, with three local side streets to the West of current LGC access providing some ability to review how road junctions in this link operate, along with the existing golf course entry providing insight into current operations for the golf club traffic.

It is suggested on review of current arrangements on Opossum Road that an upgrade of the access road to make the golf course entry a new Council junction and cul-de-sac could likely operate satisfactorily, based on the similar arrangement for streets like McHugh Street, which has approx. 22 residences and the busy DHHS public health facility operating from this street.

On this basis and following site inspections, a new cul-de-sac to service a possible new residential development appears generally reasonable, considering these similar cul-de-sacs in the nearby zone and the character of surrounding residential area generally. Suitable road layout and appropriate sight distances for a new junction appear able to be maintained based on the current proposed layout (with some geometry and minimum width suggestions noted below to consider).

A new junction for the access to the golf club, upgraded at the existing location, may require consideration of specific turn treatment based on the 3200 VPD and turning vehicles likely anticipated. Further discussion follows.

A new council road carriageway and cul-de-sac, would need to be constructed to the LGAT-IPWEA standards for residential streets, which is believed can achieve the requirements from *TSD-R06-v3 TABLE 1*, which notes a cul-de-sac serving greater than 15 lots and up to 150m approx. length should have minimum road width of 8.9m, minimum reservation width of 18m, and footpath one side. *REFER APPENDIX C – LGAT IPWEA MSD KEY INFORMATION.*

Based on the relatively modest traffic numbers likely generated by a possible new residential development (approx. 161 VPD, at 7 VPD per dwelling based on some typical lot sizes available for the subject site) this volume of traffic would have likely little impact on nearby road network and is thus not considered material in the context of wider network volumes. This assessment is based on author's experience with vehicle movements in the area, and consideration of likely peak hour volumes expected from a new possible residential development at densities which might be proposed, combined with existing golf club traffic, noting golf club traffic does not typically match to normal peak hour traffic times.

Existing site photos:

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Fig 2.2a – Existing Golf Club Access from Opossum Road – Looking SOUTH from inside subject site. Gates to be removed, and access widened, likely to the EAST



Fig 2.2b – Existing sight distance from Access on Opossum Road – Looking WEST



Fig 2.2b – Existing sight distance from Access on Opossum Road – Looking EAST

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As the proposed new access junction for the site is already in general operation (as the golf club entry) there appears limited issue with sight distance existing – noting that based on final location/alignment of the junction lanes with respect to vertical grades to the WEST the new junction SISD will need to be confirmed by design verification, to ensure SISD is maintained.

There is limited horizontal curvature for the existing Opossum Road alignment, and safe intersection sight distance is not considered a major issue for concern, being currently in excess of 170m in each direction for traffic at the golf club entrance looking to East or West

It is noted that due to the vertical curvature there is potential for some obscuring of main road traffic approaching from either direction to see oncoming vehicles, mainly for a right turning vehicle to be seen or see an oncoming vehicle travelling from the West to East, and vice-versa. This is due to the crest at the LGC entry, and the dip in the road to the West combining. However, a site-specific assessment notes that a minimum of 105m of sight distance exists at all stages through the travel zones in each direction, and thus SISD exists in accordance with requirements. Further discussion around turn treatments, and suggestion of BAR for West-bound vehicles turning into the LGC with an upgrade to this junction, would further enhance safety at this location also, but it not strictly required.

The new (and existing) junction can thus likely achieve satisfactory sight distance with respect to requirements from Planning Scheme Code E4 for SISD, exceeding the minimum 105m SISD requirements of the code for vehicle speeds of 60 km/hr in speed zones up to and including 60km/hr (Table E4.6.4).

Based on the relatively modest additional traffic numbers likely generated by a possible new residential development, capacity of the junction is not considered a significant issue. Turn treatment options are considered further below to provide additional safety and efficiency options.

3. Proposed Development

3.1 Site Development

The development proposes a 3-lot subdivision. Of this, one lot will be suitable for future residential development, one lot for the road (cul-de-sac to service to two lots), and the balance lot will be the existing golf course.

The new road lot (cul-de-sac) from Opossum Road into the site to service access for the existing Golf Club facility, and the new residential lot, is proposed, with a cul-de-sac turning head and would require a new upgraded junction with Opossum Road.

3.2 Traffic Generation & Distribution

It is noted that the development as proposed (3-lot subdivision) is likely to see a small overall increase in vehicle movements to the area, however the capacity for future development for residential dwellings could see approximately 161 VPD likely generated from a future dwelling development based on assumed lot yields likely suggested from planning requirements (such future development not part of this application). The *RTA Guide to Traffic Generating Developments* notes *weekday peak hour vehicle trips = 0.85 per dwelling*, or 20 VPD for such new dwellings. This may be conservative.

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Current arrangements and traffic volumes at the existing golf club entry appear to operate satisfactorily with no specific issues identified through crash history or anecdotal information provided by the golf club operators. Currently there appears spaces for up to around 90 vehicles at the golf club itself in formal parking, however based on the nature of play, group functions and club services, the spread of arrivals over longer periods, and the duration of a typical golf club stay means that actual peak hour rates for the existing site itself are probably quite modest – assumed around 20-25 vehicles per hour typically at peak, and 160 VPD. *Note peak hour for the club may not typically coincide with broader network peak hour being a recreational facility.*

Distribution for the site generally is likely to see vehicle movements entering and exiting the site either from the Norwood Avenue end to the EAST, or from the Kings Meadows end from the WEST. Based on a suggested split of vehicles considering the nearby centre of Kings Meadows being locally convenient with various services, it may be that the split could be considered to be 55% from the WEST and 45% coming from Norwood Avenue. Exiting traffic could be considered similarly perhaps, although exiting traffic may prefer left turn option, and flows may be more balanced in this regard.

The Golf club site has historically noted peak hour flows to site that do not often correlate to general peak hour traffic on council roads, due to the nature and timing of visitation, as a recreational destination.

As noted, the relatively modest number of additional vehicles using the site, especially on peak hour basis, means that off-site impacts are not considered further by this report.

4. Traffic Impacts

4.1 Access & Road Asset Construction

Based on site inspection, it is likely that the new road and junction construction for the proposal can be managed through the Council engineering design process to meet the requirements of the IPWEA/LGAT and AUSTROADS standards. Existing site conditions including levels, drainage, minor earthworks, appropriate sight distances, etc. all appear to be generally feasible for such design to occur. Engineering design approval by CoL will be required for road and access designs as developed.

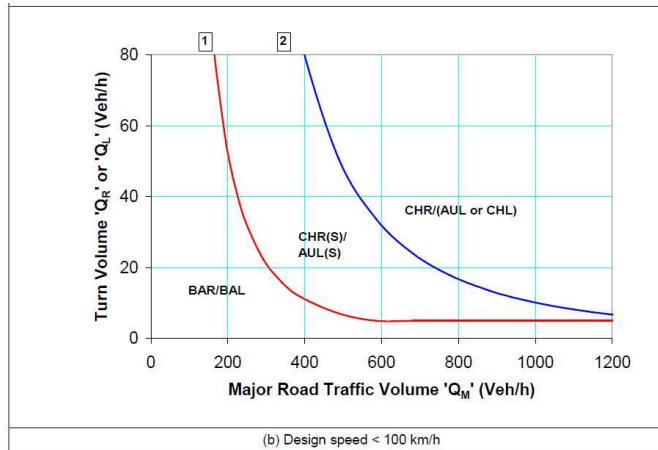
It is noted that potential for turn treatment at the site should be considered, based on possible future peak hour traffic volumes from the site and on Opossum Road (Main Road flow of 3200 VPD at current figures, assumed peak @10% = 320 VPH. 10 Year growth @1.5% might suggest 365 VPH and 3660 VPD)

Turning traffic for peak hour flows for the subdivision development at around 20 VPD at future development levels, plus some contribution from the existing golf club (not necessarily at recreational facility peak hour), say 15 VPH = 35 VPH, thus with $Q_R = 16$ VPH and $Q_L = 19$ VPH for QM of 365 VPH (10 yr projection), this provides some consideration of turn treatment requirement for the upgraded junction.

On this basis, with reference to Fig 4.9 below, it is suggested that turn treatment could be considered to cater for future development potential, with a suggested option for this specific site being provision for BAR road widening to accommodate right turn vehicles approaching from the EAST. The assessment notes some conservatism and that long term traffic projections for increase may or may

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not be realized but this treatment enhances safety for right turning vehicles including under current conditions.



Source: Arndt and Troutbeck (2006).

Figure 4.9: Warrants for turn treatments on the major road at unsignalised intersections

The provision allowing road widening for an upgraded junction to provide BAL or BAR options does not preclude future options for example CHR(s) solution etc. but based on current traffic numbers and existing successful road junctions for local streets similarly arranged with no turn treatments in place, CHR treatments would seem unwarranted at this time

The turning vehicle numbers for this site in a low-speed environment (60km/hr) could warrant protection for propping right turning vehicles entering the site (hence BAR) despite relatively low turning vehicle numbers, to allow safe crossing manoeuvres due to the higher main flow figures.

However, there is consideration of ample sight distance for main flow vehicles from the WEST following a left turning vehicle entering the site, to safely identify such left turning vehicles in adequate time to brake with limited impact on efficiency, and on this basis a BAL is not necessarily considered warranted at this time on the low turning vehicle numbers predicted at peak times.

New Council Cul-de-Sac:

The proposal to construct a short cul-de-sac to enter the site appears logical and appropriate to cater for potential future development opportunities. The layout as proposed, subject to final council engineering design approval, appears able to accommodate a suitable turning facility at the termination to allow turning traffic and provide separation to both the Golf Club access driveway, and the new subdivision development entry. Some widening to the access junction is likely required, which would likely need to occur towards the EAST, and this appears able to be achieved with some tree/fence removal.

Two items are noted for consideration/inclusion on this proposal to meet relevant standards:



- (1) The turning head, upgraded junction and general road construction must be to LGAT-IPWEA construction standards – refer *APPENDIX C*. Minimum turning radius of 18m appears possible for the location shown.
- (2) The existing layout arrangement as detailed shows a narrowing of the proposed access road reserve near to the rear corner of 25 Opossum Road. Whilst a minimum 15m road reserve width could possibly be practically workable (considering service locations carefully, TBC), the IPWEA-LGAT standards (*APPENDIX C*) require minimum road reservation width of 18m for a cul-de-sac with more than 15 equivalent tenements served (possible future dwelling/tenements of 20-25 based on minimum lot size appears possible on the subject site). Informal discussions with Council suggest this would be the minimum width required for a road reserve on this location.

4.2 Surrounding Road Network Impacts

Whilst assessment of additional road network parameters beyond the new access arrangements are outside the formal remit of this report, it is believed that the relatively modest additional traffic volumes attributable to the new development in the scheme of the surrounding network capacity, would mean off-site impacts arising from this development should not materially affect the wider road network.

CODE E6 REQUIREMENT E6.5.1 COMPLIES WITH A1

Significant parking exists at the golf club site for the club facilities, with no changes proposed or considered required for the existing club arrangements.

4.3 Sight Distances

Clause E4.7.4 of the Planning Scheme notes that sight distance for Acceptable Solution A1 must comply with Safe Intersection Sight Distance (SISD) from table E4.6.4. One new junction (upgraded) is being created with Opossum Road, with a speed limit of 60km/hr (60km/hr or less from E4.7.4) and an assumed vehicle speed of 60km/hr this SISD is 105 metres.

This distance is able to be achieved based on the likely arrangement as proposed, with in excess of 170m of sight distance currently existing at the access looking to the West and also the East, and for through traffic sight distance for turning and following traffic, a minimum 105m sight distance exists throughout. On this basis, ACCEPTABLE SOLUTION A1 is met.

Based on above analysis, E4.6.4 is met by A1.

4.5 Road Safety & Traffic Service

Due to the sight distances with regard to Planning Scheme Acceptable Solution A1 being met, and new accesses meeting IPWEA/LGAT and AUSTRROADS Standards through design and construction, road safety appears to not be compromised by the development works proposed. A final check should be made on sight distance as part of design works for the new junctions, to ensure that no level changes are made to impact on sight distance through design or construction phase.



Traffic service for the proposed development appears adequately provided with the existing infrastructure (capacity, turning gaps, etc.), based on the proposed and current traffic volumes suggested for the site and on observation of existing conditions, for both existing and new development traffic (refer Sect 2.2). The creation (formalization) of a BAR turning treatment for westbound turning traffic into the site will further assist to manage turning movements efficiently and improve safety.

4.6 Pedestrian and Cyclist impacts

Currently there is a dedicated pedestrian footpath on the Northern side of Opossum Road. A footpath should be maintained with pram ramp crossings of new kerb proposed at the new junction with the site, as per LGAT-IPWEA standards, as part of the new development works.

No additional footpath or cycling infrastructure changes to existing arrangements are proposed as part of this development; however, provision is noted for potential future pedestrian linkages to the golf club land adjacent to the site, and into the sites from Opossum Road, adding to the opportunity for pedestrian traffic. This upgrade to site access appears appropriate.

Existing cyclist access appears to be informal only in the area (no dedicated infrastructure). No specific impacts or changes are identified.

4.7 Public Transport Provision

Taxis can service the site, and services for buses appear to service the general area. No change to any existing arrangements is proposed or considered warranted.

**4.8 Summary of Assessment against Planning Scheme E4 – Road and Railway Assets Code
Item Comment/Criteria Met**

Item	Comment/Criteria Met or Not Met
E4.5.1 – Existing Road accesses and junctions	<p>A1 – Not Applicable (not >60km/hr) A2– Not Applicable (not >60km/hr) A3 – REQUIREMENTS NOT MET (>40 VPD or 20% increase)</p> <p>P3 – Requirements deemed met due to:</p> <ul style="list-style-type: none"> a. <i>limited increase in traffic in context of Opossum Road and wider network, noting also typical off peak nature of current golf course traffic</i> b. <i>generally light vehicle traffic in nature, typical of types/uses expected from neighbouring uses in the area</i> c. <i>Proposed and nearby local junctions efficiency/safety/nature appear not impacted by the use</i> d. <i>local road categories and nature built to accommodate this type of use and volumes not material in context of local network</i> e. <i>low speed local road (60km/hr), with use profile complementing nature of existing traffic use</i>

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	<p>f. <i>no alternative access exists – the existing access is already in successful use with not noted issues</i></p> <p>g. <i>The upgrade to a modern and more efficient junction to replace the current access appears as improvement for site access.</i></p> <p>h. <i>Refer this TIA report</i></p> <p>i. <i>This TIA submitted for consideration by local road authority (CoL)</i></p>
E4.5.2 – Existing Level Crossings	A1 – Not Applicable
E4.6.1 – Development on and adjacent to Existing & Future Arterial Roads and Railways	<p>A1.1 – REQUIREMENTS ARE MET - <i>no rail or Cat 1 or 2 roads</i></p> <p>A1.2 – REQUIREMENTS ARE MET - <i>no building works</i></p>
E4.6.2 – Road Accesses and Junctions	<p>A1 – Not applicable (Not >60 km/hr)</p> <p>A2 – REQUIREMENTS ARE MET (<i>existing access junction is already in use as access to Golf Club – this however is proposed as an upgrade of this access to an improved modern junction layout and so P2 is also addressed</i>)</p> <p>ALSO ADDRESSING P2: For roads in an area subject to a speed limit of 60km/h or less, accesses and junctions must be safe and not unreasonably impact on the efficiency of the road, having regard to:</p> <p>(a) the nature and frequency of the traffic generated by the use; <i>successful existing use by golf club traffic already in place, similarly light vehicles use, and likely peak hour traffic will not combine with golf club off peak visitation. Not material in context of network volumes</i></p> <p>(b) the nature of the road; - <i>residential, mostly LV, local collector, existing use, limited material changes to volumes and traffic type</i></p> <p>(c) the speed limit and traffic flow of the road; <i>low speed (60 km/hr), typical traffic appropriate to zone. Proposed arrangement can operate efficiently with existing flows/speeds</i></p> <p>(d) any alternative access to a road; <i>No practical alternative access is available, existing access proposed upgraded is most suitable option/location</i></p> <p>(e) the need for the access or junction; <i>no location changes proposed, access exists, refer (d) above; similar access location envisaged with upgrade to modern geometry and standards to permit use</i></p> <p>(f) any traffic impact assessment; <i>refer this report</i> and</p> <p>(g) any written advice received from the road authority. <i>This TIA prepared for CoL consideration and review</i></p> <p>On the above basis, with current access in operation, most appropriate and practical option for access to the site, and upgrade to modern standards and geometry, the location for upgraded access appears appropriate – REQUIREMENTS DEEMED MET P2</p>
E4.6.3 – New Level Crossings	NOT APPLICABLE
E4.6.4 – Sight Distances at Accesses, Junctions and Level Crossings	A1 - REQUIREMENTS ARE MET (Deemed acceptable - refer comments Section 4.4)

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Conclusion: Requirements for E4 are met

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5. Regulatory Authority Feedback on Traffic Impacts

5.1 City of Launceston (Council) Comment/Feedback

CoL provided traffic data estimates for this site near to the main LGC main entry off Opossum Road (and a related eastern site).

Council's traffic officer Mr Nigel Coates noted as follows:

Hi Andrew,

Unfortunately, we don't have any recent traffic data for either location.

- Estimated flows in Negara Street are 104 aadt*
- Opossum Road at the golf course entrance is 3200 aadt*

I would agree that the only real issue would probably be the golf course junction.

Both sites were impacted by some proposals a few years ago aimed at relieving congestion in Kings Meadows. This included anew road linking Opossum Road with Innocent Street and a link between Negara Street and Morshead Street. It is very unlikely that either will proceed and they are not in any adopted plans.

.....

Regards

Further informal comment from Engineering Development staff around road and parking aspects noted consideration of adequate parking on the site, review of turn treatments for any new junction based on traffic volumes and need, and likely requirement for minimum 18m road reserve width. These items have been commented upon further in this report.

5.2 DSG comment

No specific comment around road access etc. was sought from DSG officers, with no interaction with DSG assets required for the works believed required.

CRASH STATISTICS from DSG data were sourced with records for the previous 5 years provided for the local area. No specific issues are raised by the crash history with no evidence of particular issues around the Main LGC site access. Two nearby crashes were unrelated, and do not appear to represent a specific problem with the road assets or network locally.



6. TIA Conclusions

This TIA has investigated the potential impacts from the development of the site including an upgrade to the main entry to the Launceston Golf Club, to create a new junction with Opossum Road, a short Council cul-de sac street to service the existing golf club and proposed new residential lot.

Key findings are as follows:

- That the proposed road junction for Opossum Road and to create a new local street with general arrangements as per the proposed site plan, are likely to meet the requirements to service the development and possible future residential development potential of the site (subject final engineering design detail approval by CoL), and that such a new road link appears to be able to be designed/constructed to cater for the development and traffic likely generated.
- The new road reserve for the new council street requires minimum 18m width to meet LGAT-IPWEA standards, and should otherwise be constructed to meet LGAT-IPWEA and Council standards
- That traffic service is likely adequately provided for by the new road arrangements, to service the proposed development, including anticipated levels of traffic from a possible future residential development based on estimated traffic generation, and existing network capacity.
- Turning traffic and main road volumes suggest turning treatments be considered for any upgraded junction with Opossum Road, with recommendation for suitable BAR road widening to be provided for Westbound main road traffic, subject to engineering design approval by Council
- Sight distances for the new junction with Opossum Road can likely comply with the planning scheme E4.6.4 Acceptable Solution A1 for the new road proposed to service the development
- Other Planning Scheme Requirements under Code E4 & E6 where applicable are deemed met as noted.

Based on the above assessment of available information, traffic aspects associated with the development are likely to meet the requirements for Traffic Safety and Service in accordance with the Launceston Planning Scheme requirements.

Limitations

- *This TIA is based on information provided by the client and available in the public domain, additional information beyond this has not been considered. Any changes or variation to the development proposal should be reviewed further by the author and relevant road authorities.*
- *Based on the nature of the development, this TIA has considered the access and operational aspects for this development only, and has not considered in detail the wider impacts beyond the site (upstream network impacts), this being outside the scope of this report.*
- *Comments on parking and geometric design aspects are of a general nature only, based on design to be undertaken by others as part of formal engineering design approval for road authority*

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



**City of Launceston
Council Meeting Agenda**

Thursday 2 June 2022

**Appendix A
Proposed Development Plans**

(Attached)

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



**City of Launceston
Council Meeting Agenda**

Thursday 2 June 2022

Appendix B

DSG Crash Statistics Record

(Attached)

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club

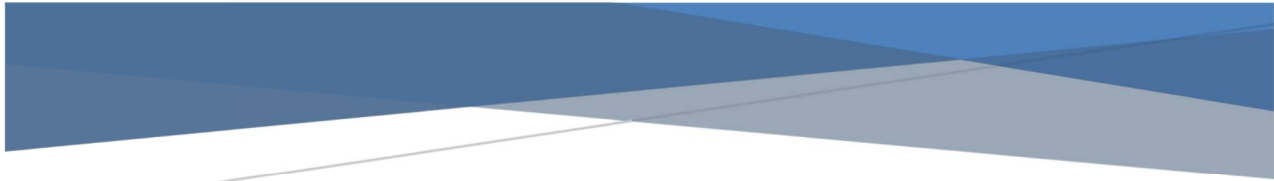


Appendix C

LGAT-IPWEA key road design drawing details (TSDR06-08)

(Attached)

TIA – Opossum Rd 3-Lot Subdivision Development, Kings Meadows Launceston Golf Club



WOOLCOTT SURVEYS

BUSHFIRE HAZARD EXEMPTION REPORT

Three Lot Subdivision (1 New Lot, 1 Road Lot, 1
Balance Lot)

Owners:

The Launceston Golf Club Limited.

Property address:

27-99 Opossum Road
Kings Meadows
CT168065/1

Launceston City Council
General Residential & Recreation Zone

Author

James Stewart
Woolcott Surveys
(03) 6332 3760



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Executive Summary

The proposed three (3) lot (1 new, 1 road, 1 balance) subdivision is subject to a bushfire threat, with parts of the balance title subject to the bushfire prone areas overlay under the *Launceston Interim Planning Scheme 2015*.

It is assessed that there is insufficient increase in risk to warrant a bushfire hazard management plan for this application. This assessment is based on:

- The area being developed for residential purposes is not mapped as bushfire prone on the Bushfire Overlay maps of the *Launceston Interim Planning Scheme 2015*. Future development of this land will not be assessed as being within a bushfire prone area.
- There is no proposed change to the use or development on the balance title which results in an increased risk to existing lots.
- All of the land has suitable access to a Council maintained road.
- The new lot being created is not within 100m of any bushfire prone vegetation.

- Client:** Launceston Golf Club
- Council:** Launceston City Council
- Zoning:** General Residential Zone (rezone) and Recreation Zone.
- Property details:** 27-99 Opossum Road, Kings Meadows
- Proposal:** Three lot subdivision (1 new, 1 road, 1 balance)

Conclusions and

Recommendations: The proposed Three Lot Subdivision is considered exempt under clause E1.4A of the *Planning Directive No 5.1 Bushfire Prone Areas Code*.

Author	Version number	Date
James Stewart	1.0	02/12/2021

DISCLAIMER

This report deals with the potential bushfire risk only, all other statutory assessments sit outside of this report. This report is not to be used for future or further development on the site, other than what has been specifically provided for in the certified plans attached. Woolcott Surveys accepts no responsibility to any purchaser, prospective purchaser or mortgagee of the property who in any way rely on this report. This report does not guarantee that buildings will survive in the event of a bushfire event. If characteristics of the property change or are altered from those which have been identified, the exempt classification may be different to that which has been identified in this report. In this event the report is considered to be void.

Signed:



Author: James Stewart
Position: Town Planner and Accredited Bushfire Practitioner BFP 157



1. Proposal

Application is made for a three lot subdivision. The subdivision includes one new lot, one road lot, and a balance lot. The area being subdivided for residential purposes is within the General Residential Zone with this area being proposed as a rezone under section 33 of the *Land Use Planning and Approvals Act 1993*. The balance lot will remain entirely within the recreation zone, with no change to the use or development on that land.

The details of the three-lot subdivision are shown below.

Lot Number	Proposed Lot Size
Lot 1	1.28ha
Lot 100 (Road)	1753m ²
Lot 3 (Balance)	40.9ha



Figure 1 - view over residential part of the site being subdivided.

The proposed location and layout for the subdivision is shown below:



Figure 2 – Lot boundaries, showing area being subdivided.



Figure 3 - Proposed layout for three lot subdivision.

2. Site Details

The portion of the land being developed with the new lot is located in the western portion of the title. This part of the land is currently used as a practice fairway by the golf club. The site adjoins established single dwellings on the western and southern sides. Golf club land is located to the north and east. This part of the site is within a residential area of Kings Meadows, being in close proximity to the primary shopping district located on Hobart Road.



Figure 4 - Aerial view to show the residential land being subdivided.

The balance of the site stretches to the north east, and contains the 18 hole golf course.



Figure 5 - Aerial view showing who site and balance lot.

According to TasVeg 3.0 the site is classified as an Urban Area (FUR), with a portion of the balance lot mapped as eucalypt forest and woodland (DAZ). The new lot being subdivided is classified as being within an urban environment according to TasVeg. The mapping accurately reflects the conditions onsite. There is no identified bushfire prone vegetation within 100m of the proposed new lot.

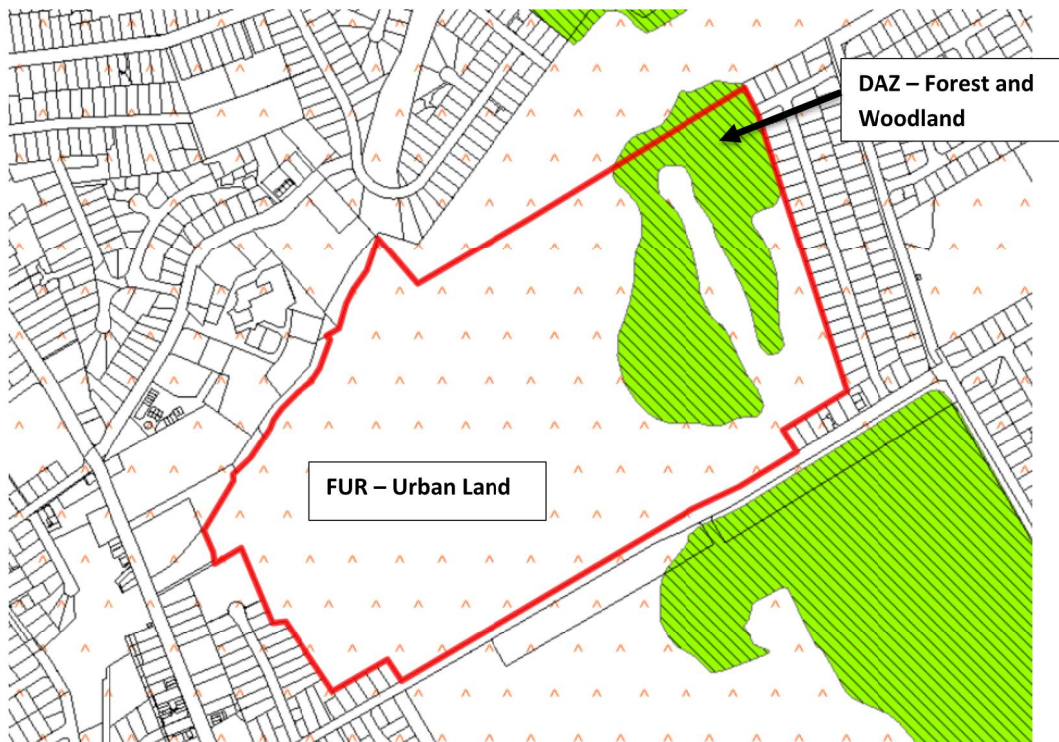


Figure 6 - TasVeg 4 mapping for the portion of land being subdivided.

3. Land Use Planning

The site is currently within the Recreation Zone, as it is associated with and owned by the Launceston Golf Club. The application before Council seeks to rezone a 1.28ha portion of land in the west of the site as General Residential.



Figure 6 - Zoning of the site and surrounds.

The land is partially subject to the bushfire prone areas overlay. This overlay covers the balance lot to the east of the area being subdivided. The new lot being created is not subject to the bushfire prone areas overlay.

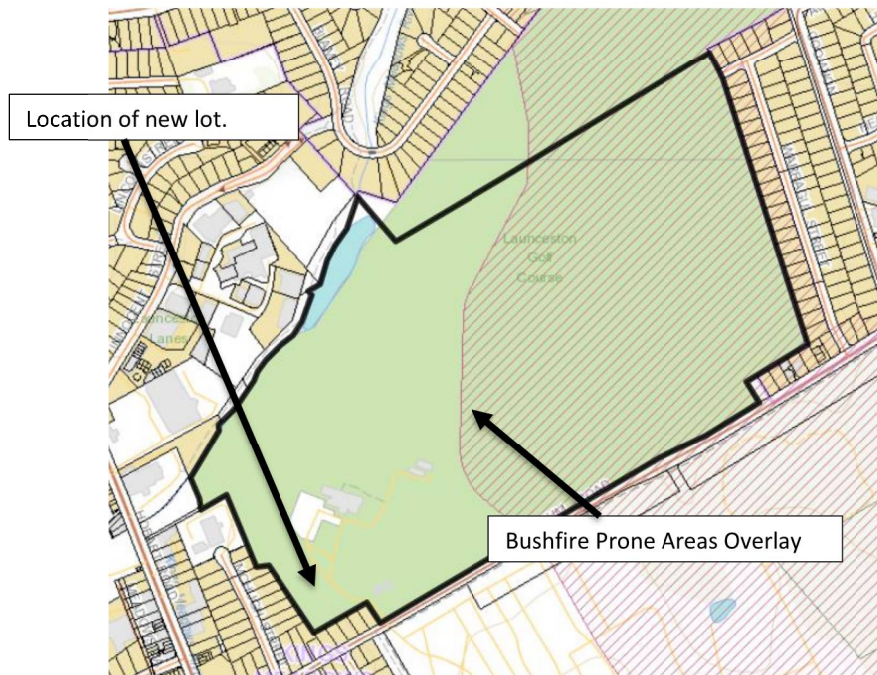


Figure 7 - Subject site showing extent of bushfire prone area overlay mapping.

4. Access

The subdivision will result in new cul-de-sac road off Opossum Road. The new residential lot will be serviced via this Council maintained road. As the cul-de-sac is not within a bushfire prone area, it will be constructed as per the LGAT standard guidelines.

Both the remaining sections of the balance lot have vehicular access the new cul-de-sac, and Negara street in the east.

5. Water

Fire Hydrants are currently located out the front of the site on Opossum Road. The lots will be connected to reticulated water. New hydrants will be installed along the proposed road as per TasWater construction requirements.

6. Slope

The new lot has a gentle fall down to the rivulet in the north of the site.



7. Bushfire Prone Area Overlay Mapping

The Bushfire Prone Area Overlay mapping determines which areas of the municipality are at possible risk to bushfire, and which areas present a low risk and therefore do not require bushfire consideration.

The overlay indicates that the part of the site being developed for residential purposes is **NOT** within a bushfire prone area. This means that a future dwelling on the residential lot would not require a bushfire assessment under the Directors Determination version 1.3.

Part of the balance lot to the east is mapped as being within a bushfire prone area overlay. Any future development of this land may require consideration of bushfire risk.

8. Conclusions and Justification

E1.0 Bushfire Prone areas code applies, as the subdivision is occurring on land which is mapped as bushfire prone on a planning scheme overlay. There is however an insufficient increase in risk from the development to warrant the provision of bushfire hazard management measures for the development.

The risk is considered low given the new residential lot is located within the General Residential Zone, within a residential area, and on a portion of land which is **NOT** shown on a bushfire prone area overlay map. No vegetation has been identified within 100m of the subject site.

While the balance lots are within a bushfire prone area as shown on the overlay, there is no use or development proposed for these areas outside of the fact that they are part of the parent title.

The access and water arrangements for the site will be maintained, with all lots having access to a Council Road.

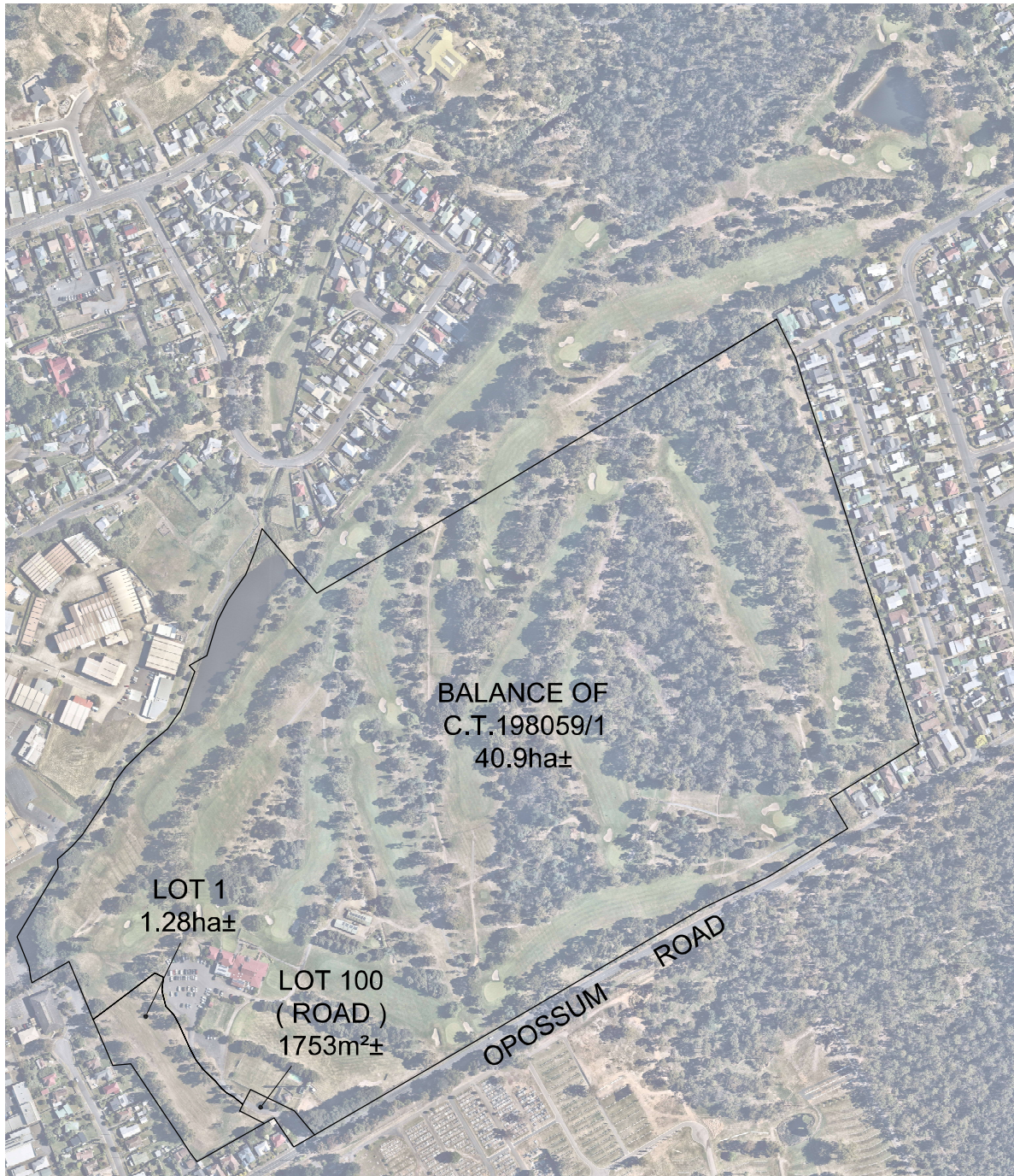
Based on the existing mapping, and given that future development of the new residential lot will not be subject to bushfire consideration, it is therefore concluded that there is an insufficient increase in the bushfire risk as a result of the proposed three lot subdivision.

9. Recommendations

The proposed subdivision is considered exempt under clause E1.4A of the *Planning Directive no 5.1 of the bushfire prone areas code*.



Annexure 1 – Proposal Plan



THIS PLAN WAS PREPARED AS A PRELIMINARY PROPOSAL PLAN FOR DISCUSSION AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE ALL MEASUREMENTS AND AREAS ARE SUBJECT TO SURVEY .

	<p>LAUNCESTON GOLF CLUB STAGE 1 - PROPOSED 3 LOT SUBDIVISION 27-99 OPOSSUM RD, KINGS MEADOWS C.T. 198059/1</p>		<p>WOOLCOTT SURVEYS</p>	<p>10 Goodman Court Invermay TAS 7248 PO Box 593 Mowbray Heights TAS 7248 Phone (03) 6332 3760 Fax (03) 6332 3764 Email: office@woolcottsurveys.com.au</p>	<p>Job Number L191207</p>		
		<p>Drawn GLM</p>	<p>File name L191207-PROP LAYOUT210921</p>	<p>Date 28/10/21</p>	<p>Scale 1:4000@A3</p>	<p>Edition V02</p>	<p>Sheet 1/7</p>



Annexure 2 – Bushfire Prone Areas Certificate



BUSHFIRE-PRONE AREAS CODE

CERTIFICATE¹ UNDER S51(2)(d) LAND USE PLANNING AND APPROVALS ACT 1993

1. Land to which certificate applies

The subject site includes property that is proposed for use and development and includes all properties upon which works are proposed for bushfire protection purposes.

Street address: 27-99 Opossum Road, Youngtown

Certificate of Title / PID: PID6883203, CT198059/1

2. Proposed Use or Development

Description of proposed Use and Development: Three Lot Subdivision

Applicable Planning Scheme: Launceston Interim Planning Scheme 2015

3. Documents relied upon

This certificate relates to the following documents:

Title	Author	Date	Version
Bushfire Hazard Exemption Report	Woolcott Surveys	02/12/2021	1
Proposed Three Lot Subdivision	Woolcott Surveys	28/10/2021	2

¹ This document is the approved form of certification for this purpose and must not be altered from its original form.



4. Nature of Certificate

The following requirements are applicable to the proposed use and development:

<input checked="" type="checkbox"/> E1.4 / C13.4 – Use or development exempt from this Code	
Compliance test	Compliance Requirement
<input checked="" type="checkbox"/> E1.4(a) / C13.4.1(a)	Insufficient increase in risk

<input type="checkbox"/> E1.5.1 / C13.5.1 – Vulnerable Uses	
Acceptable Solution	Compliance Requirement
<input type="checkbox"/> E1.5.1 P1 / C13.5.1 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/> E1.5.1 A2 / C13.5.1 A2	Emergency management strategy
<input type="checkbox"/> E1.5.1 A3 / C13.5.1 A2	Bushfire hazard management plan

<input type="checkbox"/> E1.5.2 / C13.5.2 – Hazardous Uses	
Acceptable Solution	Compliance Requirement
<input type="checkbox"/> E1.5.2 P1 / C13.5.2 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/> E1.5.2 A2 / C13.5.2 A2	Emergency management strategy
<input type="checkbox"/> E1.5.2 A3 / C13.5.2 A3	Bushfire hazard management plan

<input type="checkbox"/> E1.6.1 / C13.6.1 Subdivision: Provision of hazard management areas	
Acceptable Solution	Compliance Requirement
<input type="checkbox"/> E1.6.1 P1 / C13.6.1 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/> E1.6.1 A1 (a) / C13.6.1 A1(a)	Insufficient increase in risk
<input type="checkbox"/> E1.6.1 A1 (b) / C13.6.1 A1(b)	Provides BAL-19 for all lots (including any lot designated as 'balance')
<input type="checkbox"/> E1.6.1 A1(c) / C13.6.1 A1(c)	Consent for Part 5 Agreement



<input type="checkbox"/>	E1.6.2 / C13.6.2 Subdivision: Public and fire fighting access	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.6.2 P1 / C13.6.2 P1	<i>Planning authority discretion required. A proposal cannot be certified as compliant with P1.</i>
<input type="checkbox"/>	E1.6.2 A1 (a) / C13.6.2 A1 (a)	Insufficient increase in risk
<input type="checkbox"/>	E1.6.2 A1 (b) / C13.6.2 A1 (b)	Access complies with relevant Tables

<input type="checkbox"/>	E1.6.3 / C13.1.6.3 Subdivision: Provision of water supply for fire fighting purposes	
	Acceptable Solution	Compliance Requirement
<input type="checkbox"/>	E1.6.3 A1 (a) / C13.6.3 A1 (a)	Insufficient increase in risk
<input type="checkbox"/>	E1.6.3 A1 (b) / C13.6.3 A1 (b)	Reticulated water supply complies with relevant Table
<input type="checkbox"/>	E1.6.3 A1 (c) / C13.6.3 A1 (c)	Water supply consistent with the objective
<input type="checkbox"/>	E1.6.3 A2 (a) / C13.6.3 A2 (a)	Insufficient increase in risk
<input type="checkbox"/>	E1.6.3 A2 (b) / C13.6.3 A2 (b)	Static water supply complies with relevant Table
<input type="checkbox"/>	E1.6.3 A2 (c) / C13.6.3 A2 (c)	Static water supply consistent with the objective



5. Bushfire Hazard Practitioner

Name: James Stewart **Phone No:** 0467 676 721

Postal Address: PO BOX 593, Mowbray, Tas, 7248 **Email Address:** james@woolcottsurveys.com.au

Accreditation No: BFP – 157 **Scope:** 1, 2, 3B, 3C

6. Certification

I certify that in accordance with the authority given under Part 4A of the *Fire Service Act 1979* that the proposed use and development:

- Is exempt from the requirement Bushfire-Prone Areas Code because, having regard to the objective of all applicable standards in the Code, there is considered to be an insufficient increase in risk to the use or development from bushfire to warrant any specific bushfire protection measures, or
- The Bushfire Hazard Management Plan/s identified in Section 3 of this certificate is/are in accordance with the Chief Officer's requirements and compliant with the relevant **Acceptable Solutions** identified in Section 4 of this Certificate.

Signed:
certifier

Name:

James Stewart

Date:

03/12/2021

Certificate Number:

WS-40

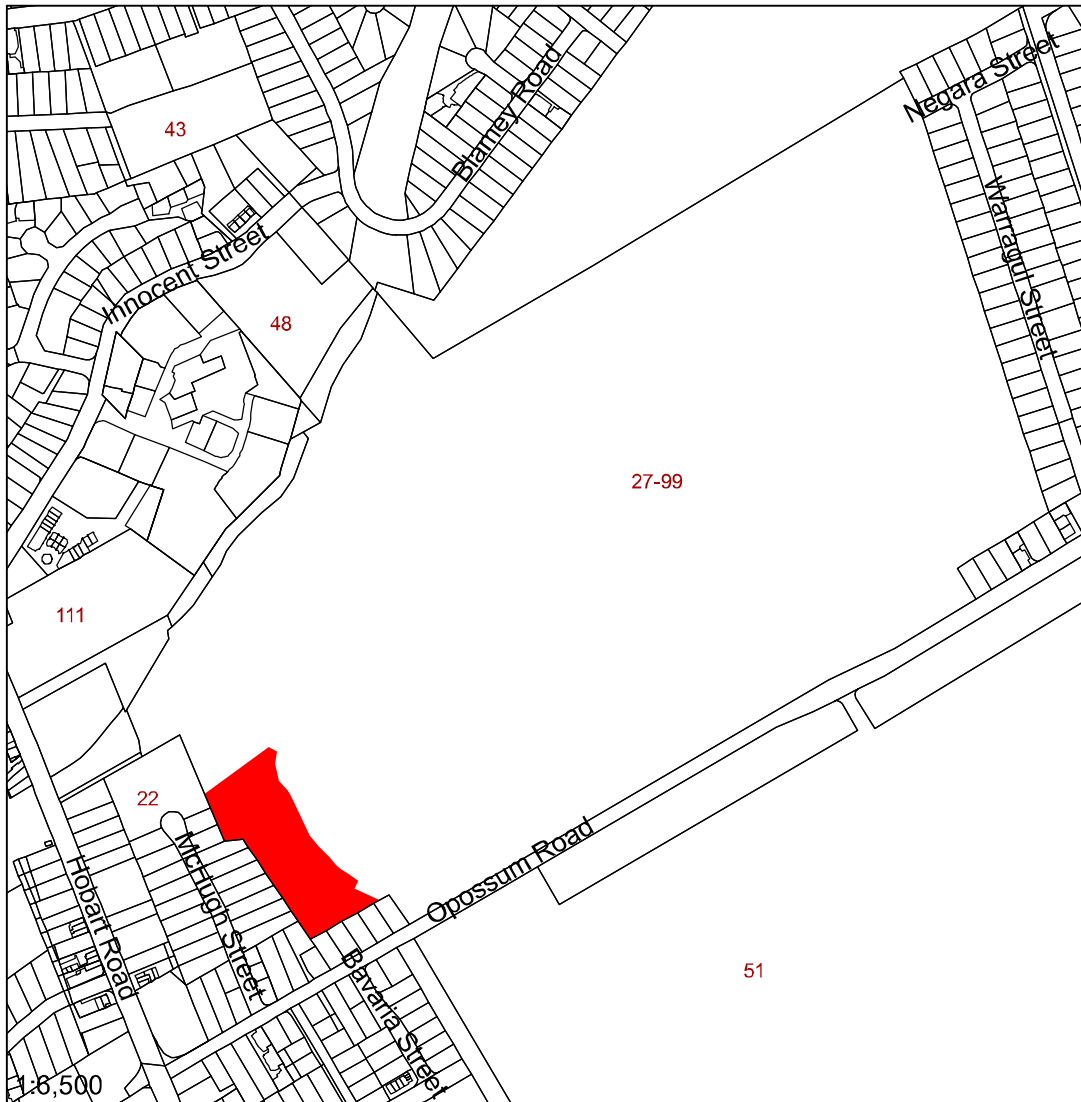
(for Practitioner Use only)



Launceston Interim Planning Scheme 2015 AMENDMENT 71

Rezoning part of 27-99 Opossum Road from Recreation to General Residential

Amend the interim planning scheme maps as below:



Zoning  General Residential

THE COMMON SEAL
of the City of
Launceston was
hereunto affixed in the
presences of: -

Michael Stretton
Chief Executive Officer

Date

Service Layer Credits:



Submission to Planning Authority Notice

Council Planning Permit No.	DA0760/2021	Council notice date	24/12/2021
TasWater details			
TasWater Reference No.	TWDA 2021/02264-LCC	Date of response	06/01/2022
TasWater Contact	Elio Ross	Phone No.	0467 874 330
Response issued to			
Council name	CITY OF LAUNCESTON		
Contact details	PlanningAdmin@launceston.tas.gov.au		
Development details			
Address	27-99 OPOSSUM RD, KINGS MEADOWS	Property ID (PID)	6883203
Description of development	Rezoning a section (recreation zone to general residential) + subdivide 1 lot into 2 lots		
Schedule of drawings/documents			
Prepared by	Drawing/document No.	Revision No.	Date of Issue
Hydrodynamica	332.31-SK02 – concept Servies Plan	C	23/11/2021
Woolcott Surveys	L191207 Subdivision plan - Sheets 1 & 2	V01	06/12/2021
Woolcott Surveys	L191207 Rezone Plan	V02	03/12/2021
Conditions			
Pursuant to the <i>Water and Sewerage Industry Act 2008 (TAS)</i> Section 56P(1) TasWater imposes the following conditions on the permit for this application:			
CONNECTIONS, METERING & BACKFLOW			
<ol style="list-style-type: none"> 1. A suitably sized water supply with metered connections and sewerage system and connections to each lot of the development must be designed and constructed to TasWater’s satisfaction and be in accordance with any other conditions in this permit. 2. Any removal/supply and installation of water meters and/or the removal of redundant and/or installation of new and modified property service connections must be carried out by TasWater at the developer’s cost. 3. Prior to commencing construction of the subdivision/use of the development, any water connection utilised for construction/the development must have a backflow prevention device and water meter installed, to the satisfaction of TasWater. 			
ASSET CREATION & INFRASTRUCTURE WORKS			
<ol style="list-style-type: none"> 4. Plans submitted with the application for Certificate(s) for Certifiable Work (Building and/or Plumbing) / Engineering Design Approval must, to the satisfaction of TasWater show, all existing, redundant and/or proposed property services and mains. 5. Prior to applying for a Permit to Construct/the issue of a Certificate for Certifiable Work (Building and/or Plumbing) to construct new infrastructure the developer must obtain from TasWater Engineering Design Approval for new TasWater infrastructure. The application for Engineering Design Approval must include engineering design plans prepared by a suitably qualified person showing the hydraulic servicing requirements for water and sewerage to TasWater’s satisfaction. 6. Prior to works commencing, a Permit to Construct must be applied for and issued by TasWater. All 			



- infrastructure works must be inspected by TasWater and be to TasWater's satisfaction.
7. In addition to any other conditions in this permit, all works must be constructed under the supervision of a suitably qualified person in accordance with TasWater's requirements.
 8. Prior to the issue of a Consent to Register a Legal Document / Certificate of Water and sewerage Compliance (Building and/or Plumbing) all additions, extensions, alterations or upgrades to TasWater's water and sewerage infrastructure required to service the development, are to be completed generally as shown on, and in accordance with, the plans listed in the schedule of drawings, and are to be constructed at the expense of the developer to the satisfaction of TasWater, with live connections performed by TasWater.
 9. After testing/disinfection, to TasWater's requirements, of newly created works, the developer must apply to TasWater for connection of these works to existing TasWater infrastructure, at the developer's cost.
 10. At practical completion of the water and sewerage works and prior to TasWater issuing a Consent to a Register Legal Document / applying to TasWater for a Certificate of Water and Sewerage Compliance (Building and/or Plumbing), the developer must obtain a Certificate of Practical Completion from TasWater for the works that will be transferred to TasWater. To obtain a Certificate of Practical Completion:
 - a. Written confirmation from the supervising suitably qualified person certifying that the works have been constructed in accordance with the TasWater approved plans and specifications and that the appropriate level of workmanship has been achieved;
 - b. A request for a joint on-site inspection with TasWater's authorised representative must be made;
 - c. Security for the twelve (12) month defects liability period to the value of 10% of the works must be lodged with TasWater. This security must be in the form of a bank guarantee;
 - d. Work As Constructed drawings and documentation must be prepared by a suitably qualified person to TasWater's satisfaction and forwarded to TasWater.
 11. After the Certificate of Practical Completion has been issued, a 12 month defects liability period applies to this infrastructure. During this period all defects must be rectified at the developer's cost and to the satisfaction of TasWater. A further 12 month defects liability period may be applied to defects after rectification. TasWater may, at its discretion, undertake rectification of any defects at the developer's cost. Upon completion, of the defects liability period the developer must request TasWater to issue a "Certificate of Final Acceptance". The newly constructed infrastructure will be transferred to TasWater upon issue of this certificate and TasWater will release any security held for the defects liability period.
 12. The developer must take all precautions to protect existing TasWater infrastructure. Any damage caused to existing TasWater infrastructure during the construction period must be promptly reported to TasWater and repaired by TasWater at the developer's cost.
 13. Ground levels over the TasWater assets and/or easements must not be altered without the written approval of TasWater.
 14. A construction management plan must be submitted with the application for TasWater Engineering Design Approval. The construction management plan must detail how the new TasWater infrastructure will be constructed while maintaining current levels of services provided by TasWater to the community. The construction plan must also include a risk assessment and contingency plans covering major risks to TasWater during any works. The construction plan must be to the satisfaction of TasWater prior to TasWater's Engineering Design Approval being issued.



FINAL PLANS, EASEMENTS & ENDORSEMENTS

- 15. Prior to the Sealing of the Final Plan of Survey, a Consent to Register a Legal Document must be obtained from TasWater as evidence of compliance with these conditions when application for sealing is made.
Advice: Council will refer the Final Plan of Survey to TasWater requesting Consent to Register a Legal Document be issued directly to them on behalf of the applicant.
- 16. Pipeline easements to TasWater’s satisfaction, must be created over any proposed TasWater infrastructure and be in accordance with TasWater’s standard pipeline easement conditions requirements.
- 17. The Plan of Subdivision Council Endorsement Page is to note, pursuant to Section 83 of the Local Government (Building and Miscellaneous Provisions) Act 1993, that TasWater cannot provide a sewerage service/ an unrestricted water supply/ a water service to all lots on the plan.
- 18. Prior to the issue of a Consent to Register a Legal Document / Certificate of Water & Sewerage Compliance (Building and or Plumbing) / Certificate of Practical Completion from TasWater, the applicant must submit a copy of the completed Transfer for the provision of a Pipeline and Services Easement(s)/lot(s) to cover proposed TasWater infrastructure as required by condition 16. All costs and expenses related to the transfer of easement(s)/lots to TasWater are to be paid by the developer.
- 19. Prior to the Sealing of the Final Plan of Survey, the developer must lodge a petition to amend the sealed plan SP154713 for the removal of the Drainage Easement 3.00 wide ‘A’.

DEVELOPMENT ASSESSMENT FEES

- 20. The applicant or landowner as the case may be, must pay a development assessment fee of \$219.04, and a Consent to Register a Legal Document fee of \$154.42 to TasWater, as approved by the Economic Regulator and the fees will be indexed, until the date paid to TasWater.

The payment is required within 30 days of the issue of an invoice by TasWater.

Advice

General

For information on TasWater development standards, please visit <https://www.taswater.com.au/building-and-development/technical-standards>

For application forms please visit <https://www.taswater.com.au/building-and-development/development-application-form>



Service Locations

Please note that the developer is responsible for arranging to locate the existing TasWater infrastructure and clearly showing it on the drawings. Existing TasWater infrastructure may be located by a surveyor and/or a private contractor engaged at the developers cost to locate the infrastructure.

- (a) A permit is required to work within TasWater’s easements or in the vicinity of its infrastructure.
Further information can be obtained from TasWater
- (b) TasWater has listed a number of service providers who can provide asset detection and location services should you require it. Visit www.taswater.com.au/Development/Service-location for a list of companies
- (c) TasWater will locate residential water stop taps free of charge
- (d) Sewer drainage plans or Inspection Openings (IO) for residential properties are available from your local council.

Declaration

The drawings/documents and conditions stated above constitute TasWater’s Submission to Planning Authority Notice.

Authorised by

Jason Taylor
Development Assessment Manager

TasWater Contact Details

Phone	13 6992	Email	development@taswater.com.au
Mail	GPO Box 1393 Hobart TAS 7001	Web	www.taswater.com.au