





Of beauty rich and rare.



Level 1a, 10-14 Paterson Street  
 Launceston TAS 7250  
 P. 6388 9200

[rarein.com.au](http://rarein.com.au)

Our Ref: 211026

4<sup>th</sup> September 2020

Mr Errol Stewart  
 PO Box 870  
 Launceston TAS 7250

ATTENTION: E STEWART

Dear Errol

**GODERICH – LINDSAY STREET SITE SUBDIVISION – COMBINED SEWER & STORMWATER STRATEGY**

I am writing to you about the proposed subdivision of land fronting Goderich and Lindsay Street to provide an update to the previously provided *Combined Sewer and Stormwater Strategy* report dated 5<sup>th</sup> March 2019. This updated report provides further detail specifically in regard to the previously proposed stormwater detention basin for Lots 5 and 7 of the development.

As part of the development, a new carpark has been proposed on Lot 5 fronting onto Lindsay St and has formed the basis for the required update to the stormwater detention basin for this catchment area.

As previously proposed as part of the *Combined Sewer and Stormwater Strategy*, the stormwater detention basin will be formed to the north west of Lot 5 by regrading to the appropriate levels and the use of some low height kerbs and retaining walls as required. The detention basin is proposed to drain via gravity to the existing connection through the flood levee at the north west corner of Lot 5, and will have an overflow directed back to Link Rd.

**Detention Basin Design Parameters**

Calculations are attached that address the design criteria and are summarized as follows:

Description	Calculation Result
Design rainfall event	1 in 100 year
Post-developed catchment to detention basin	32 875 m <sup>2</sup>
Pre-development impervious area	17595 m <sup>2</sup> (53.5%)
Predicted post-development impervious area	90%
Maximum discharge through existing flood levee connection	124 L/s
Max ponding level	RL 2.90
Volume of storage for 1 in 100 year event	600 m <sup>3</sup>



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The detention basin has been designed with capacity for the 1 in 100 year event with gravity discharge via the existing stormwater connection through the flood levee. As the detention basin is not draining to the combined sewer and stormwater system in the area but rather directly to the North Esk River, the permissible site discharge is limited only by the capacity of the existing DN300 stormwater connection.

The outlet to the existing stormwater connection through the flood levee is located at a level where it is often below the river's water level at high tide. As such, the detention basin has been designed to operate with the discharge under a submerged condition (outlet controlled) for a typical high tide level of RL 2.0. A non-return valve/flap is currently installed on the outlet to prevent flows from passing back through the levee and so the detention system will only discharge when the ponding level is above the river level.

City of Launceston's flood mapping data accessed via *City of Launceston Maps & Apps*, shows the flood level for the 1 in 100 year storm event to be at RL 4.3. It is not possible to design a detention system to store water and discharge above this level through gravity operation only. As such, the detention system is proposed to store flows during the 1 in 100 year event with full discharge to occur once the North Esk River returns to pre-flood levels, with the high tide level selected as this 'pre-flood' design level. It should be noted that the river flood is a long duration event and detention inside the levee is related to a short duration event.

The total storage capacity of the system has been designed to account for future development of Lots 5 and 7 with a predicted impervious area of 90%.

The maximum ponding level of RL 2.90 also allows for partial detention within the north east corner of the new proposed carpark with the top of kerb levels also at a minimum of RL 2.90. Approximately 41m<sup>3</sup> of detention volume is available within the north east corner of the car park and the DN300 stormwater pipe connecting to the main detention area. The balance of detention volume will be stored within the proposed stormwater detention basin and landscape zone with a maximum depth of 0.36m at the western end.

### Summary

The proposed design is to have the large detention basin adjacent to the flood levee for the Lot 5 and 7 catchments. The allocated space will allow for the required 1 in 100 year storage with partial storage occurring within the carpark area, with discharge designed to occur at high tide levels. An overflow path back to the Link Road will be required.

A plan showing the proposed detention areas is attached.

If you have any queries, please contact me.

Yours faithfully,

Rodney Jesson  
Director  
Civil and Infrastructure



7 September 2020

Errol Stewart  
e: [errol@jmc.com.au](mailto:errol@jmc.com.au)  
Silo Hotel Pty Ltd

Our ref: 12539273-56507-11  
Your ref:

Dear Errol

### **86 Lindsay Street - Proposed Car Park Preliminary Traffic Review**

I refer to the Further Information Request issued by City of Launceston on 1 September 2020 for DA0503/2020 86 Lindsay Street, Invermay. Item 2 requests a Traffic Impact Assessment be prepared for the proposed car park.

It is my opinion that a formal Traffic Impact Assessment Report should not be required for this development on the following basis:

- The car park will not generate traffic, rather it will serve as formal overflow parking for the Hotel, which is an existing use. This parking demand is existing and is currently accommodated on-street along Lindsay Street or informally on a gravel car park on this site.
- The subdivision of this parcel of land was previously considered and approved by Council in 2018. The documentation supporting that subdivision (*Goderich – Lindsay Street Site Development Transport Impact Assessment, Rev 3, 6.7.18*) made some assumptions regarding the use of this Lot:
  - Daily trip generation of 480 vehicle movements per day,
  - Weekday peak trip generation of 52 vehicle movements per day, and
  - Saturday peak trip generation of 26 vehicle movements per day.

The subdivision approval was granted on the basis of these assumptions.

- Given that the purpose of the proposed car park is to accommodate existing parking demand, which is currently present yet informal, it is likely that any potential increase in traffic due to incidental use will be lower than the approved traffic movements listed above.
- The closure of the informal gravel parking area may in fact serve to *reduce* the amount of traffic as Launceston CBD commuters may no longer be able to park there during the day.
- The car park is designed with generous parking space dimensions and aisle widths such that the minimum dimensions in the Code are met.
- Lindsay Street is a straight road and there are no obstructions to sight distance and visibility at proposed access points.

- The proposed access points are located at the western end of Lindsay Street which is relatively quiet. The introduction of these accesses will not create significant conflicts with existing traffic on the road.

Notwithstanding the above, it is noted that any further development application for a traffic generating use that would utilise the surplus parking supply created through this development may require a Traffic Impact Assessment to be prepared.

If you have any questions or require further clarification on any aspect of the above, please do not hesitate to contact me on the number below or by email ([mark.petrusma@ghd.com](mailto:mark.petrusma@ghd.com)).

Regards  
GHD

**Mark Petrusma**

Engineer  
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