

Memo

To:	Drury South Limited	Job No:	31559.3000
From:	Tim Fisher	Date:	12 November 2019
Subject:	Drury South Industrial Precinct Amendments, Private Plan Change Request, Stormwater Assessment		

1 Summary

Tonkin + Taylor (T+T) has reviewed the Plan Change request and can confirm that the change of zoning will not result in any discernible change to the methodology for managing stormwater and flooding, which are consistent with precinct rules and resource consents.

2 Introduction

Drury South Limited (DSL) is a subsidiary of Stevenson Group, and has significant landholdings in Drury South. They are currently developing the area for industrial and business uses. The development is known as Drury South Crossing. Vacant industrial lots in Phase 1 are currently for sale.

DSL is applying to Auckland Council for a Private Plan Change to the Auckland Unitary Plan - Operative in Part (AUP-OIP) to amend the precinct provisions and the underlying zoning of part of the Drury South Industrial Precinct. The proposal seeks to:

- Reduce the size of Sub-precinct C to approximately 11 hectare and rezone it from Light Industry to Mixed Use and amend the provisions that apply within the sub-precinct to provide for a greater range of activities, reflecting the changing nature of the surrounding environment;
- Rezone approximately 20 hectares of land fronting Maketu Road, from Heavy Industry to Light Industry, to better meet current and future demand, and to manage potential reverse sensitivity and amenity effects arising from the proposed change of use in Sub-precinct C.
- Rezone Sub-precinct C land to Sub-precinct D on the southwest corner of New Quarry Access Road and Maketu Road.

Other amendments proposed are inconsequential to stormwater and are to ensure an integrated planning framework across the precinct, with specific amendments proposed to the landscaping provisions.

This stormwater assessment considers the impacts of the Plan Change on stormwater management.

3 Stormwater requirements

3.1 Stormwater provisions in the current plan change

The background and history of plan changes for Drury South is set out in the Plan Change Request by Barker & Associates (November 2019).

The Drury South Industrial Precinct includes specific provisions for stormwater and flooding (refer Section I410). A significant feature of the precinct is the 101 ha Sub-precinct D: 'open space/stormwater management' that is used for flood and stormwater management, stream enhancement and passive recreation. Refer to Appendix A.

The objectives for the Drury South Industrial Precinct (I410) that relate to stormwater and flood management include provision of stormwater management, avoiding the adverse effects of stormwater runoff on surface and groundwater quality, and avoiding increased flood risks to habitable buildings upstream and downstream of the precinct.

The precinct policies in Section I410 that relate to stormwater and flood management are as follows (using proposed numbering):

- (7) Design and construct attractive wetland areas for stormwater treatment and detention that also provide reserve and visual amenity opportunities.
- (12) Provide adequate stormwater, water, wastewater, communications and energy networks in a timely and co-ordinated manner to service industrial activity within the precinct.
- (14) Make adequate provision within Sub-precinct D to detain the 100 year Average Recurrence Interval (ARI) event without adverse effects on the extent of flooding of upstream and downstream areas.
- (15) Provide sufficient floodplain storage within Sub-precinct D to avoid increasing flood risk upstream and downstream, and manage increased flood risk within the precinct, to habitable rooms for all flood events from the 50% and up to the 1% AEP.
- (16) Undertake earthworks to form the modified floodplain in a manner which ensures flood effects on downstream or upstream areas are not exacerbated.
- (17) Avoid locating buildings within the 100 year ARI modified floodplain.
- (18) Avoid locating infrastructure within the 100 year modified ARI floodplain unless it can be designed to be resilient to flood related damage and does not exacerbate flood risks for upstream or downstream activities.
- (19) Identify overland flowpaths in a stormwater management plan or discharge consent and ensure that they remain unobstructed and able to convey surface water runoff safely into the reticulated stormwater network.
- (20) Avoid or mitigate adverse effects on surface or groundwater quality from stormwater runoff within the precinct through on-site stormwater management and containment and the provision of catchment based stormwater treatment ponds.

3.2 Network discharge consent

Auckland Council, in partnership with DSL, has a Network Discharge Consent (NDC) DIS60313540 for the development consistent with the AUP-OIP precinct provisions. The NDC is based on the Drury South Precinct Stormwater Management Plan prepared by T+T.¹ Key requirements of the NDC that are relevant to the Plan Change include the following conditions:

- 5) The management of stormwater shall be in accordance with the Drury South Precinct Stormwater Management Plan and in accordance with Table 1: Stormwater management outcomes.

Table 1: Stormwater management outcomes

Precinct		Stormwater management controls	Required retention volume	Required detention volume
Industrial	Catchment wide	Centralised wetlands	Retention volume to be taken up by detention	0.036m ³ /m ² including retention volume
		Green outfalls	N/A	N/A
	High Use Roads	Vegetated swales, tree pits, and/or raingardens	Retention volume is provided for by detention within centralised wetlands	Detention achieved within centralised wetlands
	On lot/private – roofs	Inert building materials <small>Note 1</small>	N/A	N/A
Rain tanks on sites where water reuse is practicable		0.005m ³ /m ² (reuse)	0.031m ³ /m ²	
	On lot/private – high contaminating generating carparks	Water quality achieved within centralised wetlands	Retention provided for within centralised wetlands	Detention achieved within centralised wetlands

- 6) In the event that alternative stormwater management is proposed which is not specified in Table 1, but which meets the outcomes within the Drury South Precinct Stormwater Management Plan and can be demonstrated to be the Best Practicable Option, the applicant shall seek certification of the approach from the Team Leader Compliance Monitoring South.
- 8) The Consent Holder shall ensure that all subdivision applications in the sub-catchment addresses the full sub-catchment for the primary piped network and the secondary overland flow network and management devices.

¹ 'Drury South Precinct – Stormwater Management Plan'. Prepared by Tonkin & Taylor Ltd for Drury South Limited. Final Version 2 dated March 2018.

4 Current implementation status

4.1 Stormwater management

The development and associated stormwater systems for the Drury South Industrial Precinct (I410) are part way through construction. Phase 1 comprises the southern areas of the industrial precinct and is under construction in accordance with an EPA approval ENG60327506 and T+T designs². The stormwater treatment for Phase 1 is primarily provided by Wetland 1. Modifications to the stormwater networks are proposed in a recently lodged EPA application to allow for a new Road 5a.

There are also proposals³ for Phase 2 to change the stormwater treatment approach from a centralised wetland to low impact design (i.e. raingardens and other devices close to source).

4.2 Flood management

The flood management approach is set out in the Drury South Precinct Stormwater Management Plan⁴.

The confirmation of the flood management approach and compliance with the precinct rules and resource consents (primarily the earthwork consents BUN60305778) has been set out in correspondence with Auckland Council.

- T+T (4 March 2019), Drury South Structure Plan – Addendum to SMP: Updates to floodplain design and flood modelling, which documents compliance with the Drury South Precinct Rules, Earthworks and Network Discharge Consents for the developed floodplain design for the Drury South Precinct Rules area.
- T+T (27 May 2019), Drury South Structure Plan – Addendum to SMP: Updates to floodplain design and flood modelling, which provides supplementary information requested by Auckland Council to T+T (4 March 2019).
- T+T (28 June 2019), Drury South - Flood Modelling for the 2019-2020 AMP Submission - Assessment Memo (Resource Consent BUN60305778), which assesses flooding changes predicted due to the 2018/19 as-built earthworks and the 2019/20 proposed earthworks.

Modifications to the Hingaia floodplain are being constructed in accordance with these documents.

² 'Drury South Industrial Precinct – Stormwater Network, Detailed Design Report – Phase 1'. Prepared by Tonkin & Taylor Ltd for Drury South Limited. Version 4 dated January 2019.

³ 'Stormwater Management for Drury South Phase 2'. Tonkin & Taylor Ltd Memo dated 17 July 2019.

⁴ 'Drury South Precinct – Stormwater Management Plan'. Prepared by Tonkin & Taylor Ltd for Drury South Limited. Final Version 2 dated March 2018.

5 Assessment of the Plan Change

5.1 Stormwater

The Plan Change does not alter the stormwater management arrangements that are required under Drury South Industrial Precinct (I410) and the NDC.

The current stormwater design for Sub-precincts A, C and E assumes the lots to be fully impervious, which is a conservative assumption as there is landscaping that is required to be included in the lots. The land use changes in the Plan Change do not invalidate this assumption as the proposed impervious cover will be similar to the current land use. Therefore, the stormwater management (including treatment) is not impacted by the Plan Change.

The Phase 1 stormwater design under EPA approval ENG60327506 has stormwater pipes and overland flows paths through Sub-precinct C. The designs for these, have been include in EPA approval ENG60327506 and T+T designs. Any amendments to these, as necessary for development to Sub-precinct C, will be addressed in future subdivision consents and EPAs. The current and future stormwater systems are not a constraint on the Plan Change.

Similarly, proposals⁵ for Phase 2 to change the stormwater treatment approach from a centralised wetland to low impact design (i.e. raingardens and other devices close to source), are not material changes nor will to be or impediments to the Plan Change. The change of Sub-precinct C to Mixed Use zone will be well suited to stormwater management by low impact design approaches.

5.2 Flood management

Flood management has been designed and constructed in accordance with precinct rules and resource consents (primarily the earthwork consents BUN60305778) and compliance has been demonstrated to Auckland Council (refer Section 4.2). The proposed flood management is not proposed to change in the Plan Change, nor will it be affected by the change in uses.

Included in the Plan Change is the rezoning of part of Sub-precinct C land to Sub-precinct D on the southwest corner of New Quarry Access Road and Maketu Road. This is part of the flood management scheme detailed in the T+T documents to Auckland Council (refer Section 4.2).

6 Applicability

This report has been prepared for the exclusive use of our client, with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose, or by any person other than our client, without our prior written agreement.

We understand and agree that this report will be used by Auckland Council in undertaking its regulatory functions in connection with the proposed Plan Change.

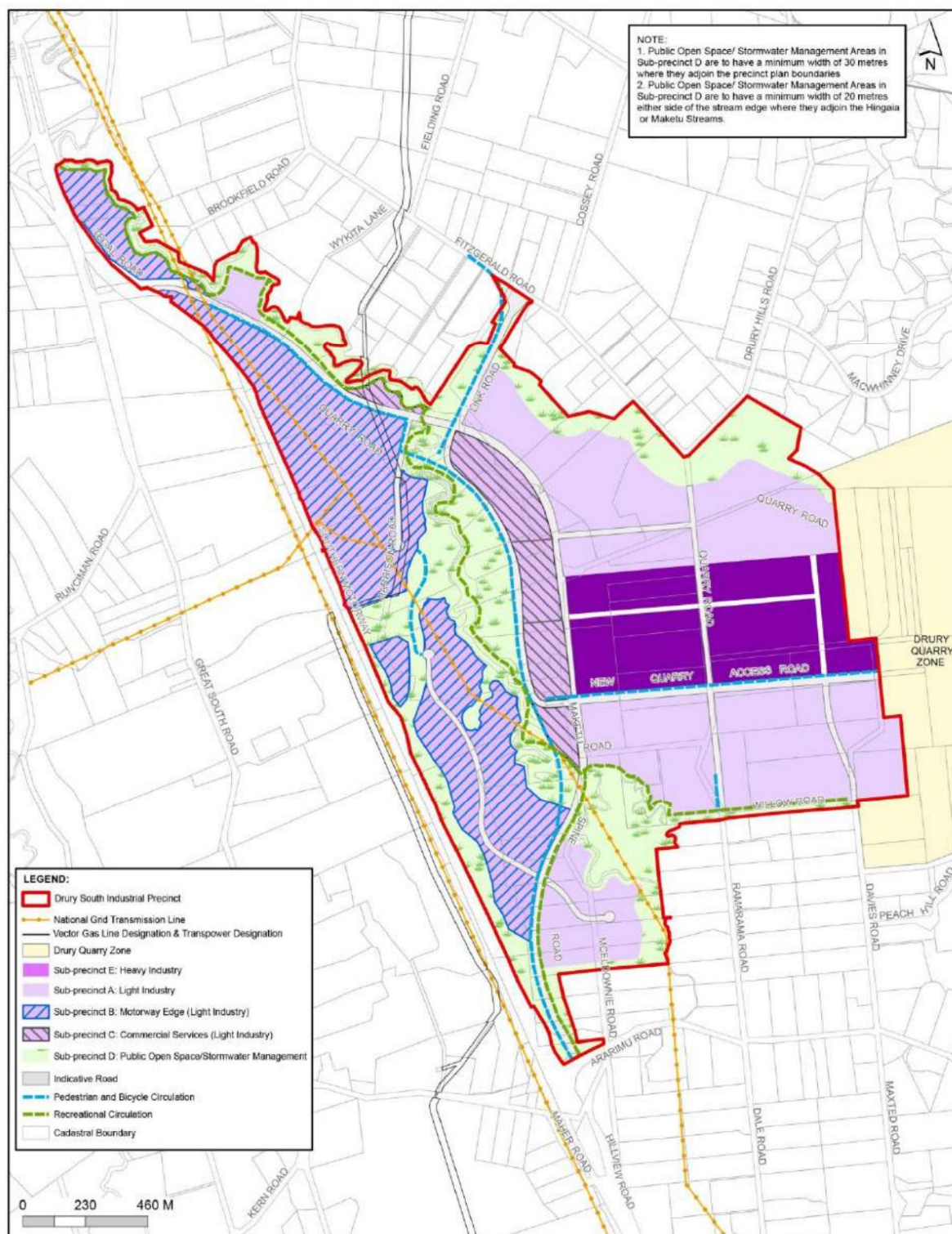
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⁵ 'Stormwater Management for Drury South Phase 2'. Tonkin & Taylor Ltd Memo dated 17 July 2019.

Appendix A – Existing Plan

I410.10. Precinct plans

I410.10.1 Drury South Industrial: Precinct plan 1



Appendix B – Proposed Plan

I410.10. Precinct plans

I410.10.2 Drury South Industrial and Mixed Use: Precinct plan 1

