

Hastings District Council

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FURTHER PRE-CIRCULATED APPLICANT EVIDENCE - ASSESSMENT OF OPTIONS FOR TREMAIN SERVICE CONNECTOR

COMMISSIONER HEARING NOR HOWARD STREET HEARING

Rescheduled Meeting Date: **Tuesday, 19 February 2019**

Time: **9.00am**

Venue: **Council Chamber
Ground Floor
Civic Administration Building
Lyndon Road East
Hastings**

Hearing Commissioner	Commissioner Paul Cooney
Officer Responsible	Group Manager: Planning & Regulatory Services
Reporting Planner	Senior Environmental Planner (Consents) Michelle Hart
Committee Secretary	Christine Hilton (Extn 5633)

HASTINGS DISTRICT COUNCIL

A COMMISSIONER HEARING WILL BE HELD IN THE COUNCIL
CHAMBER, GROUND FLOOR, CIVIC ADMINISTRATION BUILDING,
LYNDON ROAD EAST, HASTINGS ON
TUESDAY, 19 FEBRUARY 2019 AT 9.00AM.

1. APOLOGIES
2. FURTHER PRE-CIRCULATED APPLICANT EVIDENCE - ASSESSMENT
OF OPTIONS FOR TREMAIN SERVICE CONNECTOR FOR NOR HOWARD
STREET HEARING - 19 FEBRUARY 2019

**DOCUMENTS CIRCULATED FOR HEARING - COMPILED AS ONE
DOCUMENT**

Document 1 The covering administrative report **Pg 1**

Attachments:

- | | | | |
|---|---|------------|------|
| 1 | Attachment 1 - Mr Kneebone's assessment of
options for Tremain Service Connector | 55505#0261 | Pg 3 |
|---|---|------------|------|

REPORT TO: COMMISSIONER HEARING

MEETING DATE: TUESDAY 19 FEBRUARY 2019

FROM: COMMITTEE SECRETARY
CHRISTINE HILTON

SUBJECT: FURTHER PRE-CIRCULATED APPLICANT EVIDENCE -
ASSESSMENT OF OPTIONS FOR TREMAIN SERVICE
CONNECTOR FOR NOR HOWARD STREET HEARING - 19
FEBRUARY 2019

1.0 SUMMARY

- 1.1 The purpose of this report is to have a way to attach the pre-circulated Applicant evidence addressing Assessment of Options for Tremain Service Connector and to put it onto the Council's website prior to the hearing – as is required by the provisions of the Resource Management Act.
- 1.2 The Applicant had previously provided its Pre-circulated Briefs of Evidence and this had been put onto the Council's website in two separate agendas. Subsequently, further evidence was requested from Mr M Kneebone which the hearings commissioner directed was to be circulated separately, on 1 February 2019, to the parties to the hearing.
- 1.3 The evidence noted in Paragraph 1.2 above is attached to this report.

2.0 RECOMMENDATIONS AND REASONS

That the Applicant's further pre-circulated evidence titled "Assessment of Options for Tremain Service Connector" relating to the NOR Howard Street, be put onto the website prior to the hearing commencing on 19 February 2019 so it can be viewed by the submitters and members of the public.

Attachments:

- 1 Mr Kneebone's assessment of options for Tremain Service Connector 55505#0261



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 TE KAUNIHERA O HERETAUNGA

File Ref ENV-9-19-3-19-220

To: Rowan Wallis
Copy to: Asher Davidson
Date: 1 February 2019
Subject: Assessment of options for Tremain service connector – Howard St Residential Development

Background

As part of the Howard St residential rezoning process, HDC has issued a Notice of Requirement for designation of a corridor for both an internal access road and a bulk water (Water, Wastewater & Stormwater) service corridor.

The proposed roading/service corridor layout for the development aims to ensure that all properties within the rezoned area have reasonable ability to access this corridor for the provision of drinking water and the disposal of wastewater and stormwater.

While there is a preference that the properties are able to connect to this service corridor using a gravity based solution, this is not always possible. Council does not guarantee that all sites will have a gravity based option, and in some cases properties will need to consider earthworks to achieve a sufficient fall to the corridor, or potentially employ alternative solutions, such as pumping.

All new stormwater systems are to be designed in accordance with the HDC Engineering Code of Practice¹ and need to comply with the general requirements and objectives outlined in the Code,² including the following requirements in Section 4.1 Performance Criteria:

- *Convey the flow by gravity, unless it can be shown that this does not represent the least whole of life cost option*
- *Be compatible with the existing drainage network, and does not impose any adverse effects on the existing system, and on upstream and downstream properties*
- *Not cause undue restriction on the location of any future building or development nor cause undue risk to public health and safety*
- *Enhance the environmental and amenity value of any open channels and flood banks with protection from scouring, erosion or siltation.*

The ECOP provides guidance for design of a stormwater system for new developments to ensure that the system provides for “amenity, land drainage and protecting land and infrastructure against flooding.” This includes a primary system of pipes and open channels and secondary network of overland flowpaths. Refer to Section 4.3 Design for further information.

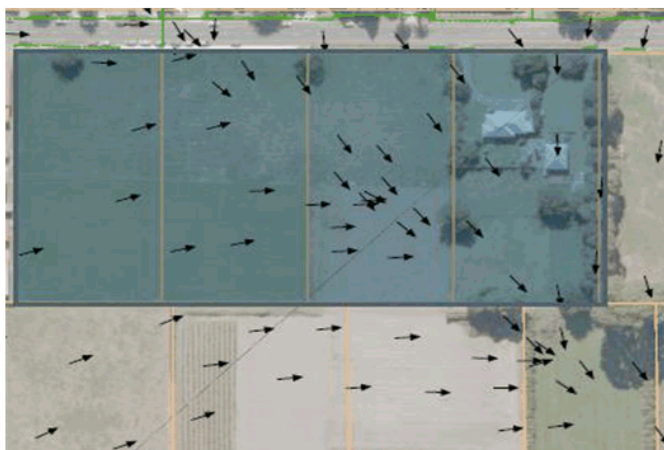
¹ Available at <https://www.hastingsdc.govt.nz/assets/Document-Library/Policies/Engineering-Code-of-Conduct/engineering-code-of-practice.pdf>

² As a requirement of approval to discharge stormwater to the Council controlled Network, and potentially as a requirement of subdivision consent condition - see Proposed Hastings District Plan, Policy SLDP7 and SLDP15, and Explanation to those Policies.

The ECOP also requires that any public pipelines and overland flowpaths are located in public open space, with the creation of easements or drainage reserves to ensure that flowpaths are not obstructed. Refer to Section 4.3.7 for further information.

Topographical consideration of the land is also required *"to ensure that the pipe layout shall conform to the natural fall as far as possible."* Refer to section 5.3.4.3 for further information.

Although the topography of the Howard St rezone area is fairly flat, the land does fall away from Howard St, towards the Riverslea/Awahou Drain. The arrows on the plan below show the direction of fall across the rezoned land and the shaded block of land is referred to as the Tremain land (1239 Howard Street).



Plan 1 – Arrows showing direction of fall across the rezoned land.

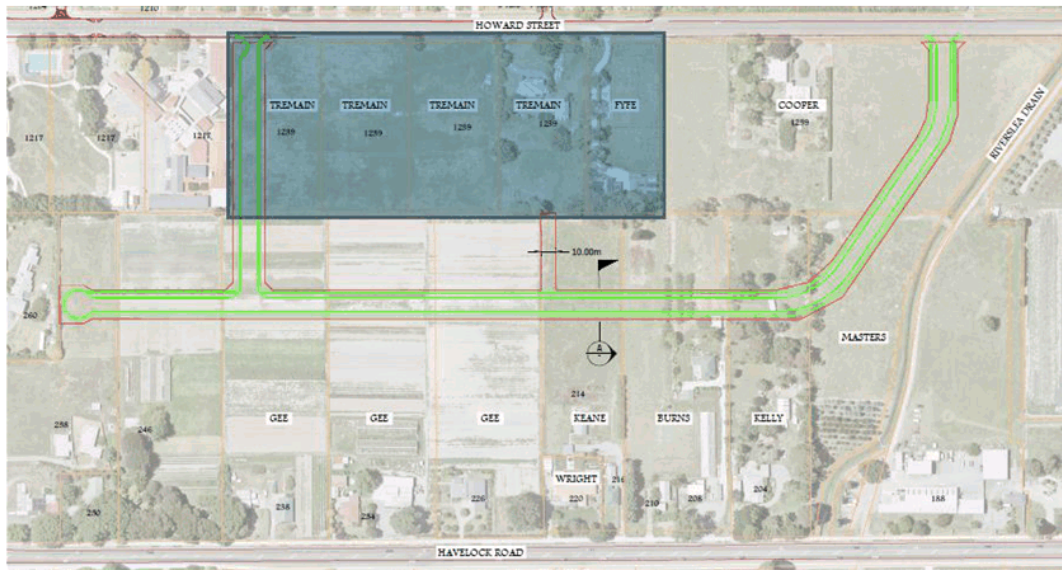
Servicing Concept

An early assessment of the surrounding water related infrastructure was undertaken as part of the background documentation for the rezoning of the land to determine if there was available capacity in the existing network to cater for the Howard St rezoned land. Refer to the MWH report titled *Howard Street Stormwater Capacity – March 2016*.

MWH were engaged to assess the stormwater network and identify if there was any available capacity or any capacity constraints. This report confirmed that the existing stormwater network did not have capacity to service the rezoned land. As a result the stormwater from the entire development is to be directed to the stormwater management area adjacent to the Riverslea/Awahou Drain, as this follows the existing land topography.

A single bulk water service corridor for water, wastewater and stormwater, collected within the internal roadway was determined to be the best option for servicing residential developments at Howard Street and is consistent with the requirements of the Engineering Code of Practice. The intention is for the road to act as an overland flowpath for excess stormwater not able to be conveyed in the piped network.

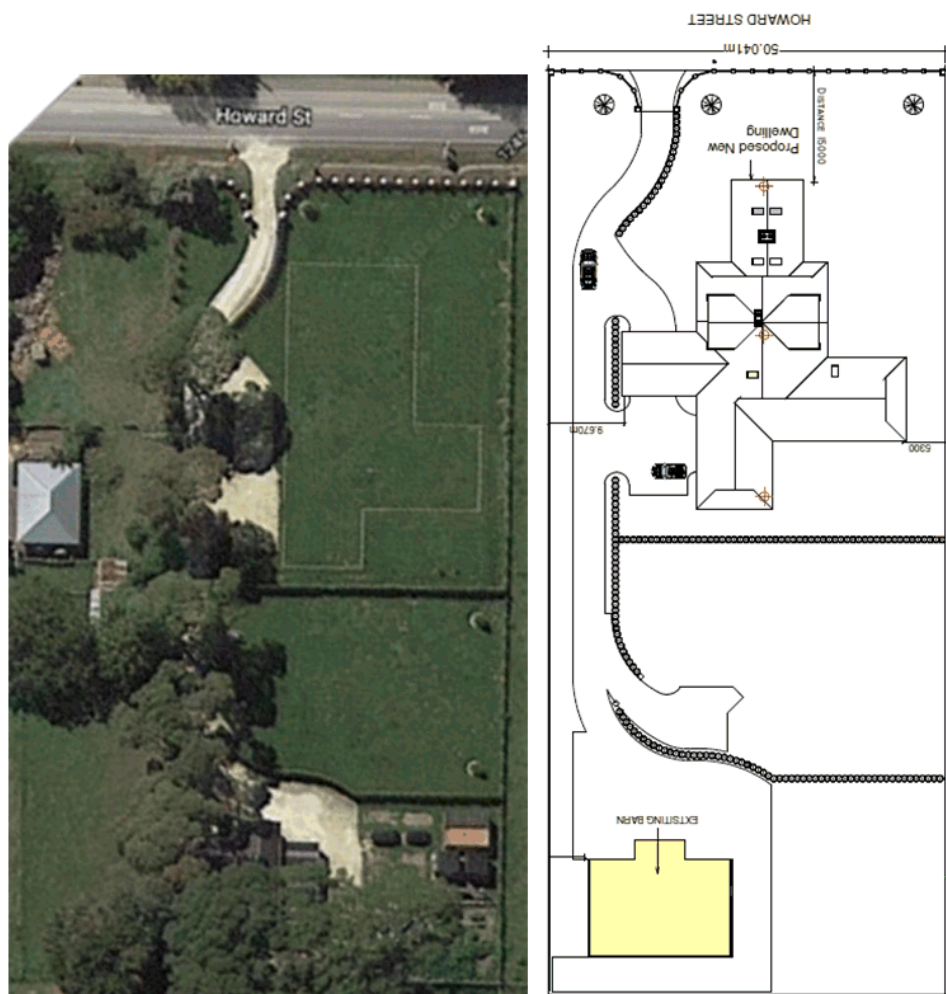
All properties, with the exception of the Tremain parcels of land and the Fyfe property (shaded properties) have direct physical access to the proposed service corridor.



Plan 2 – Proposed roading and service corridor layout

As part of the NOR/Designation process, a service corridor was identified to allow the Tremain land to connect to the bulk water service corridor.

It is not proposed that the Fyfe property will be connected to the service corridor. The reason for this is that prior to the Variation to rezone the land to residential, a new large shed, located to the rear of the site, was constructed on the Fyfe property, and a second house is being built on the land fronting Howard St. At this stage there is no further development proposed for the Fyfe property and the site is already connected to Howard St for water and stormwater and currently has an onsite wastewater treatment system.



Plan 3 – Fyfe property with new dwelling at rear and outline for a new building at the front of the site.

A number of options were considered with regard to servicing the Tremain land which are outlined below.

Service Corridor Options Assessed

Five broad servicing options were considered by HDC as part of the Notice of Requirement/designation process.

Option 1 – Services direct to Howard St

There is not sufficient capacity in the existing stormwater system along Howard St to cater for the runoff from the Tremain land and the fall of the land is away from Howard St.

At the time of rezoning, it was contemplated that the Tremain land would have an outlet to Howard Street, and their stormwater would be conveyed along the road to the Howard Street detention area. However since the rezoning process, as more information has become available, particularly about the topography of the land, this option was considered to be undesirable.

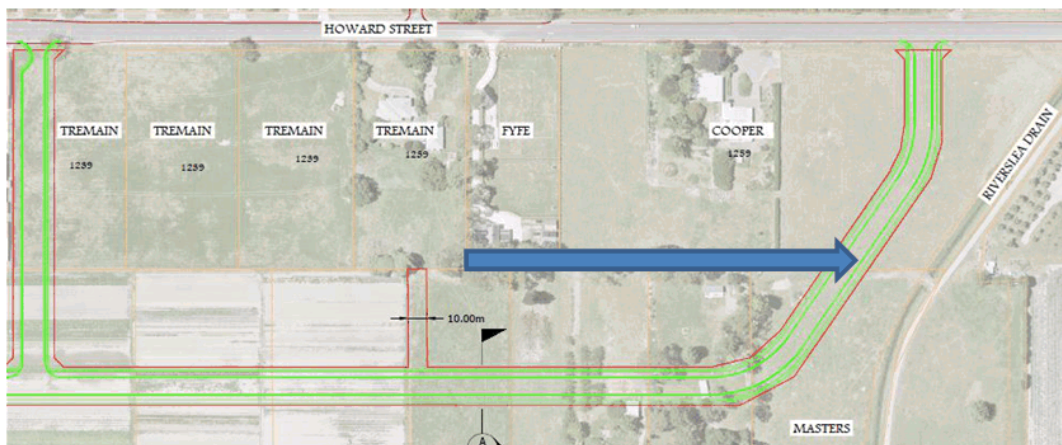
If this option were to be pursued, the land to the rear of these sites would need to be raised in the order of 0.7 -1.0m, in order to provide fall to Howard St.

This would adversely impact on the adjacent land owners, who would either have large retaining walls on their boundary, or would have to undertake significant earthworks in order to raise their land to match in with the new levels of the Tremain land.

Given the Fyfe land has already been developed, with dwellings on site, it would be difficult to implement this option, and some form of significant retaining structure would likely be needed to address the differences in ground levels.

This option is not consistent with the overall servicing approach of servicing all land via the internal road corridor, would require significant raising of ground levels, and would potentially create significant amenity impacts on neighbouring properties. It was therefore not considered to be the preferred option servicing option.

Option 2 – Services through the Fyfe-Cooper properties



A service corridor through both the Fyfe and Cooper properties would be needed to provide for piped services and a stormwater overland flowpath through to the internal road/service corridor.

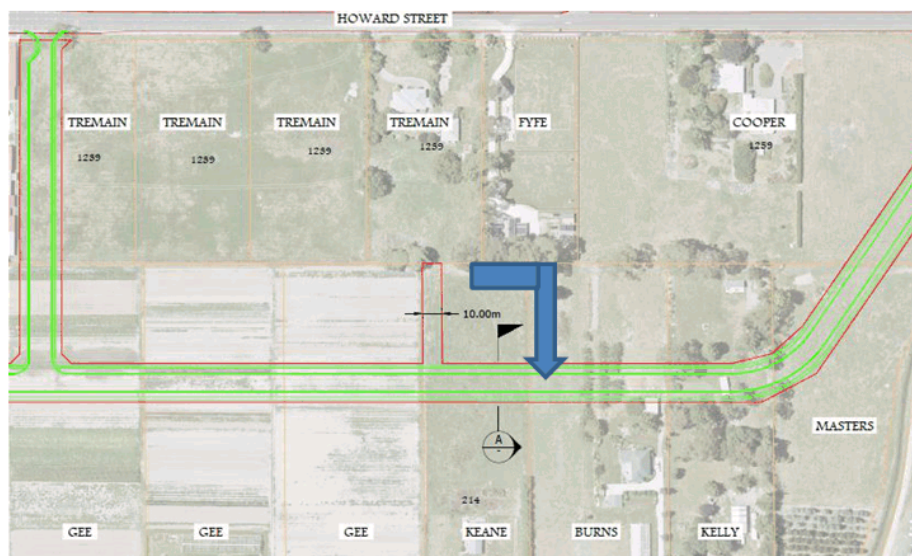
Given the Fyfe property has a large building towards the rear of the site, it would be difficult to construct services along the rear of the site, especially given the extent of mature trees along the boundary.

This option involved impacting on two private properties, one of which (the Cooper property) is already the subject of a significant land take for road and stormwater detention area.

The distance of the piping and overland flowpath is much greater than other options, and therefore would be more expensive, and have a greater impact overall.

For these reasons this option was not identified as the preferred option.

Option 3 – Services through the Burns property.



There is no direct connectivity between the Tremain and Burns land. In order to provide a service corridor through the Burns land, the corridor would need to either pass through the Fyfe or Keane properties.

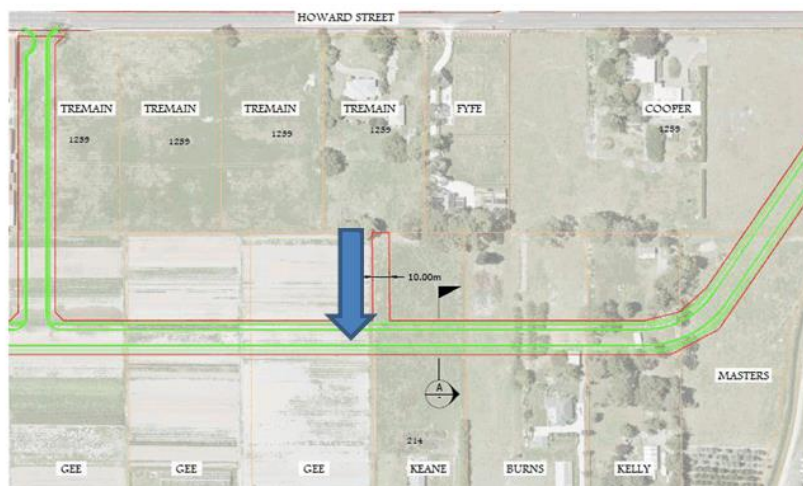
Given the limitations that already exist on the Fyfe property (outlined above), the option of directing the corridor through the Fyfe property was not considered feasible.

Therefore this option would still require access over the Keane land for a service corridor, albeit to a lesser extent than the notified service corridor.

This option would require there to be a bend in the service corridor, which is inefficient, and it takes up more land overall (and is therefore expected to be more costly). It also affects and requires dealing two private landowners, rather than one.

This option was not considered practical or efficient, and is not the preferred option.

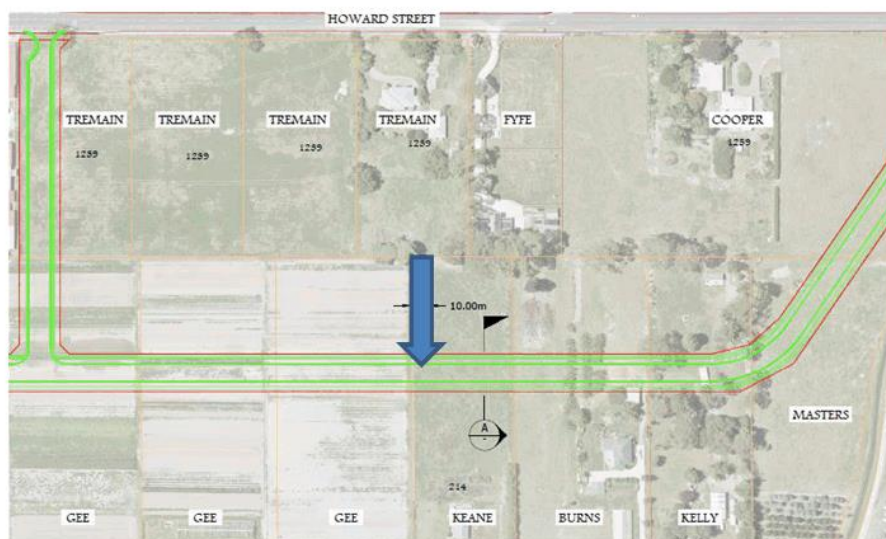
Option 4 - Services through the Gee property



A service corridor through the Gee property would be technically possible, however it was not considered the most efficient option, as the location of the corridor would be 'upstream' of the lowest point of the Tremain land.

Due to the engineering issues, this option would be more costly, without providing any technical advantage over the notified option (Option 5). This option would still affect private land.

Option 5 – Services through the Keane property



A service corridor through the Keane land is the most direct path, located at the lowest point and most closely reflecting the natural overland flowpath. This path is considered the most logical, and is expected to involve the least cost, both in terms of construction and maintenance, as it involves the shortest distance between the Tremain property and the internal road.

For these reasons, the overland path over the Keane property was identified as the preferred option.



Matthew Kneebone
Stormwater Manager