

## Development

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To: Gillian Cockerell – Principal Planner  
From: Jonathon Brooke – Project Engineer  
Subject: Engineering comments for Weston Lea Limited resource consent applications  
Date: 2 April 2019 File: 2018/9853 & 2018/6695

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### Purpose of this Memo

1. To provide a summary of the multiple engineering assessments on the potential effects with regards to the Weston Lea Limited resource consent applications at Peacockes Road.

### Background

2. Planning Guidance Unit (PGU) requested engineering comments from Strategic Development Unit (SDU) on the resource consent applications lodged by Weston Lea Limited to develop approximately 105 hectares for residential development and associated subdivision.
3. Weston Lea Limited supplied the following engineering reports as part of the resource consent applications:
  - Integrated Transportation Assessment by TDG
  - Geotechnical Investigation Report by Engeo
  - Wastewater Disposal Report by O’Callaghan Design
  - Water Supply Report by Jacobs
  - Integrated Sub-Catchment Management Plan (Sub-ICMP) by Awa Environmental
  - Civil Infrastructure Report by Harrison Grierson
  - Flood Hazard Report by Awa Environmental
  - Flood Hazard Build Report by Awa Environmental
4. Due to the complexity of the applications Council engaged the following experts to assist with the assessment of the proposed development:
  - Alasdair Gray from Gray Matter for Transportation
  - Chris Hardy from Aecom for Wastewater
  - Caleb Clarke from Morphum for Stormwater, flooding and the Sub-ICMP
  - John Brzeski from Tonkin & Taylor for geotechnical risks
5. Jackie Colliar, Strategic Manager from SDU, has provided additional wastewater commentary on behalf of Hamilton City Council as the asset operator.
6. My role in assessing the resource consent applications was to liaise with the experts and provide an understanding of Hamilton City Council standards, practices and processes. Hamilton City

Council uses the Regional Infrastructure Technical Specifications as guidance on engineering practices and design solutions. It is considered to be an acceptable means of compliance for infrastructure related standards within the Hamilton City Council Operative District Plan. In this context it is used for setting conditions of resource consent for subdivision and development. The content is amended from time to time to reflect best practice and new technologies. Public infrastructure is expected to be designed in accordance with the latest specifications in this document. I also assessed the water supply proposal as it was a standard design and layout within the assessment abilities of a Development Engineer.

### Staging

7. Harrison Grierson have supplied a staging plan, drawing 141842-1046 v6, for review. I concur with the intended staging but have the following exceptions:
  - Stage 9 appears to have a large amount of required infrastructure for a small number of residential lots. Proposed Pump Station 1 should look to be built within a larger stage.
  - Each stormwater basin should be within their own fee simple lot and to vest as drainage reserve.

### Transportation

8. I concur with Alasdair Gray's evidence and his assessment of the applicant's transportation proposal.
9. Staging has been reviewed and appropriate conditions have been included to ensure adequate urban reconstruction of Peacockes Road at the appropriate staging points. Ensuring that Peacockes Road is reconstructed to an urban standard at the appropriate times will ensure a safe and efficient roading network is established to service alongside the development.
10. Alasdair Gray raised concerns over the road corridors being sufficient to meet operational requirements. I have reviewed the roading cross sections and discussed these with the City Transportation Unit who will be the asset owner and are satisfied that sufficient width has been provided to cater for all infrastructure and use required within the proposed road corridor widths. Due to the space available in the front berms required for parking bays, street landscaping, stormwater management and vehicle crossings a condition has been recommended to address the location of all this infrastructure at the detailed design stage to ensure the efficient and effective use of the front berm and avoidance of conflicts.
11. Two pedestrian walkways are proposed to vest in Council as Pedestrian Access (Lots 1504 & 1505). Both are approximately 10 m wide and straight alignment but relatively long. Fencing should be limited to a height of 1.2m high for approximately 10m from each end of the accessway in accordance with drawing D3.8.10 of the Regional Infrastructure Technical Specifications (RITS). The reason for the height limit is to allow visibility for people entering and exiting the walkway ends.
12. As per the RITS all shared paths shall be a minimum 3m width, this will include pedestrian walkways if they are intended to function as a shared path.
13. Utility corridors have been provided in all road corridors. These corridors are 1.5m in width and suitable for power, gas, fibre and other services. Wel Networks (submission #69) has submitted on the proposal and is approving on this utility corridor as long as the 1.5m width is a minimum.

Wel Networks would also like to better understand the location for potential aboveground infrastructure. This understanding and consultation can occur at detailed engineering design.

### **Stormwater**

14. I concur with Caleb Clarke's evidence and assessment of the applicant's stormwater proposal.
15. The proposal has been altered to provide consolidated stormwater assets which will reduce the on-going operational and maintenance costs of the assets.

### **Wastewater**

16. I concur with Chris Hardy's evidence and his assessment of the applicant's wastewater proposal, which is supported by the memo from Jackie Colliar, HCC Strategic Manager from SDU.
17. I endorse Chris Hardy's recommendation, paragraph 29, that a condition is imposed that the development can proceed with the eastern discharge solution only.

### **Water Supply**

18. I have reviewed the Water Supply Report by Jacobs and agree with the conclusions.
19. The site proposes the following layout, 250mm diameter water main with a 150mm diameter water main, to be installed from the existing infrastructure and brought to the site along Peacockes Road.
20. The above layout will provide the site with a suitable level of service for pressure and adequate fire flow capacity.
21. With appropriate conditions a suitable water supply will be able to service the development.
22. Jacobs engaged Mott McDonald to do some modelling on the effects the resource consent application will have on the existing network. The results of the modelling found that a proposed development of 1000 lots would not lower an existing household or business below Council's minimum 10m pressure level of service or fire flow capacity as per the HCC Water Supply Bylaw.

### **Recommendation**

23. I have reviewed and contributed to the draft engineering conditions appended to the section 42a report.

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Jonathon Brooke  
Project Engineer  
Date 29/03/19