

Our Ref: L19062d

8 January 2020

SH 16 Limited  
PO Box 540  
Silverdale

Attn: Paul Boocock

Dear Paul,

**RE: ENGINEERING REVIEW FOR PROPOSED PLAN CHANGE  
AT MADDIES ROAD, KAUKAPAKAPA  
FOR SH16 LIMITED**

### **Introduction**

This engineering report has been prepared to assess the above site for suitability for a proposed plan change from its current zoning of Rural Production Zone to Countryside Living.

### **Site Description**

The site consists of a 24.36 Ha irregular shaped rural lot located between Alpine Road and Maddies Road, to the north-west of the Kaukapakapa township. The site falls eastwards from Alpine Road towards the Te Koru Stream which conveys runoff from the surrounding catchment and discharges into Kaipara Harbour via Kaukapakapa River.

The property is defined by numerous ridgelines and gully features. The site is covered with native vegetation isolated within the centre and southern portion of the property. The south eastern portion of the site is generally vegetated in pasture.

### **Access**

The site is accessed from the northern end of a cul-de-sac head located on Maddies Road and provides the site with all-weather access. Another site entrance extends from the eastern side of Alpine Road which borders the property to the west.

The topography of the subject site should allow access to future developments with a longitudinal gradient less than 1 in 5 (20%) in accordance with Auckland Council engineering standards.

### **Earthworks**

An assessment and review of the geotechnical aspects of the site has been carried out by CMW Geosciences, Ref: 2015-1122AD Rev.0 dated 15<sup>th</sup> May 2018. The above mentioned report confirms there are suitable areas to locate future residential building platforms with an estimate of 11 building platforms of varying sizes and with stable access available on the property.

As a result of the varying topography on site, earthworks would be required for the formation of future vehicle access ways and building platforms and would consist of cut to fill earthworks operations.

### **Stormwater Disposal**

There is sufficient area on site to effectively manage stormwater runoff from an increase in impervious area as a result of potential future development.

Future access ways could be managed by the addition of grassed swales, similar to existing developments adjacent to the site.

All stormwater runoff from future building sites, tank overflows, hardstand areas and surface and subsoil drainage should be collected into a sealed stormwater system and discharged through a suitable scour resistant outlet well clear of any future building sites.

This office has reviewed the network discharge consent referenced 949644 dated 10 September 1996 for the Kaukapakapa area. The stormwater outfall for any future development of the property could be carried out in general accordance with the Kaukapakapa network discharge consent and therefore we anticipate a stormwater discharge consent would not be required for the subject site.

### **Wastewater**

Review of the site topography and soil categories confirms any potential future developments would have sufficient area to service a standard three bedroom dwelling per lot as is typically required by Auckland Council for onsite wastewater treatment. Typically 450m<sup>2</sup> is required for treatment including a sufficient reserve area (typically 50%).

### **Water Supply**

There is no current water supply network within the property. Any future developments would be serviced by harvesting rainwater from roof collection into on-site storage tank(s). The tanks would be installed at the time of dwelling construction.


Sufficient firefighting provisions would be made available by onsite water supply (tanks).

Should you wish to discuss any aspects of the above information, please contact this office.

We trust this meets with your approval.

Yours faithfully,  
**IAN HUTCHINSON CONSULTANTS LTD**

p.p  
Prepared by



M. Symons  
**ENGINEER**

Reviewed by



P. Farley  
**CIVIL MANAGER**

Reviewed by



I. T. Hutchinson  
**MANAGING DIRECTOR**