



**LOTS 5 & 250 HELENA VALLEY RD, HELENA VALLEY**  
**INVESTIGATION STUDY**  
**POWER & COMMUNICATIONS SERVICING REPORT**

**REVISION 1**

## REVISION HISTORY

Document Review History		
Revision	Description	Date
1	Original Issue	7/09/2021
2	Scope Reduced	9/09/2021

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## 1. Introduction

Peritas Group have requested Underground Power Development complete a servicing investigation report for the proposed subdivision in the Figure below. There are existing developments in the area with Power and Comms already established.



## 2. Power Requirements

Based on the Western Power (WP) UDS manual requirements the loads are calculated for the subdivision area as follows:

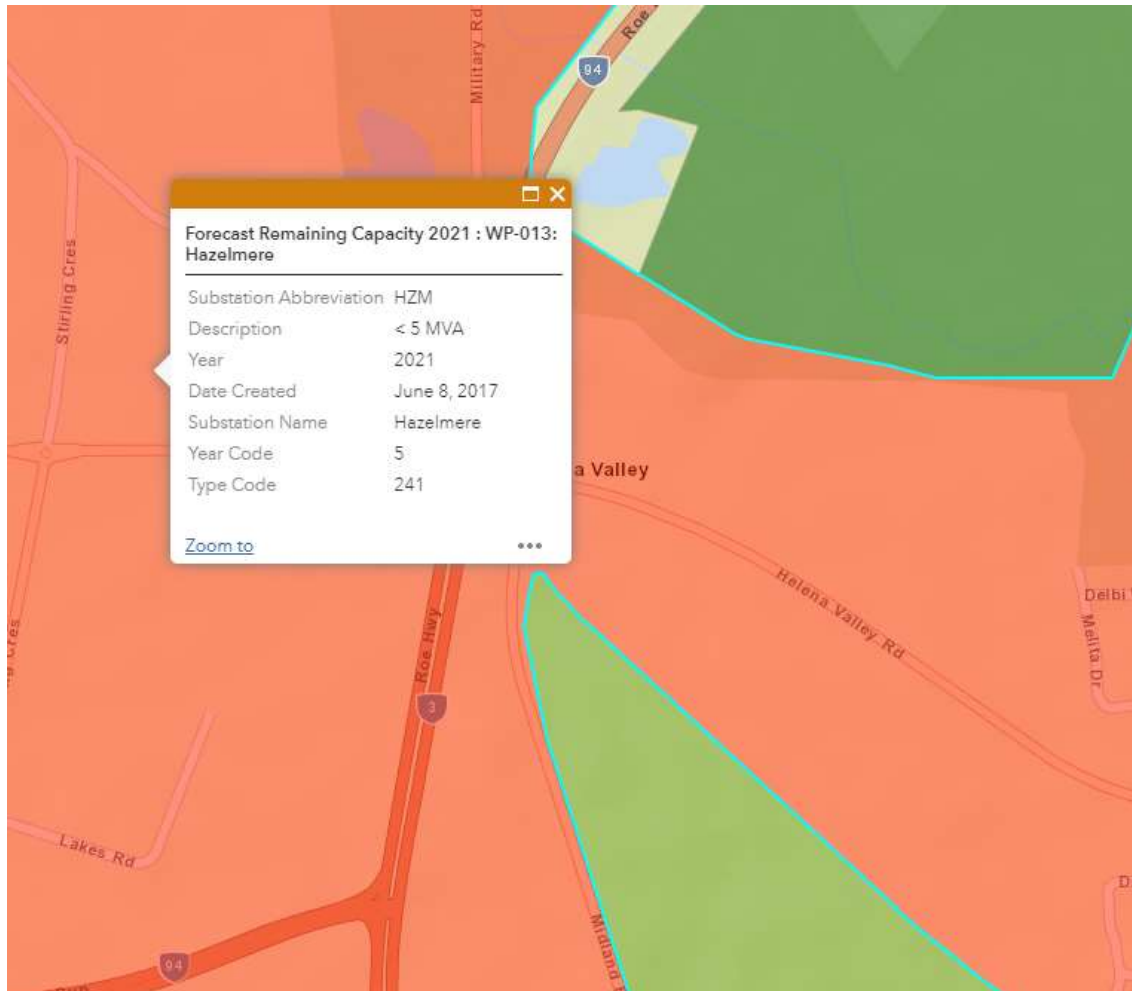
Load Type	Number	Required kVA	Total kVA	Comments
Development area yield	72 Lots	4.7kVA per lot	338	Estimated
<b>Total</b>			<b>338</b>	

The development would most likely be completed as two stages. The total load requirement is 338 kVA. The estimated load is based on an approximate 72 lots at 4.7kVA. This load would be connected to the existing aerial network..

### 3. Feeder Capacity

Western Power's Network Capacity Mapping tool indicates that the area has sufficient power available to meet the development's needs, from the WP Hazelmere Zone Substation. Due to the colour shading of orange, this indicates there is less than 5 MVA available in this area.

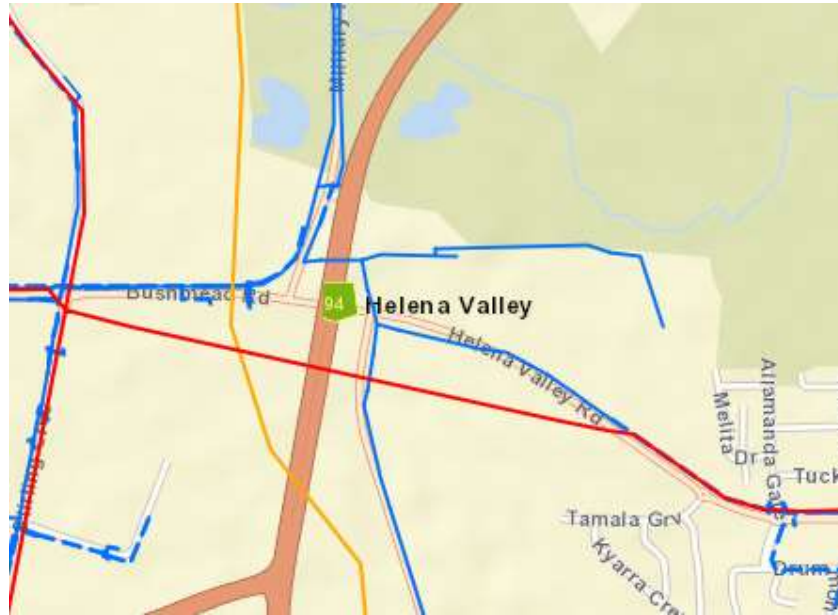
Image from WP Mapping tool:



Western Power Capacity => 5MVA

### 4. Existing HV Network

The HV network mapping tool indicates there is a HV back bone feeder is on Helena Valley Road through the centre, to the north and west. The development will need to connect to this section of HV overhead.



## 5. Opinion of Probable Power Cost

- Power Equipment cost \$640,000 Plus GST. Works out at about \$9000 per lot.
- HV Earthing 2 sites at \$20k each site Plus GST
- Western Power interface Costs \$50k

## 6. Transmission Line 132kV Network

There is an existing 132KV transmission line running diagonally across the southern section of the Development, and would affect three lots in the south eastern corner of lot 250.

The power line would be expensive to divert.

Indicative costs obtained from Western Power for this subdivision in 2017 showed two options:

Option 1

Aerial diversion.

Indicative cost - **\$690,404**

Option 2

Underground diversion

Indicative cost - **\$3,392,930**

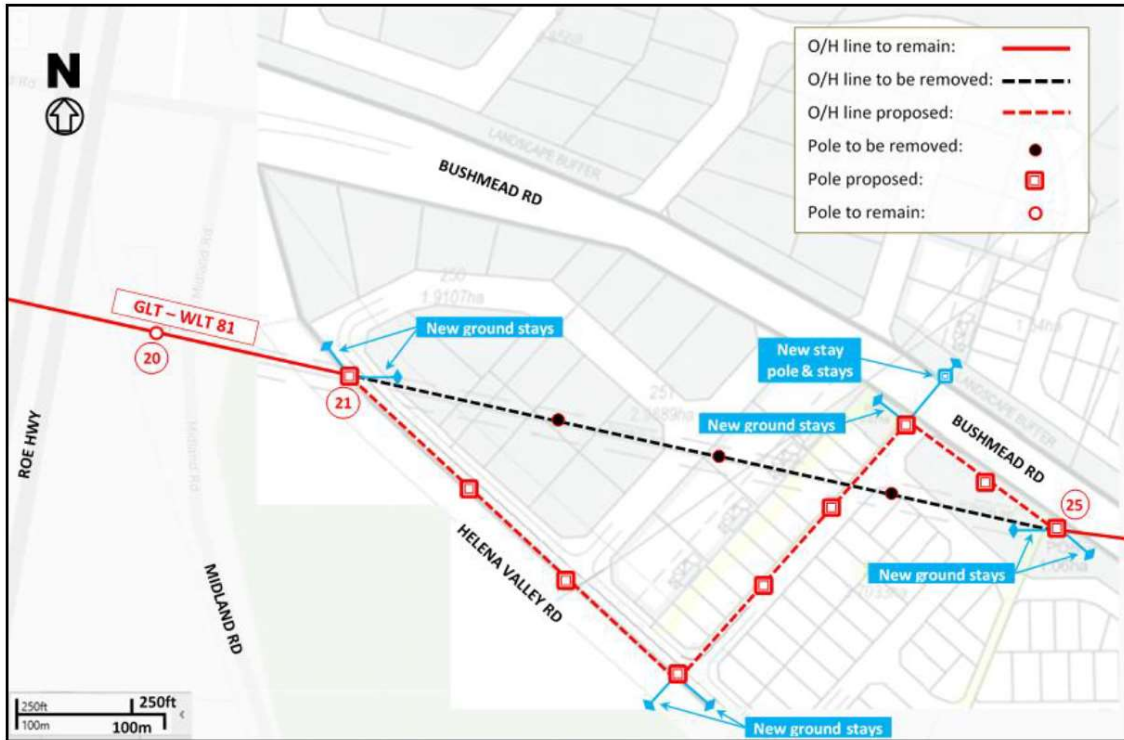


Figure 4: Proposed arrangement in Option 1 (for illustration only)

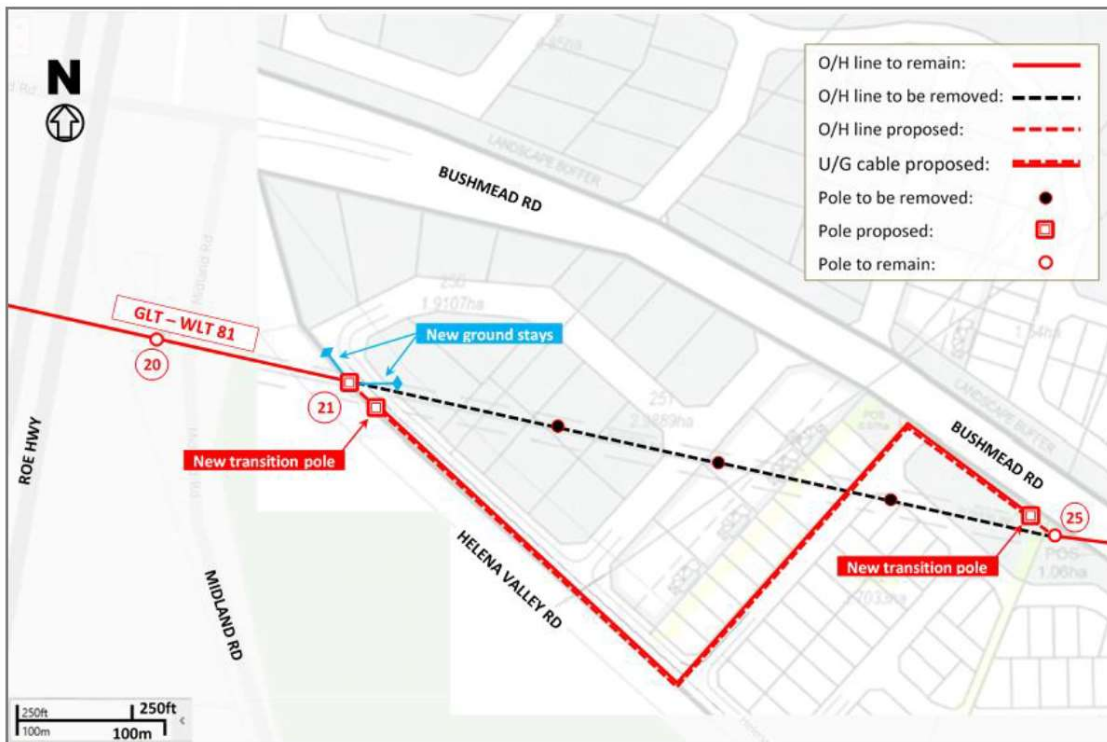
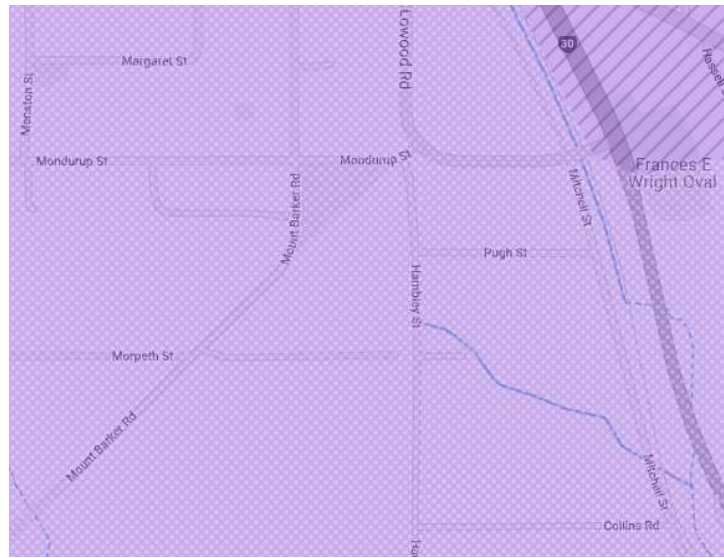


Figure 5: Proposed arrangement in Option 2 (for illustration only)

## 7. Comms Consideration

NBN does exist within the vicinity of the proposed subdivision. Based on the NBN rollout map seen above, there are existing NBN technology (fibre to the node available for this subdivision).

Currently, NBN charges \$600 per lot. Based on 72 lots, the client will be looking at \$43,200.00 in total, not including any backhaul charges. UPD is of the opinion that as the development area is within a fixed line service area and in close proximity to fix line area NBN would most likely connect this development to the fix line networks without any backhaul charges



Show service type



Fixed line ⓘ



Fixed wireless ⓘ