

# Memorandum

**To:** University of Auckland  
**From:** s 9(2)(a)  
**Copy:** s 9(2)(a)  
**Subject:** UoA Student Centre and Library – Civil Engineering Services Feasibility and Natural Risk Memorandum

**Date:** 4 March 2026  
**Our Ref:** 5010714

## 1 Introduction

Beca Ltd (Beca) has been engaged to provide civil engineering feasibility input in support of an application for referral to use the Fast-track Consenting process for the University of Auckland (UoA) Student Centre and Library development.

The development is planned to be on a site which is currently occupied by the Student Union Buildings and is bounded by the Kate Edger Information Commons to the southwest and the Recreation and Wellness Centre to the southeast, with Princes Street to the northwest and Alfred Street to the northeast. Refer to Figure 1 for the site layout plan with the architect's proposed Level 00 Plaza overlaid.



Figure 1 Site Layout Plan

The purpose of this memorandum is to:

- Provide an assessment of the serviceability of existing civil infrastructure to support the proposed development and,
- Provide an assessment of the risks of natural hazards.

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The infrastructure serviceability assessment comprises a desktop review of existing publicly available information to identify key opportunities and constraints. The review focuses on stormwater, wastewater, potable (domestic) and fire water, and utility networks to serve the development. The objective is to determine whether existing infrastructure is available to support the development and or if any upgrades or mitigations are required.

The natural hazard risk review includes a desktop assessment of coastal erosion, inundation, flooding, and landslide susceptibility for the development.

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## 2 Infrastructure Serviceability

### 2.1 Existing Stormwater Services

According to Auckland Council GIS (AC GIS), public stormwater networks are present around the site, including DN225 and DN375 concrete pipelines with associated manholes and catchpits on Alfred Street that collect road runoff and potentially flows from the existing Student Union Buildings, AUSA House, Kate Edger Information Commons, and General Library. These discharge to the downstream DN525 pipes at the Symonds Street/Grafton Road intersection as shown in Figure 2. A survey done by Beca in 2017 found that the diameters of most of the pipe-run along Alfred Street are bigger than what is shown in AC GIS.

A DN450 ceramic/earthenware public stormwater pipelines with catchpits are located on Princes Street to the north-west, conveying flows from Princes Street and buildings along Princes Street and discharging to Wellesley Street East.

As the site grades toward the east and it is expected that most of the proposed development will tie into the existing network along Alfred Street. This network along Princes Street can potentially be utilised to drain the south-west and north-west building frontages.

The existing site is nearly fully impervious and is expected to remain the same post-development, which means no increase of stormwater run-off due to an increase in impervious area is anticipated. Post-development runoff will therefore be similar to existing conditions, with any increase in peak discharge attributable only to future climate change allowances.

The site does not fall within a Stormwater Management Area – Flow (SMAF) 1 or 2 area, therefore no further hydrology mitigation is required.

The site sits near the top of the catchment; therefore, capacity constraints are expected to be low. Attenuation and retention measures are not anticipated to be necessary, though they may be included to support broader sustainability initiatives.



Figure 2 Existing Stormwater Layout Plan from AC GIS

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## 2.2 Existing Wastewater Services

According to AC GIS’s “Watercare Network Capacity Areas” dataset, the site falls within an “Area With Capacity”.

AC GIS shows a DN225 public wastewater main that runs along Alfred Street on the eastern side of the site, discharging to the downstream DN150 mains at the Alfred Street/Symonds Street/Grafton Road intersection and continuing down Grafton Road as shown in Figure 3. The downstream pipe size reduction (which is not common practice) is noted and will be verified in future stages of the project.

AC GIS does not show invert levels for the section of network in Alfred Street adjacent to the site, although levels are available further downstream near the Alfred Street/Symonds Street/Grafton Road intersection. Gravity discharge from the lower-ground level appears feasible, but any level below this would require pumping.

On Princes Street to the north-west, records indicate abandoned DN450 pipes and a live DN150 wastewater main. Given the site’s location near the top of the wastewater catchment, these may provide alternative connection options, subject to confirmation of levels and capacity.

A DN2300 transmission line traverses underneath the western corner of the site. It should be noted, with this line is being quite deep (circa 40m below existing site level), the impact the development will have on it is expected to be negligible. However, as a significant Watercare asset, any works in proximity will likely require discussions with WaterCare and a Works Over approval.



Figure 3 Existing Wastewater Layout Plan from AC GIS



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Vector's plan identifies two distribution substations near the north-western corner of the site on Princes Street. One of these (C-20206 & C-23658) is in the process of being removed directly by the University. The remaining (C-20582 & C-31825) will need to be retained and integrated into the new development.

The new Student Centre and Library development will not require a new connection to the Vector electrical network as the University will derive a 22kV high voltage supply from their own private (UoA) owned network, established from the adjacent Recreation and Wellness Centre.

The University will require ducts and cables to be installed across Alfred Street and these will likely be directionally drilled with the route / locations to be confirmed in subsequent design stages.

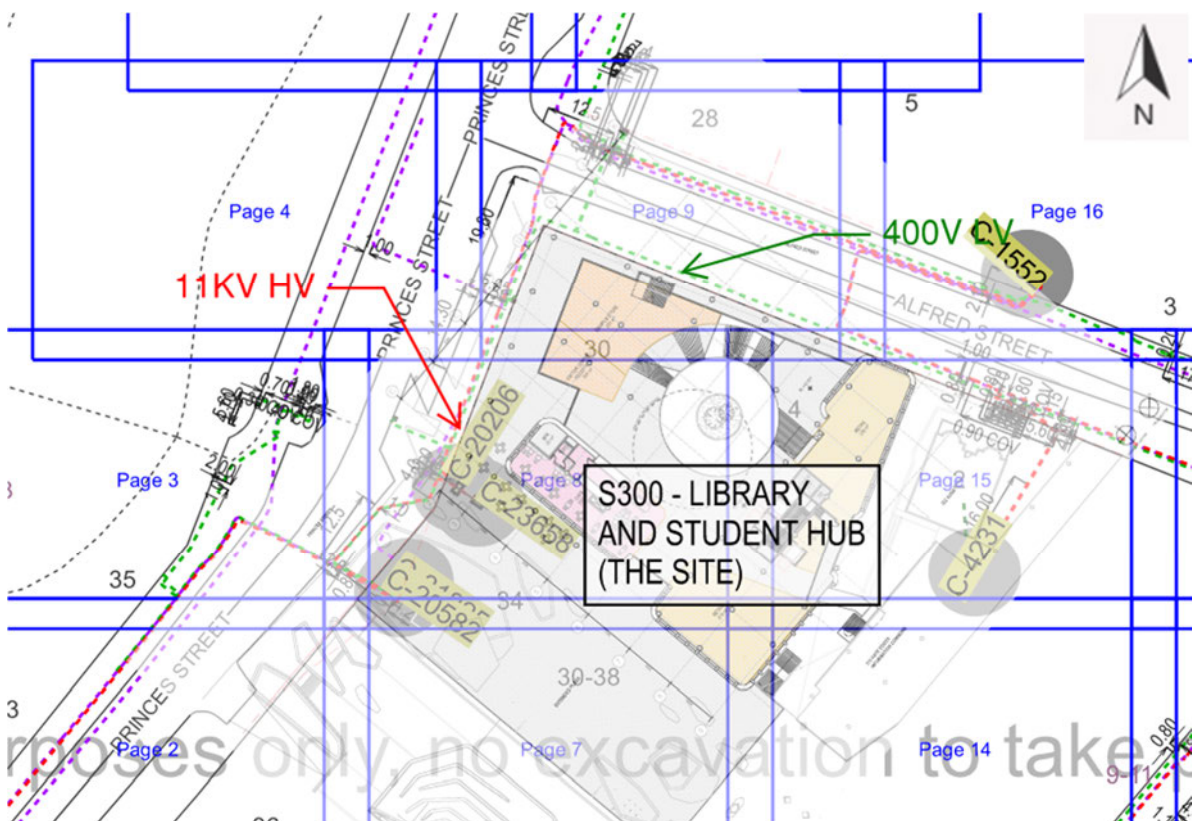


Figure 5 Vector Existing Power Layout Plan

### 2.5 Communications

Based on Vector's fibre plan obtained via the Before-U-Dig enquiry lodged on 16 February 2026 as shown in Figure 6, underground fibre cables are present along the north-eastern boundary on Alfred Street and the north-western boundary on Princes Street, which appears to be serving the existing site.

The Before-U-Dig response also identifies EonFibre infrastructure along the north-eastern side of the site on Alfred Street as shown in Figure 7. This also appears to be serving the existing site and could be considered as a potential connection option.

Chorus' plan indicates an existing DN100 communications cable approximately 0.5 m from the north eastern site boundary on Alfred Street as shown in Figure 8, with existing communications pits located to the north at the Alfred Street/Symonds Street intersection.

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Private (UoA) owned communication lines are present along the north-eastern and north-western boundary. These will be used to provide Communications services to the new Student Centre and Library development. No new connections are planned at this time into the Vector, Eon or Chorus systems.

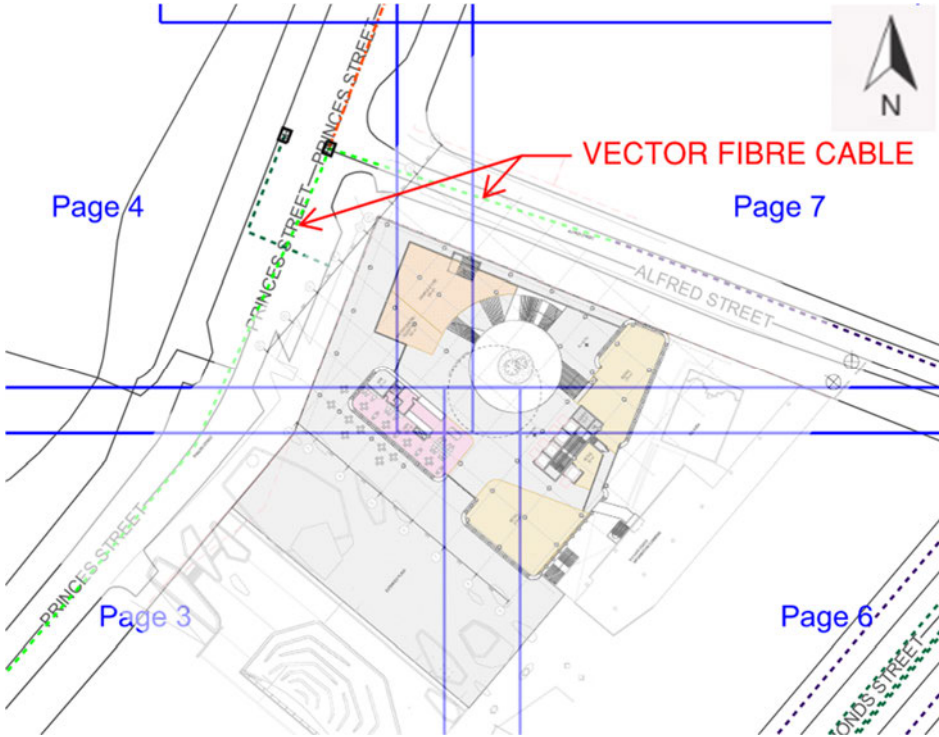


Figure 6 Vector Existing Fibre Layout Plan

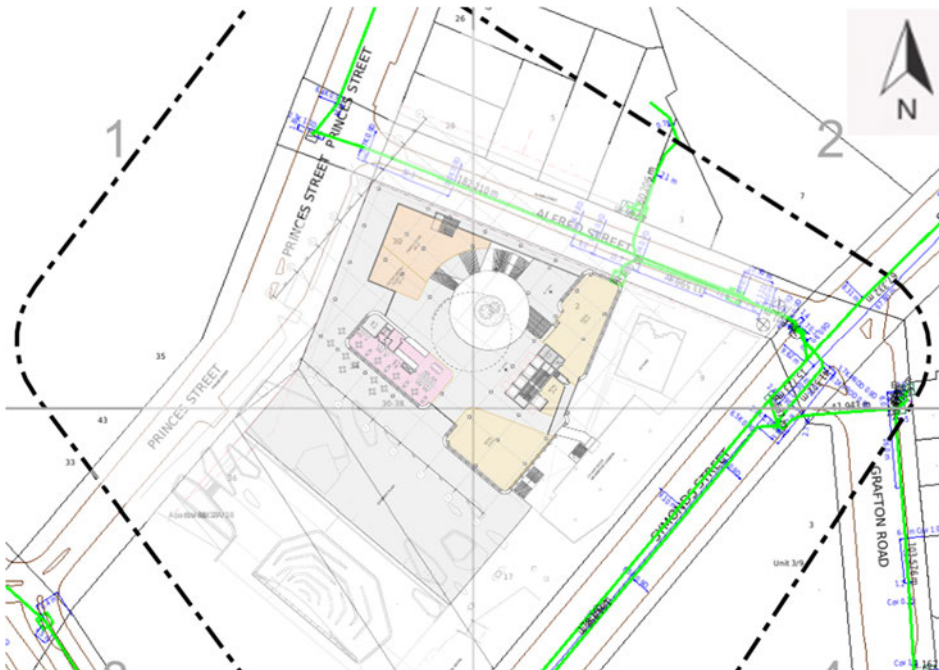


Figure 7 EonFibre Existing Fibre Layout Plan

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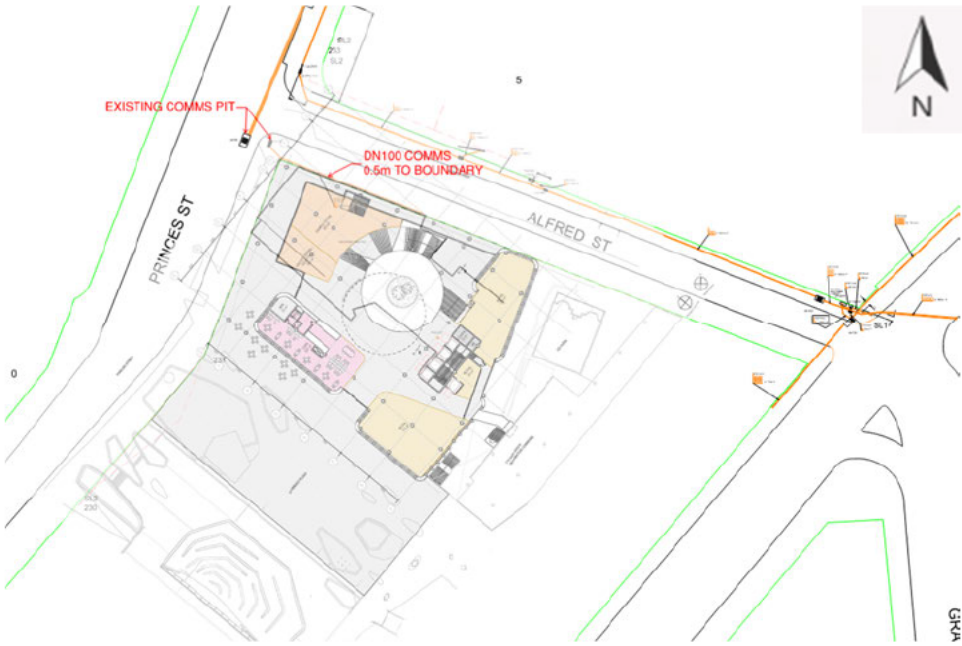


Figure 8 Chorus Existing Telecommunication Cable Layout Plan

## 2.6 Natural Gas

Based on Vector's gas plan obtained via the Before-U-Dig enquiry lodged on 16 February 2026 as shown in Figure 9, a 50mm (reducing to 32mm) underground natural gas main is present along the north-eastern boundary on Alfred Street and continuing as a 32mm pipe along the north-western boundary on Princes Street. This line is an existing natural gas supply that is redundant.

The new Student Centre and Library development will not require a natural gas connection.

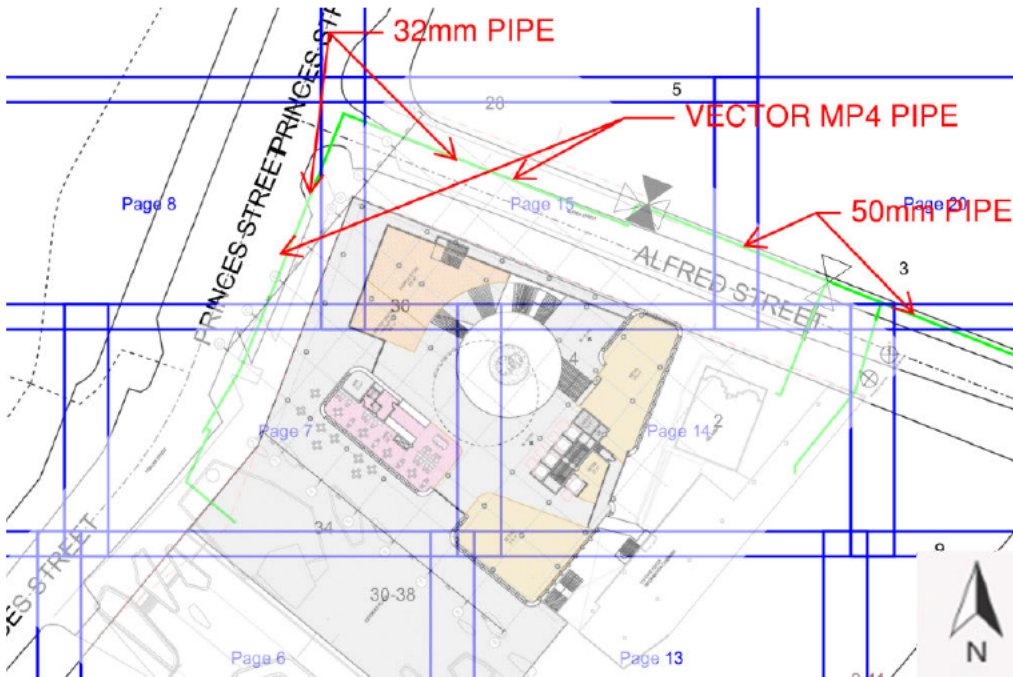


Figure 9 Vector Existing Gas Layout Plan

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## 3 Natural Hazards

### 3.1 Coastal Erosion and Coastal Inundation

Because the site is located well inland and away from the coastal environment, there is no risk of coastal erosion and coastal inundation.

### 3.2 Flooding

According to Auckland Council GIS (AC GIS), the site is not affected by any flood plain, flood-prone area, or flood-sensitive area.

AC GIS does indicate an overland flow path (OLFP) originating near the south-eastern corner of the site as shown in Figure 3. The contributing area of this OLFP is identified as 2,000 – 4,000 m<sup>2</sup>, which are below the threshold of an OLFP under the Auckland Unitary Plan Operative in Part definitions. Other mapped OLFP routes near the site are on Symonds Street and Princes Street and they will not have any impact on the site.

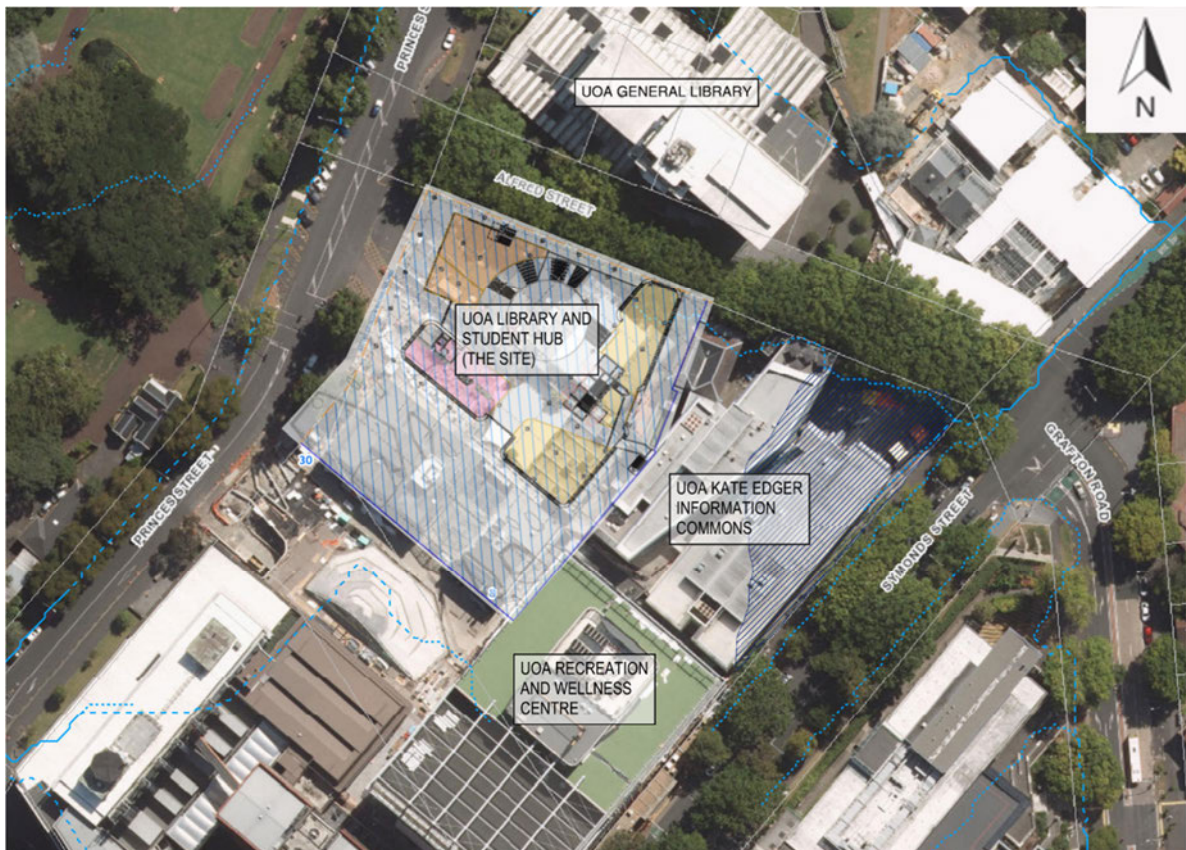


Figure 10 Existing OLFP and Flood Plain Layout Plan from AC GIS

Because the site sits on the higher side of the surrounding terrain, near a natural ridge and with no flood planes or flood prone areas identified, the likelihood of flooding is low.

### 3.3 Landslides

Assessed against the Auckland Region Landslide Susceptibility Mapping for Large Scale Landslides 2025 (AC GIS – February 2025), the site sits on the boundary of a low-risk area and a very low risk area as shown in Figure 11.

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Figure 11 Large-Scale Deep-Seated Landslide Susceptibility Risk

Assessed against the Auckland Region Landslide Susceptibility Mapping for Small Scale Landslides 2025 (AC GIS – February 2025), the site sits on a very low risk area, with 2 pockets of moderate within 50m of the site boundary and a single pocket of very high risk, approximately 65m from the site’s southern corner as shown in Figure 12.

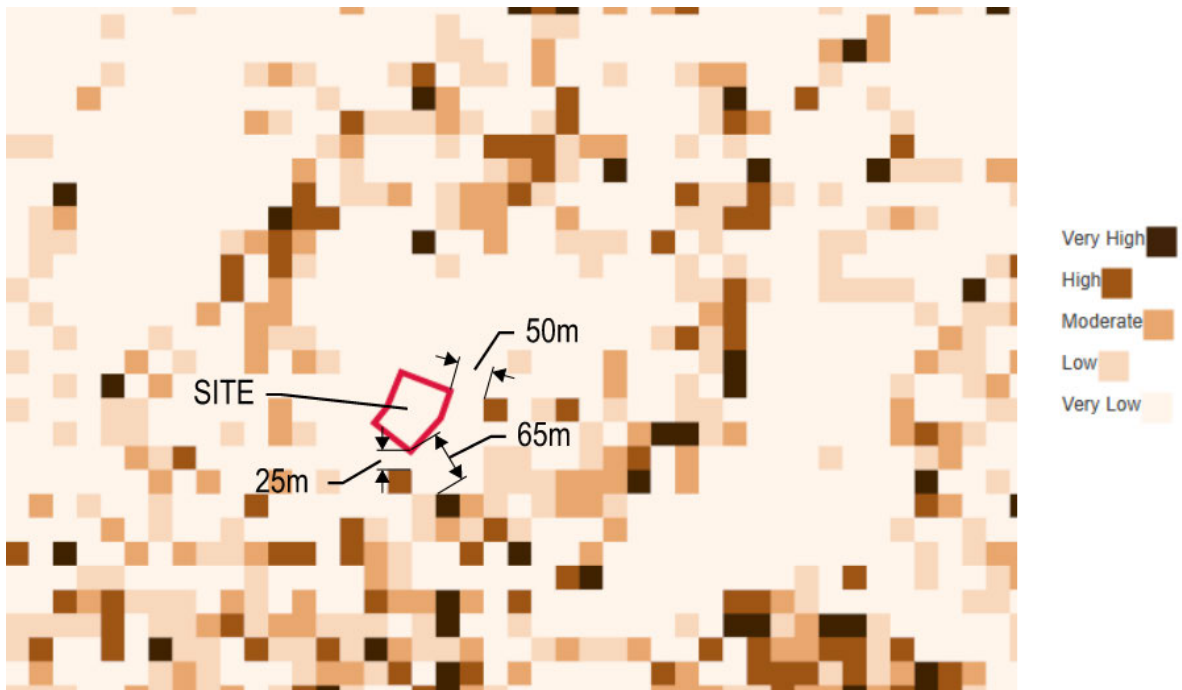


Figure 12 Small-Scale Shallow Landslide Susceptibility Risk

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### 4 Summary

The review of the site's serviceability indicates that existing stormwater, wastewater, water, power, communications, and gas infrastructure is already in place, with no evident constraints that would limit redevelopment. The available services appear adequate to support the proposed works without requiring significant upgrades.

The assessment of natural hazard risks, which covered coastal erosion and inundation, flooding, and slope instability, indicates that the site is not exposed to any coastal-related hazards. The likelihood of flooding or landslides is considered low, and no natural hazard constraints are expected to affect the proposed redevelopment.

We trust this memorandum provides a high-level overview of natural risks, infrastructure serviceability to support an application for referral to use the Fast-track consenting process. Should you have any questions or concerns, please reach out to me using the undersigned contact details.

Sincerely,

s 9(2)(a)

Civil Engineer

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