MSC Consulting Group Ltd
Civil & Structural Engineers

PROPOSED DEVELOPMENT
FOR
MATVIN GROUP LIMITED

CIVIL ENGINEERING REPORT

201 & 203 BROWNS BAY ROAD
BROWNS BAY
AUCKLAND

August 2021

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INTRODUCTION

My name is Paul James Culley. I am a Director of MSC Consulting Group Limited (MSC). I have been with MSC for over 35 years' and have held several roles, including civil designs of residential developments, retirement villages, commercial developments, and subdivisions.

At present, I am primarily involved in resource and civil engineering design and management. Within this role I specialise in the design of civil and development engineering works and provided expert evidence for many projects across Auckland and New Zealand.

SITE CHARACTERISTICS

From a Civil Engineering perspective, relevant matters to consider while preparing the civil engineering design include:

- The site is 3,309m^2 in area and falls approximately 14m from Browns Bay Road to the north
- The site has existing public stormwater, wastewater, and water connections
- There is no flooding or overland flow paths identified on the site
- The site is outside of the SMAF zone as identified in the Unitary Plan.
- There is an existing vehicle access to the site
- Bulk earthworks will be required to form the new site levels
- Retaining walls will be required to support the new ground levels and building structures

CIVIL ENGINEERING DESIGN

The civil engineering design to support this development will include the following:

- The existing stormwater drainage that serves the site will be investigated and extended to serve the new development. It required stormwater mitigation will be designed to ensure any downstream effects are mitigated. Although the site is not in a SMAF area some form a mitigation may still be required.
- Stormwater treatment will be provided to treat the accessways and carparks
- The existing wastewater drainage that serves the site will be investigated and extended to serve the new development. The capacity of the system will be calculated and approval from Watercare will be sought for the discharge from the new development.
- The existing water supply that serves the site will be investigated and extended to serve the new development. The capacity of the system will be calculated and approval from Watercare will be sought for supply to this new development.
- There will be earthworks required to form the new ground levels and building platforms. Erosion and Sediment controls will be installed prior to the earthworks commencing to ensure compliance with the Unitary Plan. Where required, retaining walls will be designed to support the new ground levels where the land is being cut or filled.

CONCLUSION

The site is well serviced with existing public stormwater, wastewater, and water supply reticulation. It is expected that the public wastewater and water supply will have sufficient capacity to adequately serve the development. The stormwater reticulation will be investigated and if required stormwater mitigation and treatment will implemented to ensure any downstream effects are no more than minor.

Prior to the bulk earthworks being undertaken on site appropriate sediment and erosion controls will be installed to ensure any downstream effects are no more than minor. Where required retaining walls will be designed to support the new ground levels for the development.

MSC CONSULTING GROUP LTD

Paul Culley

Director