SECTION 96A OF THE PLANNING AND ENVIRONMENT ACT 1987

Appendix M Land Capability Memorandum

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Technical Memorandum

Project name	**No. 108 & 110 Parr Street Leongatha VIC 3953**	Date	16 August 2024
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Client	110 Parr St Pty Ltd	Pages	8
Subject	Proposed Subdivision Planning Review	Prepared by	Tyler Reidy
Purpose	Planning Approval	Reviewed by	Nigel Wan

1 Introduction

Saxil Tuxen of 110 Parr St Pty Ltd has engaged Intrax Consulting Engineers Pty Ltd (Intrax) to conduct an assessment of the proposed subdivision at No. 108 & 110, Parr Street Leongatha. The intent of the assessment is to provide commentary on geotechnical considerations relating to the removal of Environmental Significance Overlay (ESO), ESO2 and ESO5 in line with a 96A amendment application for the development. The scope of work and terms and conditions of our engagement are set out in the Intrax quotation QU2028846. Approval to proceed was given by Saxil Tuxen via email correspondence on 16th July 2024.

1.1 Referenced Documents:

The following documentation has been provided to Intrax to provide project background information and aid in the assessment:

- Atma Environmental (2022); Environmental Site Assessment – 108 & 110 Parr Street, Leongatha, VIC, ref #2153 Leongatha, 12 May 2022
- Unearthed Heritage (2023); Cultural Heritage Management Plan – 108 & 110 Parr Street, Leongatha, VIC, CHMP No: 18671, 17 October 2023.
- South Gippsland Water (2022); Planning Scheme Amendment and Application for a Planning Permit for Subdivision – STRPP/1/2021/P-108 & 110 Parr Street, Leongatha, red 452/003/980, 27 June 2022.

The previous investigations at the site have involved borehole and test pit investigations, revealing the site is generally underlain by brown silty clays overlying red-brown clayey overlying brown and red-brown clay, consistent with the expected geological setting at the site.

2 Proposed Development

2.1 Site Setting

The site is located on the outer region of the Leongatha township, with access to the site provisioned at Parr Street. The site is bound by rural residential development to the north, a partially constructed residential development to the west, a future low-density development to the south, and Coalition Creek along the eastern boundary. The site is currently set as rural farmland, with a residential premises at the mid-south-west corner. Generally consistent with rural farm living in the Gippsland region, refer Figure 1.

Figure 1. Site Locality (Source: Nearmap, image dated 20/01/2024)

The site's landform comprises predominantly rounded slopes, with a crest of 52 mAHD in the approximate centre of the development, sloping gradually to Coalition Creek in the east at 35 mAHD. Undulating slopes bound the western elevation at 52 mAHD through a minor valley, then gently sloping to the southwest elevation. Erosion onsite is observed to be mainly at the boundary of Coalition Creek, where surface soils are subject to river processes.

2.2 Development Plans

Intrax has been supplied development plans by Rural Subdivision Specialists, version 29, refer Figure 2. It is understood that the current parcel of land will be subdivided to develop 171 individual allotments for residential living, a stormwater drainage reserve, and roadways to service the properties. It is expected that the development will largely be constructed by cut/fill earthworks onsite to form benches for construction and forming the structural elements of the roadways and drainage basin.

Figure 2. Proposed Development (Source: Rural Subdivision Specialists)

2.3 Geological Setting

The site is set within the boundary of two geological units, Thorpdale Volcanic Group (Put), and Quaternary Alluvium (Qa1). The Thorpdale volcanics are derived from basalt bedrock, surface materials are typically high plasticity clays weathered from the basalt bedrock, typically stiff to hard consistency. Quaternary Alluvium units are associated with river systems, deposited through movements of Coalition Creek to the west of the development site. The alluvial units are typically unconsolidated gravel sand and silts, mostly loose to medium dense or firm consistency. Refer to Figure 3 for geology map overlays in relation to the development site.

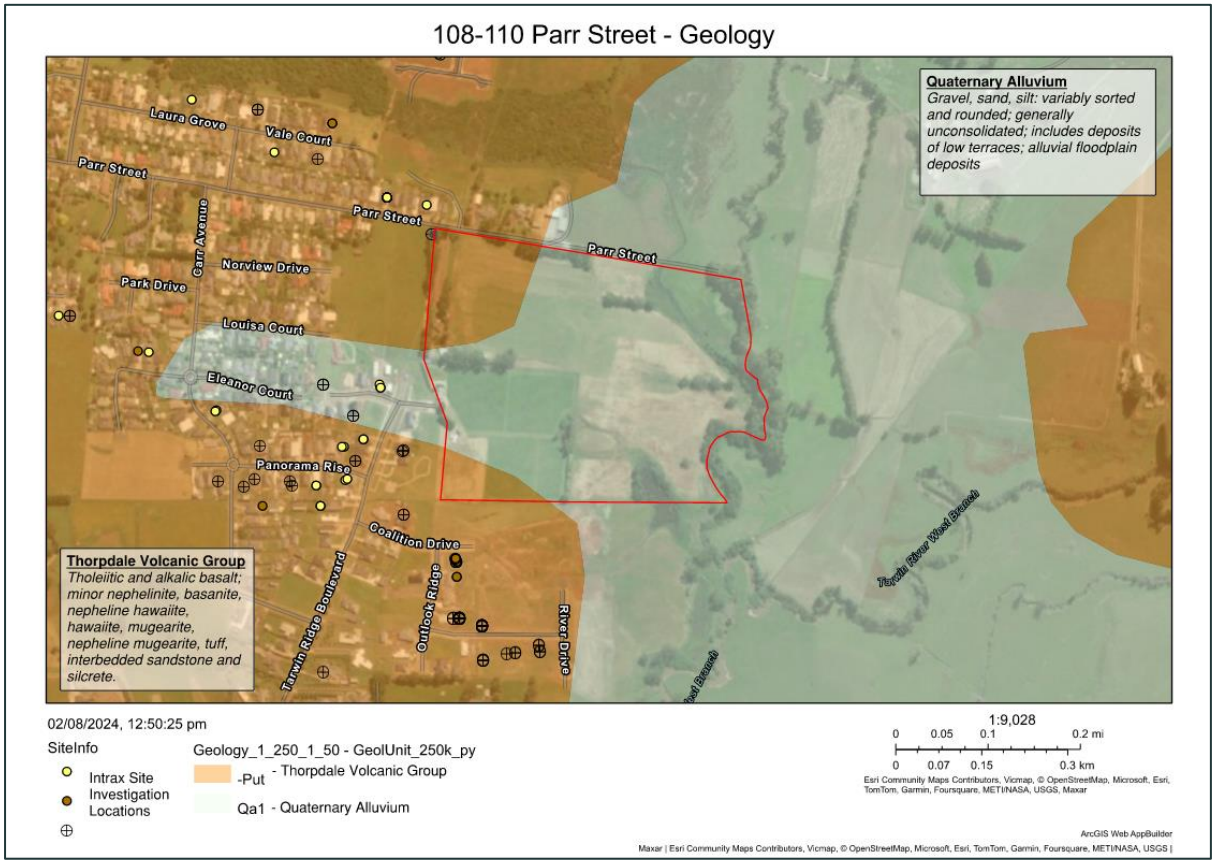

Figure 3. Geological Setting (Source: Intrax GIS database)

3 ESO Considerations

The development is located within *Environmental Significance Overlay – ESO2*. This overlay applies to approximately 30 percent of land within South Gippsland Shire located in a water catchment that are used to provide water for human consumption, domestic use, agriculture, and industrial activities.

The key considerations for ESO2 is the protection of waterways adjoining developments, for the subject development siting, Coalition Creek is the considered waterway. It is understood that ESO2 is generally applied to rural farming sites where waterways adjoin or are within site boundaries. The main risks to the waterways and mitigations are as follows:

- *Environmental contamination from onsite effluent disposal.*
    - A reticulated sewer system will service the development sites, per South Gippsland Water advice, negating impacts of onsite disposal of effluent.
- *Retention of native vegetation along the waterway alignment.*
    - Civil earthworks for the development will construct boundary conditions at the edge of the subdivision and Coalition Creek to the satisfaction of asset owners.
    - Overland flows will be captured by a pit/pipe stormwater network, likely disposing water to Coalition Creek, reducing impacts of surface scour, runoff damage, and weed transfer to the native creek.

The development is located with *Environmental Significance Overlay – ESO5*. The overlay is applied to areas considered to be susceptible to erosion, such as the farming zones at the outskirts of the Leongatha township. The Department of Natural Resources and Environment has mapped certain areas in the Shire as susceptible to erosion, whereby the overlay mentions:

Erosion is recognised as a land management concern with diverse causes that may affect any property. Therefore, it is important to encourage best practices for farming, building and associated land disturbances and to increase awareness of the issues that may exacerbate the process such as earthworks, control of water run-off and removal of vegetation.

With respect to the proposed subdivision, the below geotechnical considerations are noted:

- The Thorpdale Volcanic Group at the site is considered a stable unit, generally not prone to erosion. The Quaternary Alluvium could be subjected to erosion where poor land practices coupled with surface water processes (waterways, overland flows etc).
- Surface waters where managed by storm water systems within the development, in lieu of overland flow, can reduce erosion effects
- Earthworks will be completed in accordance with the geotechnical recommendations (to be completed), which will ensure safe practice and stability of slopes during construction and long term.
- In the final condition, where residences are developed, erosion risk is considered to be minimal, as each property will locally control storm water around the buildings and within the property in line with Water Act 2007 requirements. Overland flows emanating from road reserves will be collected at roadway drainage and flow to the proposed stormwater basin at the south of the site.

The following geotechnical requirements are required at the site as part of the detailed design:

- A geotechnical investigation is to be completed that incorporates site testing boreholes/test pits to progress civil earthworks. At a minimum the site testing should involve:
    - Soil classification tests of the bulk earthworks material (Atterberg Limits, Linear Shrinkage, Particle Size Distributions, and Emerson Class Number)
    - Investigation of groundwater depth
    - Recommendations for pavement design and construction, including drainage behind pavement infrastructure
    - Recommendations for the subdivision interface with Coalition Creek. Including but not limited to, site topography, adjoining structures (retaining walls, berms, etc), and surface drainage requirements.

It is understood that the ESO purposes and objectives are more related to the current agriculture setting and activities rather than applying to the proposed urban development where services/infrastructure will be delivered, and agricultural activities will no longer occur.

The removal of the ESO2 and ESO5 is expected to ensure the delivery of individual dwellings on allotments following subdivision/development will not trigger individual building planning permits for building work.

Based on a review of the proposed development, and supplied documentation pertaining to the development, the removal of the ESO2 and ESO5 overlays are considered appropriate in the context of the rezoning to facilitate urban development.

We trust that this memorandum meets your requirements. Any questions or queries regarding this report should be directed to the report author on 0434 936 103 or tyler.reidy@intrax.com.au.

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