

Expert Witness Statement in relation to drainage outfall from the proposed development through adjacent land by John Guise – Civil Engineer

**Amendment C372 to the Greater Geelong Planning Scheme
Land: 35 and 69-93 Hams Road, Waurin Ponds**

**TO COMMENCE: Thursday 22 August 2019
STATEMENT DATE: Thursday 15 August 2019**

Tomkinson Group Ref: A4073

Report By: John Alexander Guise

Position: Director
P.T.Tomkinson & Associates Pty Ltd trading as Tomkinson Group
1/3 Cliff St, TORQUAY 3228

Qualifications: Bachelor of Engineering (Civil) (Hons) – Melbourne University

Experience: I have been employed as a qualified Civil Engineer for approximately the last 18 years including:

- 5 years at Leighton Contractors and Baulderstone Hornibrook – two of Australia's largest construction companies - managing the design and construction of roads, bridges, stormwater drainage and retardation systems, and reticulated sewer and water mains for various land development and infrastructure projects across Victoria.
- 5 years working and a Construction Manager and Project Manager in Nigeria and the United States, designing and managing construction projects for Non-Government organisations in Nigeria and to working on a number of EPCM projects throughout North America for global Engineering and Controls company Invensys Operations Management as a construction services engineer.
- 8 years at Tomkinson Group as a Civil Engineer designing and project managing land development projects and infrastructure projects for both private and public clients. This has included design of Roads, Stormwater Drainage, Retardation Systems, Water Quality systems, Flood and Stormwater modelling, Sewer and Water reticulation and has required designing from concept to detail drawings and overseeing construction of the works. During this time, I have also been responsible for overseeing all 1 and 2-dimensional flood modelling carried out by the Tomkinson Group and have been involved in a number of projects in Bendigo and Geelong as well as other areas of Victoria. I have produced a number of Surface water Management Strategies for proposed developments within the State of Victoria as well as preparing the Drainage Strategy for the Spring Creek Structure Plan on behalf of the Surf Coast Shire Council.

Statement of Expertise:

My expertise includes the civil engineering design for land development projects including Roads Stormwater Drainage, Stormwater Retardation, drainage/flood modelling, sewer and water reticulation for these land development projects. I have successfully undertaken and overseen many of these land development civil engineering designs and supervised their construction and gained their acceptance from authorities. Many of these projects are similar in nature to the subject site for this hearing. I have appeared as an expert witness in relation to drainage and flood modelling. With my qualifications and experience, I believe that I am well qualified to provide an expert opinion of darinage issues associated with the site and surrounds.

Scope of this Statement and Associated Report:

Tomkinson Group has been engaged by Australian Property Partnership P/L on behalf of the owners of to 35 and 69-93 Hams Road, Waurm Ponds to review the previous documentation relating to the drainage for the proposed development and provide expert opinion on proposed options for a drainage outfall from the site through adjacent land to the south under the rail line.

Basis of Statement and Report:

This statement and associated report is based on the following information:

- Overall Subdivision Masterplan (Version MP19) dated 24 July 2019.
- Surface Water Management Strategy (Version 3) prepared by Neil M Craigie Pty Ltd dated 19 September 2013
- Preliminary Site Investigation prepared by Tonkin +Taylor dated January 2018
- Flood Modelling prepared by Water Technology dated 30 October 2018
- Cultural Heritage Management Plan prepared by Benchmark Heritage Management dated 31 October 2018
- City of Greater Geelong Planning Scheme Amendment C372 – submission received from VicTrack, dated 16 May 2019.
- City of Greater Geelong Planning Scheme Amendment C372 – submission received from Department of Transport (DOT), dated 8 May 2019

Key Report Conclusions:

In reviewing the material provided by Australian Property Partnership in relation to the proposed development of the land at 35 and 69-93 Hams Road, Waurn Ponds, I agree with the conclusions of the Surface Water Management Strategy prepared by Neil Craigie and the Flood Modelling report by WaterTech, namely:

- All events up to and including the 100 year ARI flood are fully contained within the proposed waterway and storage system, outside the railway reserve boundary.
- To provide free drainage outfall to the existing Railway culvert it may be necessary for the culvert under Ghazeepore Road to be upgraded in capacity and at lower invert level as part of future works downstream of the Railway in the Armstrong Creek West Precinct;
- Final design and construction of the drainage works will be dependent on cleanout and survey proving of the presently obscured pipe under the Railway;
- peak flows expected under existing conditions are not increased by the development and will be close to or matching those for existing conditions for all events up to and including the 100 year ARI event.
- The 2018 modelling, conducted under the new (2016) Australian rain fall and Runoff parameters confirms that the development does not appear likely to have any adverse effects on downstream property owners as the peak flow rate exiting the site in a 1% AEP design flood is reduced with the current design layout. The principles presented within the 2013 Craigie SWMS for online detention of the stormwater runoff are not expected to increase the peak flow rate from the site.

Furthermore, having met with the stakeholders involved (including City of Greater Geelong (CoGG) engineers and planners; VicTrack, V/Line and DOT representatives; the Corangamite Catchment Management Authority (CCMA); and adjacent landowners (Boral)) and having visited the site surrounds and having reviewed the proposed Section 173 agreement and Planning permit Conditions, it is my opinion that:

- The existing culvert under the Warrnambool-Geelong railway line appears to be partially blocked with sediment.
- The existing waterway downstream of the above-mentioned culvert Warrnambool-Geelong railway line appears be partially blocked with sediment.
- The subject site (currently farm land) and the road reserve north of the site (VicRoads road reserve – Geelong Ring Rd Stage 4B) show signs of significant erosion that is contributing to the above-mentioned sediment blockages.
- The in-line Water Sensitive Urban Design Elements and Stormwater Detection assets required to be constructed as part of the development under the proposed Planning permit will act to reduce sediment load on the waterway and culvert downstream of the subject site.
- The proposed Section 173 agreement contains adequate provision for works required to further address the abovementioned erosion and sedimentation concerns raised by VicTrack and DOT.
- The proposed Section 173 agreement contains adequate provision for works required to allow for the stormwater flows travelling through and generated from the subject site to be conveyed under the Warrnambool – Geelong Railway line and Ghazeepore Rd to Armstrong Creek West Branch through the use of the existing culvert or an alternate engineering design (such as an upgraded or new culvert).
- Based on the above, and contingent on the proposed Section 173 agreement being entered into, there is no impediment to the proposed development proceeding in the manner proposed which will have no adverse impact on the Warrnambool - Geelong railway line or downstream land.

Declaration:

I have made all the inquiries that I believe are desirable and appropriate and no matters of significance which I regard as relevant have to my knowledge been withheld from the Panel. Accordingly, I believe that the report is a complete and accurate statement of the matters relating to a proposed outfall drainage solution.



John Guise BE (Civil)
Director
Tomkinson Group

15 August 2019