Jeremy Knox
Yass Valley Council
209 Comur Street,
Yass NSW 2582

Reference: DA210293 – 2155 Sutton Road – Flooding Review

Dear Mr Knox,

With reference to the Section 4.55 (2) amendment of the existing consent DA10293, this flooding review has been prepared to assess them implications of the modification in relation to flood flow conditions within the McLaughlin's Creek catchment. The original Stormwater Risk Assessment prepared by Lyall & Associates (2021) for PHL Surveyors assessed flood behavior along Guise Street, adjacent to the Keir property. The assessment refined flood modelling to better understand overland flow paths, stormwater infrastructure, and ground conditions in the context of future development.

This flooding review utilises the modelling completed by Lyall & Associates to review the impacts of proposed development modifications against the findings of the original report.

1. Summary of Proposed Modifications and Impacts

The following provides a summary of the proposed modifications and their likelihood of impact on the outcomes of the flood modelling:

Modification 1 – Super-lot Subdivision of R2 Land

This modification would see the addition of an initial stage, Stage 0 which separates all the R2 zoned land into a single super-lot via a 'paper' subdivision envisages no physical work, utilities or payment of developer contributions and the balance into a 'residual' lot retained by Mr Keir. This is to be undertaken via a modification to the consent and adding Stage 0.

Likely Impact

Modification 1 is an administrative task which is required to subdivide the parent lot into a development parcel and a residual parcel. It requires no physical work and has no impact on the outcomes of the flood modelling previously undertaken.

Modification 2 – Increase in R2 Lots from 17 to 19

This modification will result in minor redesign that redistributes developable land and shortens the main cul-de-sac, resulting in two additional lots within the existing R2 footprint. The revised layout remains compliant with the 5,000m² minimum lot size and does not require additional infrastructure. See comparison of existing and proposed layouts on the following page.

Likely Impact

Modification 2 does not seek to broaden the footprint of the development. The proposed layout impacts the same area as the original consent and does not make any modifications to the developments interface with the flood prone land to the east. As such, this modification has no impact on the outcomes of the flood modelling previously undertaken.

Modification 3 – Subdivision of Residual R1 Land

This modification will result in the subdivision of the existing 62ha residual lot into two parcels: a 13.17ha lot (Lot 20) and a 48.41ha balance (Lot 21). Development is proposed on Lot 20, with the on-site sewer disposal area located outside the 1% AEP design storm extent.

Likely Impact

Implications of this modification are discussed in Section 2 below.

Existing Approved Lot Plan

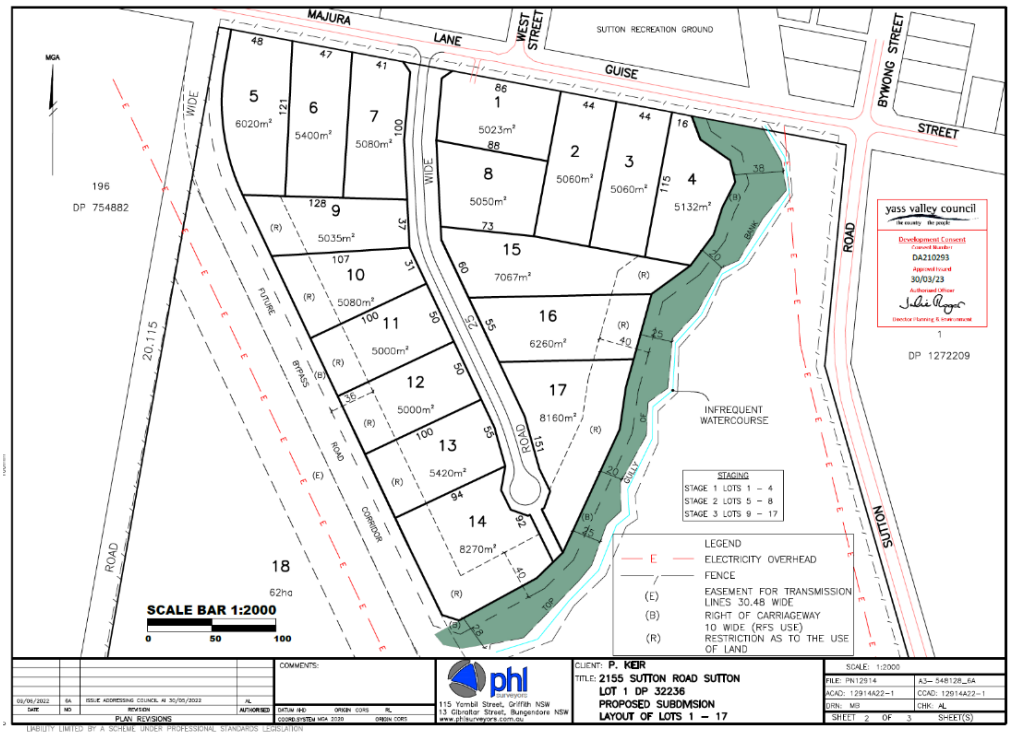

***Figure 1-1**- DA210293 Stamped Plans (Detail on R2 Residential Lots)*

Proposed Modified Lot Plan

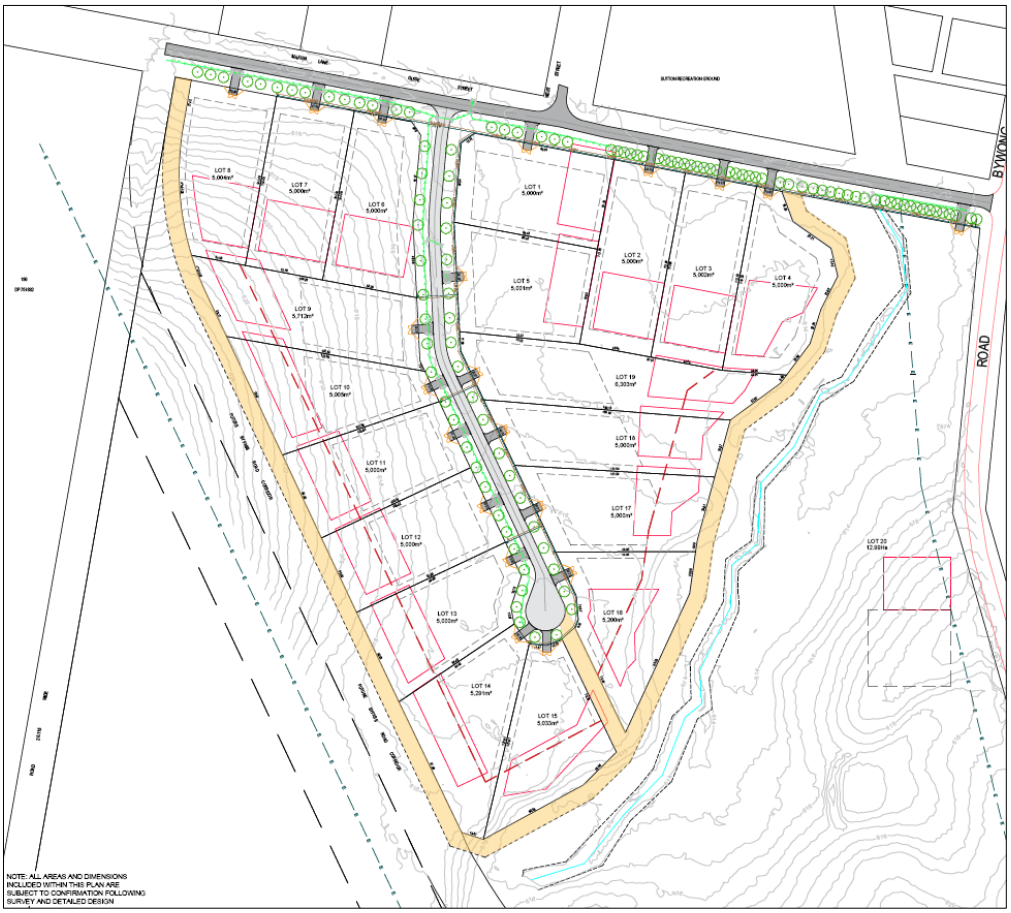

***Figure 1-2** – S4.55 Proposed Modified Plans (Detail on R2 Residential Lots & Adjacent Parcel)*

2. Flooding Assessment Commentary

Chase DM has reviewed the proposed modifications to DA210293 in conjunction with the original Stormwater Risk Assessment prepared by Lyall & Associates (2021). As discussed above, modification 3 is the only proposed modification which has the potential to be impacted by site flooding.

While a portion of the residual lot lies within the 1% Annual Exceedance Probability (AEP) flood extent, all proposed building envelopes, driveways and on-site sewer disposal areas are located outside the mapped flood zone (Figure 2-2 below). The areas affected by flooding are limited to open space and non-developable land. The proposed modifications do not alter catchment characteristics, flow paths, or drainage infrastructure in a way that would increase flood risk to the site or surrounding areas.

Additionally, the proposed building envelope and indicative On-Site Sewer Management (OSSM) disposal area are shown to be located outside of the Probable Maximum Flood (PMF) impacted area, See Figure 2-5 below. As such, no further flood modelling or assessment is considered necessary.

1% AEP Flood Modelling

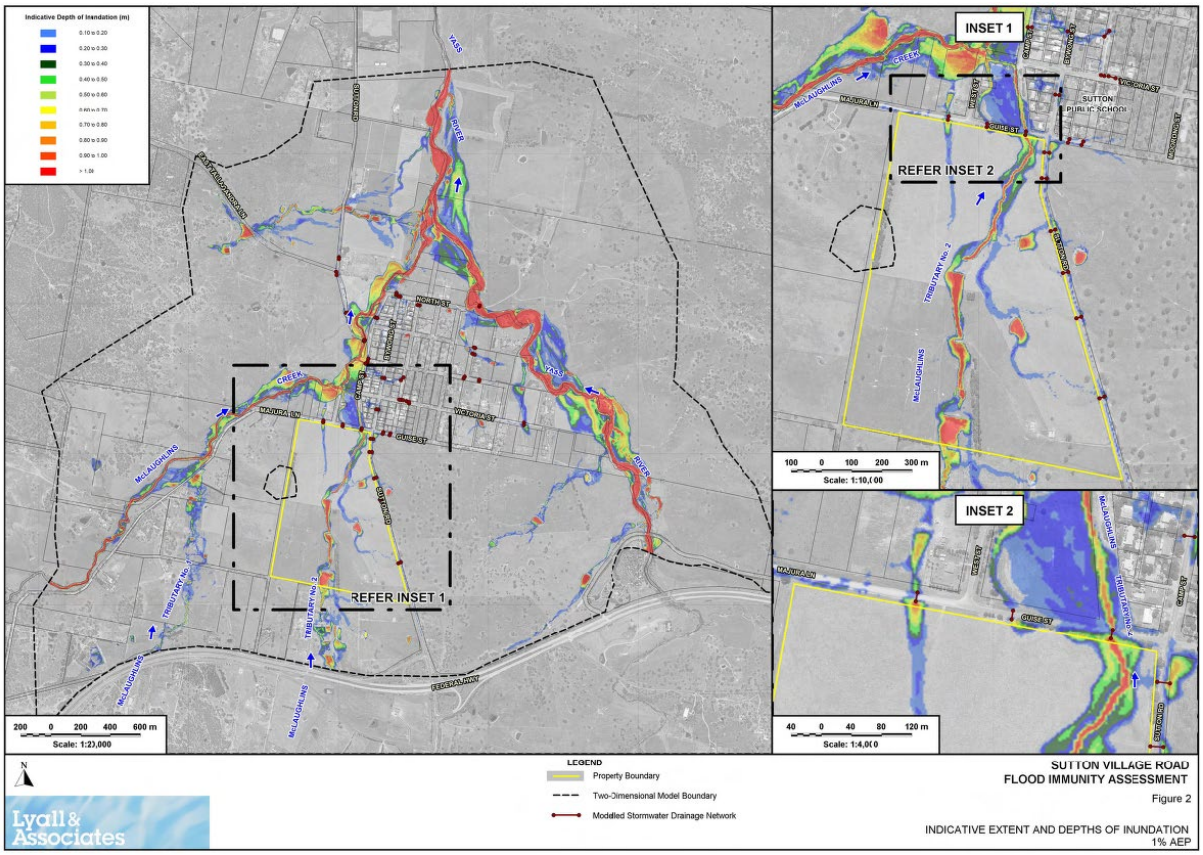

***Figure 2-1** – 1% AEP Flood Model Results (Lyall and Associates, 2021)*

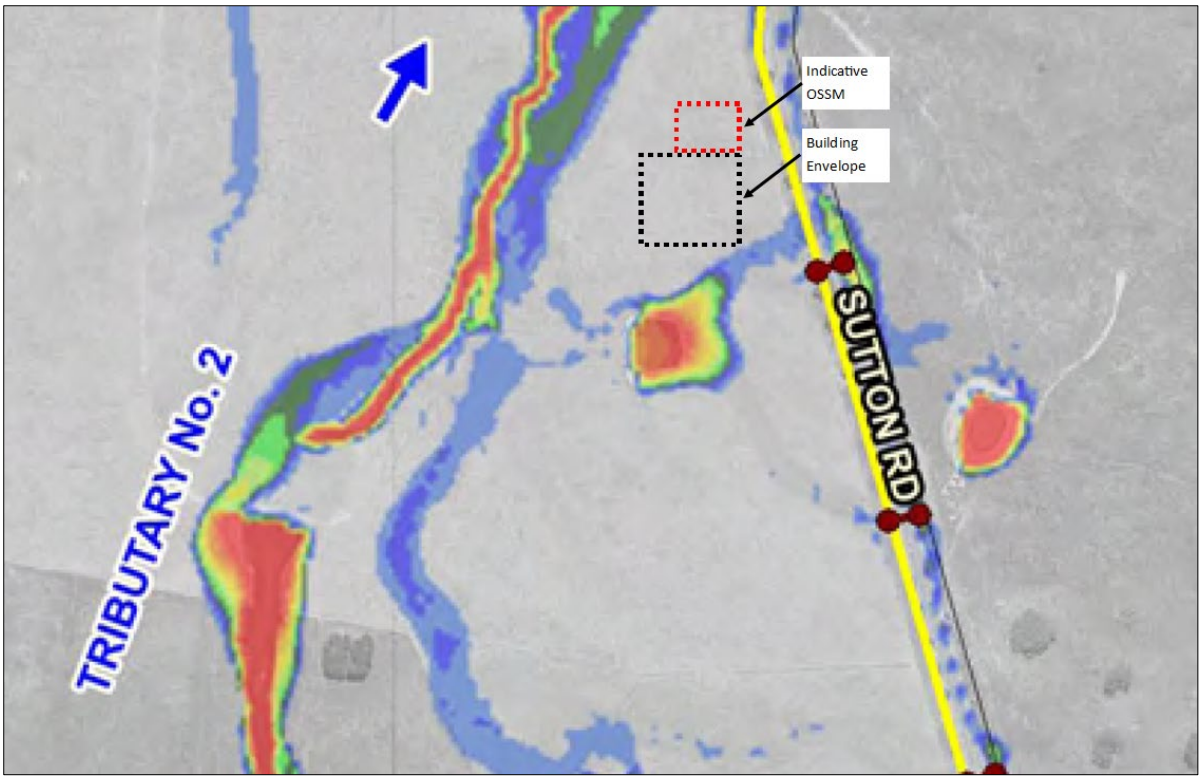

***Figure 2-2** – 1% AEP Flood Model Results overlaid with lot 20 proposal (Lyall and Associates, 2021)*

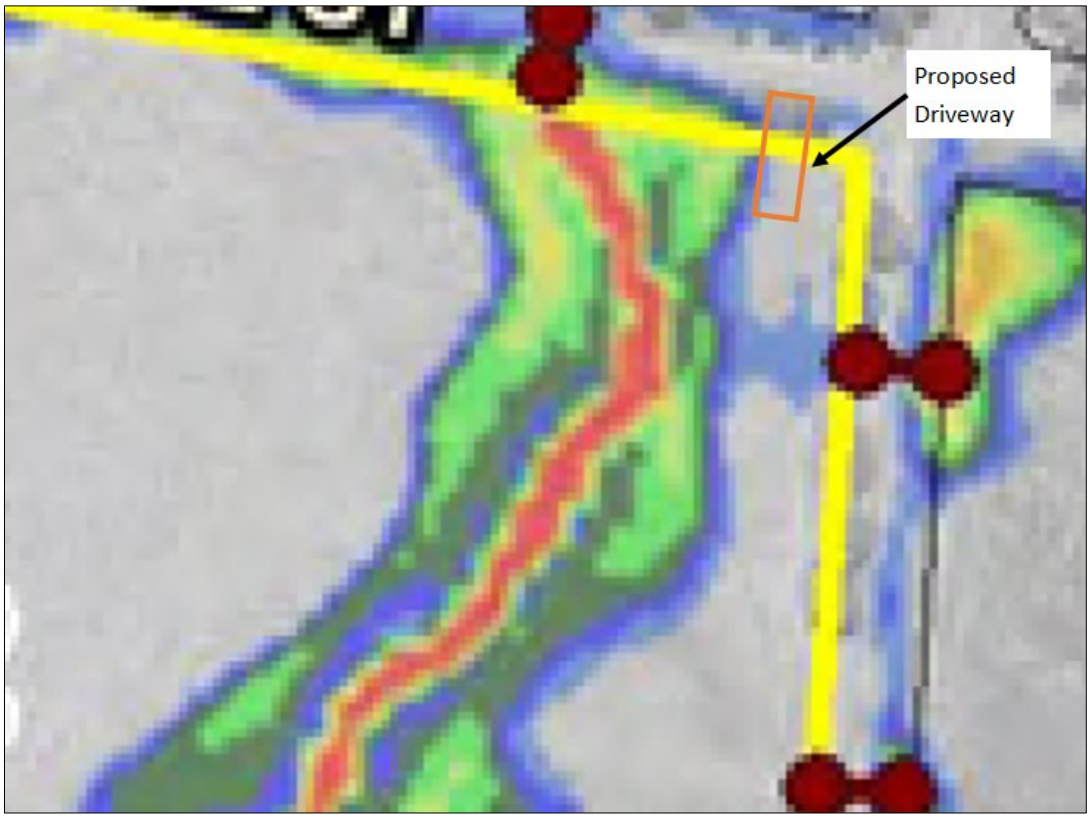

***Figure 2-3** – 1% AEP Flood Model Results overlaid with lot 20 driveway (Lyall and Associates, 2021)*

PMF Modelling

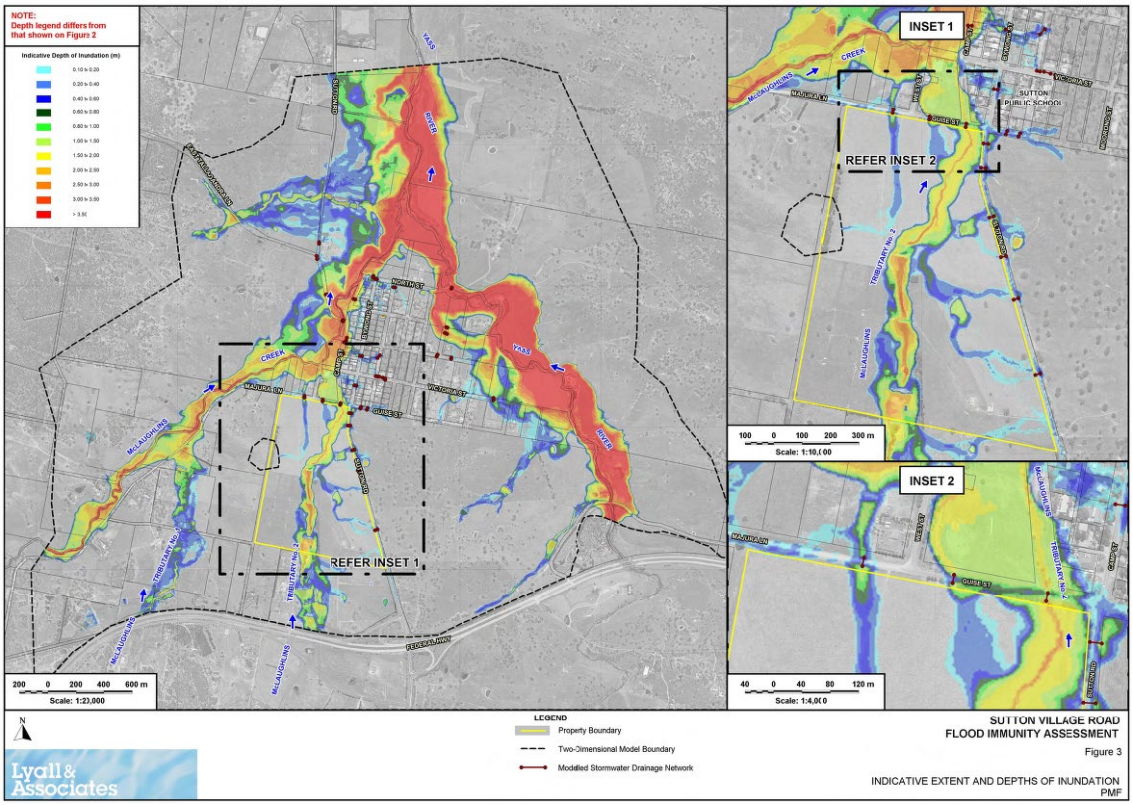

Figure 2-4 *– PMF Flood Model Results (Lyall and Associates, 2021)*

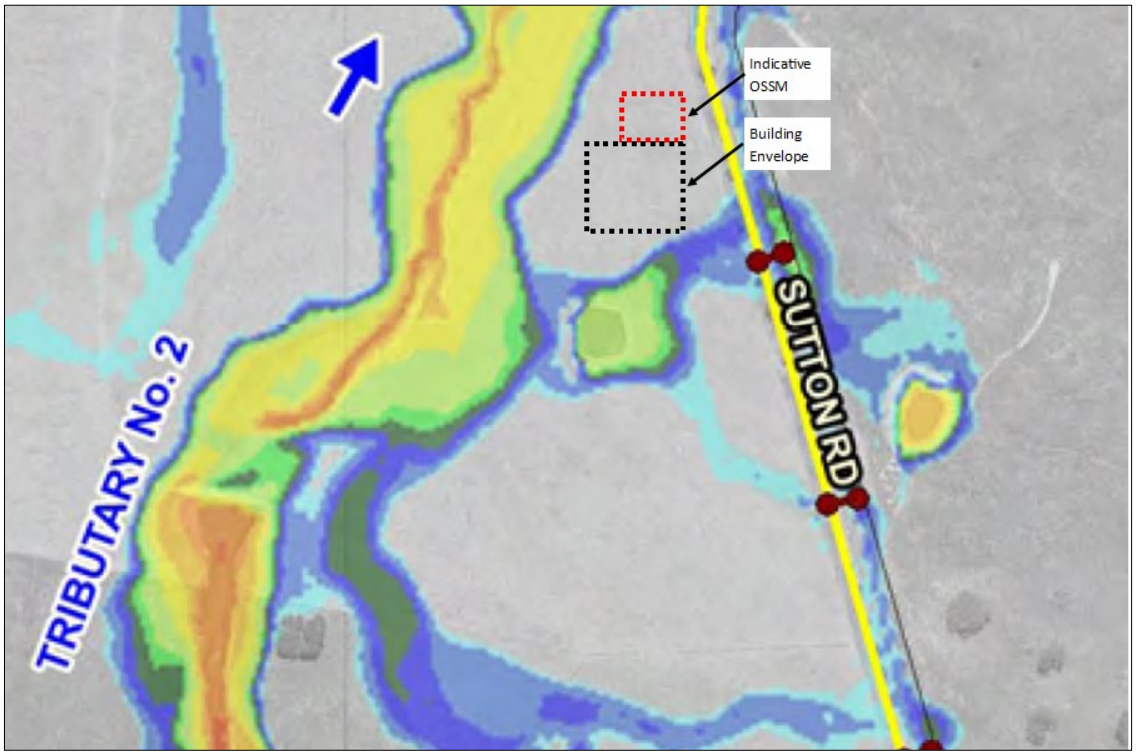

Figure 2-5 *– PMF Model Results overlaid with lot 20 proposal (Lyall and Associates, 2021)*

The following key findings from the Lyall & Associates report remain relevant to the current proposal:

- Guise Street is subject to shallow inundation (up to 0.3 m) during a 1% AEP event, increasing to approximately 0.9 m during a PMF event. These conditions are confined to the road corridor and do not materially affect the proposed development areas.
- The proposed modification does not seek to increase the development footprint of the R2 component, and as such does not impact the findings of the previously approved flood modelling.
- Proposed infrastructure on lot 20 has been shown to be free from flood impacts.
- Flood hazard classifications during a 1% AEP event are generally H1–H2, with a short section near McLaughlins Tributary No. 2 reaching H3. During a PMF event, the same location is subject to H6 conditions with flow velocities exceeding 5 m/s.
- The duration of inundation at the Guise Street crossing is estimated to be less than 9 hours during extreme flood events.
- The modelling incorporated refined sub-catchments, updated pipe data, and LiDAR-based surface levels, providing a robust and current representation of flood behavior.

Accordingly, the original stormwater risk assessment remains current and sufficient to support the proposed Section 4.55 modification.

If you require any additional information, please let me know.

Regards,

John Sutcliffe
B.EngT (Civil), MPM
Director

Chase Development Management
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