Appendix K
Stormwater Management Technical Memorandum

TECHICAL MEMORANDUM

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Reviewed:	Shaun Leinster (RPEQ 15637) - DesignFlow
Date:	24 March 2022
Subject:	Carseldine Urban Village – Stormwater management to support Stage 4B development

1 INTRODUCTION

This technical memorandum describes stormwater management (stormwater quality and flood impacts) relevant to Carseldine Urban Village to support Stage 4B development.

2 BACKGROUND

In support of the Carseldine Urban Village development, stormwater management requirements, including stormwater treatment and flood impacts under ultimate development conditions, have been assessed. A stormwater treatment strategy was derived to treat stormwater runoff from the site to meet State Planning Policy objectives, whilst flood mitigation measures were determined to avoid flood impacts external to the site. The latest assessments are reported in the following approved documents:

- *Carseldine Urban Village – Updated Stormwater Management Plan* (DesignFlow, October 2019)
- *Technical memorandum – Carseldine Urban Village – Updated flood assessments to support Stage 1 development (May 15, 2020)*
- *Addendum to Carseldine Urban Village – Updated flood assessments to support Stage 1 development (May 27, 2020)*
- *Technical memorandum – Flood impact assessment to Support Stage 2 development (15 May, 2020)*
- *Technical memorandum – Carseldine Urban Village – Stormwater management to support Stage 3 development (17 November, 2020)*
- *Technical memorandum – Carseldine Urban Village – Stormwater management to support Stage 4A development (25 August, 2021)*

3 STAGE 4B DEVELOPMENT

Stage 4B development covers an area of 1.56 ha. The stormwater treatment strategy and flood impact assessments previously reported have been completed for ultimate development conditions. All required treatment and flood mitigation measures for ultimate development conditions have now been completed as part of Stage 1 works. The catchment and drainage assumptions made relating to future development are still valid for Stage 4B development and the stormwater treatment and flood impacts previously reported are unaltered with the inclusion of Stage 4B development.

3.1.1 Potential future DTMR overpass and associated road connection

A potential future road connection has been identified at the north east corner of the site (Refer to Figure 1). A swale along this boundary currently directs drainage east and then south. The current design solution for Stage 4B serves the requirements of this development without causing external impacts.

The configuration and design of these potential future DTMR works and road connections are unknown and cannot be predicted with any certainty. The current model output at the potential future road crossing location predicts peak flows for the 1% AEP event of 1.2m³/s. This includes runoff from the CUV site as well as contributory Beams Road catchment. Figure 1 summarises the current model outputs at the potential future road crossing.

In addition, the current stormwater management strategy retains an overland flow path of ~100m at the north east corner of the site (refer to Figure 1). This is provided to ensure regional flows through the site from Cabbage Tree Creek are not constrained. Any future road works will need to ensure this overland flow path is retained for regional flow management.

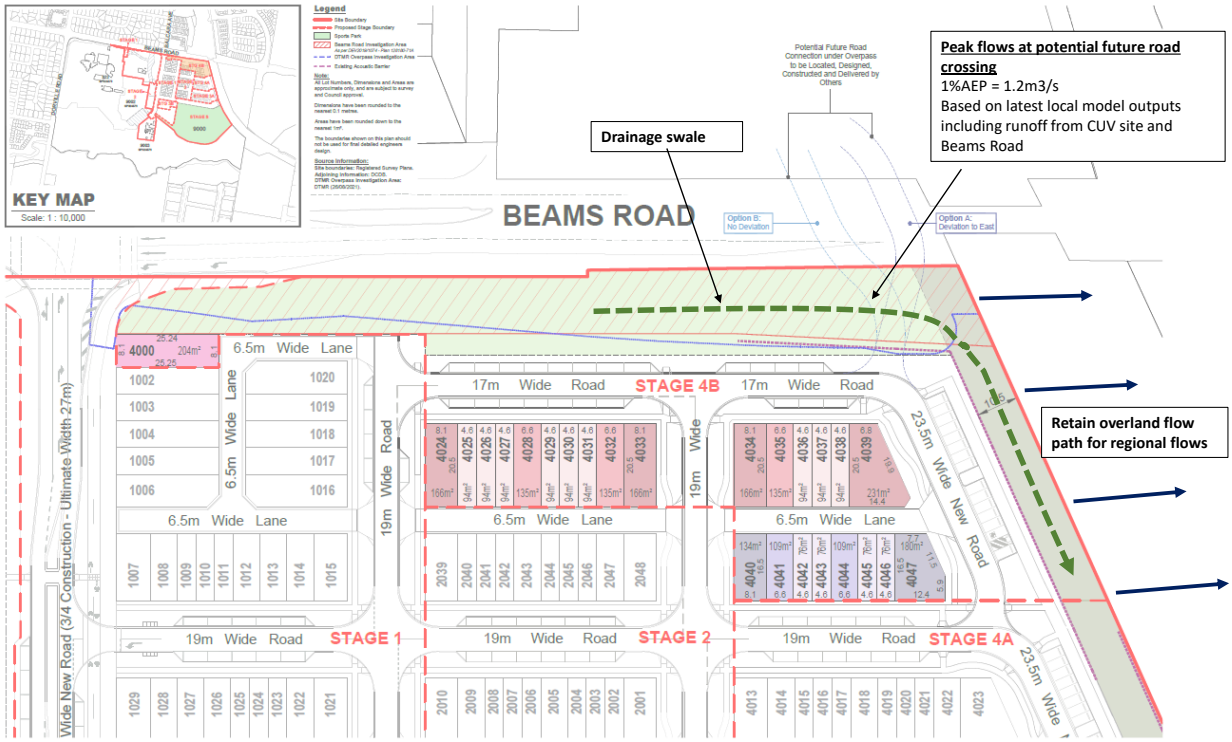

Figure 1 – Peak flows at potential future road crossing

Any future road works must ensure drainage capacity is retained and flood impacts are managed. Updated flood modelling will likely be required to review impacts with any future road works. This modelling is outside the scope of this development.

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