

## ADDENDUM

Approval no: DEV2020/1118

Date: 2 September 2020

To: Richard Bender - EDQ  
From: Ralph Williams / Shaun Leinster  
DesignFlow  
Date: 27 May 2020  
Subject: Addendum to Carseldine Urban Village – Updated Flood Assessments to Support Stage 1 Development

- Attachments**
1. Updated flood impact map – 1% AEP (regional)
  2. Flood level difference – 0.5% AEP with 20% blockage (regional)
  3. Flood level difference – 1% AEP ARR1987 v ARR2019 (local)

### 1 INTRODUCTION

This addendum provides requested additional flood impact information to *Carseldine Urban Village – Updated Flood Assessments to Support Stage 1 Development (DesignFlow, 15 May 2020)*. Brief discussions are provided below for each:

#### **Attachment 1: Updated flood impact map 1% AEP (regional)**

This flood impact map illustrates the model flood impacts for the 1% AEP with the latest modelling arrangement. This includes:

- Removal of the flap valve on the 1200mm RCP culvert along the eastern outlet drain
- Inclusion of the pedestrian bridge crossing joining CUV with Aspley State High School

The flood impact map illustrates improved flood conditions along the rail corridor, Beams Road and areas north of Beams Rd. Flood impacts external to the site occur within Aspley State High School. These impacts have been previously discussed with the Department of Education and have been accepted (refer to letter from DoE to EDQ - 16 December 2019).

#### **Attachment 2: Flood level difference - 0.5% with 20% blockage (regional)**

This map illustrates the change in flood levels associated with a severe storm event (0.5% AEP) with a 20% blockage applied to the 1200mm RCP culvert along the eastern outlet drain. This map compares CUV ultimate development versus existing conditions. This analysis was undertaken to review the adequacy of 500mm freeboard applied to the flood barrier along the eastern boundary of the site. No overtopping of the flood barrier is expected under severe storm conditions with a 500mm freeboard applied. Refer to *Carseldine Urban Village – Updated Flood Assessments to Support Stage 1 Development (DesignFlow, 15 May 2020)*.

#### **Attachment 3: Flood level difference 1% AEP ARR1987 v ARR2019**

This map illustrates the difference in flood levels between using the ARR1987 approach versus using the design ARR2019 approach for ultimate CUV development conditions. Storm durations of 15, 25, 45, 60, 120 and 180 minutes were run for both analyses. Flood levels using the ARR1987 approach are typically 20-100mm higher than using the ARR2019 approach. Review of flood impacts using

ARR1987 approach for both the proposed and bases case was previously presented in *Carseldine Urban Village – Updated Flood Assessments to Support Stage 1 Development (May 15, 2020)* and demonstrated no impacts external to the site.

Prepared by:

Ralph Williams

Reviewed/Certified by:



Shaun Leinster

RPEQ 15637

**DesignFlow**








Attachments:

1. Updated flood impact map – 1% AEP (regional)
2. Flood level difference – 0.5% AEP with 20% blockage (regional)
3. Flood level difference – 1% AEP ARR 2019 v ARR1987














ATTACHMENT 1 – UPDATED FLOOD IMPACT MAP– 1% AEP (REGIONAL)

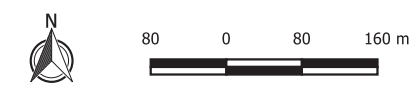
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**LEGEND**

-  Site
-  Cadastral Data
-  Future Bus Corridor
-  1D Pipes
-  Bridge (2d\_lfch)
-  Design Contour
-  Z-Point Modifier

**Impact (m)**

-  Less than -0.2
-  -0.1 to -0.2
-  -0.05 to -0.1
-  -0.02 to -0.05
-  -0.01 to -0.02
-  -0.01 to 0.01
-  0.01 to 0.02
-  0.02 to 0.05
-  0.05 to 0.1
-  0.1 to 0.2
-  Greater than 0.2
-  Was Wet - Now Dry
-  Was Dry - Now Wet



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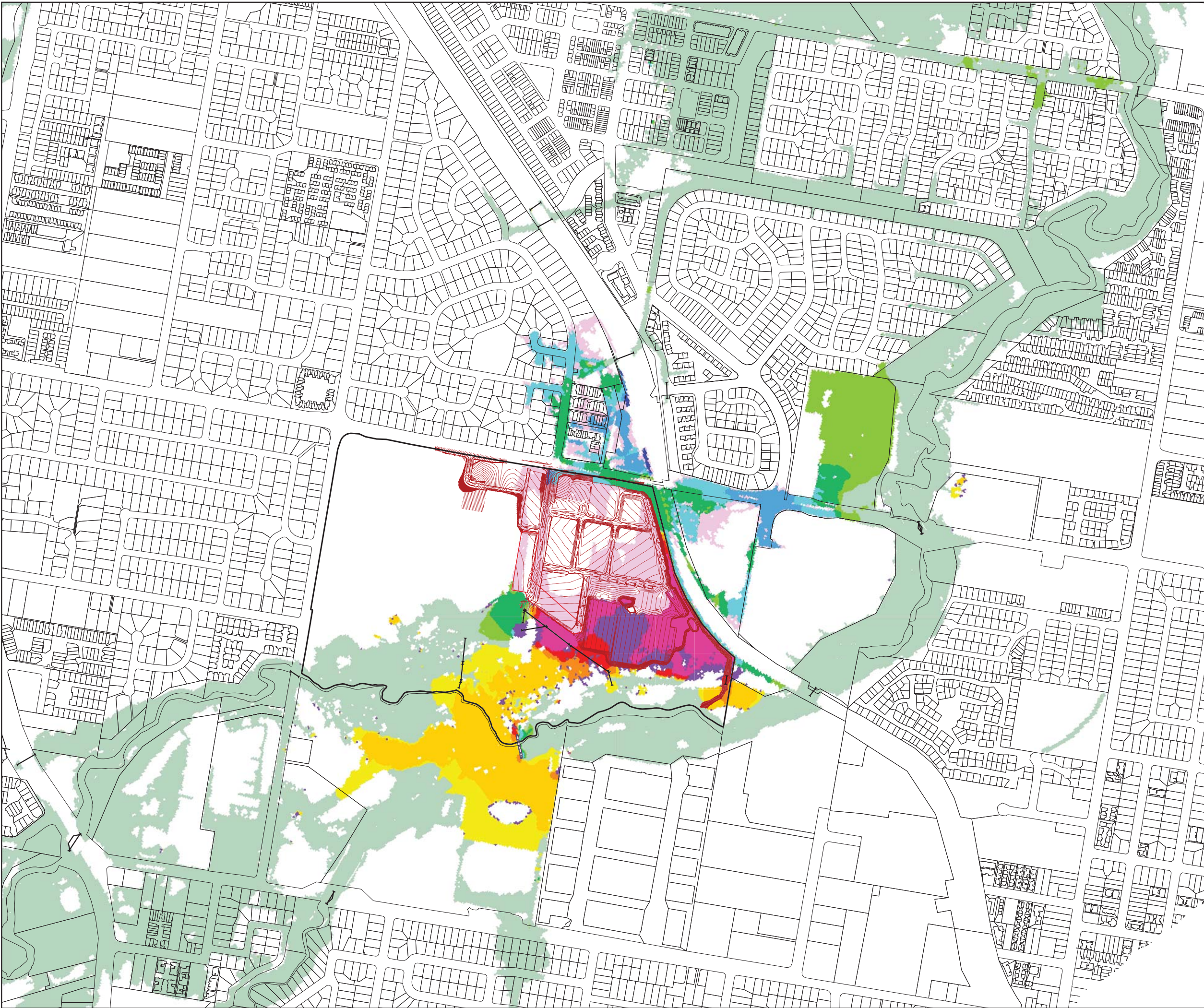
**Carseldine Urban Village**

**Peak Flood Level Impacts**  
**Regional Catchment Analysis**

**CUV & Bridge Vs Existing Case**  
**(TUFLOW Case P04c Vs B03a)**

**1% AEP Event**



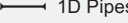
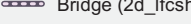

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ATTACHMENT 2 – FLOOD LEVEL DIFFERENCE 0.5% AEP WITH 20% BLOCKAGE  
(REGIONAL)

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**LEGEND**

-  Site
-  Cadastral Data
-  1D Pipes
-  Bridge (2d\_ifcsh)
-  Z-Point Modifier

**Peak Flood Level Difference (m)**

-  Less than -0.5
-  -0.4 to -0.5
-  -0.3 to -0.4
-  -0.2 to -0.3
-  -0.1 to -0.2
-  -0.1 to 0.1
-  0.1 to 0.2
-  0.2 to 0.3
-  0.3 to 0.4
-  0.4 to 0.5
-  Greater than 0.5
-  Was Wet - Now Dry
-  Was Dry - Now Wet



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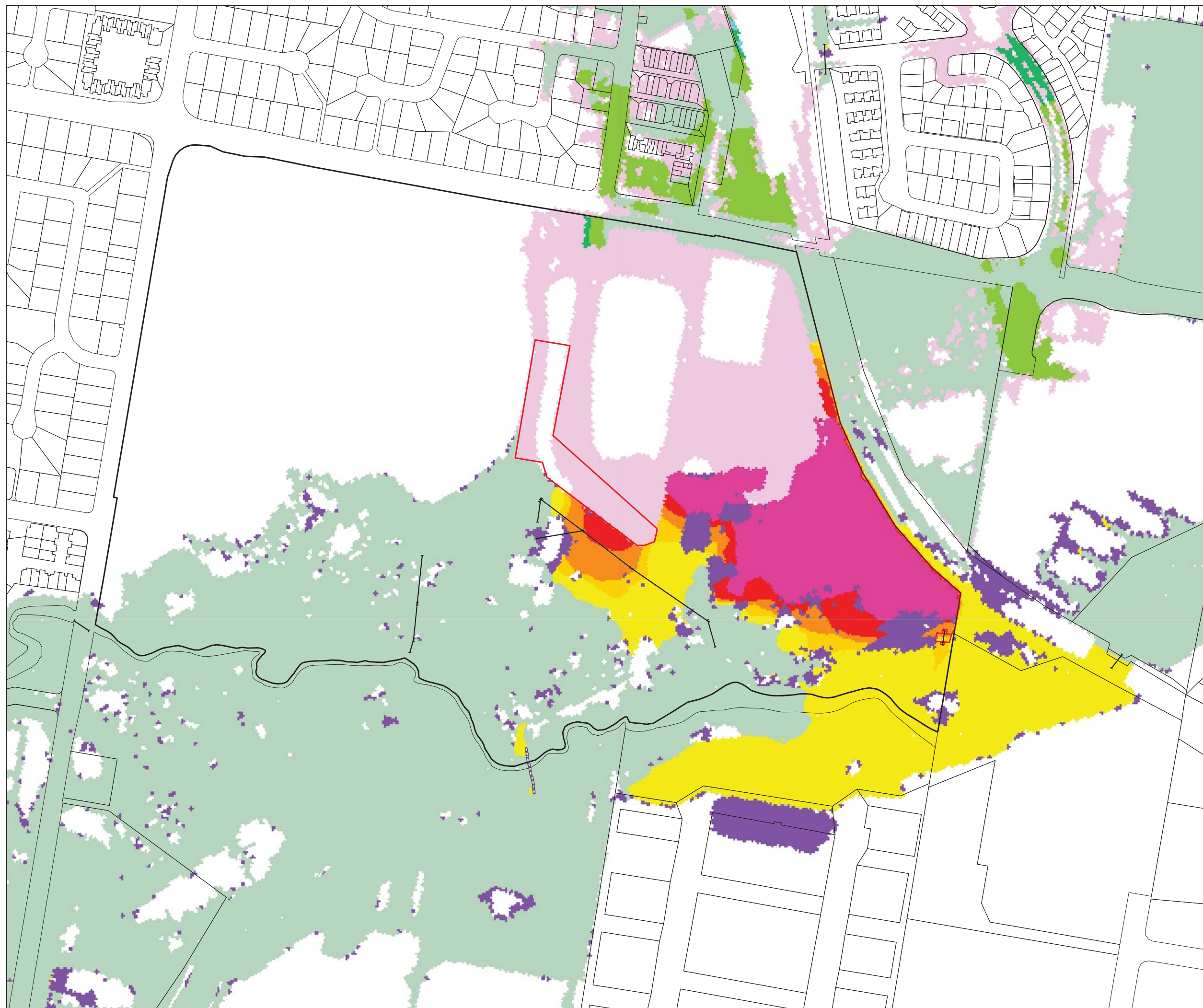
**Peak Flood Level Difference:**

**Proposed Case Minus Base Case**

**(TUFLOW Case P04c\_B1 - B03a)**









**0.5% AEP**

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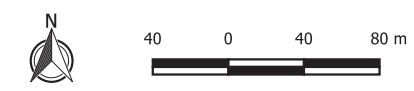


**LEGEND**

-  Site
-  Cadastral Data
-  Model Extent
-  External Boundary
-  Design Conts (0.25m)
-  Developed Case Z-Point Modifiers
-  1D Pipes - Existing
-  1D Pipes - Proposed

**Impact (m)**

-  Less than -0.2
-  -0.1 to -0.2
-  -0.05 to -0.1
-  -0.02 to -0.05
-  -0.01 to -0.02
-  -0.01 to 0.01
-  0.01 to 0.02
-  0.02 to 0.05
-  0.05 to 0.1
-  0.1 to 0.2
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**Change in Peak Flood Level  
Associated with Applying ARR 87 Rainfall  
(TUFLOW Case LP05b\_87 Vs LP05b)**

**1%AEP Event**

Client: Economic Development Queensland

