

J. WYNDHAM PRINCE

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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- + HQ Model Outlet
- 1D Element - Pipe
- 1D Element - Pit
- ★ 1D Model Outlet
- 2D - Z line gully
- 2D - Building flood levels raised 0.3 m above ground level
- Watercourse
- LIDAR Contour (5 m interval)
- 2D Z-shape
- 2D Z-Shape bridge
- Dam - Assumed Filled



Scale 1: 9,000 @ A3

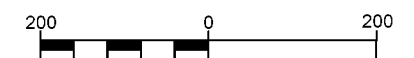
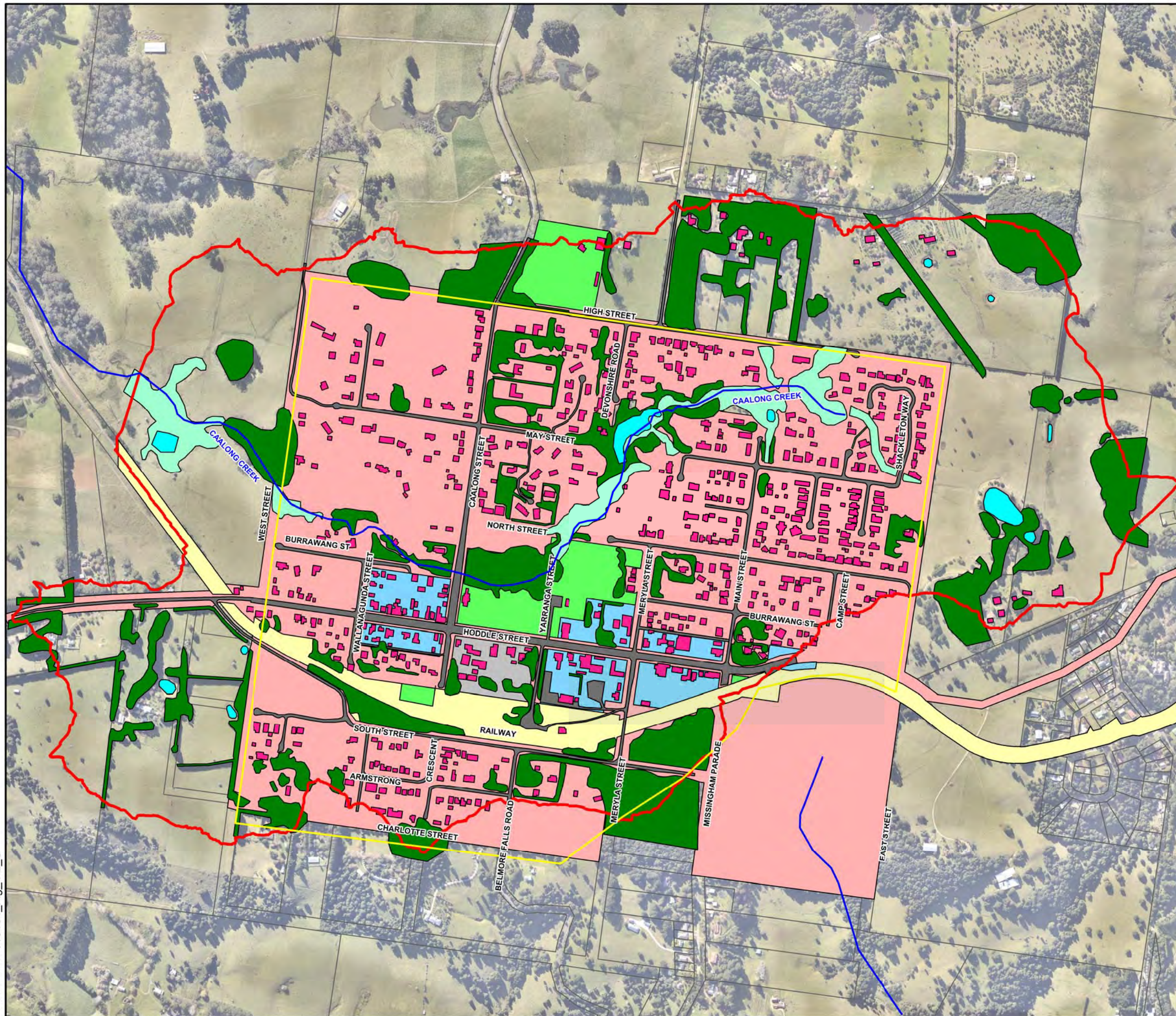


Figure 4-1
Robertson Village
Overland Flow Study

Existing Condition
TUFLOW Model Layout

Date : 21/09/16

Issue : C



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- Road pavement, $n = 0.013$
- Open Space, $n = 0.035$
- Railway Embankment, 0.04
- Building, Depth Varying
- Residential (remainder of lot), $n = 0.04$
- Commercial (remainder of lot), $n = 0.04$
- Light Vegetation, 0.05
- Medium Vegetation, 0.08
- School (remainder of lot), $n = 0.03$
- Water Body, 0.02



Scale 1: 9,000 @ A3

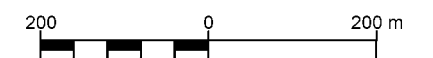


Figure 4-2
Robertson Village
Overland Flow Study

Existing TUFLOW Model
Material Mapping

Date : 21/09/16

Issue : C



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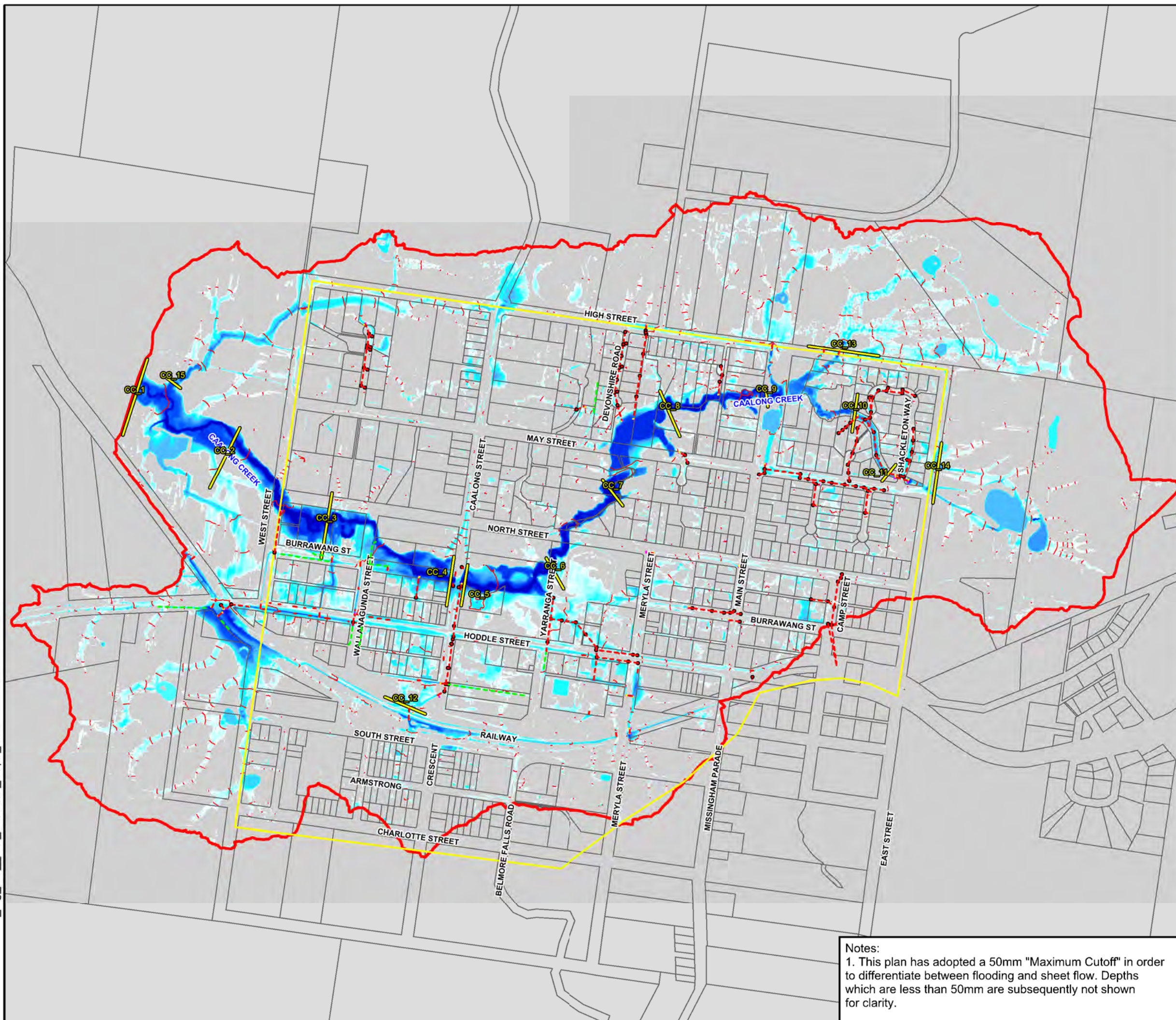
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- | | |
|--|-------------|
| | 0.0 to 0.05 |
| | 0.05 to 0.1 |
| | 0.1 to 0.2 |
| | 0.2 to 0.35 |
| | 0.35 to 0.5 |
| | 0.5+ |



Scale 1: 9,000 @ A3

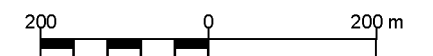


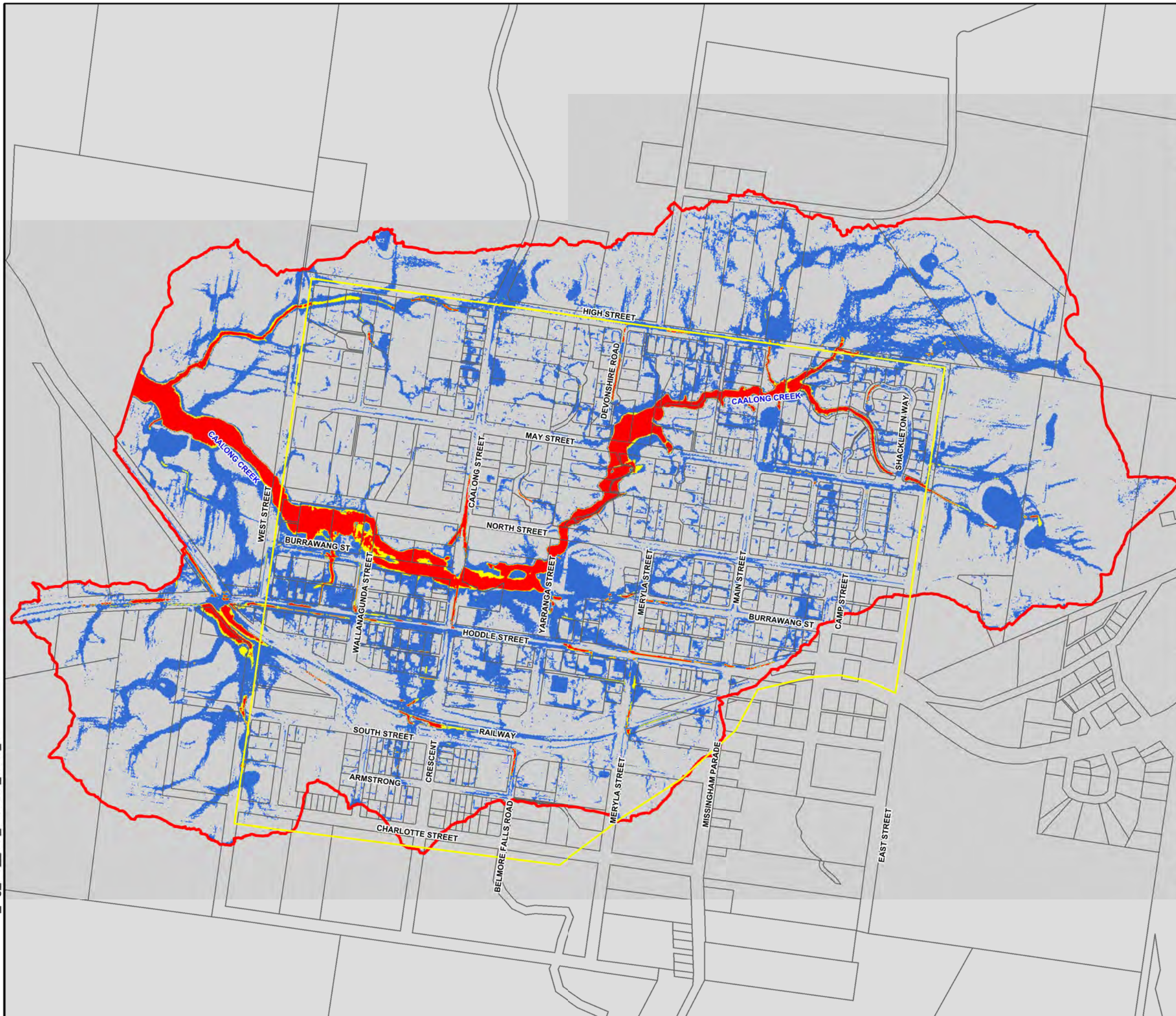
Figure 4-3
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
1% AEP

Date : 21/09/2016

Issue : d\ld

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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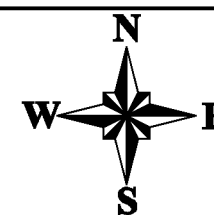
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary

HAZARD CATEGORISATION

- Low Hazard
- Transition Hazard
- High Hazard



Scale 1: 9,000 @ A3

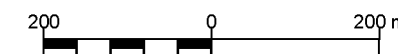


Figure 4-4
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Hazard Map
1% AEP

Date : 21/09/2016

Issue : D



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- Watercourse
- XP-RAFTS Sub Catchment
- XP - RAFTS



Scale 1: 9,000 @ A3

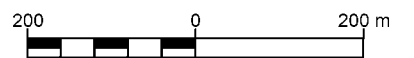
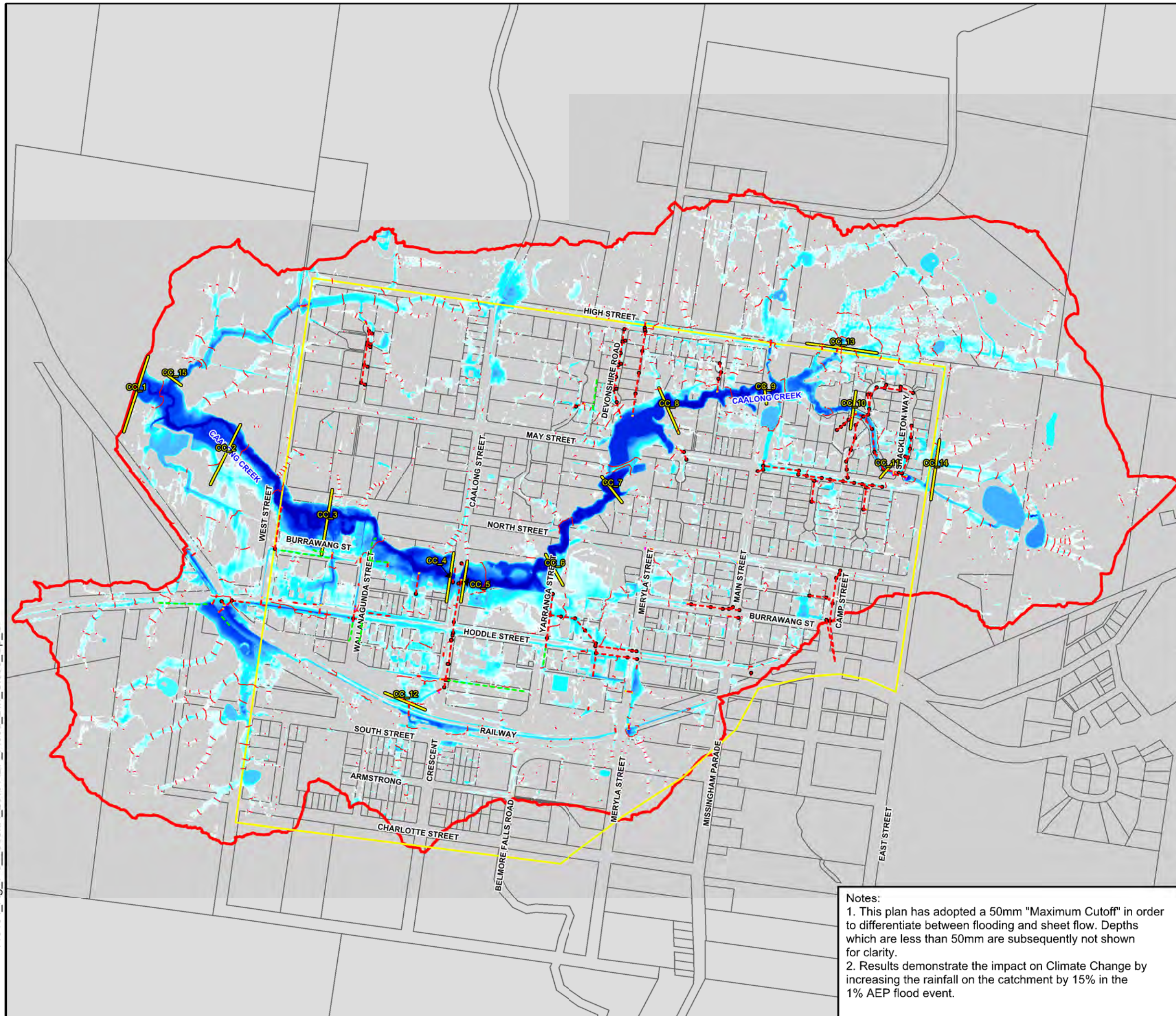


Figure 4-5
Robertson Village
Overland Flow Study

XP-RAFTS
Catchment Plan

Date : 21/09/16

Issue : C



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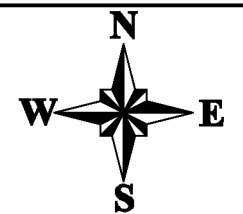
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+



Scale 1: 9,000 @ A3

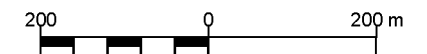


Figure 4-6
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
1% AEP + Climate Change

Date : 21/09/16

Issue : C

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.
2. Results demonstrate the impact on Climate Change by increasing the rainfall on the catchment by 15% in the 1% AEP flood event.



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LEGEND

FLOOD LEVEL INCREASE (m)

| | |
|-------|---------------|
| -0.2+ | -0.02 to 0.02 |
| -0.18 | 0.02 |
| -0.16 | 0.04 |
| -0.14 | 0.06 |
| -0.12 | 0.08 |
| -0.10 | 0.10 |
| -0.08 | 0.12 |
| -0.06 | 0.14 |
| -0.04 | 0.16 |
| -0.02 | 0.18+ |

- AREAS NOW FLOOD FREE FOR MODELLED EVENT
- AREAS NOW FLOOD AFFECTED FOR MODELLED EVENT
- Robertson Village Study Area
- TUFLOW Boundary
- Road Swale
- Existing Stormwater



Scale 1: 9,000 @ A3

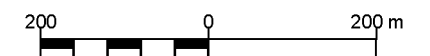


Figure 4-7
Robertson Village
Overland Flow Study

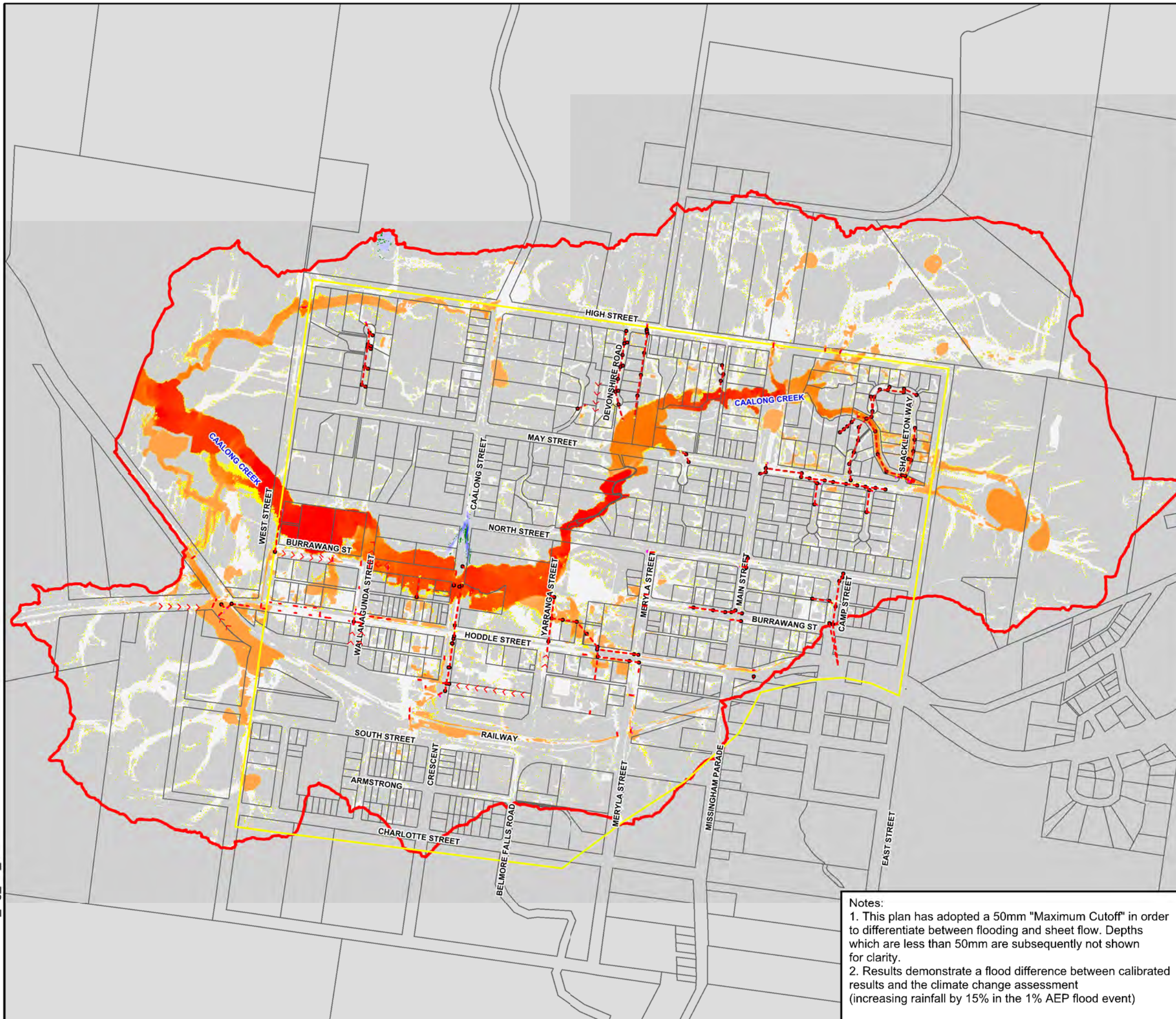
Flood Difference
Climate Change v Existing
1%AEP

Date : 1/06/16

Issue : B

Notes:

1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.
2. Results demonstrate a flood difference between calibrated results and the climate change assessment (increasing rainfall by 15% in the 1% AEP flood event)



Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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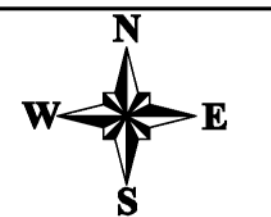
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3

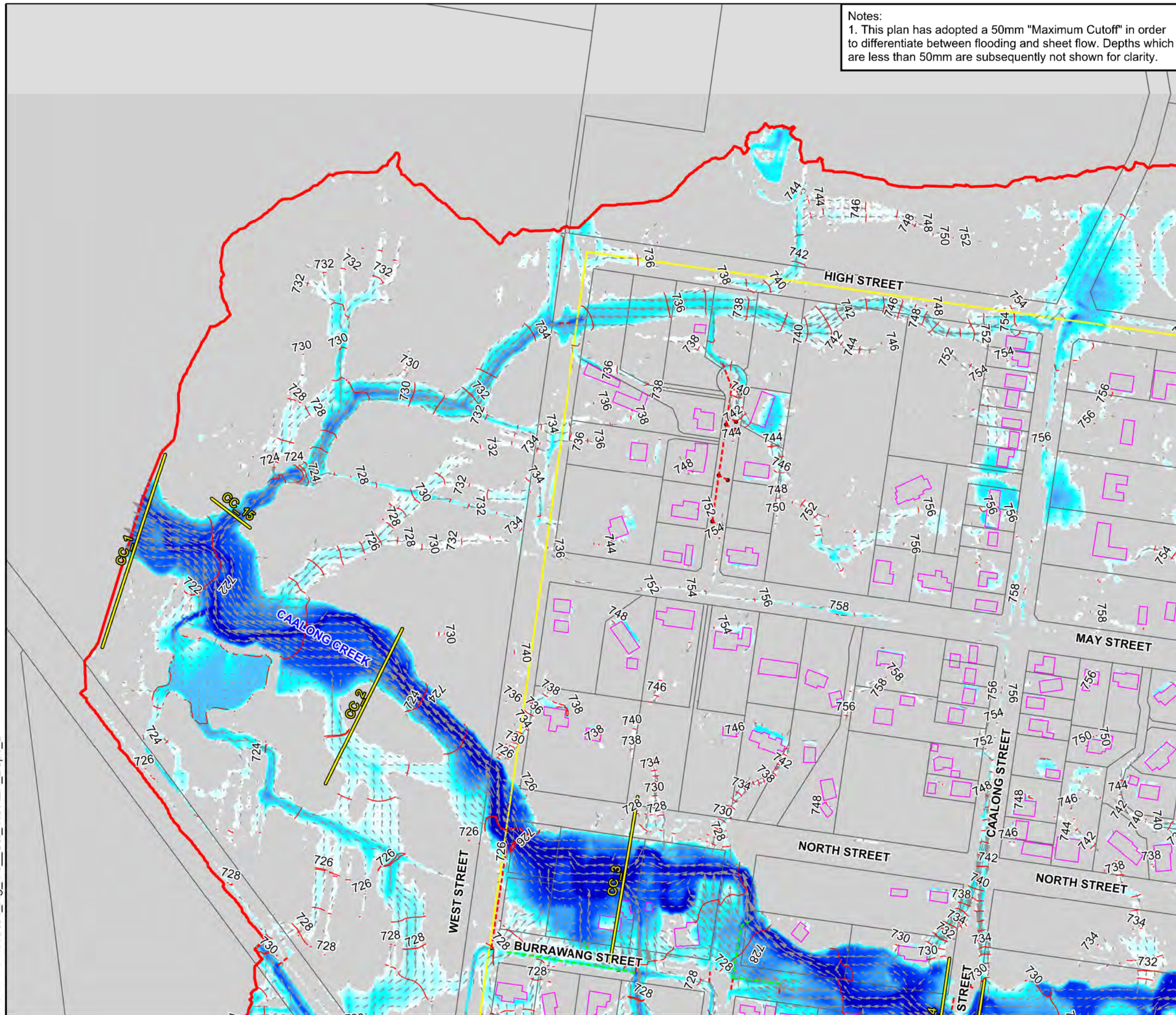


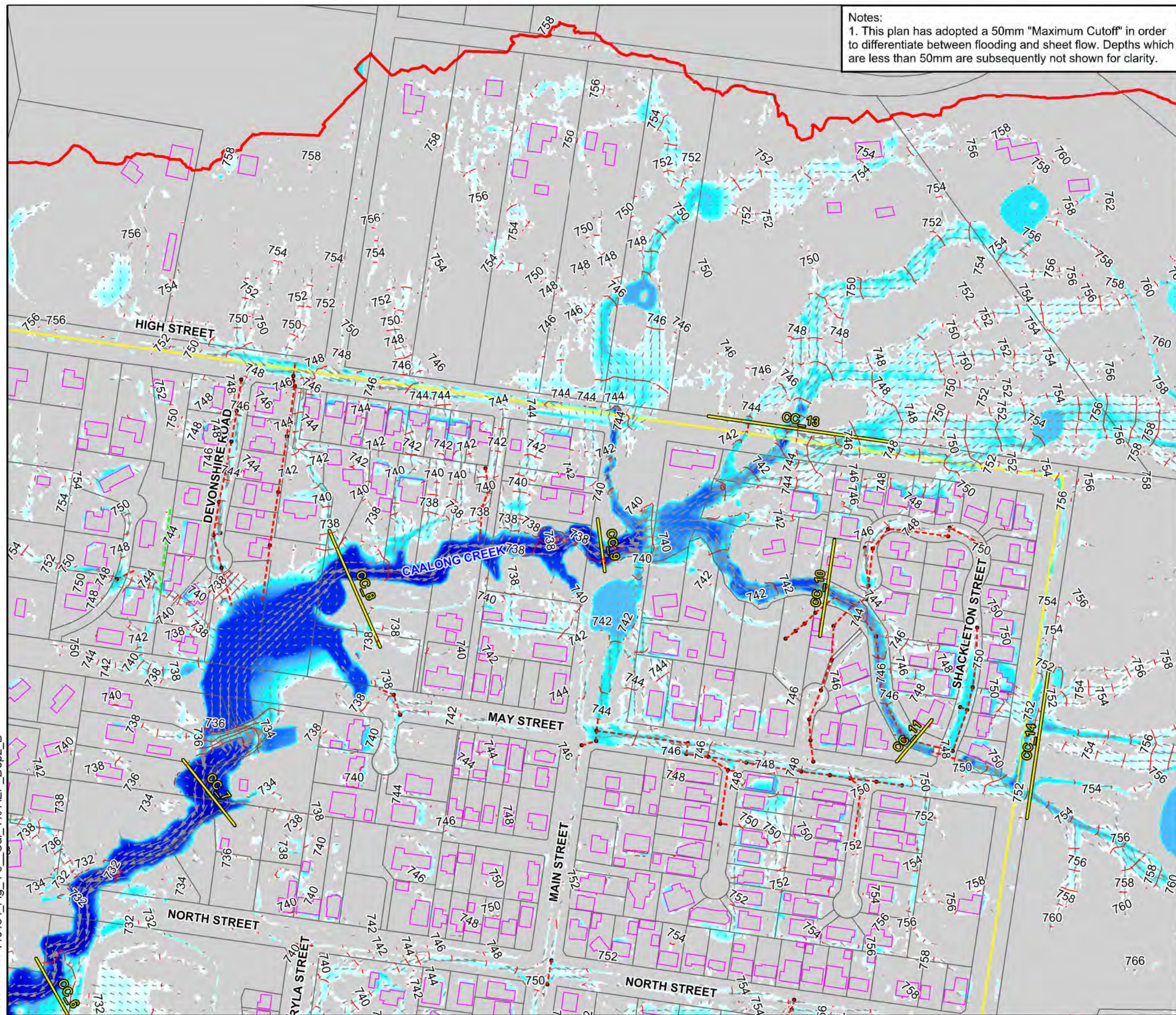
Figure 4-8
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
1% AEP

Date : 21/09/2016

Issue : A





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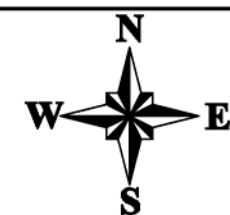
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3

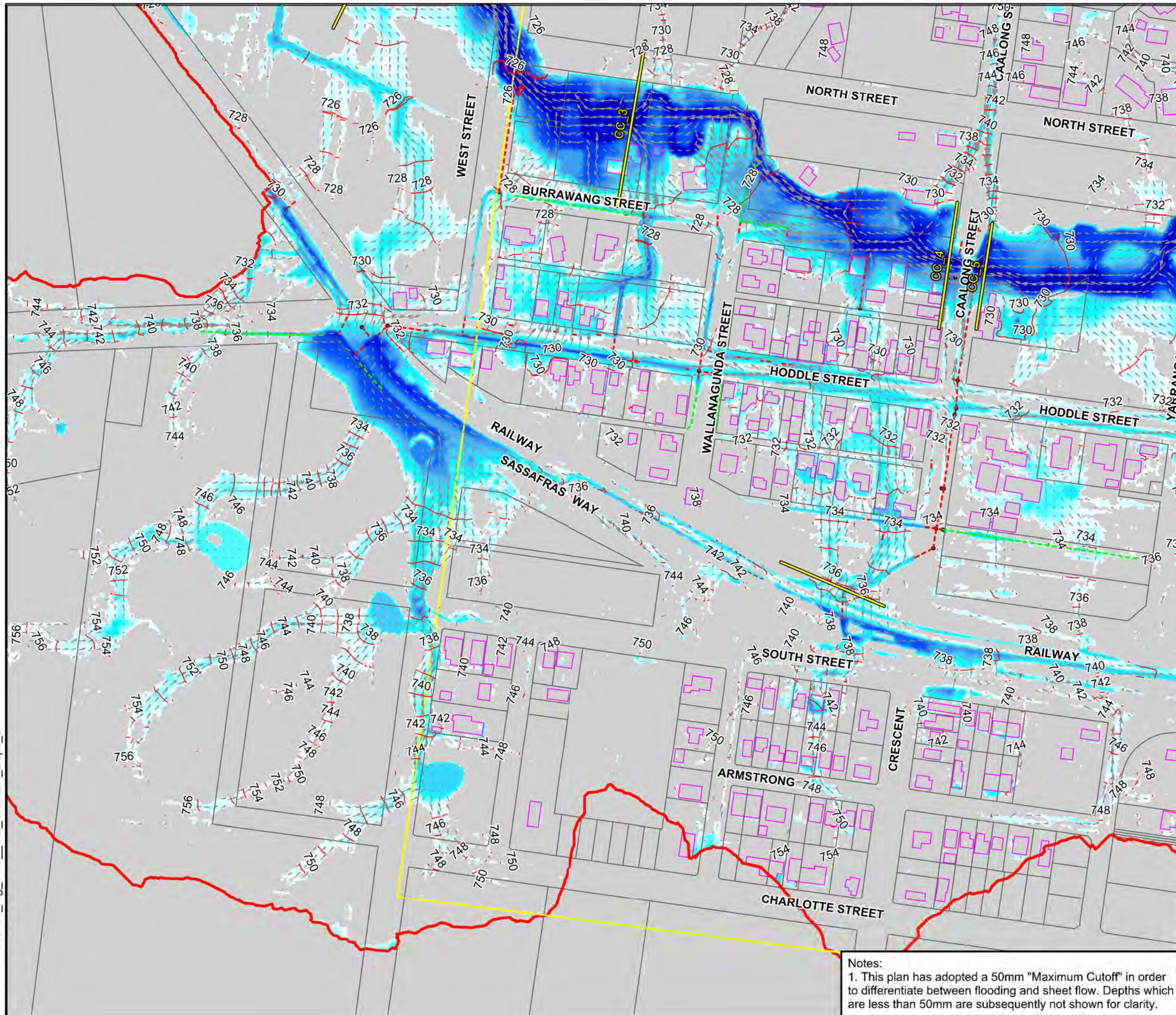


Figure 4-9
Robertson Village
Overland Flow Study

Existing (Sheet 2 of 4)
Flood Depth & Velocities
1% AEP

Date : 29/01/2016

Issue : A



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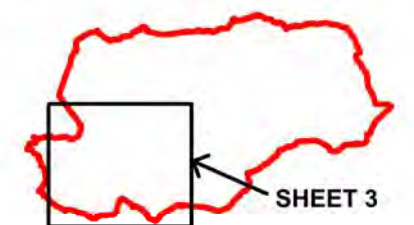
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



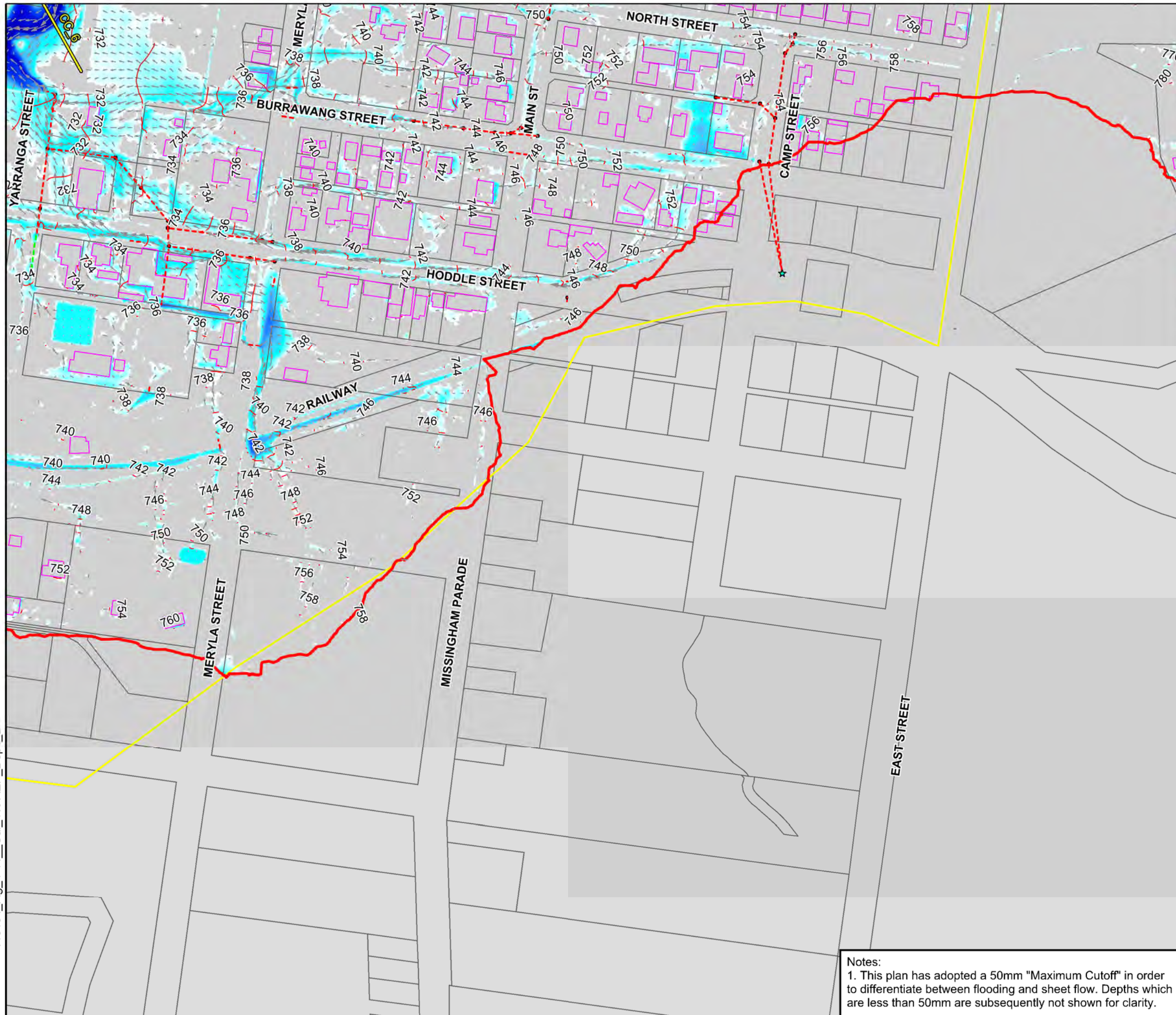
Figure 4-10
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
1% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

750

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



Figure 4-11
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
1% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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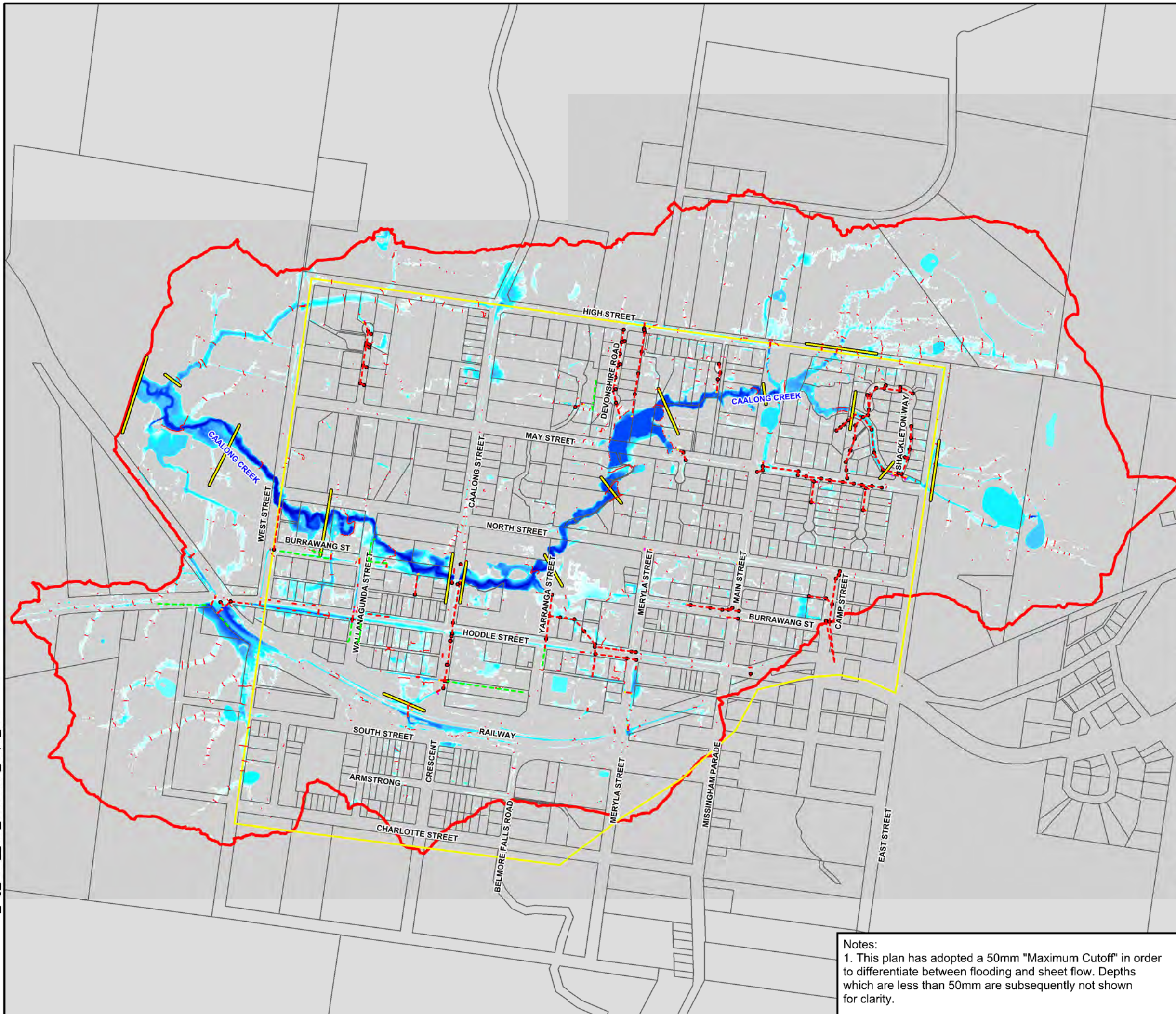
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- | | |
|--|-------------|
| | 0.0 to 0.05 |
| | 0.05 to 0.1 |
| | 0.1 to 0.2 |
| | 0.2 to 0.35 |
| | 0.35 to 0.5 |
| | 0.5+ |



Scale 1: 9,000 @ A3

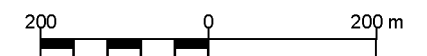


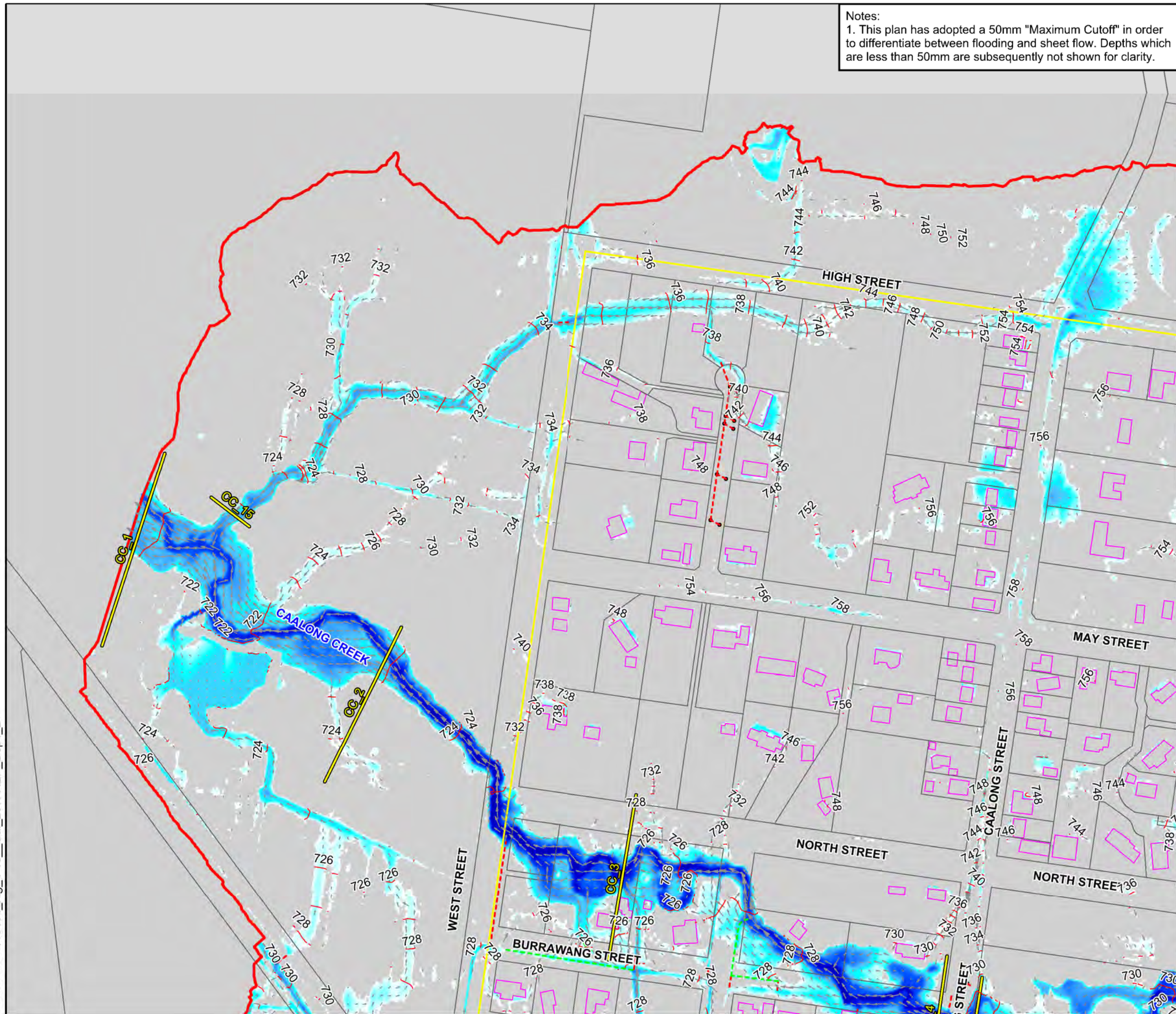
Figure 4-12
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
20% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- 750 Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

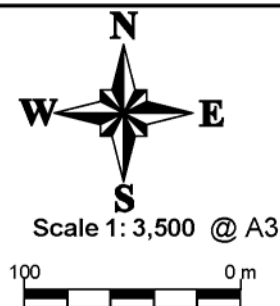
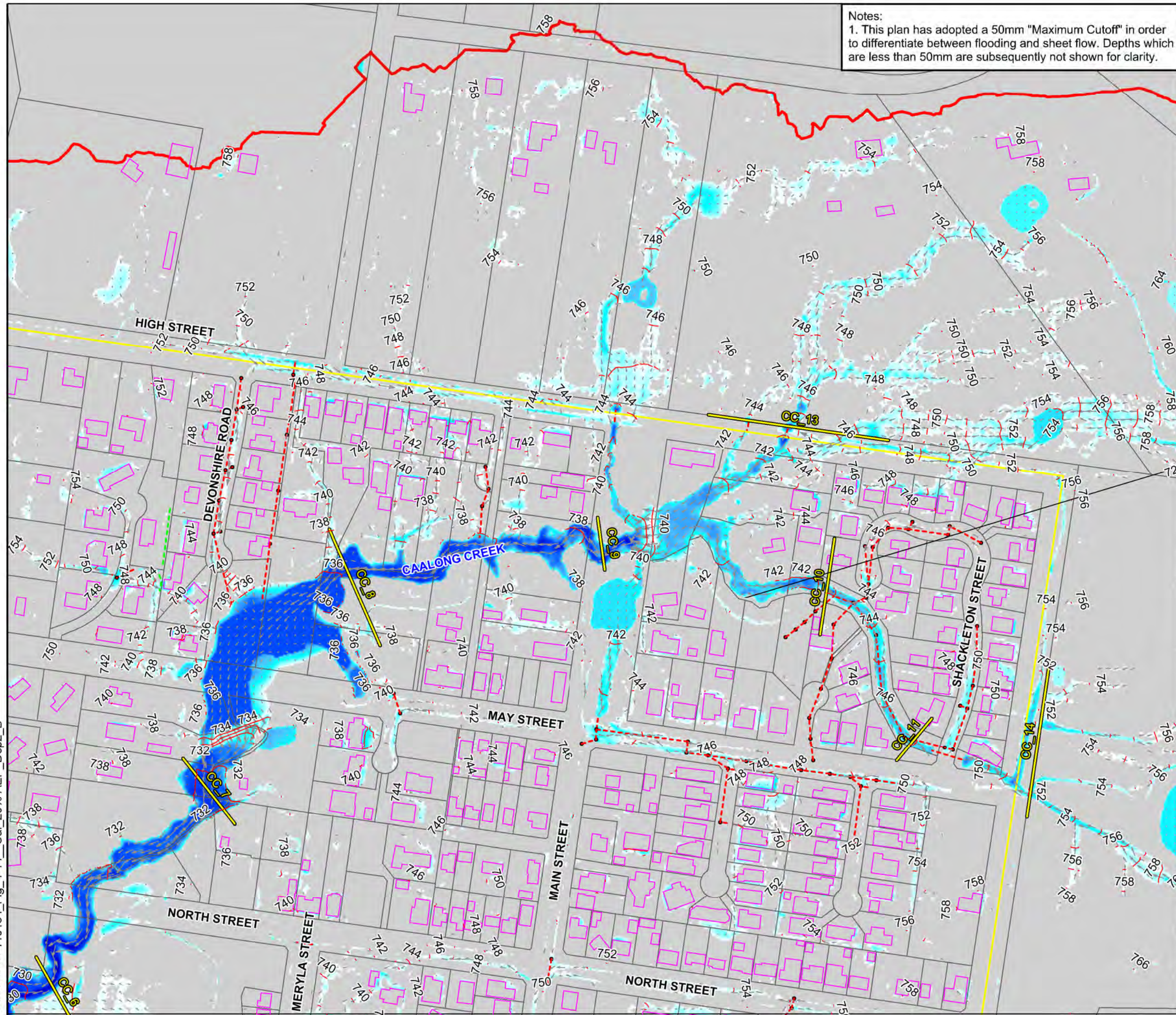


Figure 4-13
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
20% AEP



Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)
- FLOOD DEPTH (m)**
- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

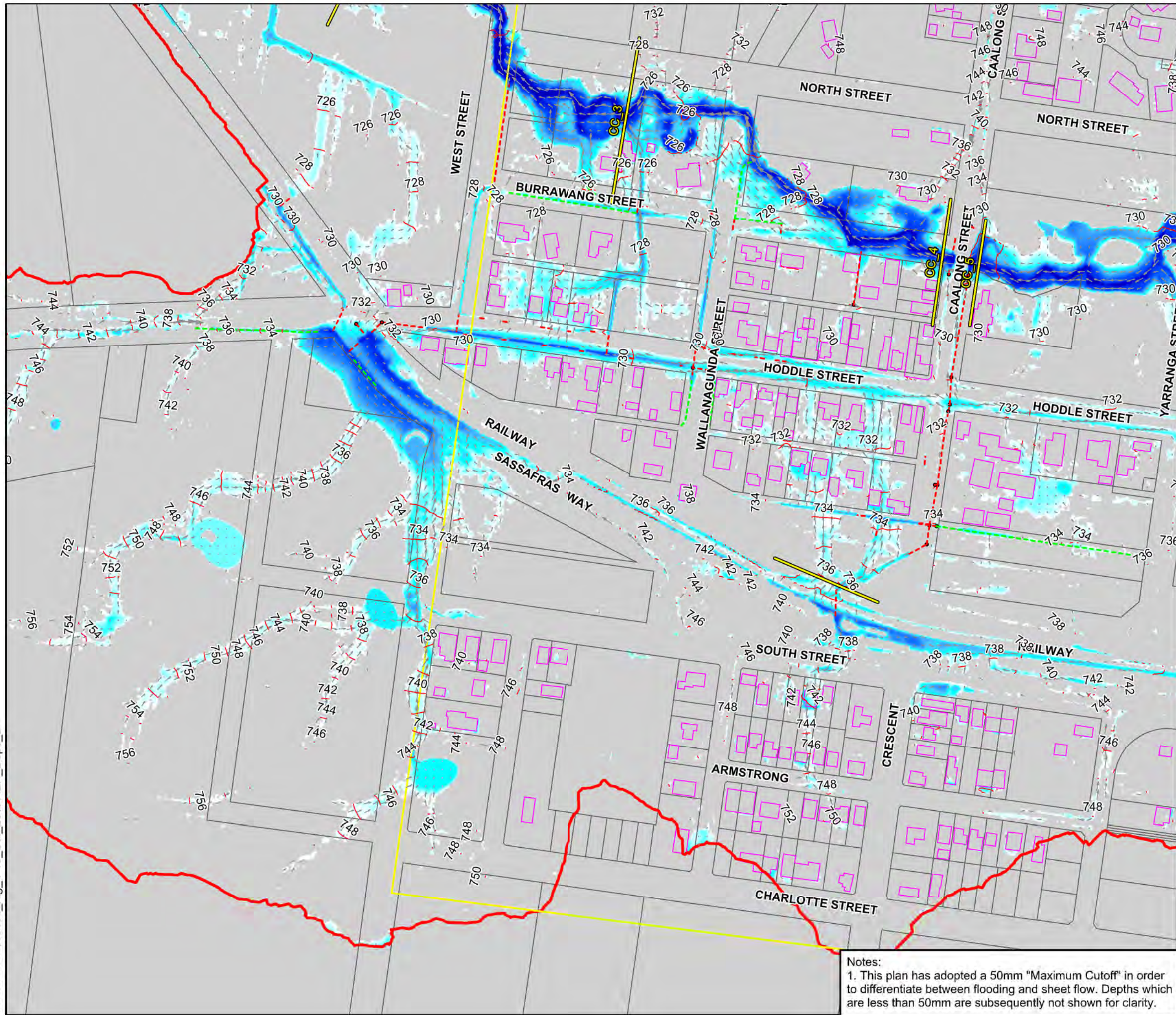


Scale 1: 3,500 @ A3



Figure 4-14
Robertson Village
Overland Flow Study

Existing (Sheet 2 of 4)
Flood Depth & Velocities
20% AEP



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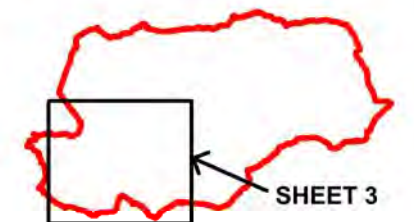
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



Figure 4-15
Robertson Village
Overland Flow Study

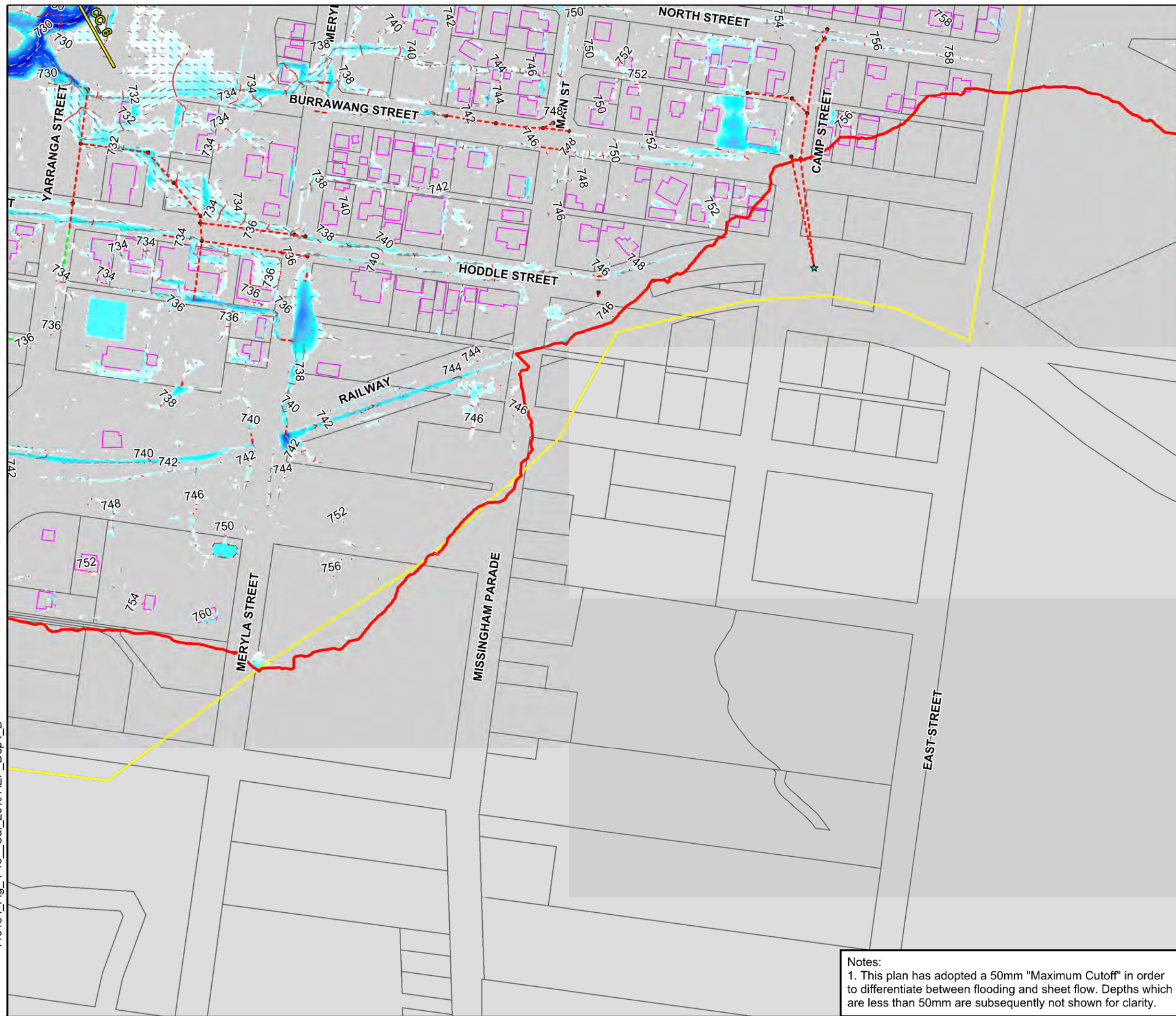
Existing (Sheet 3 of 4)
Flood Depth & Velocities
20% AEP

Notes:

1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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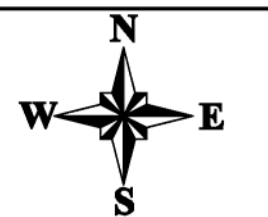
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- 750 Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



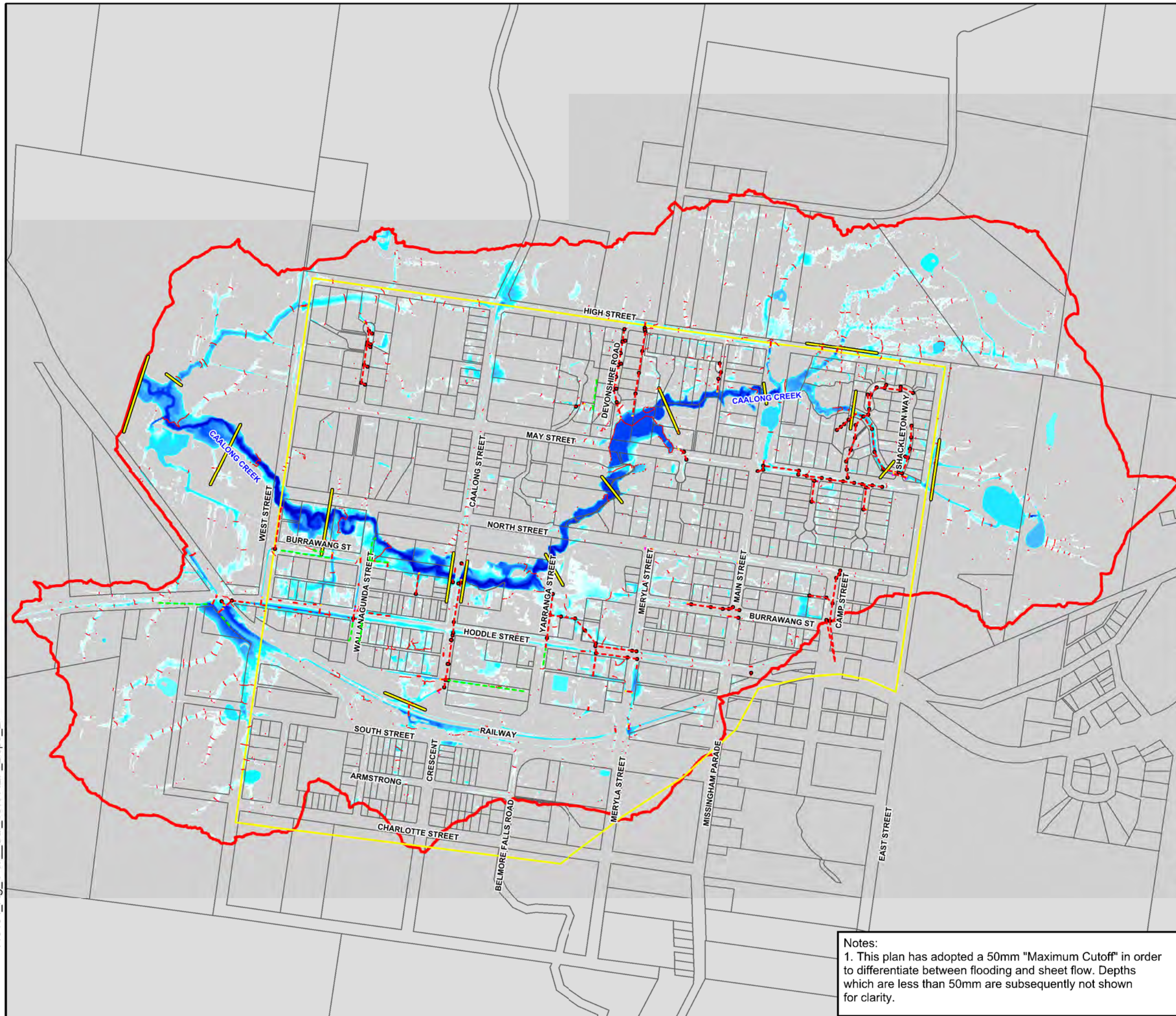
Figure 4-16
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
20% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+



Scale 1: 9,000 @ A3

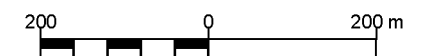


Figure 4-17
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
10% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)
- FLOOD DEPTH (m)**
- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

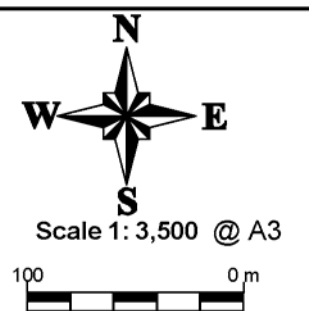
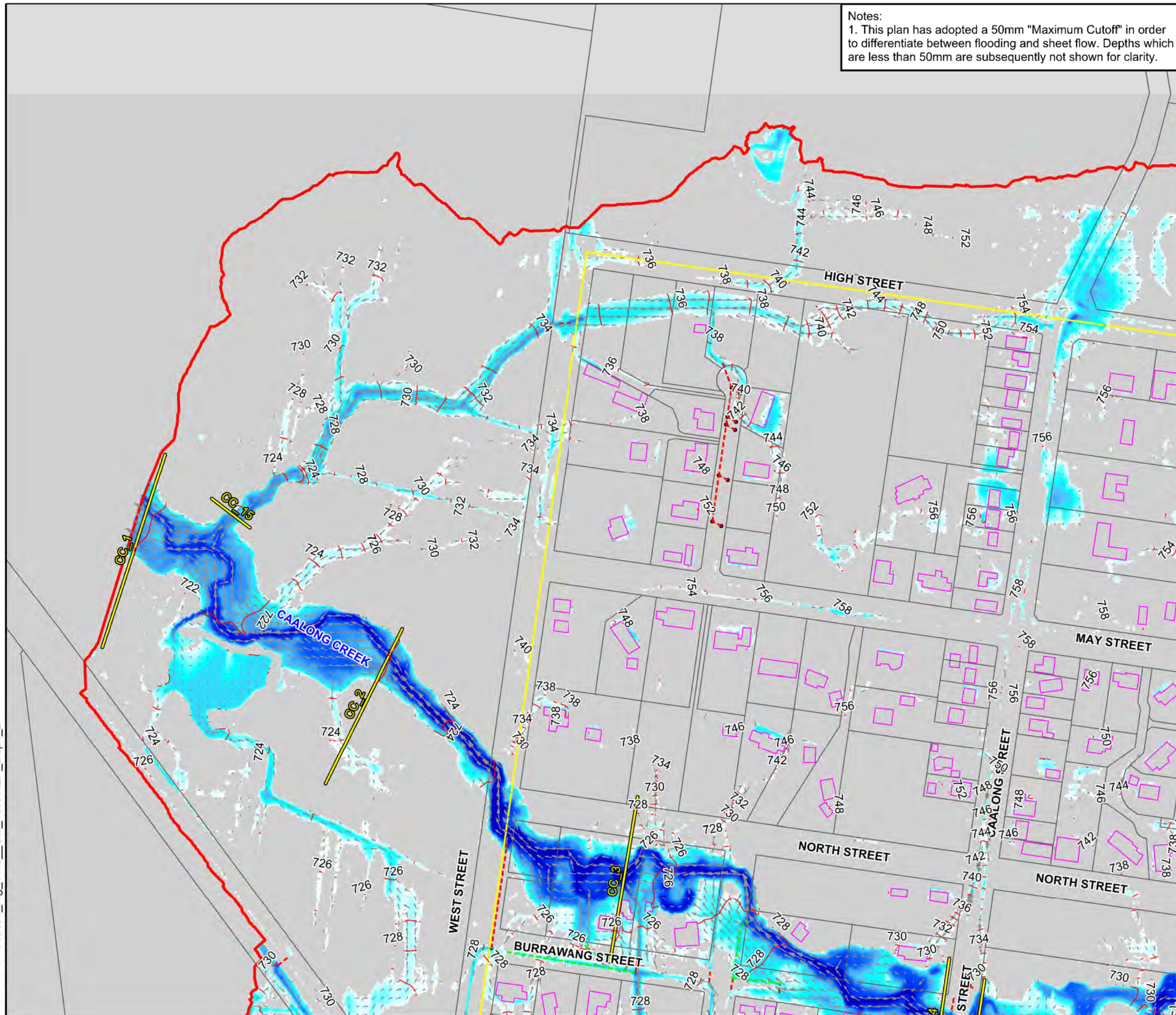


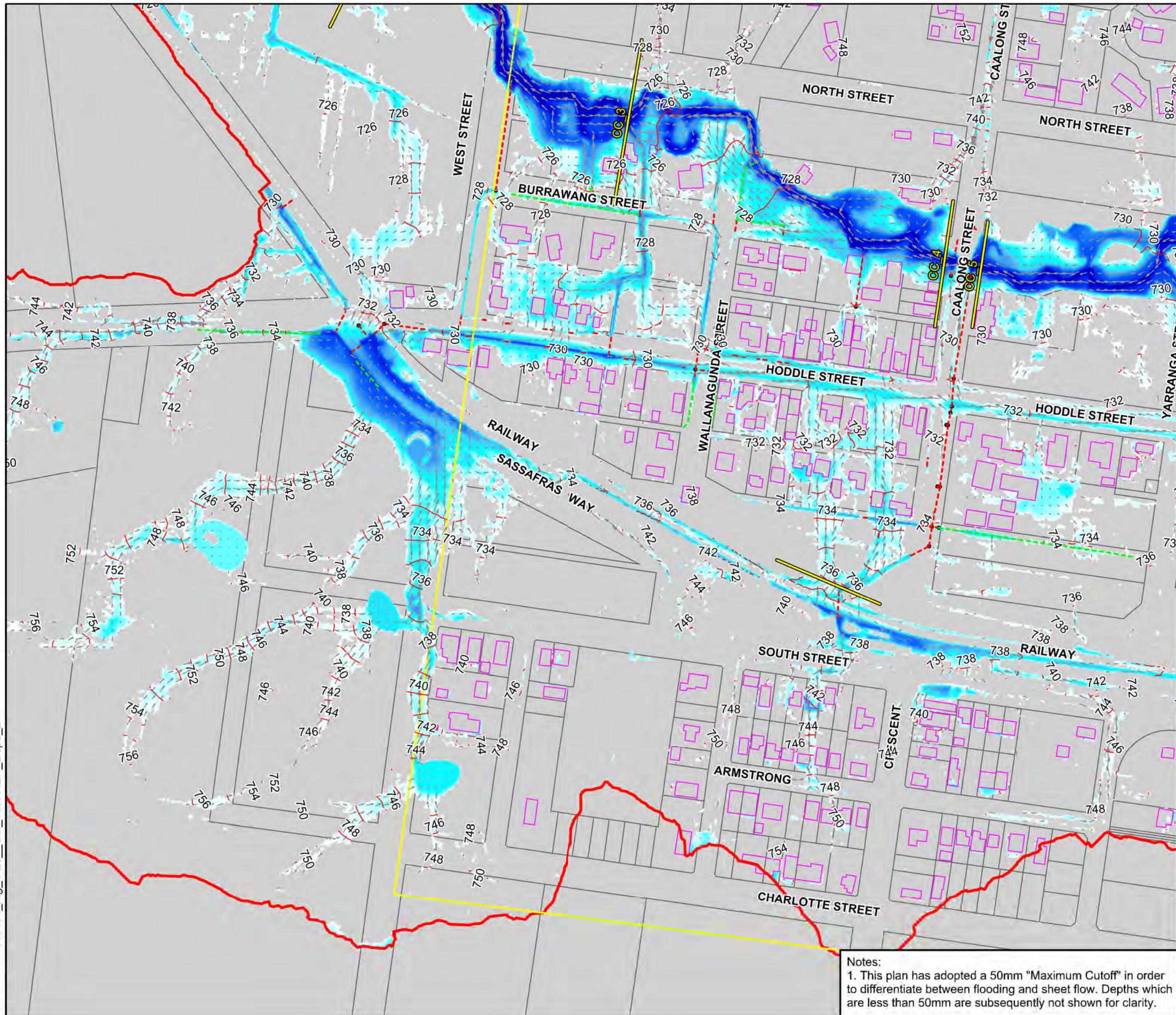
Figure 4-18
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
10% AEP

Date : 21/09/2016

Issue : A





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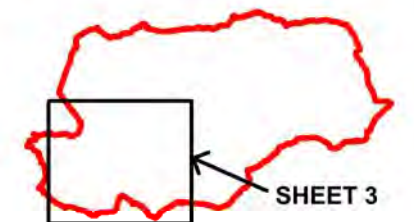
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- - - Road Swale
- - - Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



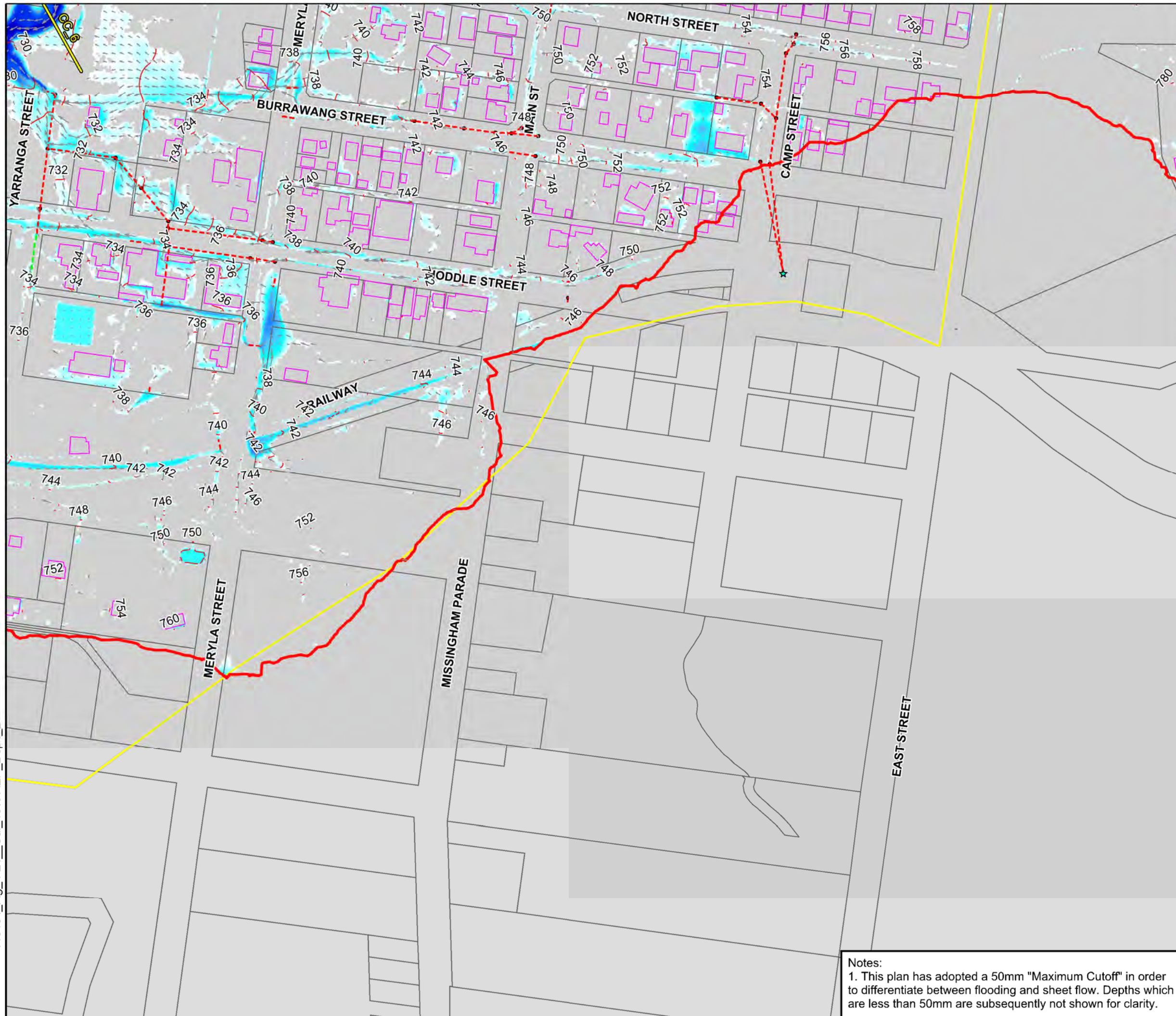
Figure 4-20
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
10% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- 750 Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

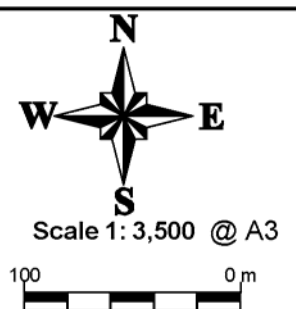


Figure 4-21
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
10% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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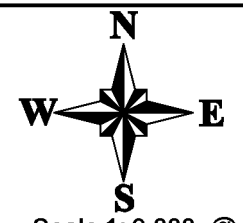
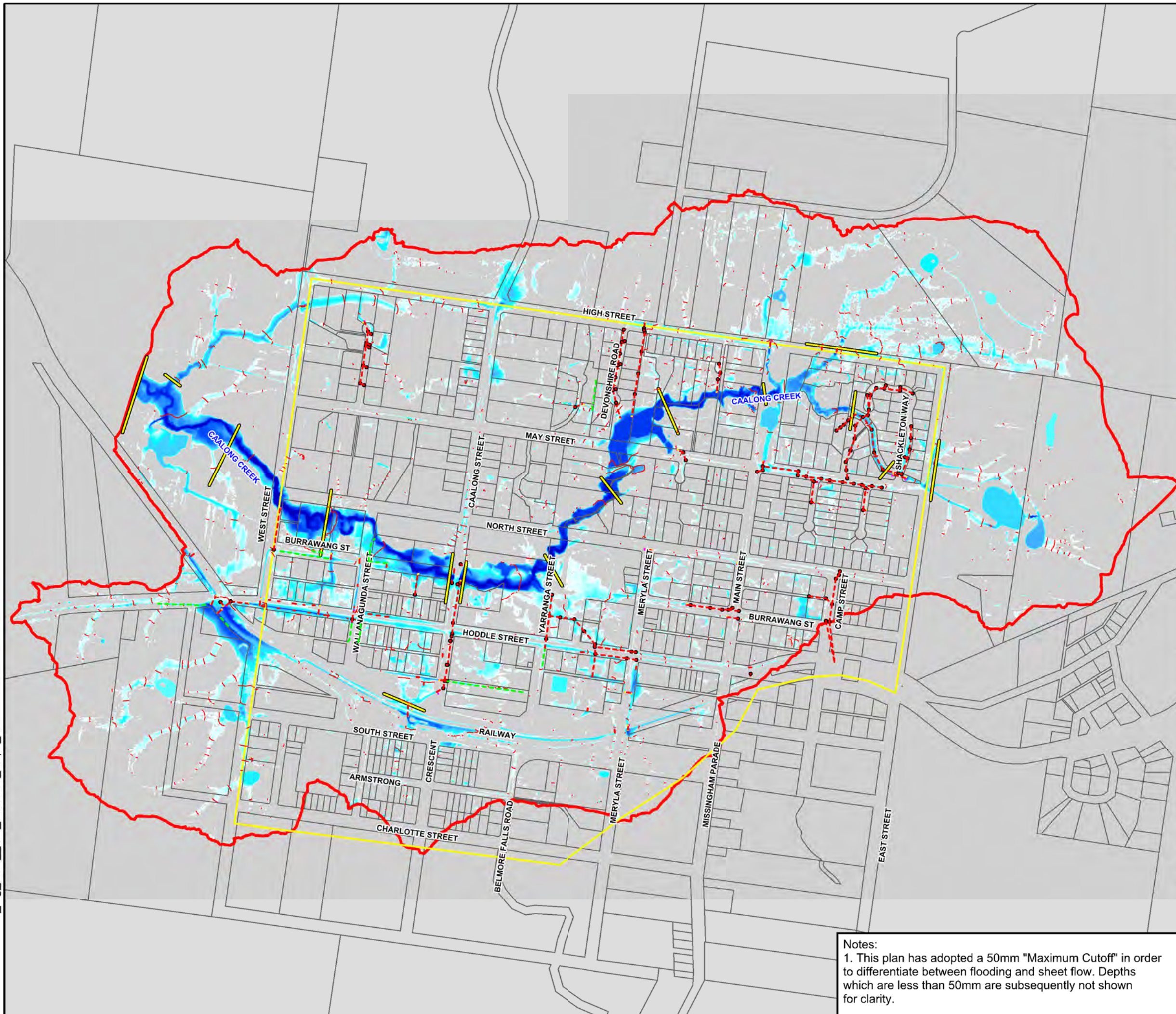
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- | | |
|--|-------------|
| | 0.0 to 0.05 |
| | 0.05 to 0.1 |
| | 0.1 to 0.2 |
| | 0.2 to 0.35 |
| | 0.35 to 0.5 |
| | 0.5+ |



Scale 1: 9,000 @ A3

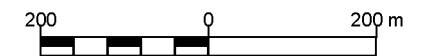


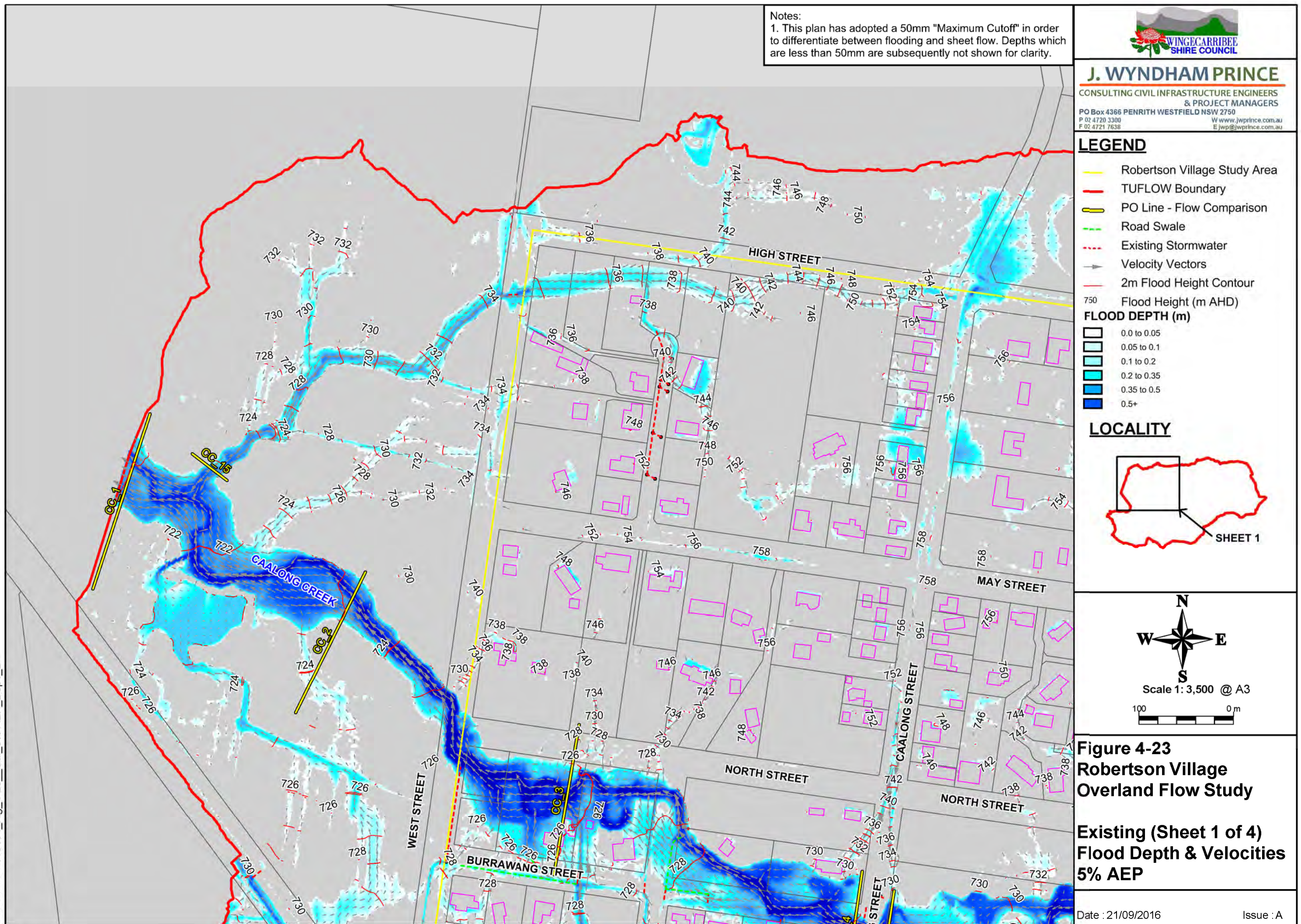
Figure 4-22
Robertson Village
Overland Flow Study

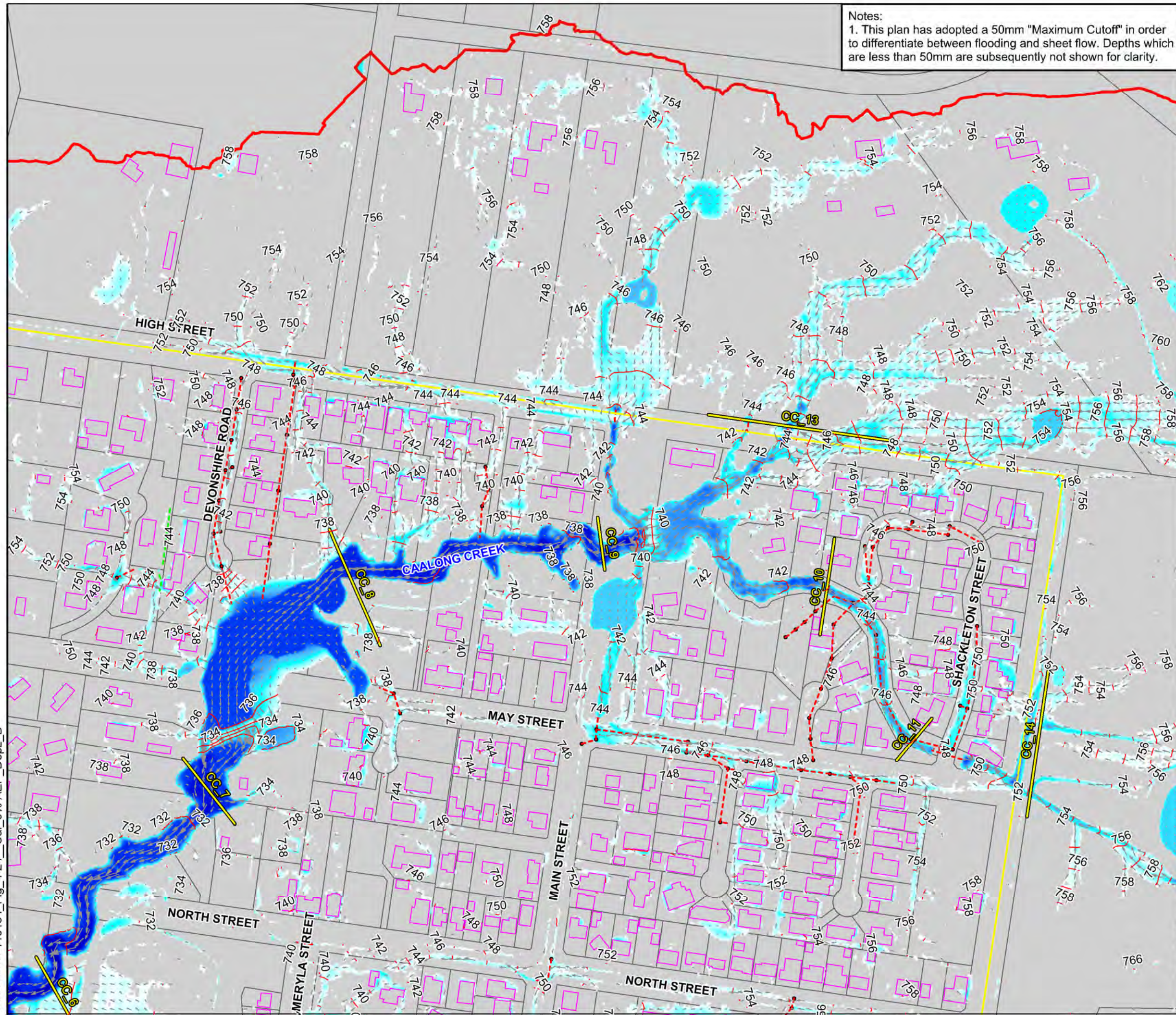
Existing (Overall)
Flood Depth
5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A





Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
 - TUFLOW Boundary
 - PO Line - Flow Comparison
 - Road Swale
 - Existing Stormwater
 - Velocity Vectors
 - 2m Flood Height Contour
 - Flood Height (m AHD)
- FLOOD DEPTH (m)**
- 0.0 to 0.05
 - 0.05 to 0.1
 - 0.1 to 0.2
 - 0.2 to 0.35
 - 0.35 to 0.5
 - 0.5+

LOCALITY

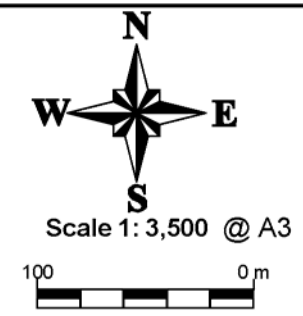
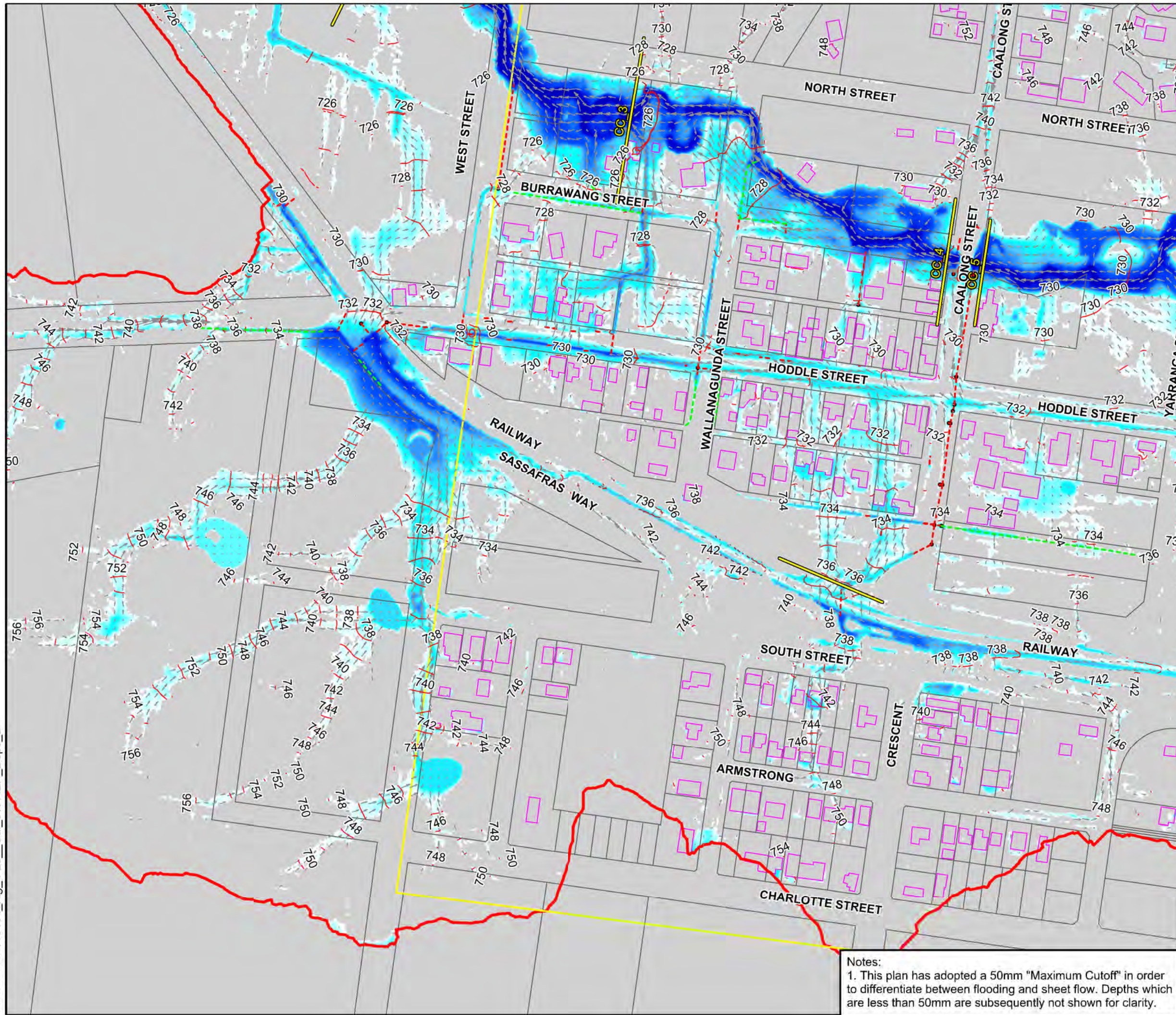


Figure 4-24
Robertson Village
Overland Flow Study

Existing (Sheet 2 of 4)
Flood Depth & Velocities
5% AEP



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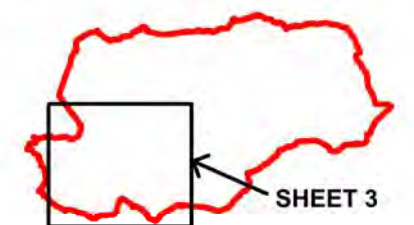
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



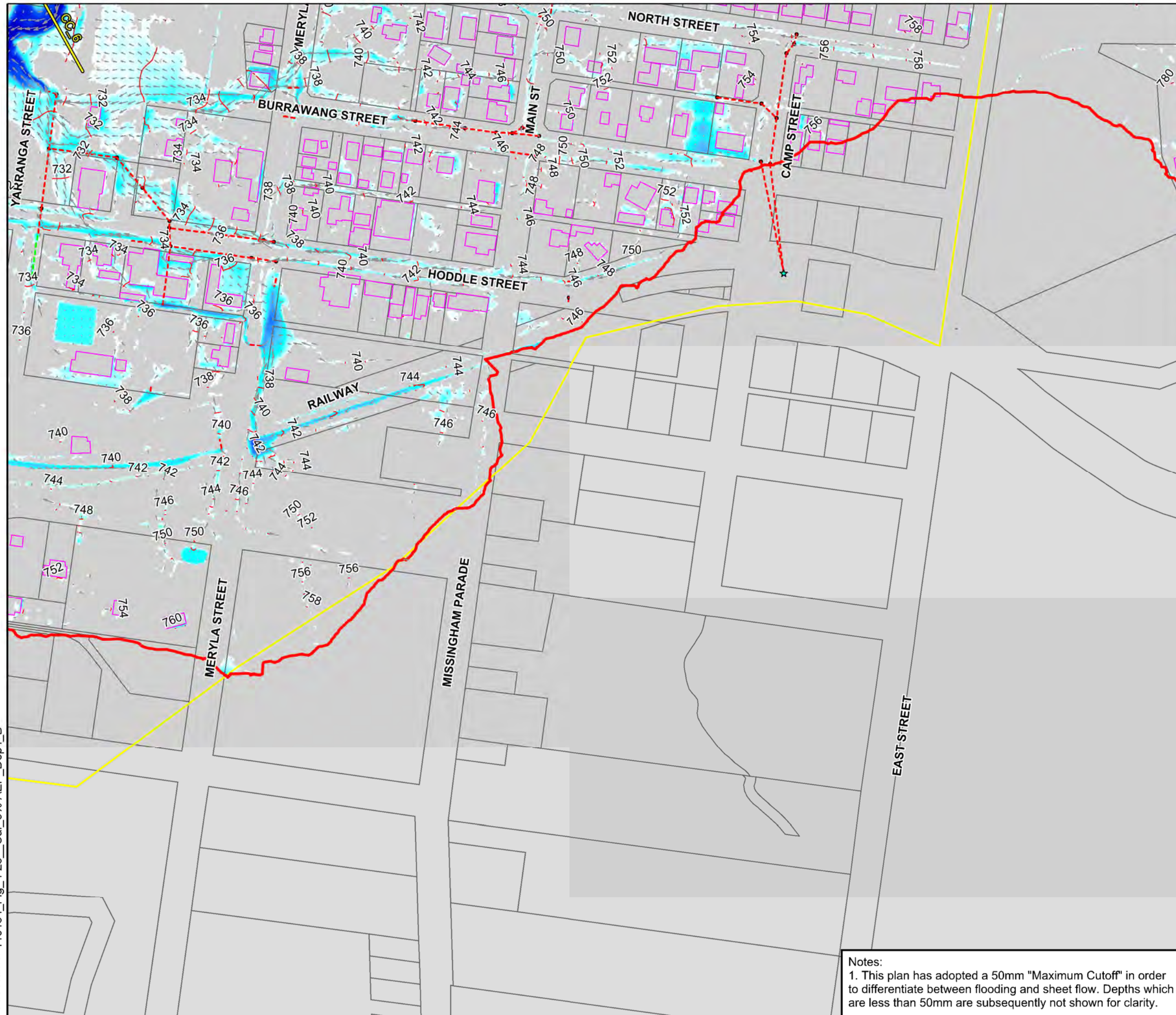
Figure 4-25
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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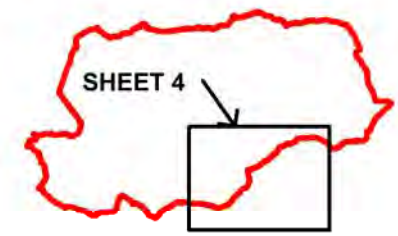
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



Figure 4-26
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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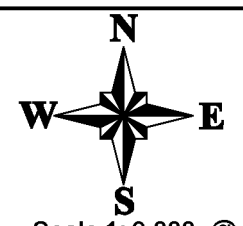
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

| | |
|---|-------------|
| | 0.0 to 0.05 |
| | 0.05 to 0.1 |
| | 0.1 to 0.2 |
| | 0.2 to 0.35 |
| | 0.35 to 0.5 |
| | 0.5+ |



Scale 1: 9,000 @ A3

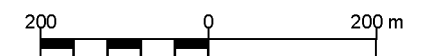


Figure 4-27
Robertson Village
Overland Flow Study

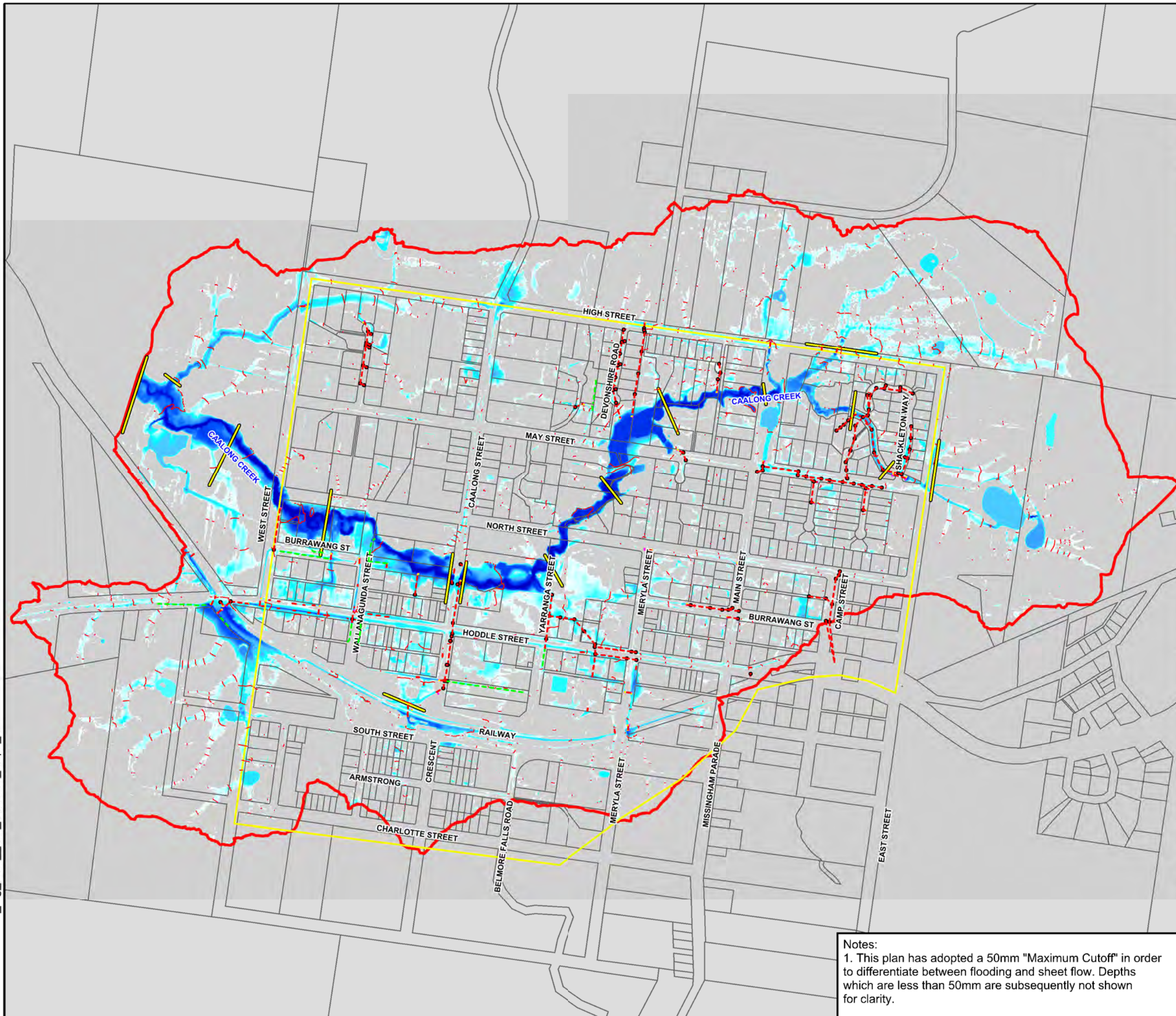
Existing (Overall)
Flood Depth
2% AEP

Date : 21/09/2016

Issue : A

Notes:

1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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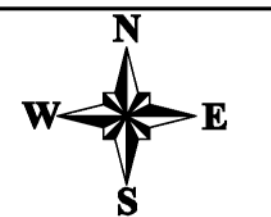
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3

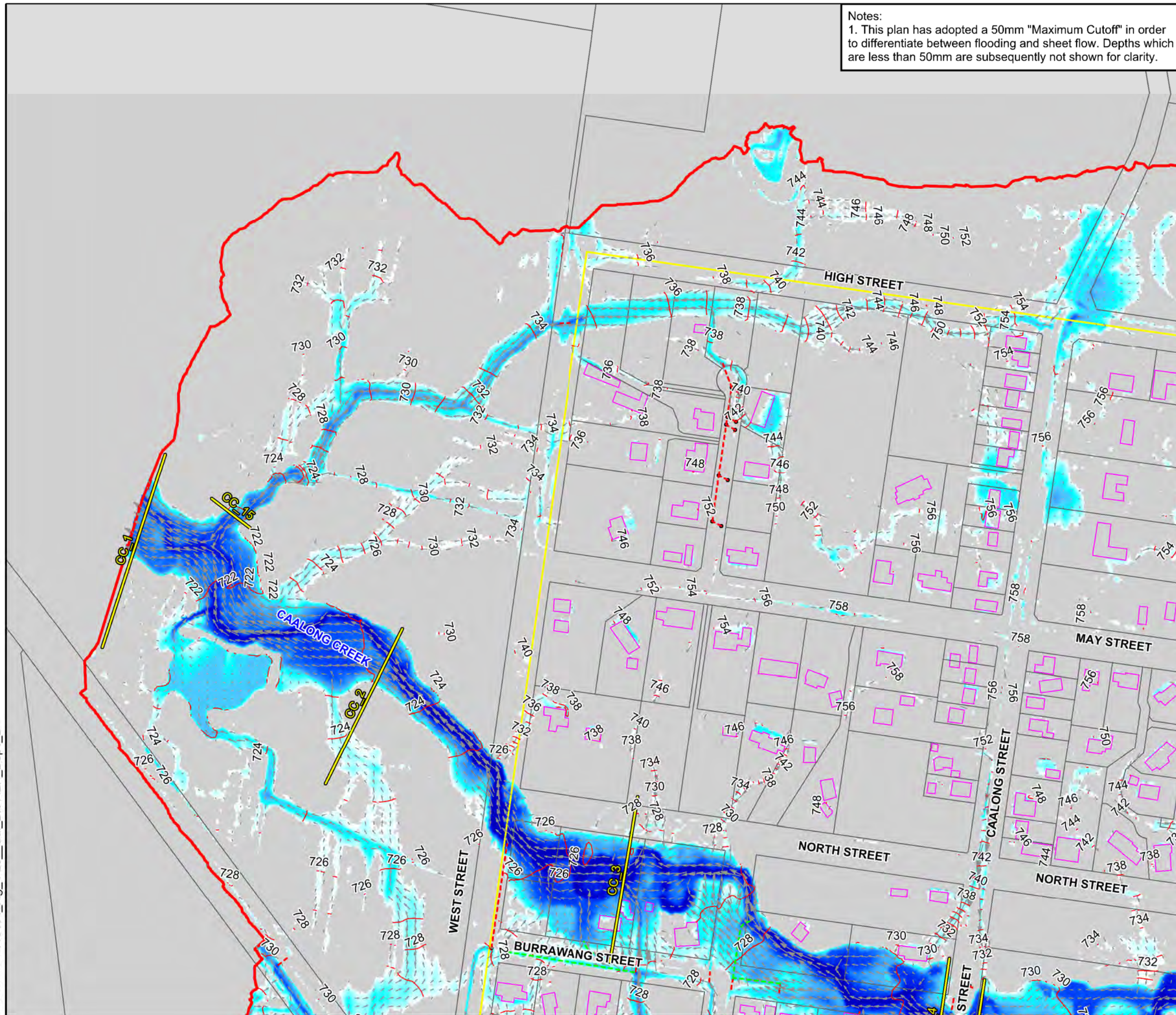


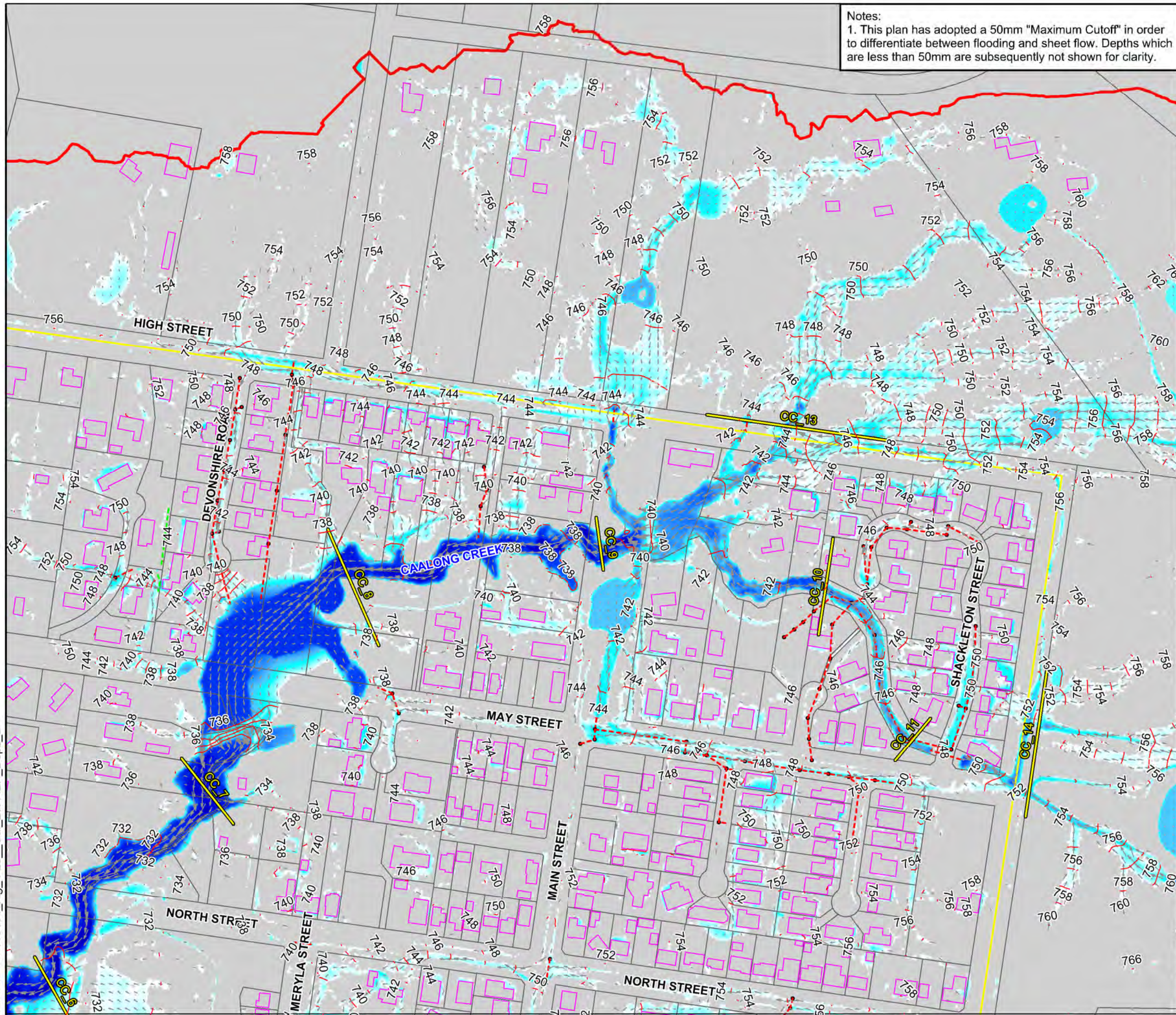
Figure 4-28
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
2% AEP

Date : 21/09/2016

Issue : A





Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)
- FLOOD DEPTH (m)**
- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

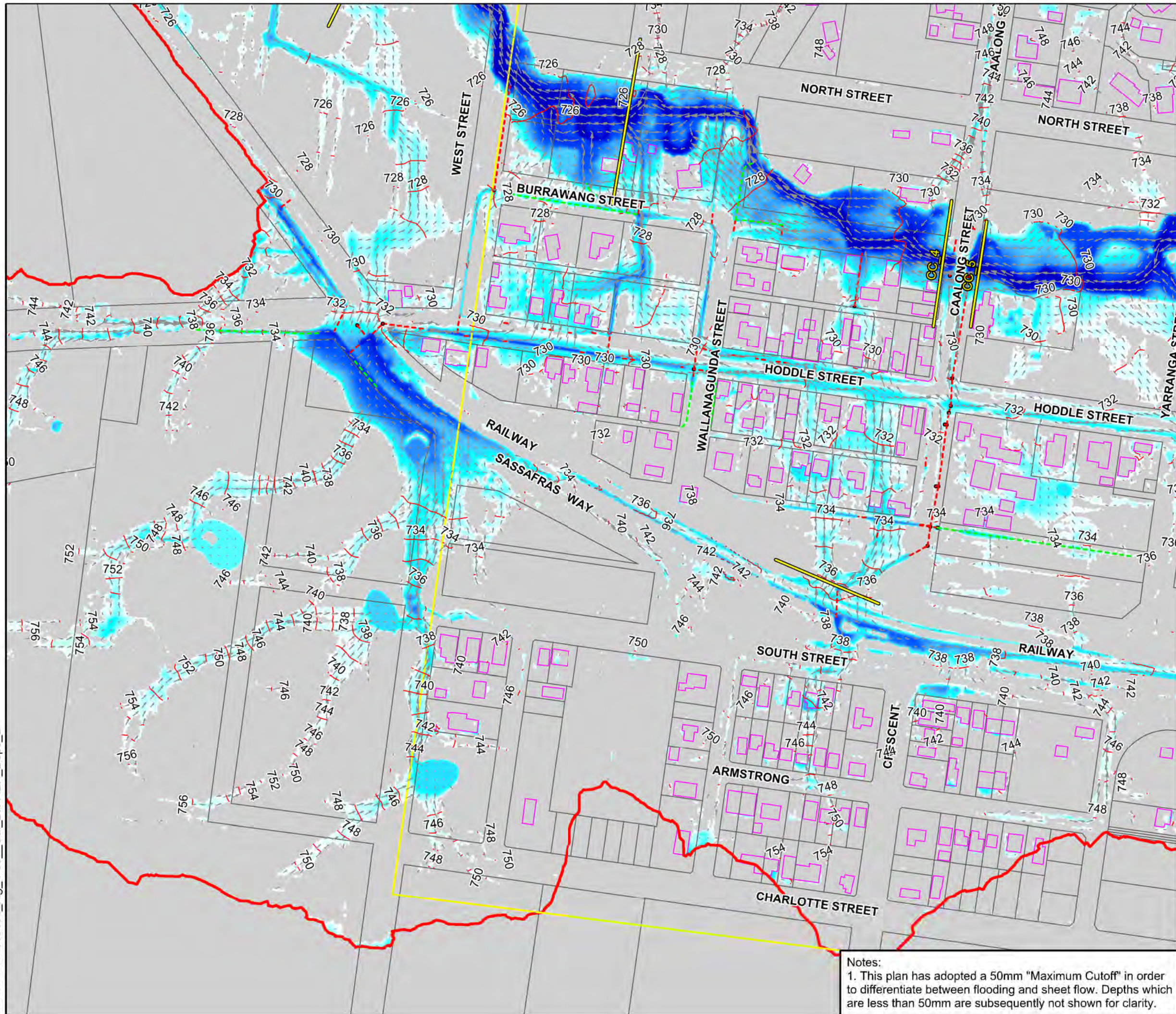


Scale 1: 3,500 @ A3



Figure 4-29
Robertson Village
Overland Flow Study

Existing (Sheet 2 of 4)
Flood Depth & Velocities
2% AEP



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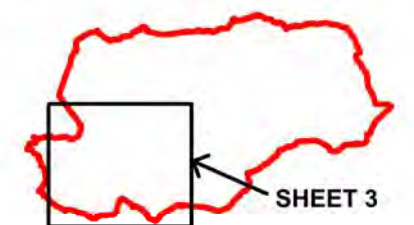
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- 750 Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



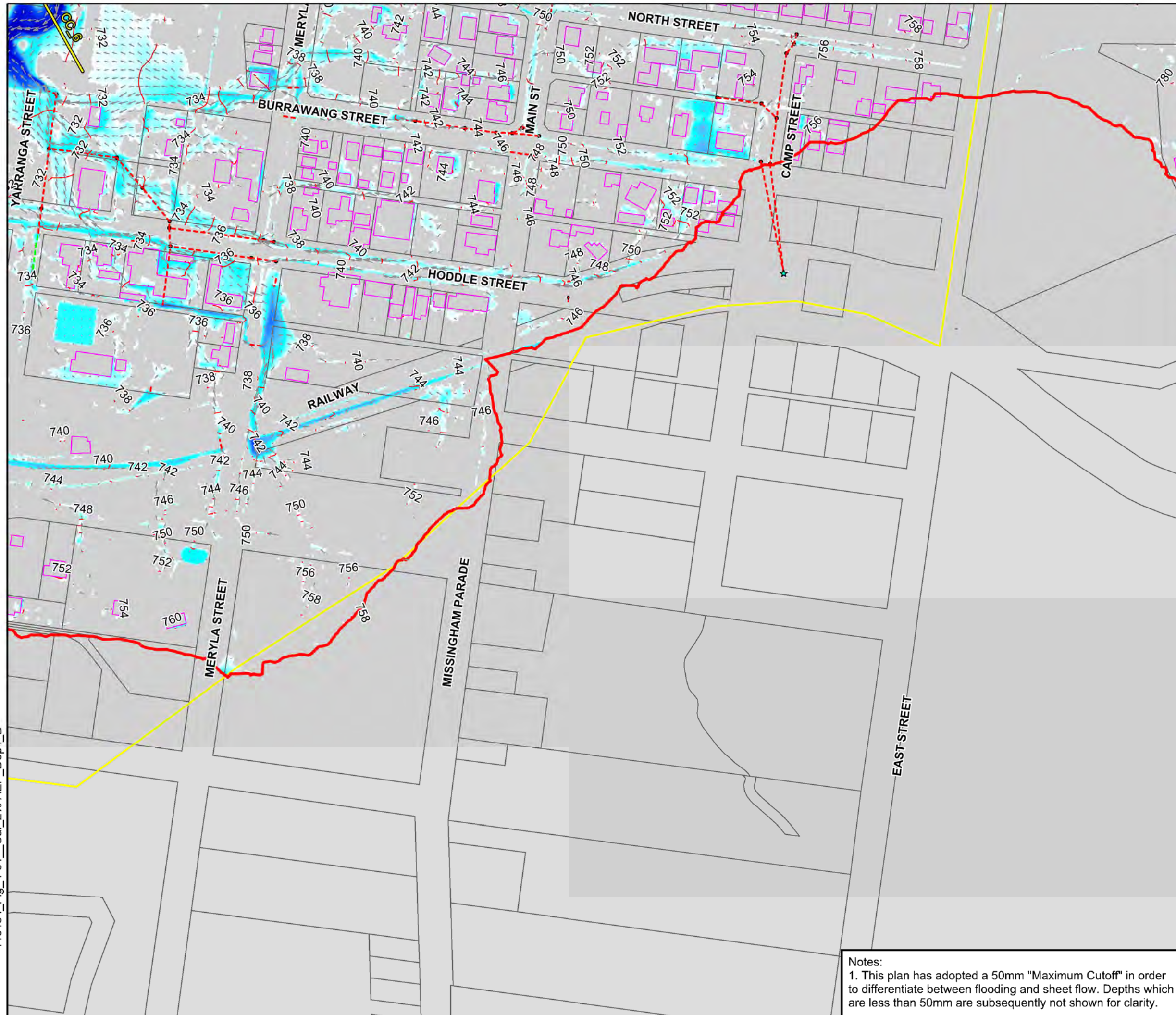
Figure 4-30
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
2% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

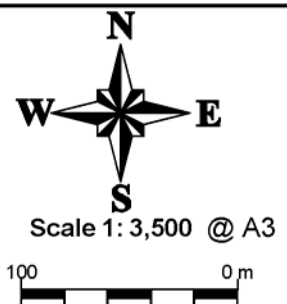
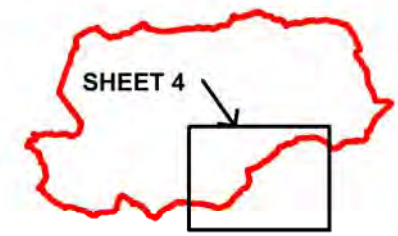
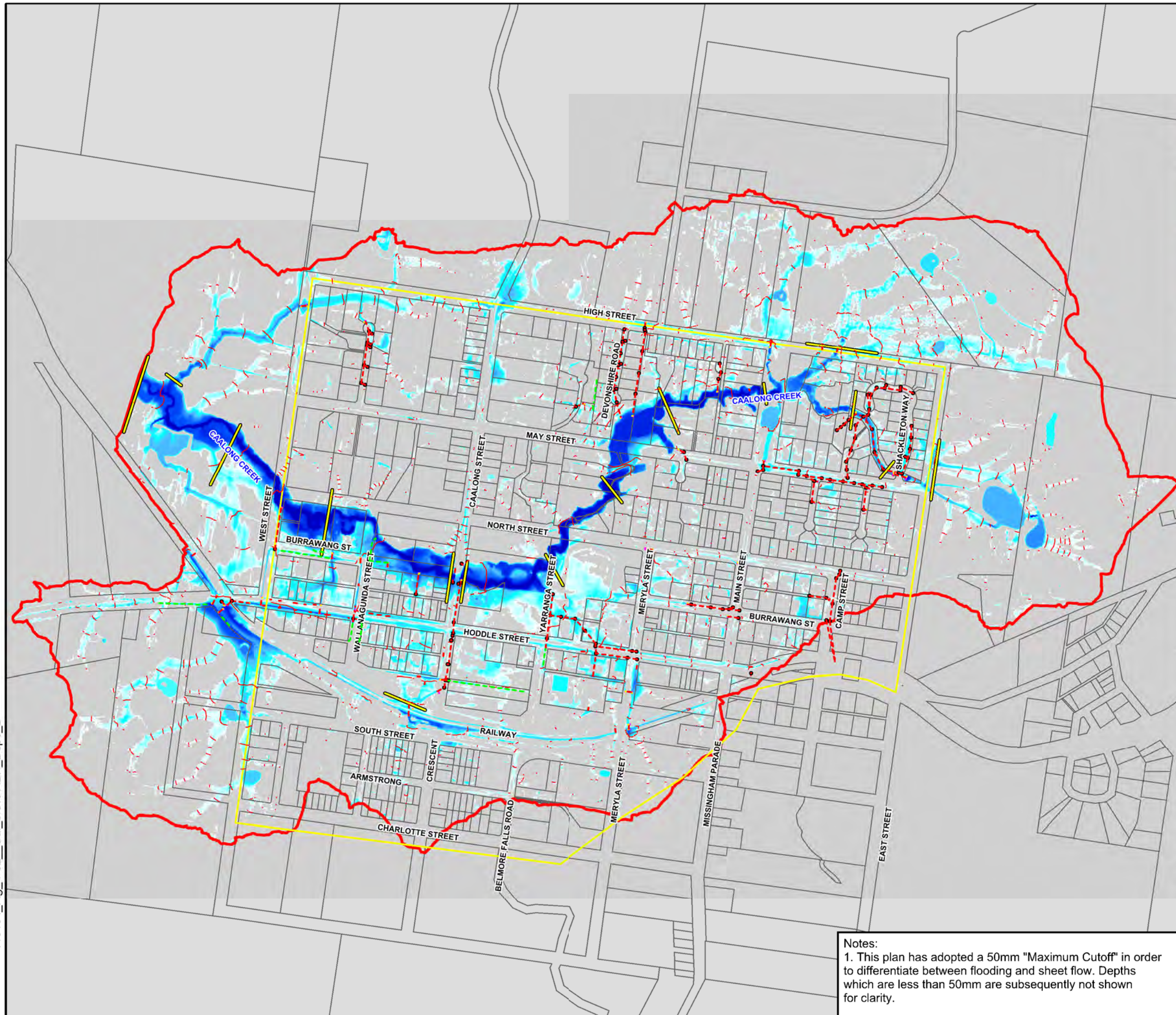


Figure 4-31
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
2% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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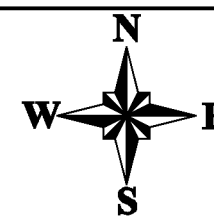
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

- | |
|-------------|
| 0.0 to 0.05 |
| 0.05 to 0.1 |
| 0.1 to 0.2 |
| 0.2 to 0.35 |
| 0.35 to 0.5 |
| 0.5+ |



Scale 1: 9,000 @ A3

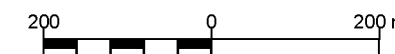


Figure 4-32
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
0.5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- 750 Flood Height (m AHD)

FLOOD DEPTH (m)

- | | |
|--|-------------|
| | 0.0 to 0.05 |
| | 0.05 to 0.1 |
| | 0.1 to 0.2 |
| | 0.2 to 0.35 |
| | 0.35 to 0.5 |
| | 0.5+ |

LOCALITY



Scale 1: 3,500 @ A3

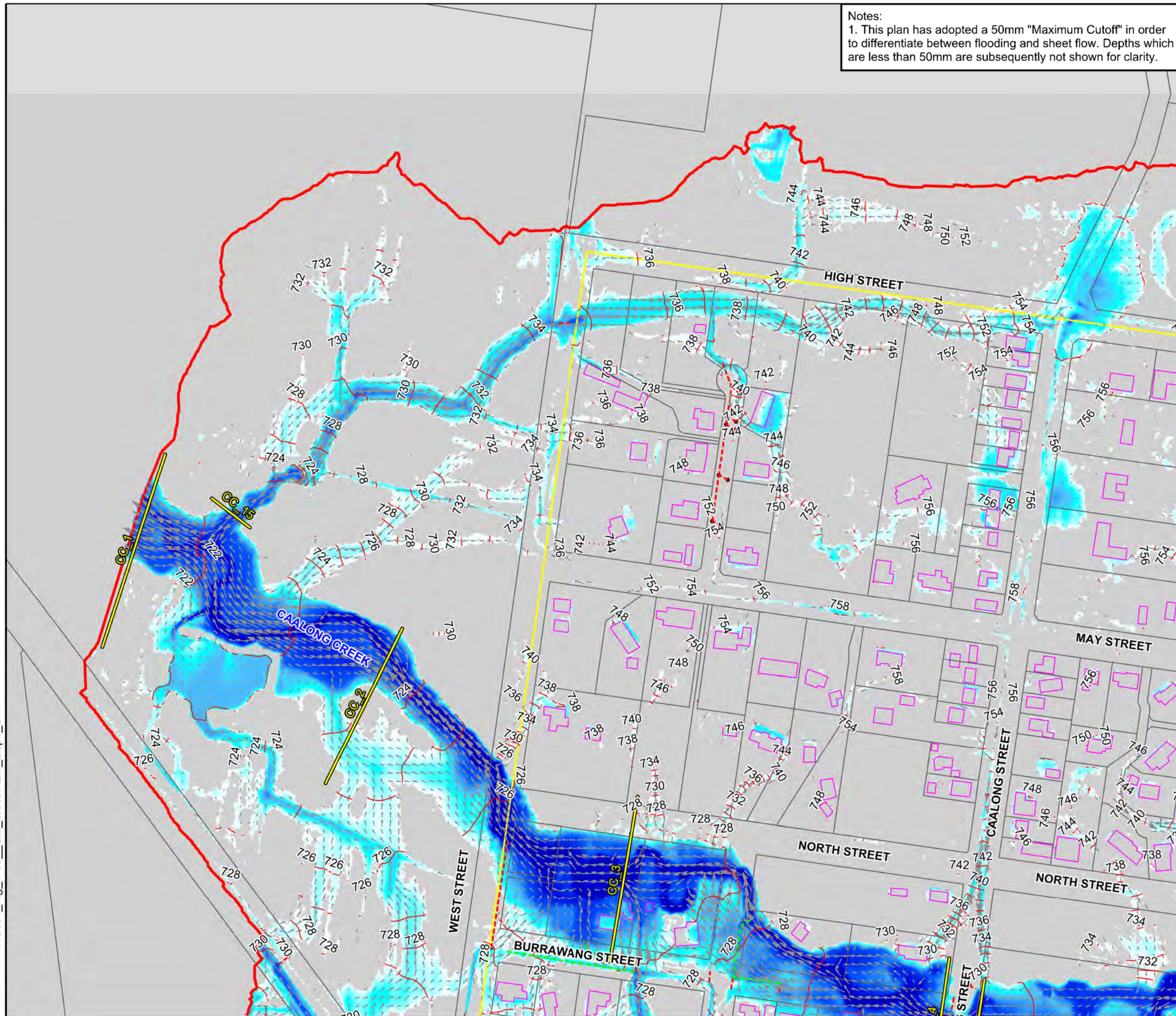


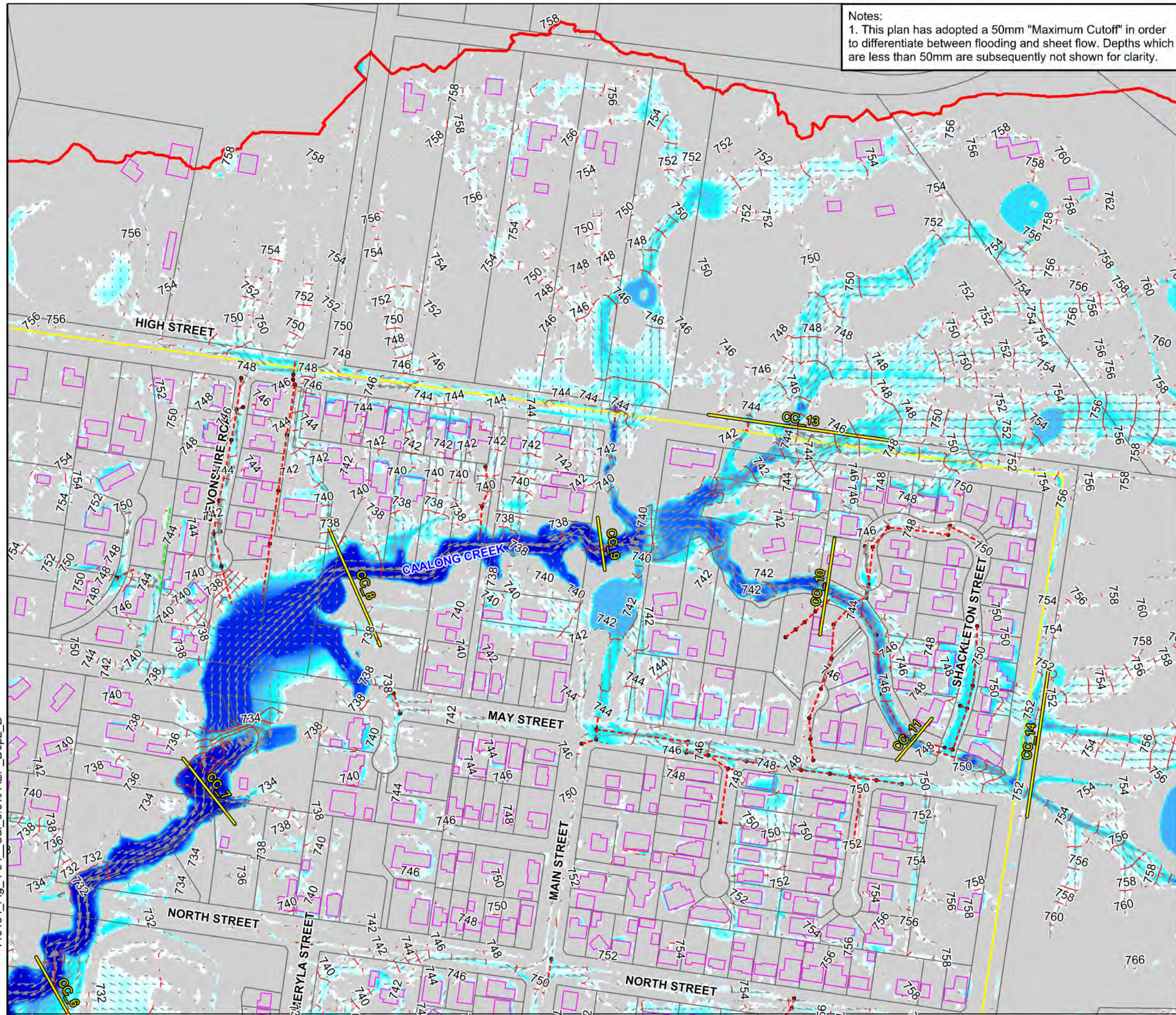
Figure 4-33
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
0.5% AEP

Date : 21/09/2016

Issue : A





Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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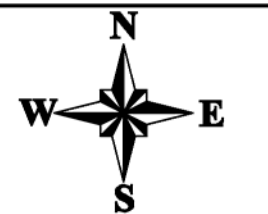
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- - - Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY

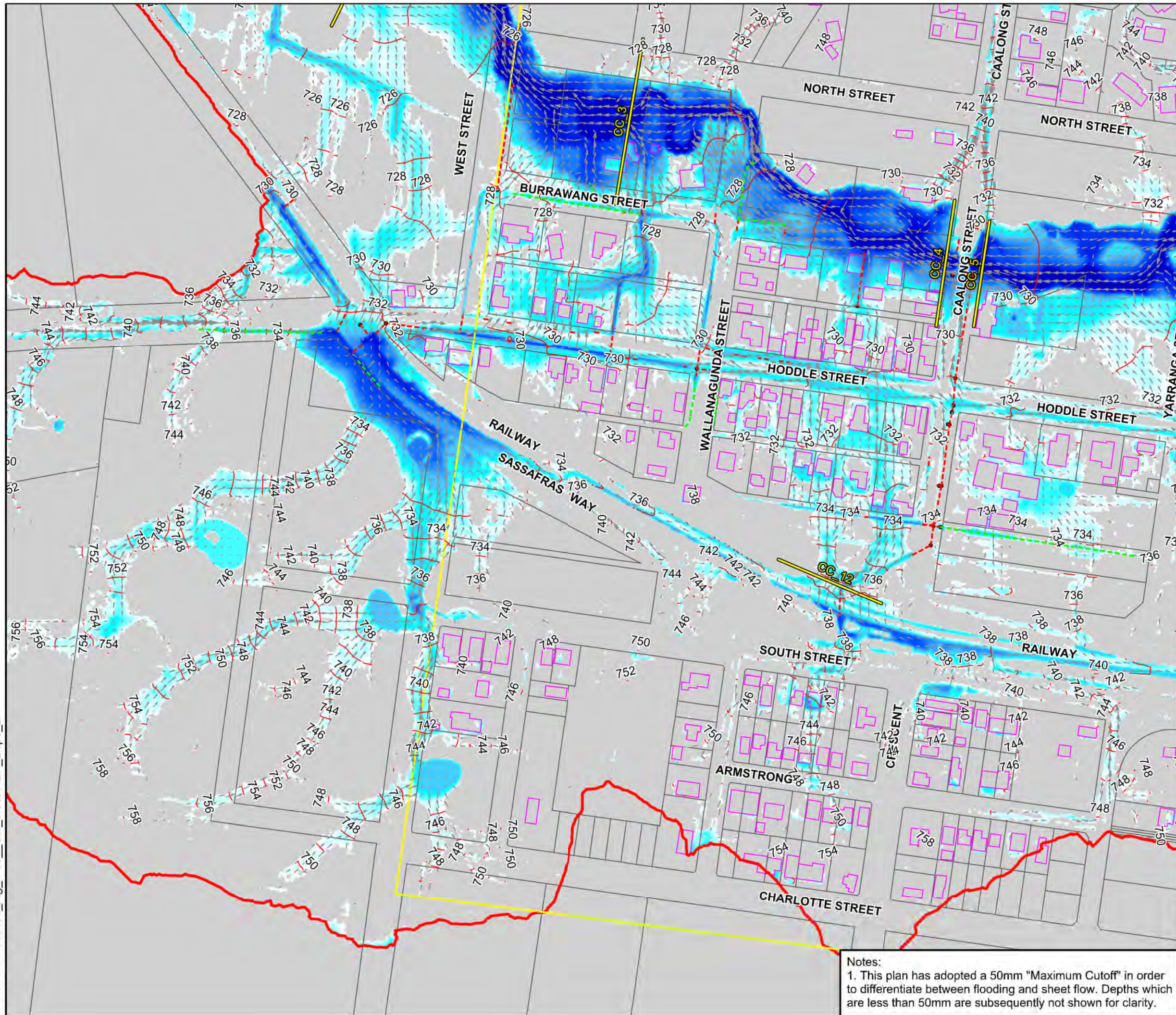


Scale 1: 3,500 @ A3



Figure 4-34
Robertson Village
Overland Flow Study

Existing (Sheet 2 of 4)
Flood Depth & Velocities
0.5% AEP



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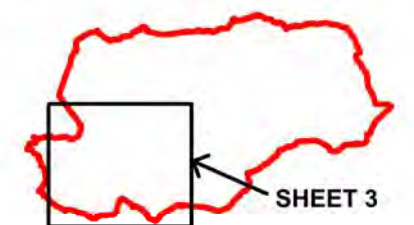
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- - - Road Swale
- - - Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



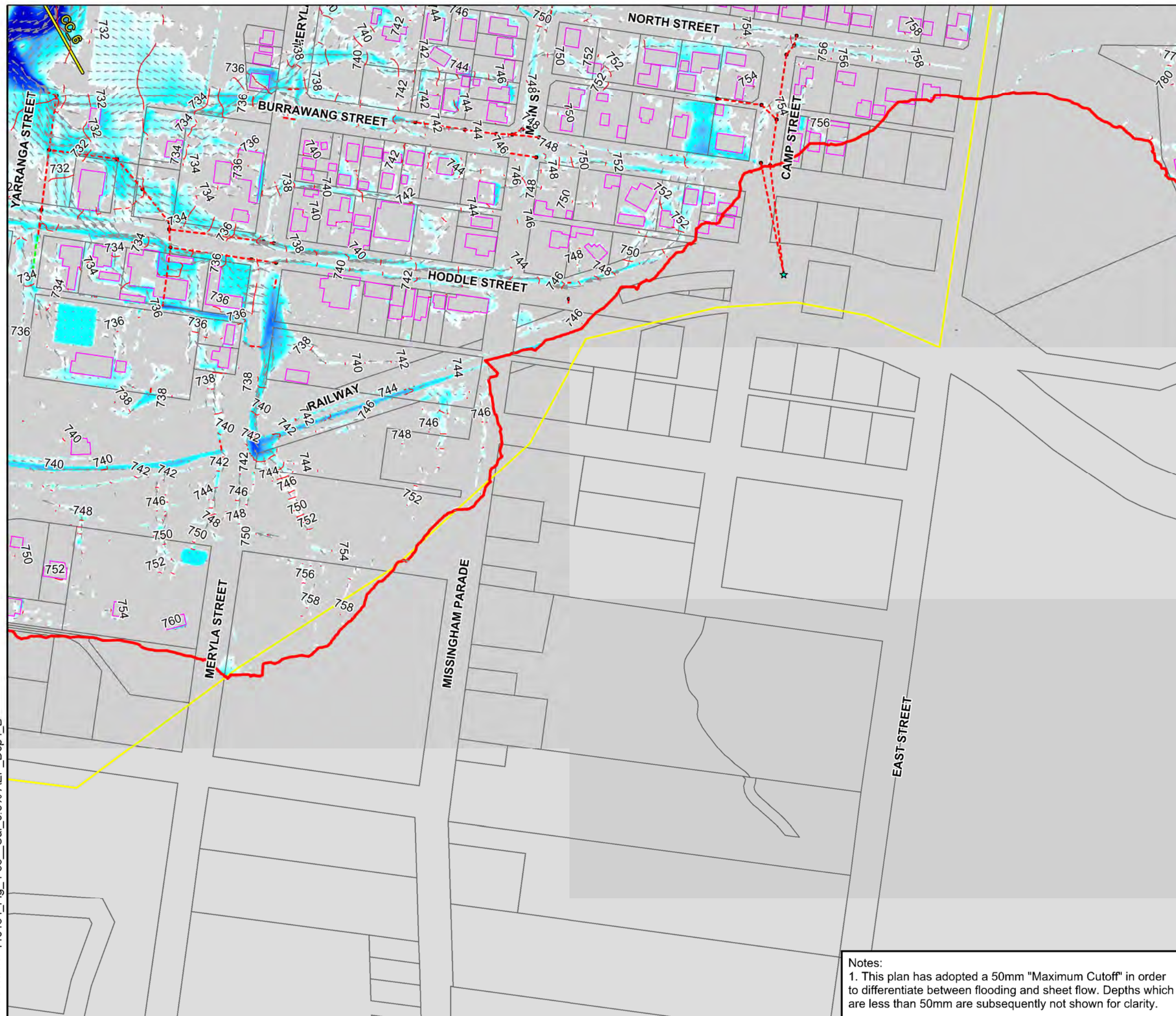
Figure 4-35
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
0.5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

750

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



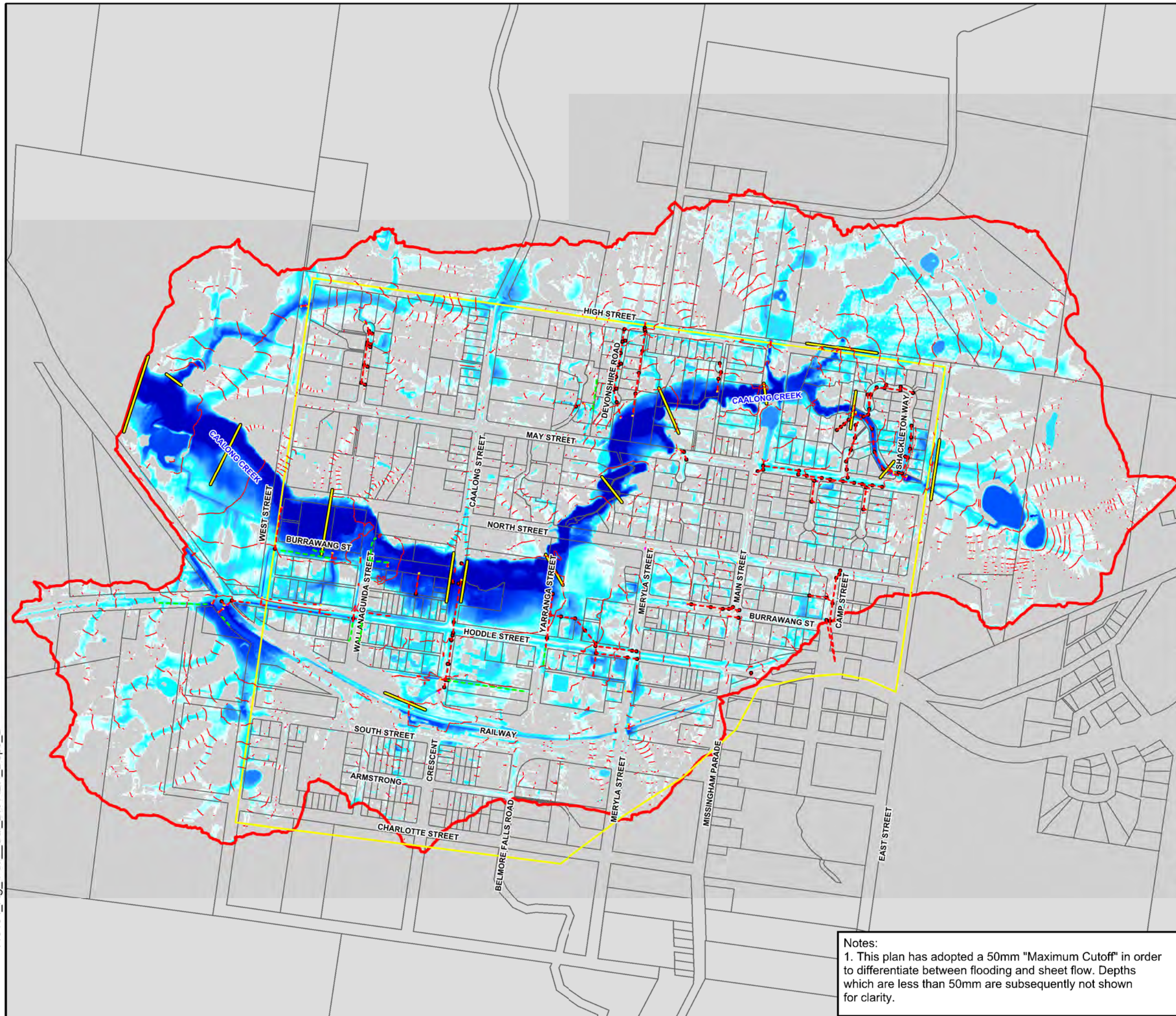
Figure 4-36
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
0.5% AEP

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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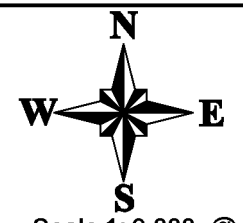
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- 2m Flood Height Contour

FLOOD DEPTH (m)

| |
|-------------|
| 0.0 to 0.05 |
| 0.05 to 0.1 |
| 0.1 to 0.2 |
| 0.2 to 0.35 |
| 0.35 to 0.5 |
| 0.5+ |



Scale 1: 9,000 @ A3

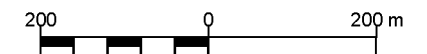


Figure 4-37
Robertson Village
Overland Flow Study

Existing (Overall)
Flood Depth
PMF Event

Date : 21/09/2016

Issue : A

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Notes:
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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

750 Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3

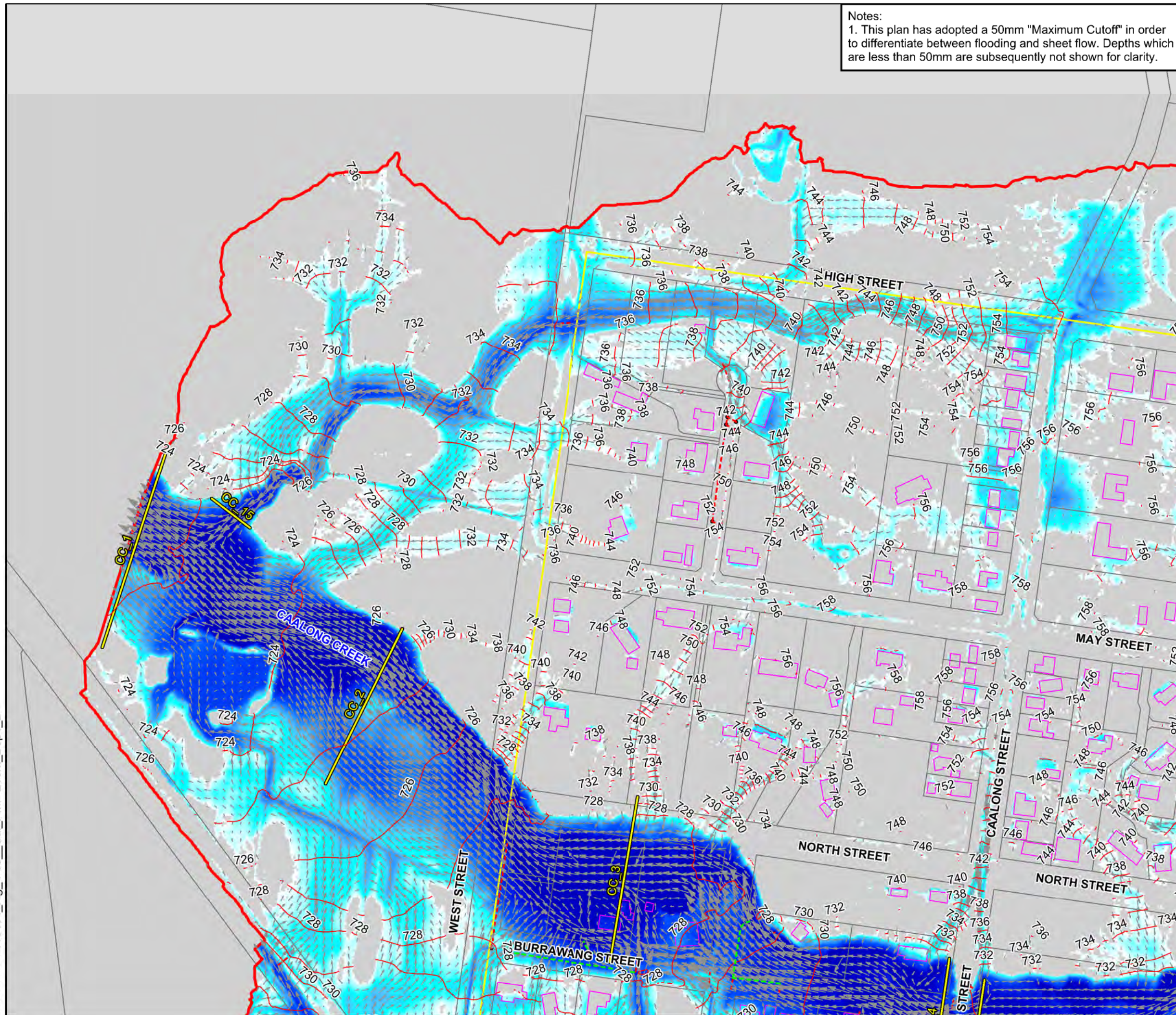


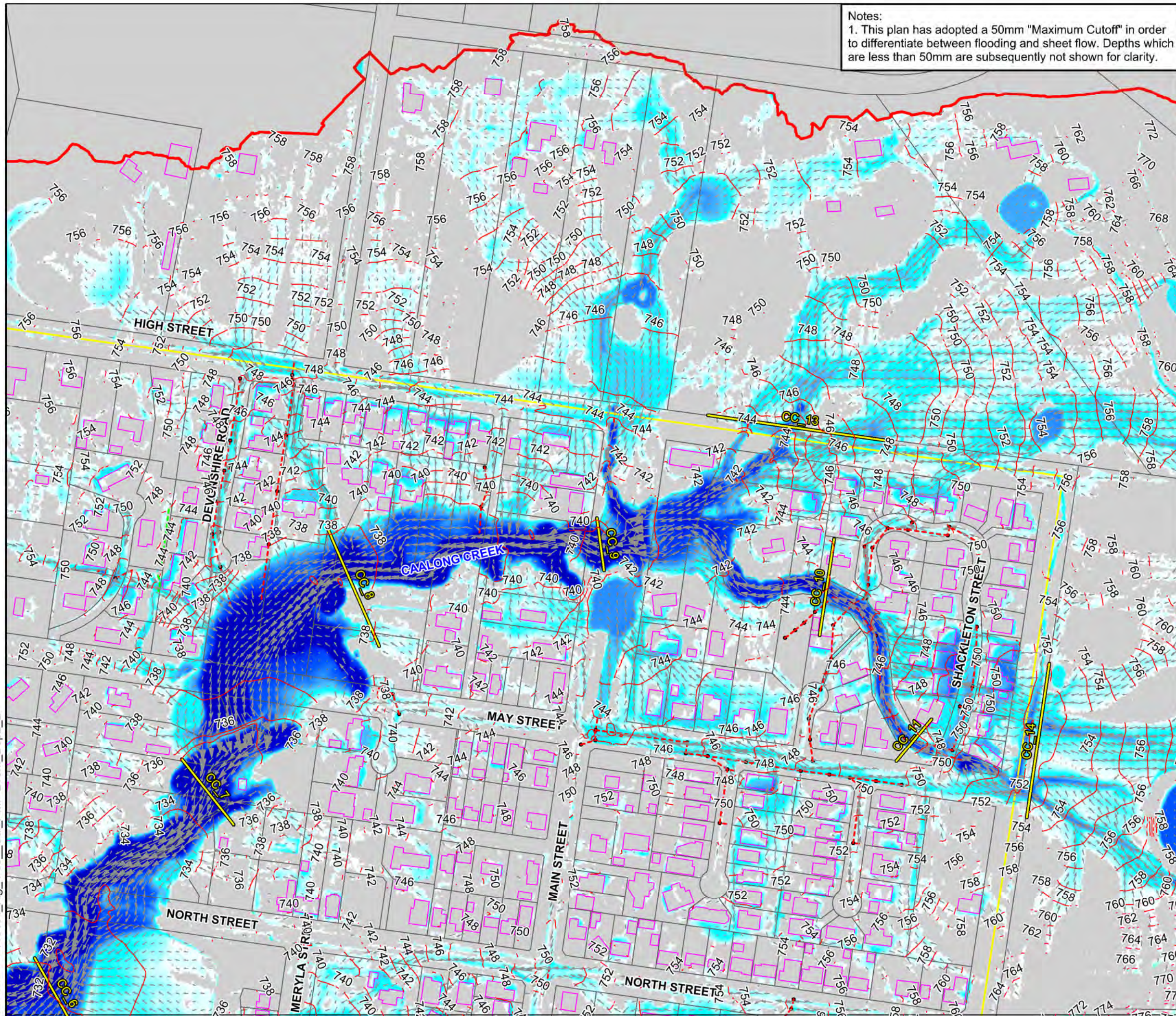
Figure 4-38
Robertson Village
Overland Flow Study

Existing (Sheet 1 of 4)
Flood Depth & Velocities
PMF Event

Date : 21/09/2016

Issue : A





Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.



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LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)
- FLOOD DEPTH (m)**
 - 0.0 to 0.05
 - 0.05 to 0.1
 - 0.1 to 0.2
 - 0.2 to 0.35
 - 0.35 to 0.5
 - 0.5+

LOCALITY

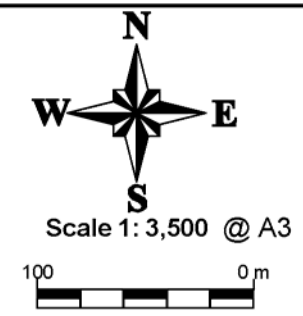
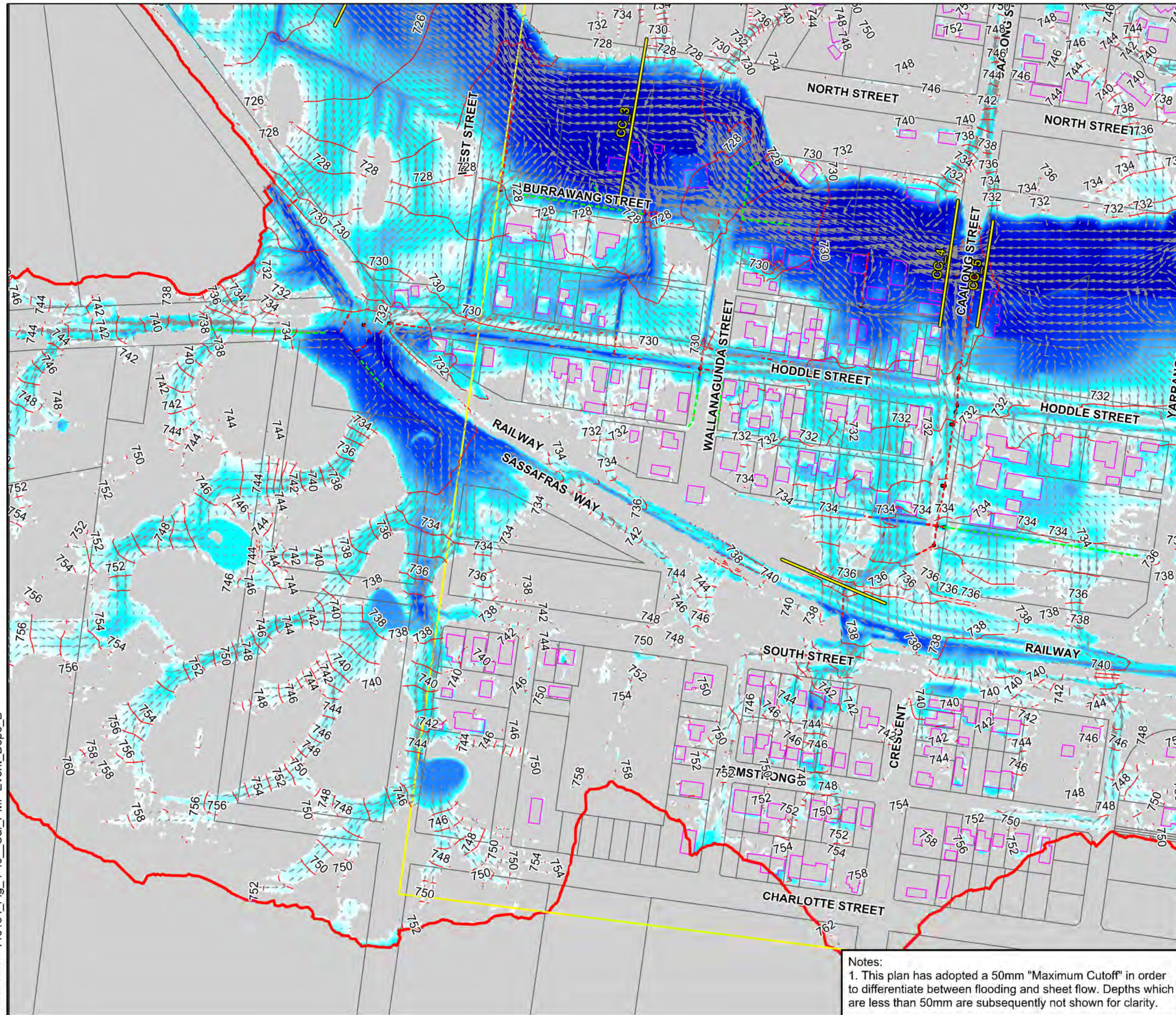


Figure 4-39
Robertson Village
Overland Flow Study
Existing (Sheet 2 of 4)
Flood Depth & Velocities
PMF Event



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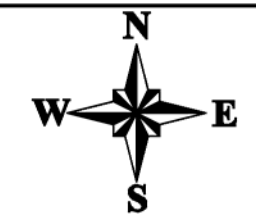
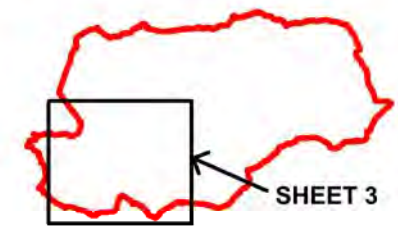
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



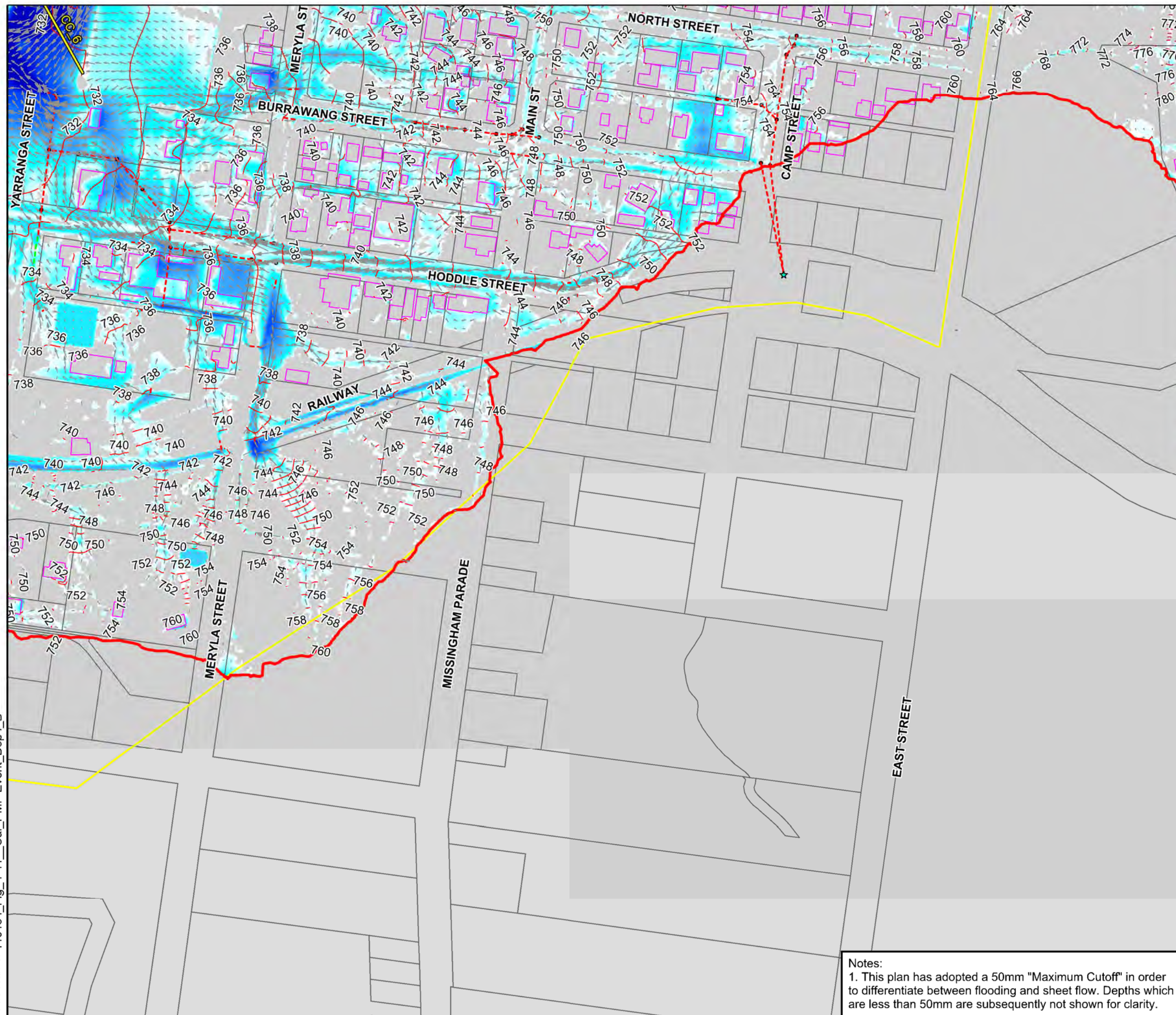
Figure 4-40
Robertson Village
Overland Flow Study

Existing (Sheet 3 of 4)
Flood Depth & Velocities
PMF Event

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A



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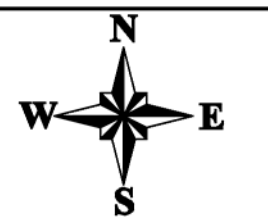
LEGEND

- Robertson Village Study Area
- TUFLOW Boundary
- PO Line - Flow Comparison
- Road Swale
- Existing Stormwater
- Velocity Vectors
- 2m Flood Height Contour
- Flood Height (m AHD)

FLOOD DEPTH (m)

- 0.0 to 0.05
- 0.05 to 0.1
- 0.1 to 0.2
- 0.2 to 0.35
- 0.35 to 0.5
- 0.5+

LOCALITY



Scale 1: 3,500 @ A3



Figure 4-41
Robertson Village
Overland Flow Study

Existing (Sheet 4 of 4)
Flood Depth & Velocities
PMF Event

Notes:
1. This plan has adopted a 50mm "Maximum Cutoff" in order to differentiate between flooding and sheet flow. Depths which are less than 50mm are subsequently not shown for clarity.

Date : 21/09/2016

Issue : A