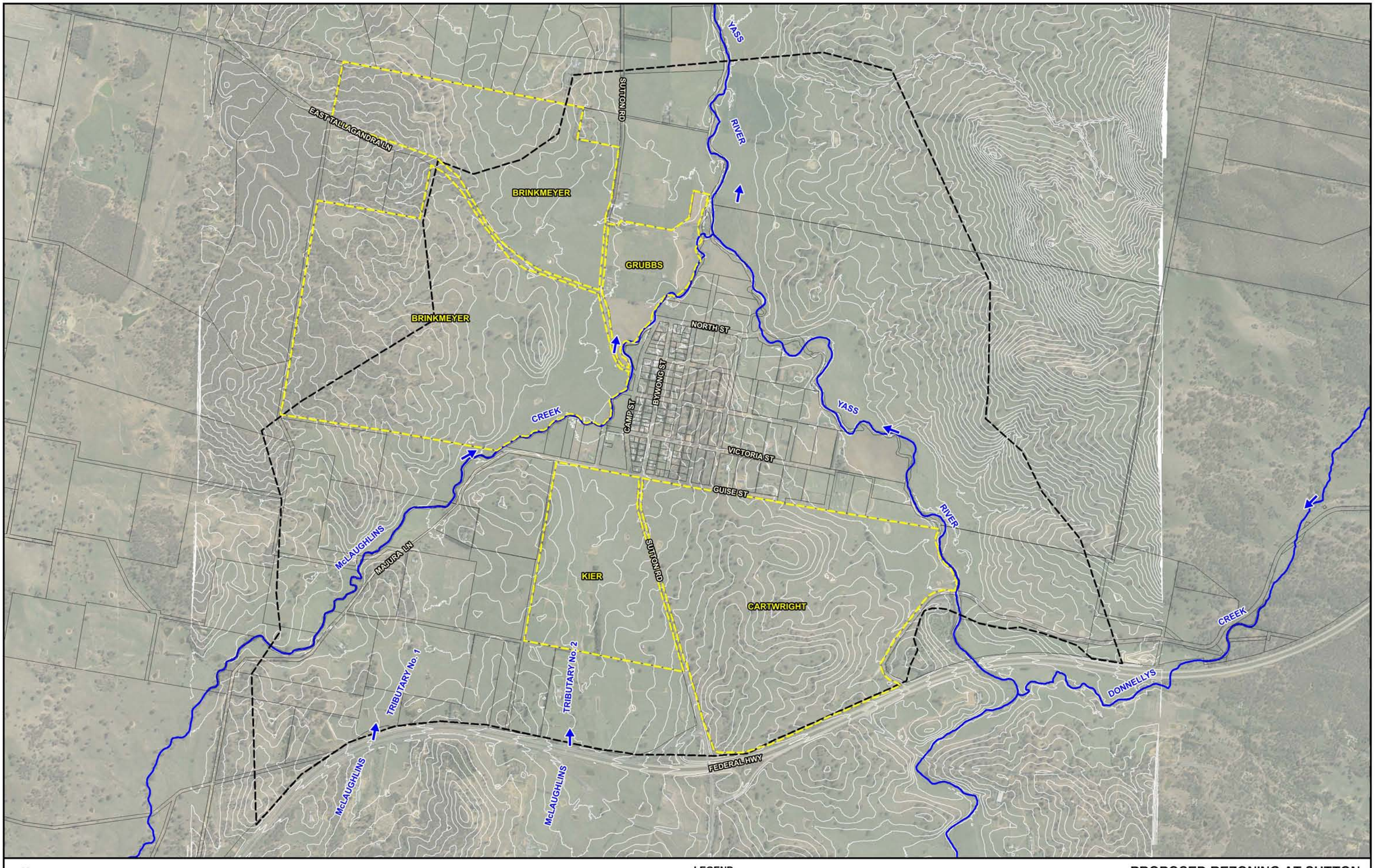

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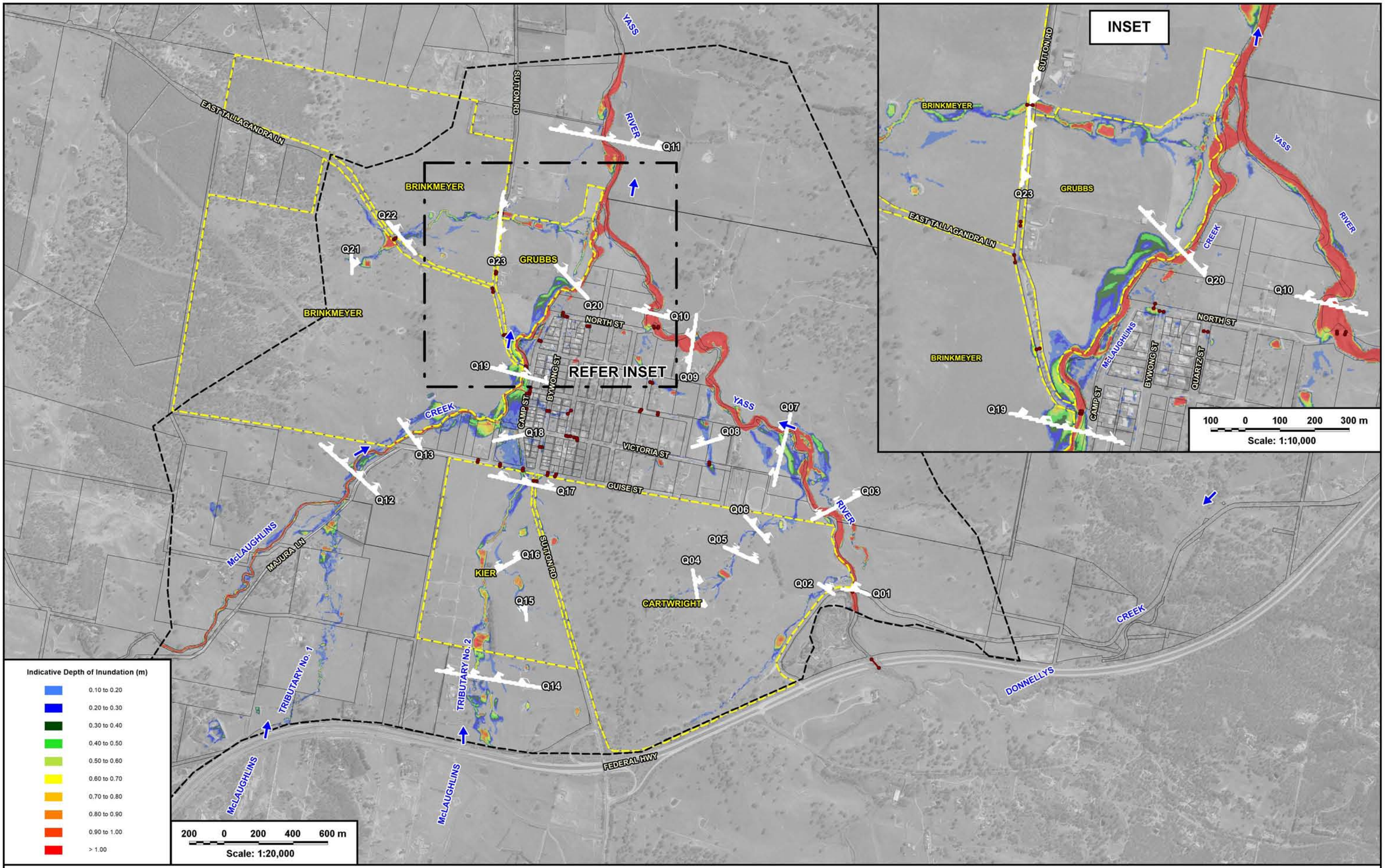
PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 1

LOCATION PLAN



N

Lyall & Associates

NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 5 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

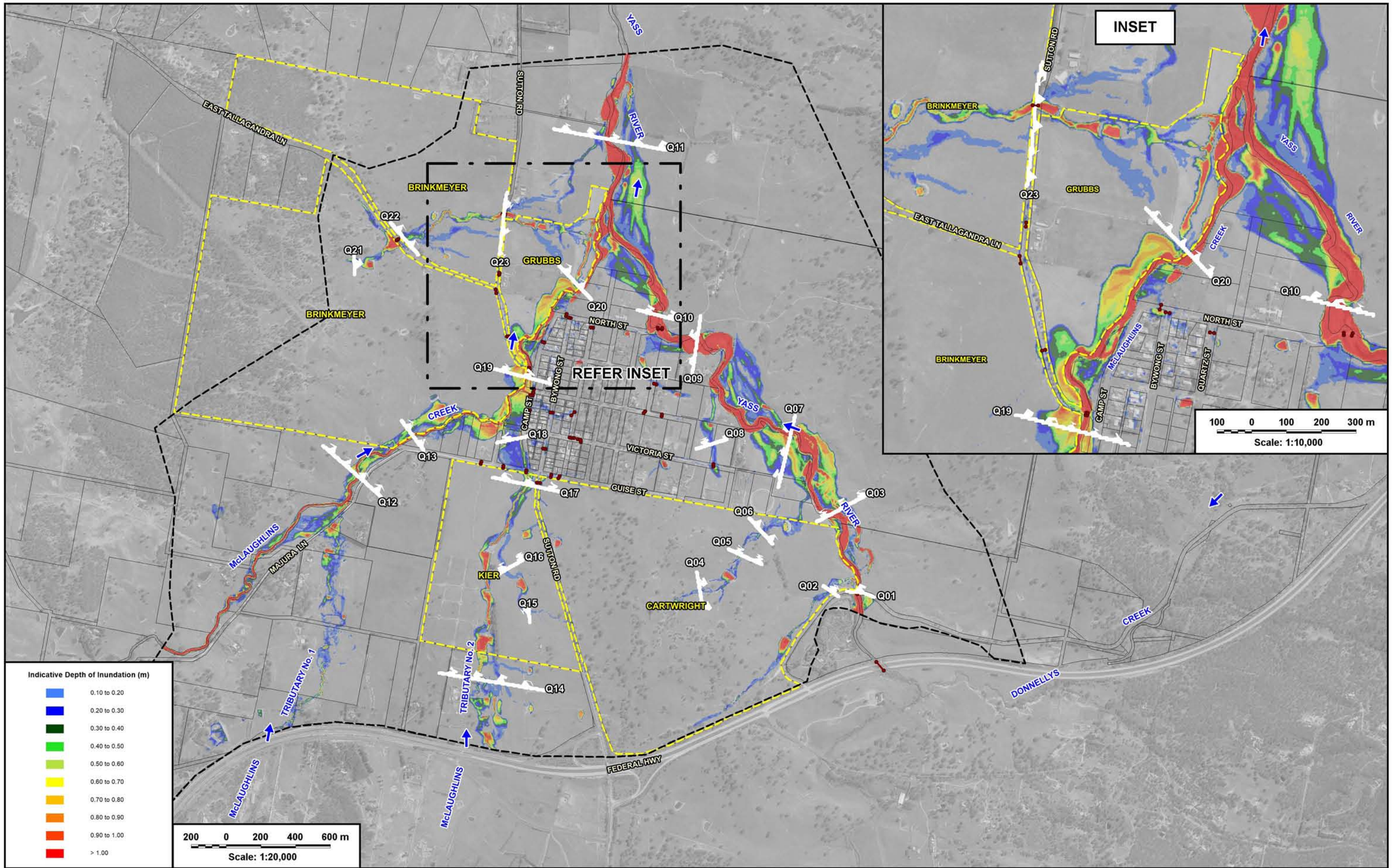
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LEGEND
- Proposed Development Sites
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network
- Q01 Peak Flow Location and Identifier

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 2

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
PRESENT DAY CONDITIONS - 5% AEP



N

Lyall & Associates

NOTE:
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Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

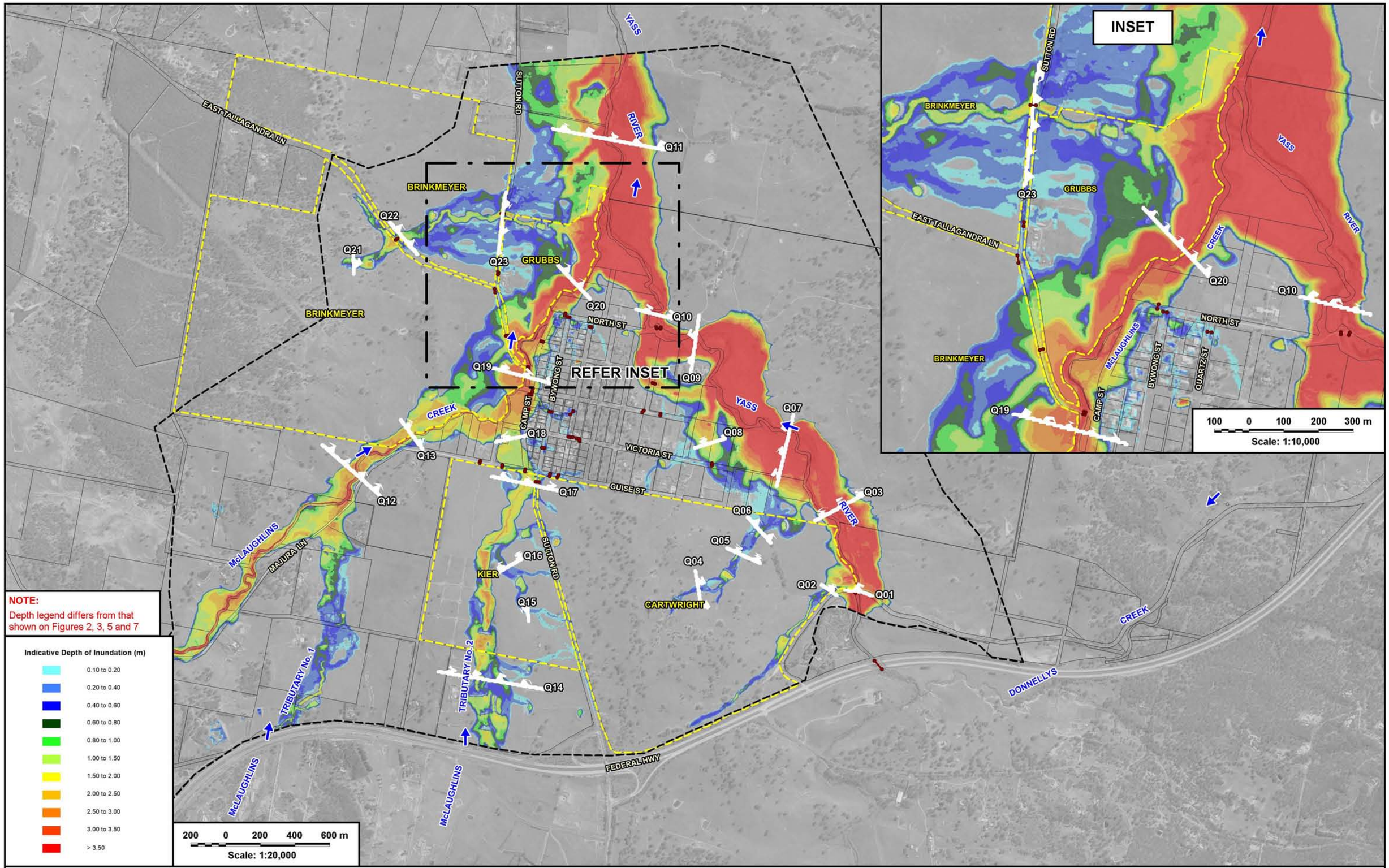
LEGEND

- Proposed Development Sites
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network
- Q01 Peak Flow Location and Identifier

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 3

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
PRESENT DAY CONDITIONS - 1% AEP



NOTE:
Depth legend differs from that shown on Figures 2, 3, 5 and 7

Indicative Depth of Inundation (m)

0.10 to 0.20
0.20 to 0.40
0.40 to 0.60
0.60 to 0.80
0.80 to 1.00
1.00 to 1.50
1.50 to 2.00
2.00 to 2.50
2.50 to 3.00
3.00 to 3.50
> 3.50

N

Lyall & Associates

NOTE:
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Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LEGEND

- Proposed Development Sites
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network
- Q01 Peak Flow Location and Identifier

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 4

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
PRESENT DAY CONDITIONS - PMF

INSET

REFER INSET

BRINKMEYER
GRUBBS
KIER
CARTWRIGHT
EAST TALLAGANDRA LN
SUTTON RD
YASS RIVER
CREEK
NORTH ST
CAMP ST
BYWONG ST
McLAUGHLINS
QUARTZ ST
VICTORIA ST
GUISE ST
MAJURA LN
TRIBUTARY No. 1
TRIBUTARY No. 2
FEDERAL HWY
DONNELLYS

100 0 100 200 300 m
Scale: 1:10,000

200 0 200 400 600 m
Scale: 1:20,000

N

LEGEND

- Sub-Catchment Boundary and Identifier
- TUFLOW Inflow Boundary and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

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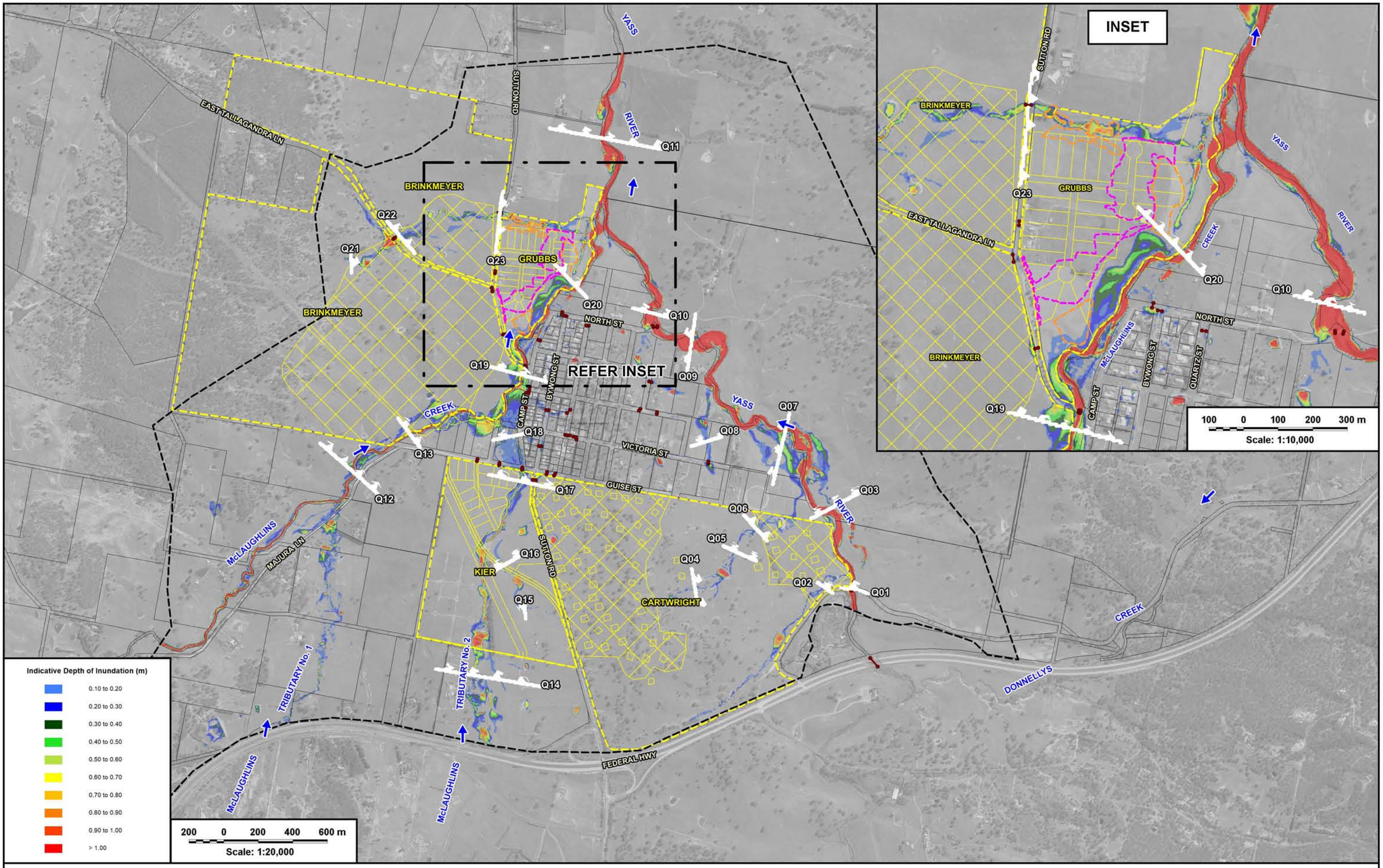
PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 5

LOCATION OF CATCHMENT INFLOWS



N

Lyall & Associates

NOTE:
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Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

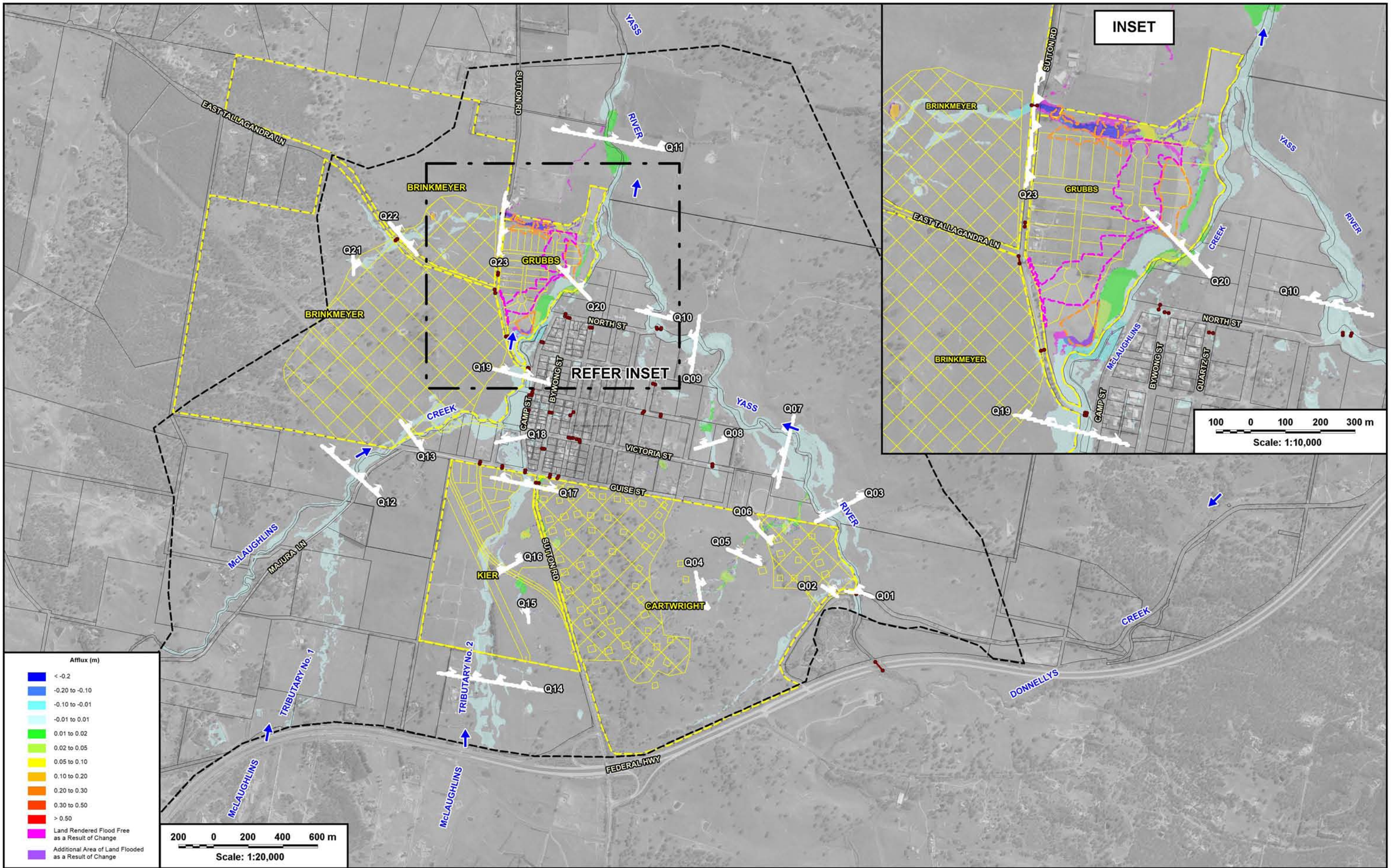
LEGEND

- Extent of Cut
- Extent of Fill
- Q01 Peak Flow Location and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 6

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
POST-DEVELOPMENT CONDITIONS - 5% AEP



NOTE:
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Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LEGEND

- Extent of Cut
- Extent of Fill
- Q01 Peak Flow Location and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

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PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 7

IMPACT OF PROPOSED DEVELOPMENT ON FLOOD BEHAVIOUR
5% AEP

INSET

REFER INSET

BRINKMEYER
GRUBBS
EAST TALLAGANDRA LN
SUTTON RD
YASS RIVER
CREEK
NORTH ST
VICTORIA ST
GUISE ST
CAMP ST
BYWONG ST
McLAUGHLINS
MAJURA LN
TRIBUTARY No. 1
TRIBUTARY No. 2
KIER
CARTWRIGHT
QUARTZ ST
FEDERAL HWY
DONNELLYS

Q01 Q02 Q03 Q04 Q05 Q06 Q07 Q08 Q09 Q10 Q11 Q12 Q13 Q14 Q15 Q16 Q17 Q18 Q19 Q20 Q21 Q22 Q23

100 0 100 200 300 m
Scale: 1:10,000

200 0 200 400 600 m
Scale: 1:20,000

Indicative Depth of Inundation (m)

- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.40
- 0.40 to 0.50
- 0.50 to 0.60
- 0.60 to 0.70
- 0.70 to 0.80
- 0.80 to 0.90
- 0.90 to 1.00
- > 1.00

N

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NOTE:
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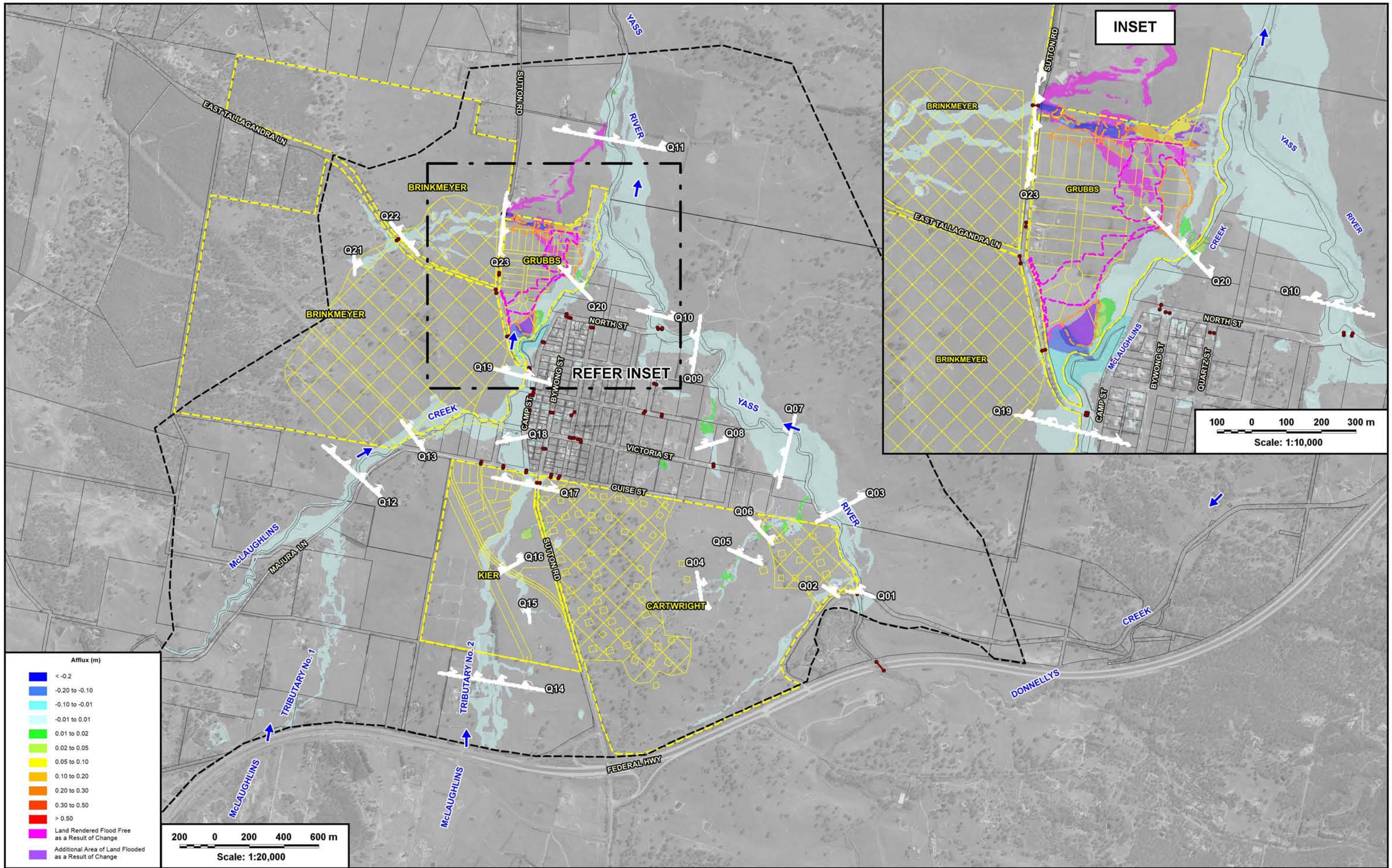
LEGEND

- Extent of Cut
- Extent of Fill
- Q01 Peak Flow Location and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 8

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
POST-DEVELOPMENT CONDITIONS - 1% AEP


INSET
REFER INSET
BRINKMEYER
GRUBBS
CARTWRIGHT
KIER
EAST TALLAGANDRA LN
SUTTON RD
YASS
RIVER
CREEK
NORTH ST
VICTORIA ST
GUISE ST
CAMP ST
BYWONG ST
McLAUGHLINS
MAJURA LN
TRIBUTARY No. 1
TRIBUTARY No. 2
FEDERAL HWY
DONNELLYS
QUARTZ ST
Q01
Q02
Q03
Q04
Q05
Q06
Q07
Q08
Q09
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Afflux (m)
< -0.2
-0.20 to -0.10
-0.10 to -0.01
-0.01 to 0.01
0.01 to 0.02
0.02 to 0.05
0.05 to 0.10
0.10 to 0.20
0.20 to 0.30
0.30 to 0.50
> 0.50
Land Rendered Flood Free as a Result of Change
Additional Area of Land Flooded as a Result of Change
200 0 200 400 600 m
Scale: 1:20,000
100 0 100 200 300 m
Scale: 1:10,000
N
NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 5 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.
LEGEND
Extent of Cut
Extent of Fill
Q01 Peak Flow Location and Identifier
Proposed Development Sites
Indicative Allotment Layout (Grubbs and Kier)
Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
Two-Dimensional Model Boundary
Modelled Stormwater Drainage Network
Lyall & Associates
PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT
Figure 9
IMPACT OF PROPOSED DEVELOPMENT ON FLOOD BEHAVIOUR
1% AEP

INSET

REFER INSET

NOTE:
Depth legend differs from that shown on Figures 2, 3, 5 and 7

Indicative Depth of Inundation (m)

- 0.10 to 0.20
- 0.20 to 0.40
- 0.40 to 0.60
- 0.60 to 0.80
- 0.80 to 1.00
- 1.00 to 1.50
- 1.50 to 2.00
- 2.00 to 2.50
- 2.50 to 3.00
- 3.00 to 3.50
- > 3.50

200 0 200 400 600 m
Scale: 1:20,000

100 0 100 200 300 m
Scale: 1:10,000

N

Lyall & Associates

NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 5 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LEGEND

- Extent of Cut
- Extent of Fill
- Q01 Peak Flow Location and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 10

INDICATIVE EXTENT AND DEPTHS OF INUNDATION
POST-DEVELOPMENT CONDITIONS - PMF

INSET

REFER INSET

Afflux (m)

- < -0.2
- -0.20 to -0.10
- -0.10 to -0.01
- -0.01 to 0.01
- 0.01 to 0.02
- 0.02 to 0.05
- 0.05 to 0.10
- 0.10 to 0.20
- 0.20 to 0.30
- 0.30 to 0.50
- > 0.50
- Land Rendered Flood Free as a Result of Change
- Additional Area of Land Flooded as a Result of Change

200 0 200 400 600 m
Scale: 1:20,000

100 0 100 200 300 m
Scale: 1:10,000

N

Lyall & Associates

NOTE:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 5 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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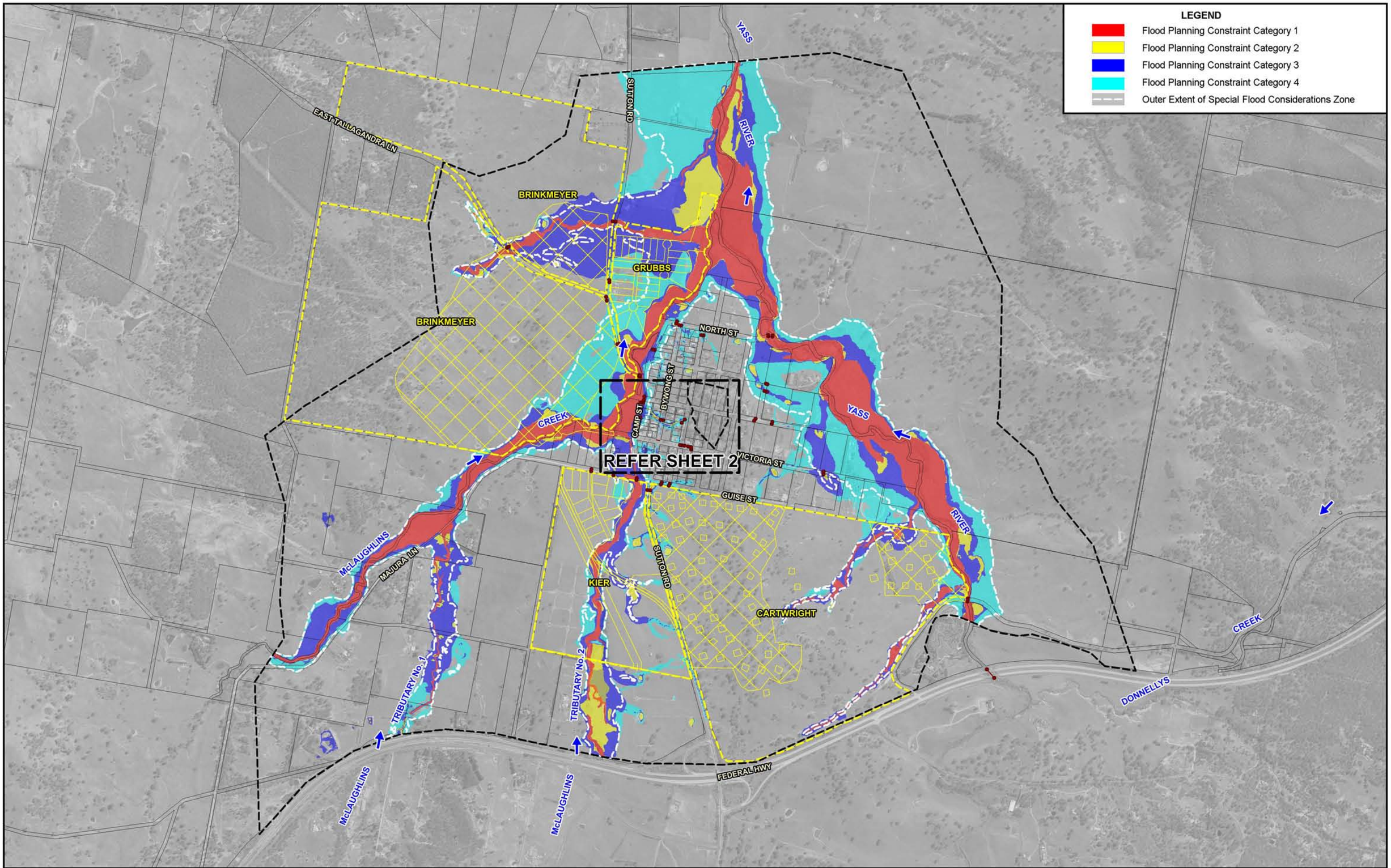
LEGEND

- Extent of Cut
- Extent of Fill
- Q01 Peak Flow Location and Identifier
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)
- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage Network

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 11

IMPACT OF PROPOSED DEVELOPMENT ON FLOOD BEHAVIOUR
PMF



N

200 0 200 400 600 m

Scale: 1:20,000

Lyall & Associates

NOTE:

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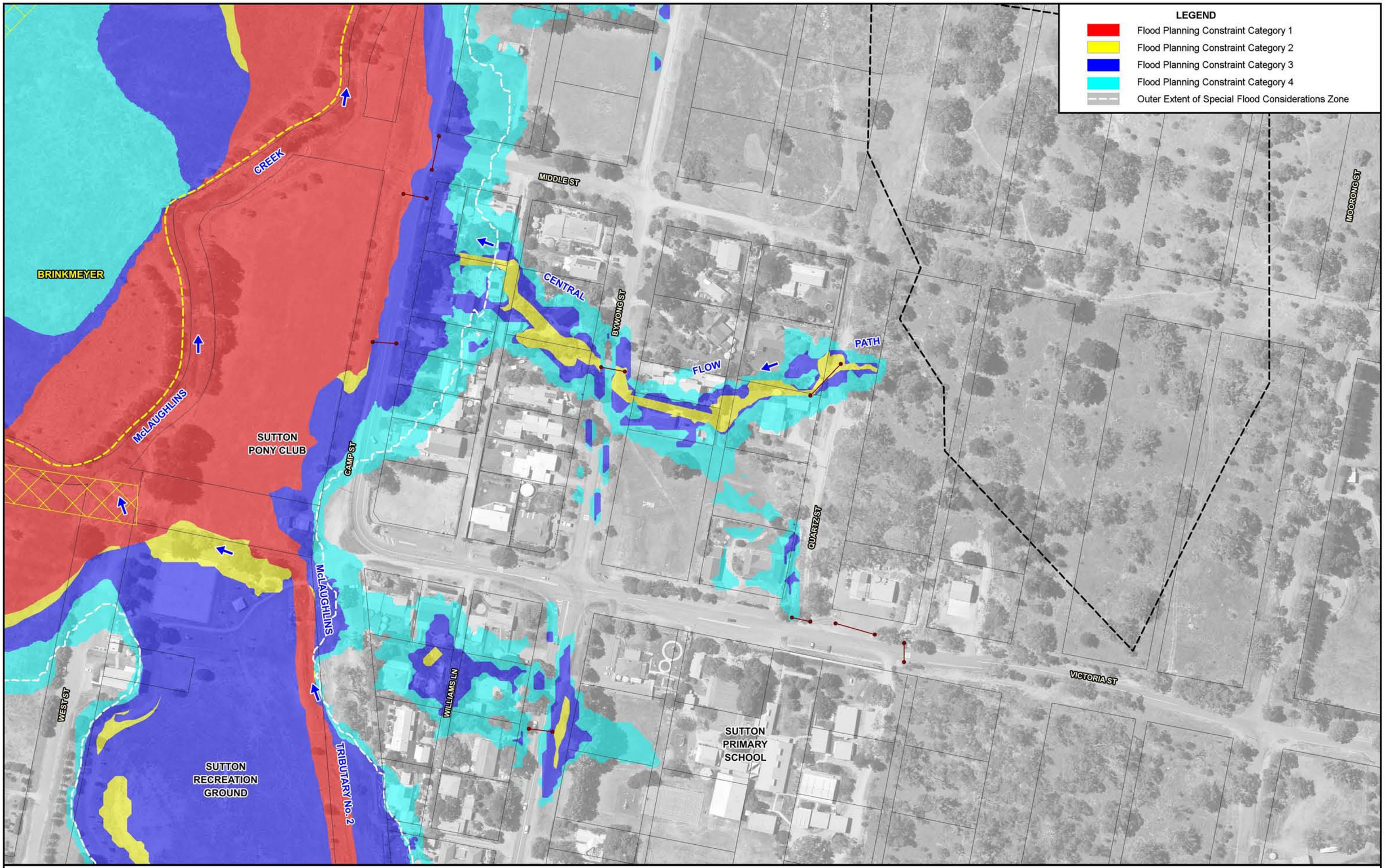
LEGEND

- Two-Dimensional Model Boundary
- Modelled Stormwater Drainage System
- Proposed Development Sites
- Indicative Allotment Layout (Grubbs and Kier)
- Extent of Proposed Subdivision (Brinkmeyer and Cartwright)

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 12
(Sheet 1 of 2)

EXTRACT OF YASS VALLEY FLOOD PLANNING CONSTRAINT CATEGORY MAP AT SUTTON



N

20 0 20 40 60 m

Scale: 1:2,000

Lyall & Associates

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LEGEND

Two-Dimensional Model Boundary

Modelled Stormwater Drainage System

Proposed Development Sites

Extent of Proposed Subdivision (Brinkmeyer)

PROPOSED REZONING AT SUTTON
FLOOD IMPACT ASSESSMENT

Figure 12
(Sheet 1 of 2)

EXTRACT OF YASS VALLEY FLOOD PLANNING CONSTRAINT CATEGORY MAP AT SUTTON

PROPOSED REZONING AT SUTTON FLOOD IMPACT ASSESSMENT
COMPARISON OF PEAK FLOWS

Flow Location Identifier	5% AEP			1% AEP			PMF		
	Present Day (m^3/s)	Post-Development (m^3/s)	Difference (m^3/s)	Present Day (m^3/s)	Post-Development (m^3/s)	Difference (m^3/s)	Present Day (m^3/s)	Post-Development (m^3/s)	Difference (m^3/s)
Q01	100.3	100.3	0	176.4	176.4	0	-	-	-
Q02	3.5	3.5	0	6.9	6.9	0	57.7	57.7	0
Q03	100.3	100.3	0	177.4	177.4	0	3046	3046	0
Q04	2.9	3.2	0.3	5.1	5.3	0.2	36.6	36.7	0.1
Q05	3.6	4.2	0.6	7.2	7.5	0.3	58.4	58.7	0.3
Q06	4	4.8	0.8	8.4	9.1	0.7	75.5	75.9	0.4
Q07	100.2	100.2	0	177.4	177.5	0.1	-	-	-
Q08	3	3.1	0.1	5.3	5.6	0.3	177	177	0
Q09	99.8	99.9	0.1	177.6	177.7	0.1	2814	2814	0
Q10	99.7	99.8	0.1	177.8	177.9	0.1	3141	3141	0
Q11	132.7	133	0.3	242.5	243	0.5	-	-	-
Q12	31.5	31.5	0	60.6	60.6	0	857	857	0
Q13	31.3	31.3	0	61.6	61.6	0	857.7	857.7	0
Q14	8.8	8.8	0	15.5	15.5	0	217	217	0
Q15	1.1	1.2	0.1	1.8	1.9	0.1	10	10.4	0.4
Q16	1.6	1.8	0.2	3.4	3.6	0.2	35.3	35.8	0.5
Q17	11.2	11.3	0.1	21.1	21.3	0.2	301.4	301.6	0.2
Q18	12	12.2	0.2	23.2	23.3	0.1	327.7	327.9	0.2
Q19	43.9	44.2	0.3	85.8	86.1	0.3	-	-	-
Q20	44.5	45	0.5	87.6	87.9	0.3	-	-	-
Q21	6.3	6.3	0	12	12	0	109.7	109.7	0
Q22	11.1	11.1	0	18.5	18.5	0	169.5	170.3	0.8
Q23	8.8	9.2	0.4	18	18.1	0.1	-	-	-

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