100 0 100 200 300 m

Scale: 1:10,000

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.20
(Sheet 3 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 20% AEP

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK LAKE

CRANEBROOK FIRE STATION

HENRY FULTON PUBLIC SCHOOL

RICKABYS CREEK

WIANAMATTA NATURE RESERVE

ANDROMEDA PLAYING FIELDS

CORPUS CHRISTI PRIMARY SCHOOL

BOUNDARY ROAD CATCHMENT

SAMUEL TERRY PUBLIC SCHOOL

CRANEBROOK ROAD SOUTH CATCHMENT

CRANEBROOK PARK

NORTH POND

STILLING BASIN

Limit of Flood Mapping

JOINS SHEET 2

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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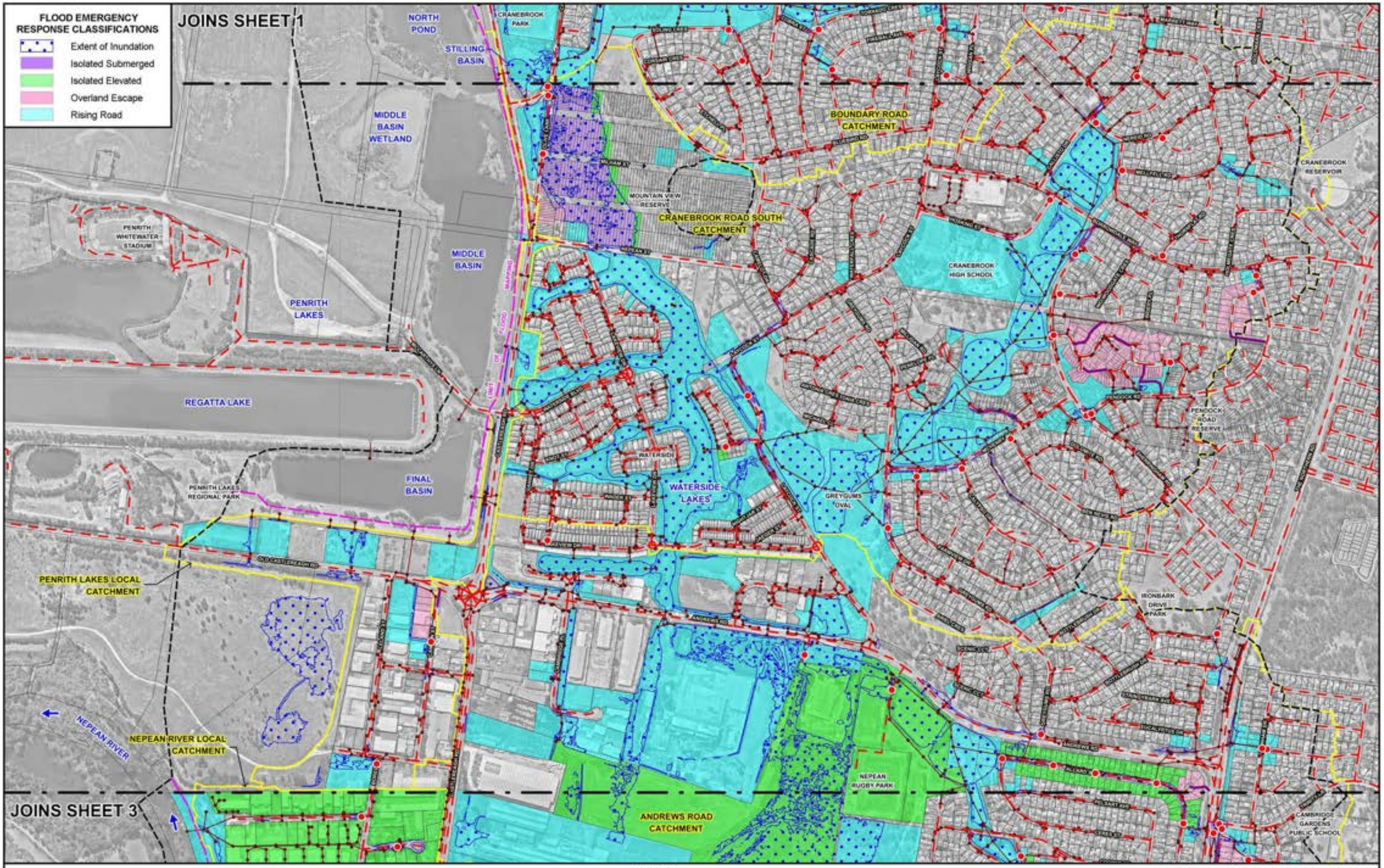
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.21
(Sheet 1 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 5% AEP



N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.21
(Sheet 2 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

NORTH PENRITH CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PENRITH WEIR

WEIR RESERVE

NEPEAN RIVER

PEACH TREE CREEK

BOUNDARY CREEK

MAIN WESTERN RAILWAY

RON MULOCK OVAL

PARKER STREET RESERVE

PATERSON OVAL

ALLSOPP OVAL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRIVA PARK

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.21
(Sheet 3 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK LAKE

CRANEBROOK FIRE STATION

HENRY FULTON PUBLIC SCHOOL

RICKABYS CREEK

WIANAMATTA NATURE RESERVE

ANDROMEDA PLAYING FIELDS

CORPUS CHRISTI PRIMARY SCHOOL

BOUNDARY ROAD CATCHMENT

SAMUEL TERRY PUBLIC SCHOOL

CRANEBROOK ROAD SOUTH CATCHMENT

CRANEBROOK PARK

NORTH POND

STILLING BASIN

JOINS SHEET 2

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.22
(Sheet 1 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

JOINS SHEET 1

NORTH POND

STILLING BASIN

CRANEBROOK PARK

MIDDLE BASIN WETLAND

BOUNDARY ROAD CATCHMENT

CRANEBROOK RESERVOIR

MOUNTAIN VIEW RESERVE

CRANEBROOK ROAD SOUTH CATCHMENT

PENRITH WHITEWATER STADIUM

MIDDLE BASIN

CRANEBROOK HIGH SCHOOL

PENRITH LAKES

REGATTA LAKE

PENNOCK ROAD RESERVE

FINAL BASIN

PENRITH LAKES REGIONAL PARK

WATERSIDE LAKES

GREYGUMS OVAL

IRONBARK DRIVE PARK

PENRITH LAKES LOCAL CATCHMENT

NEPEAN RIVER

NEPEAN RIVER LOCAL CATCHMENT

NEPEAN RUGBY PARK

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS PUBLIC SCHOOL

JOINS SHEET 3

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.22
(Sheet 2 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 2

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

BOUNDARY CREEK CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

CAMBRIDGE GARDENS PUBLIC SCHOOL

KINGSWOOD PARK PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ST DOMINICS COLLEGE

NORTH PENRITH CATCHMENT

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRIVA PARK

WEIR RESERVE

PENRITH WEIR

NEPEAN RIVER

BOUNDARY CREEK

PEACH TREE CREEK

MAIN WESTERN RAILWAY

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note:
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.22
(Sheet 3 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK LAKE

CRANEBROOK FIRE STATION

HENRY FULTON PUBLIC SCHOOL

RICKABYS CREEK

WIANAMATTA NATURE RESERVE

ANDROMEDA PLAYING FIELDS

CORPUS CHRISTI PRIMARY SCHOOL

BOUNDARY ROAD CATCHMENT

SAMUEL TERRY PUBLIC SCHOOL

CRANEBROOK ROAD SOUTH CATCHMENT

JOINS SHEET 2

NORTH POND

CRANEBROOK PARK

STILLING BASIN

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

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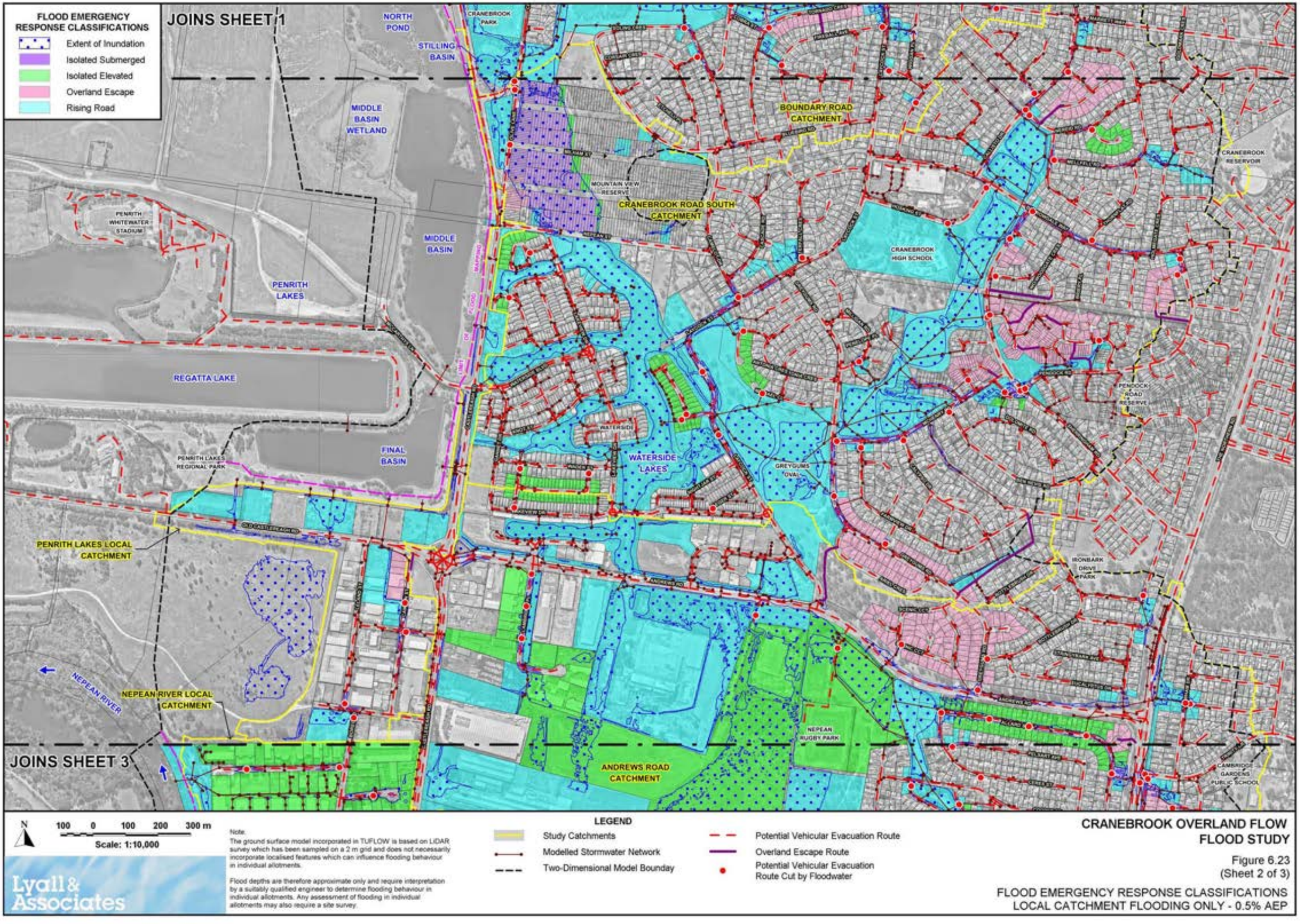
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.23
(Sheet 1 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP


FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
Extent of Inundation
Isolated Submerged
Isolated Elevated
Overland Escape
Rising Road
JOINS SHEET 1
NORTH POND
CRANEBROOK PARK
STILLING BASIN
MIDDLE BASIN WETLAND
BOUNDARY ROAD CATCHMENT
CRANEBROOK RESERVOIR
MOUNTAIN VIEW RESERVE
CRANEBROOK ROAD SOUTH CATCHMENT
PENRITH WHITEWATER STADIUM
MIDDLE BASIN
CRANEBROOK HIGH SCHOOL
PENRITH LAKES
REGATTA LAKE
PENNOCK ROAD RESERVE
FINAL BASIN
PENRITH LAKES REGIONAL PARK
WATERSIDE
WATERSIDE LAKES
GREYGUMS OVAL
IRONBARK DRIVE PARK
PENRITH LAKES LOCAL CATCHMENT
NEPEAN RIVER
NEPEAN RIVER LOCAL CATCHMENT
NEPEAN RUGBY PARK
ANDREWS ROAD CATCHMENT
CAMBRIDGE GARDENS PUBLIC SCHOOL
JOINS SHEET 3
N
100 0 100 200 300 m
Scale: 1:10,000
Lyall & Associates
Note.
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LEGEND
Study Catchments
Modelled Stormwater Network
Two-Dimensional Model Bounday
Potential Vehicular Evacuation Route
Overland Escape Route
Potential Vehicular Evacuation Route Cut by Floodwater
CRANEBROOK OVERLAND FLOW FLOOD STUDY
Figure 6.23
(Sheet 2 of 3)
FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

JOINS SHEET 2

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

BOUNDARY CREEK CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PENRITH WEIR

WEIR RESERVE

NEPEAN RIVER

MAIN FLOOD FLOWPATH

BOUNDARY CREEK

PEACH TREE CREEK

MAIN WESTERN RAILWAY

RON MULOCK OVAL

PARKER STREET RESERVE

PATERSON OVAL

ALLSOPP OVAL

ST DOMINICS COLLEGE

NORTH PENRITH CATCHMENT

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRA PARK

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note:
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.23
(Sheet 3 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK LAKE

CRANEBROOK FIRE STATION

HENRY FULTON PUBLIC SCHOOL

RICKABYS CREEK

WIANAMATTA NATURE RESERVE

ANDROMEDA PLAYING FIELDS

CORPUS CHRISTI PRIMARY SCHOOL

BOUNDARY ROAD CATCHMENT

SAMUEL TERRY PUBLIC SCHOOL

CRANEBROOK ROAD SOUTH CATCHMENT

JOINS SHEET 2

NORTH POND

CRANEBROOK PARK

STILLING BASIN

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

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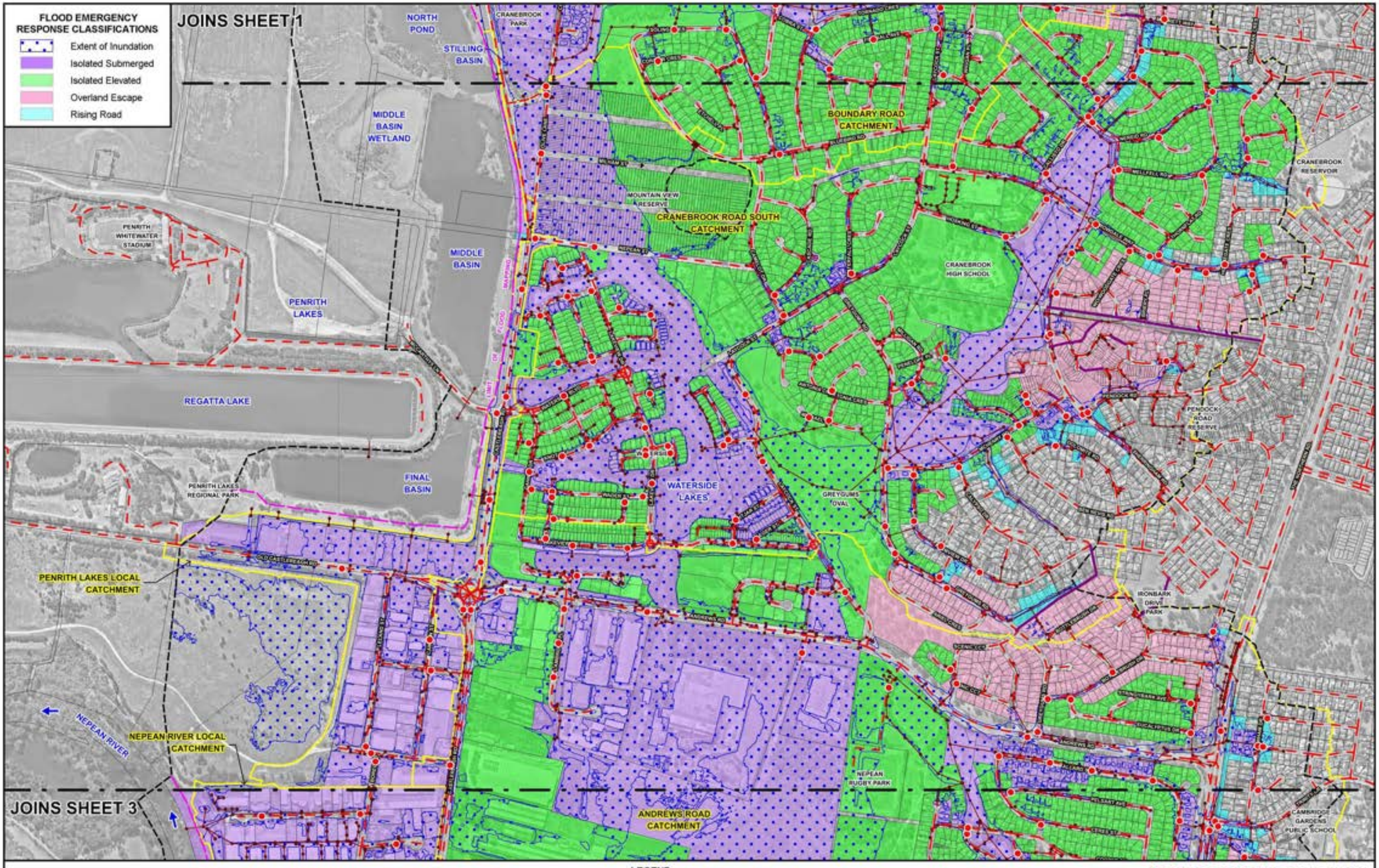
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.24
(Sheet 1 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - PMF


FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
Extent of Inundation
Isolated Submerged
Isolated Elevated
Overland Escape
Rising Road
JOINS SHEET 1
NORTH POND
STILLING BASIN
CRANEBROOK PARK
MIDDLE BASIN WETLAND
BOUNDARY ROAD CATCHMENT
CRANEBROOK RESERVOIR
MOUNTAIN VIEW RESERVE
CRANEBROOK ROAD SOUTH CATCHMENT
PENRITH WHITEWATER STADIUM
MIDDLE BASIN
CRANEBROOK HIGH SCHOOL
PENRITH LAKES
REGATTA LAKE
FINAL BASIN
PENRITH LAKES REGIONAL PARK
WATERSIDE LAKES
GREYGUMS OVAL
PENROCK ROAD RESERVE
IRONBARK DRIVE PARK
PENRITH LAKES LOCAL CATCHMENT
NEPEAN RIVER
NEPEAN RIVER LOCAL CATCHMENT
NEPEAN RUGBY PARK
ANDREWS ROAD CATCHMENT
CAMBRIDGE GARDENS PUBLIC SCHOOL
JOINS SHEET 3
N
100 0 100 200 300 m
Scale: 1:10,000
Lyall & Associates
Note.
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LEGEND
Study Catchments
Modelled Stormwater Network
Two-Dimensional Model Bounday
Potential Vehicular Evacuation Route
Overland Escape Route
Potential Vehicular Evacuation Route Cut by Floodwater
CRANEBROOK OVERLAND FLOW FLOOD STUDY
Figure 6.24
(Sheet 2 of 3)
FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - PMF

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

NORTH PENRITH CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PENRITH WEIR

WEIR RESERVE

NEPEAN RIVER

PEACH TREE CREEK

BOUNDARY CREEK

MAIN WESTERN RAILWAY

RON MULOCK OVAL

PARKER STREET RESERVE

PATERSON OVAL

ALLSOPP OVAL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRIVA PARK

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS

- Extent of Inundation
- Isolated Submerged
- Isolated Elevated
- Overland Escape
- Rising Road

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note:
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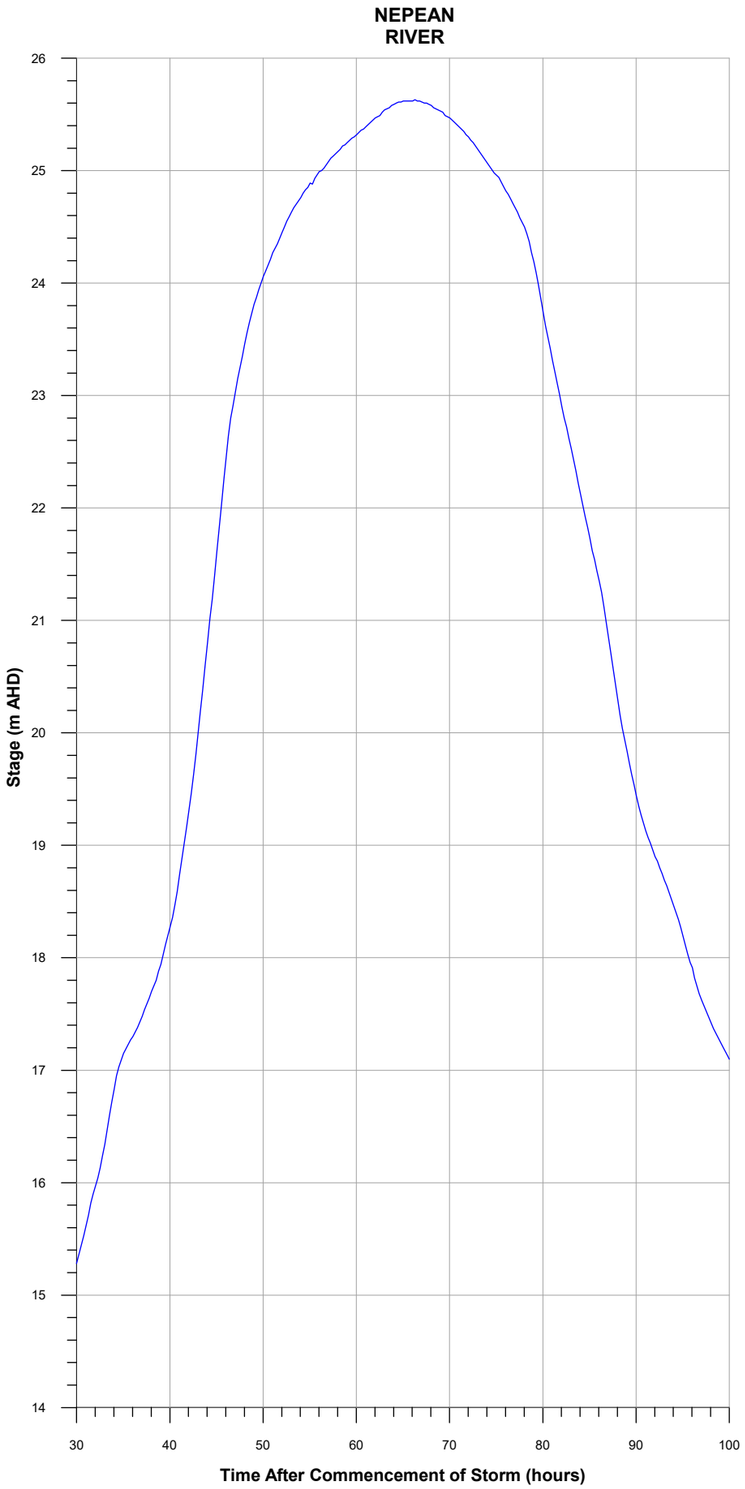
LEGEND

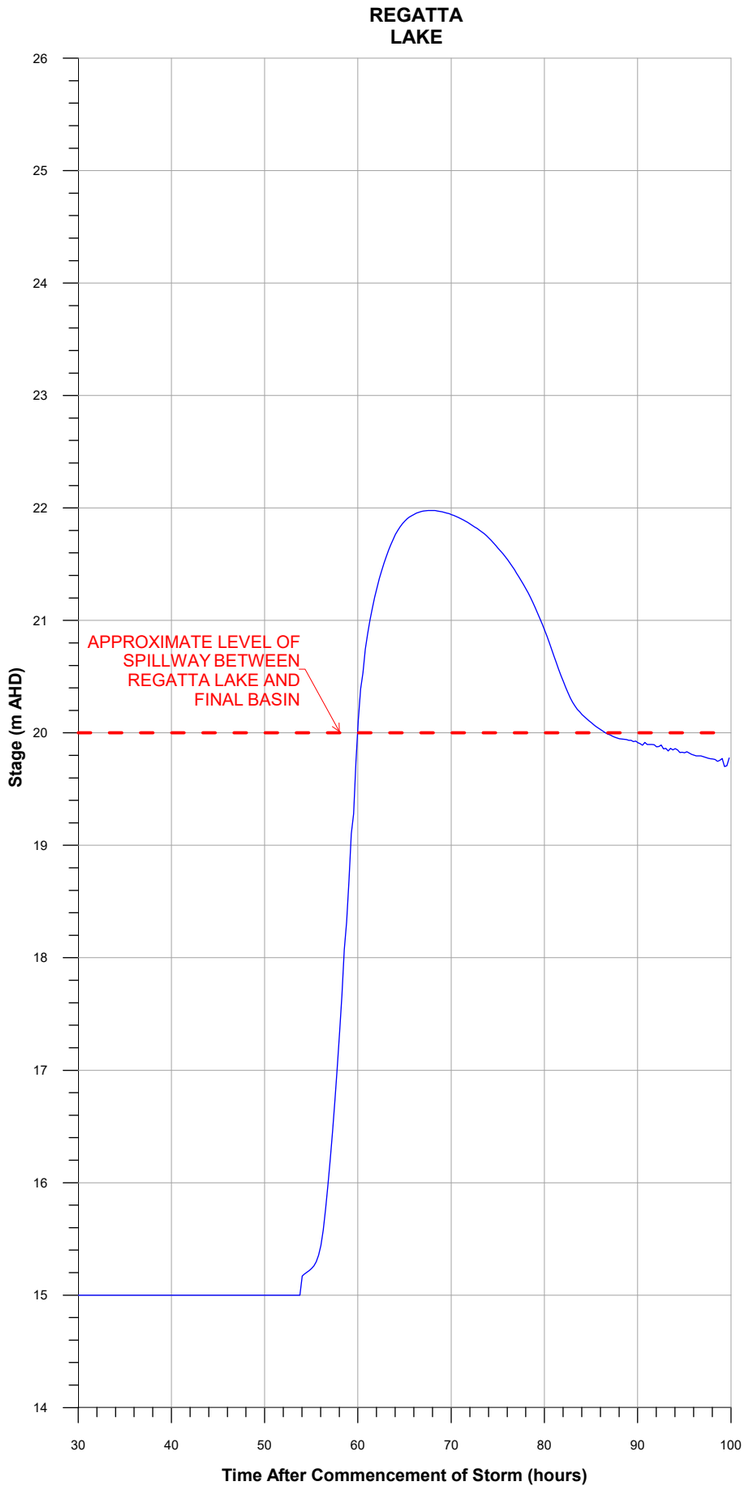
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary
- Potential Vehicular Evacuation Route
- Overland Escape Route
- Potential Vehicular Evacuation Route Cut by Floodwater

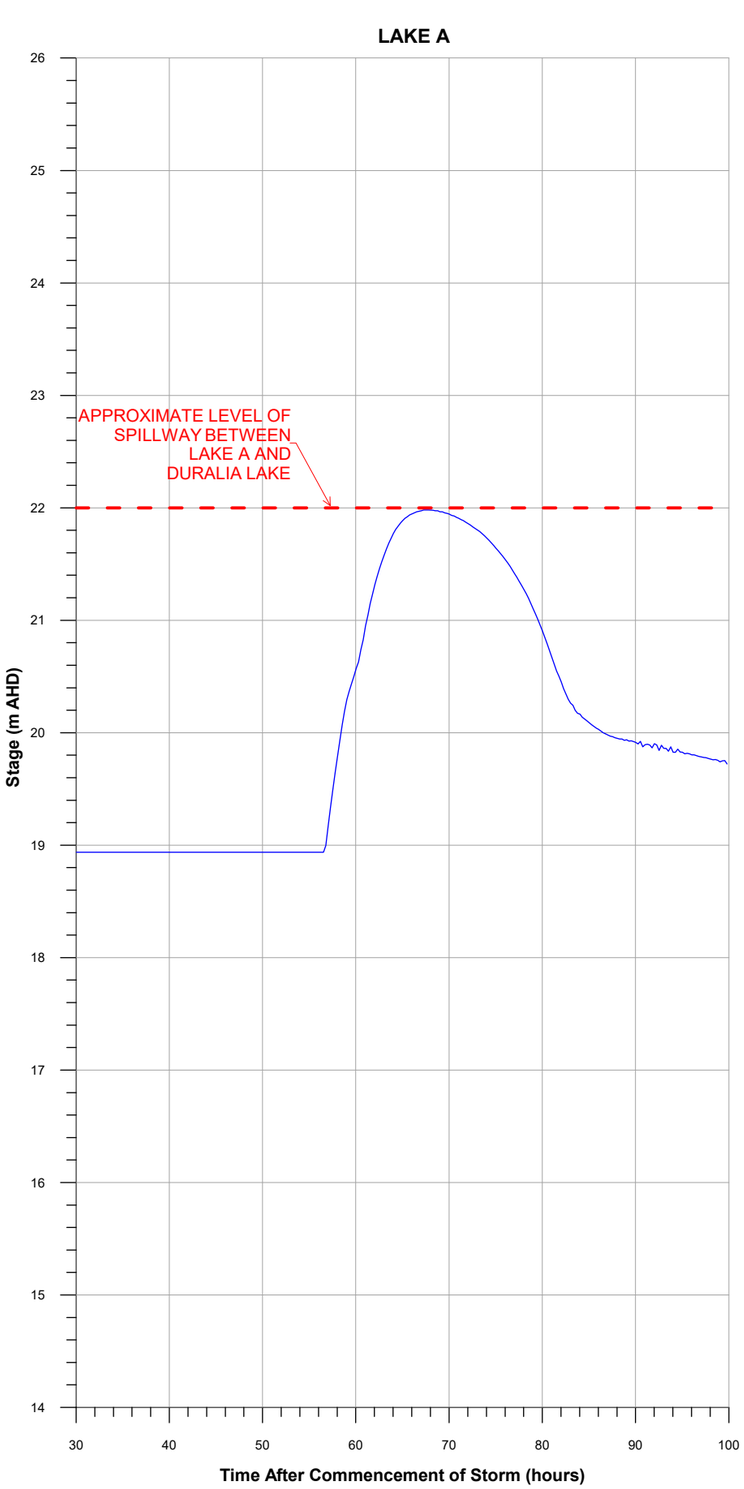
CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.24
(Sheet 3 of 3)

FLOOD EMERGENCY RESPONSE CLASSIFICATIONS
LOCAL CATCHMENT FLOODING ONLY - PMF







LEGEND

Water Level

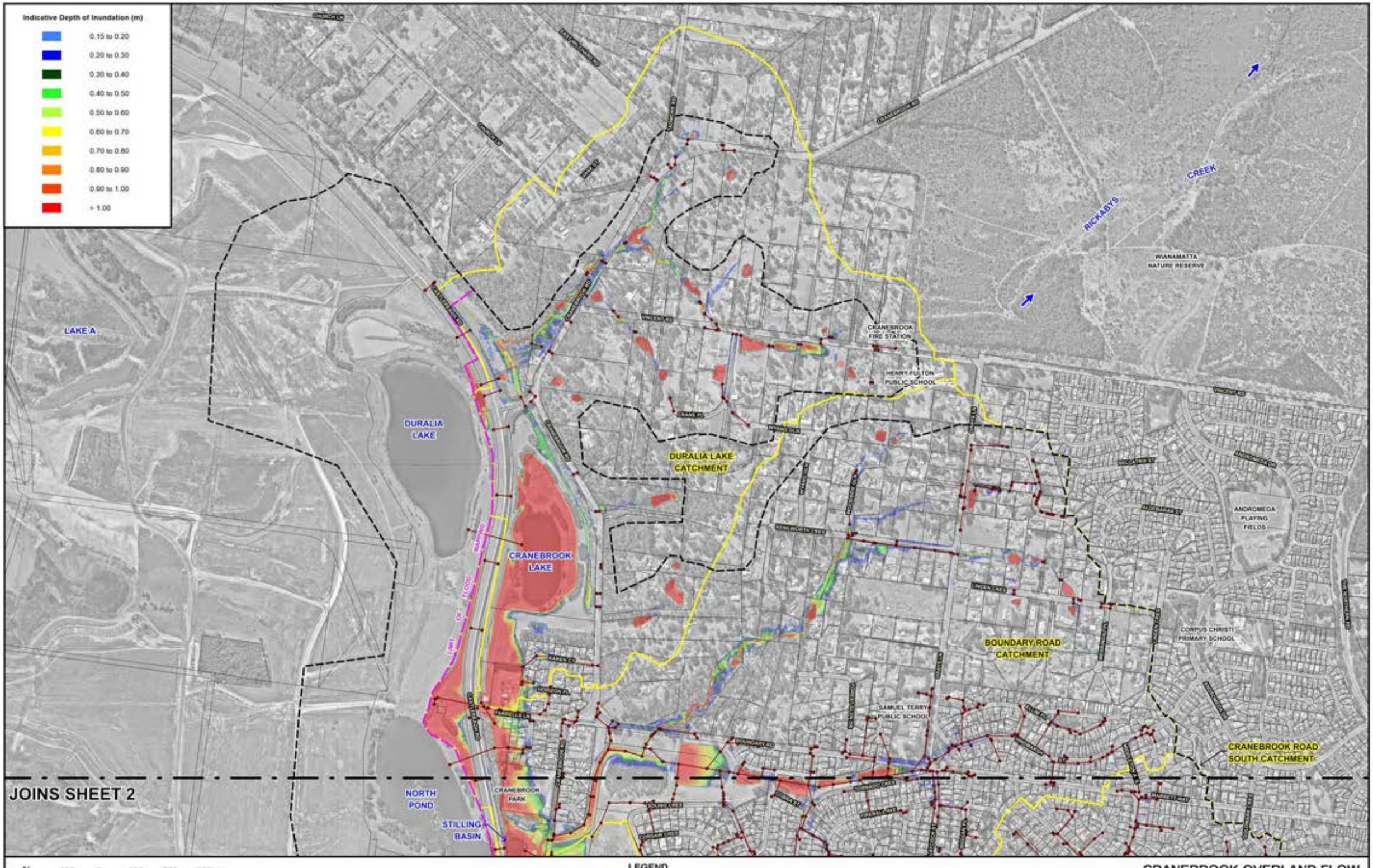
Spillway Level

Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.25

STAGE HYDROGRAPHS EXTRACTED FROM NEPEAN RIVER FLOOD STUDY


Indicative Depth of Inundation (m)
0.15 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
LAKE A
DURALIA LAKE
DURALIA LAKE CATCHMENT
CRANEBROOK LAKE
Limit Of Flood Mapping
NORTH POND
CRANEBROOK PARK
STILLING BASIN
JOINS SHEET 2
CRANEBROOK FIRE STATION
HENRY FULTON PUBLIC SCHOOL
RICKABYS CREEK
WIANAMATTA NATURE RESERVE
ANDROMEDA PLAYING FIELDS
CORPUS CHRISTI PRIMARY SCHOOL
BOUNDARY ROAD CATCHMENT
SAMUEL TERRY PUBLIC SCHOOL
CRANEBROOK ROAD SOUTH CATCHMENT
N
100 0 100 200 300 m
Scale: 1:10,000
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LEGEND
Study Catchments
Modelled Stormwater Network
Two-Dimensional Model Bounday
Lyall & Associates
CRANEBROOK OVERLAND FLOW FLOOD STUDY
Figure 6.26
(Sheet 1 of 3)
TUFLOW MODEL RESULTS
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

Indicative Depth of Inundation (m)

- 0.15 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

JOINS SHEET 1

NORTH POND

STILLING BASIN

CRANEBROOK PARK

MIDDLE BASIN WETLAND

BOUNDARY ROAD CATCHMENT

CRANEBROOK RESERVOIR

MOUNTAIN VIEW RESERVE

CRANEBROOK ROAD SOUTH CATCHMENT

WHITEWATER STADIUM

MIDDLE BASIN

CRANEBROOK HIGH SCHOOL

PENRITH LAKES

REGATTA LAKE

PENROCK ROAD RESERVE

FINAL BASIN

PENRITH LAKES REGIONAL PARK

WATERSIDE LAKES

GREYGUMS OVAL

PENRITH LAKES LOCAL CATCHMENT

IRONBARK DRIVE PARK

NEPEAN RIVER

NEPEAN RIVER LOCAL CATCHMENT

NEPEAN RUGBY PARK

JOINS SHEET 3

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS PUBLIC SCHOOL

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.26
(Sheet 2 of 3)

TUFLOW MODEL RESULTS
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.26
(Sheet 3 of 3)

TUFLOW MODEL RESULTS
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

Flow Velocities (m/s)

- 0.00 to 0.10
- 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

CRANEBROOK CREEK

RICKABY'S CREEK

WIANAMATTA NATURE RESERVE

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK FIRE STATION

HENRY FULTON PUBLIC SCHOOL

ANCHOMEDA PLAYING FIELDS

CRANEBROOK LAKE

BOUNDARY ROAD CATCHMENT

CORPUS CHRISTI PRIMARY SCHOOL

SAMUEL TERRY PUBLIC SCHOOL

CRANEBROOK ROAD SOUTH CATCHMENT

JOINS SHEET 2

NORTH POND

CRANEBROOK PARK

STILLING BASIN

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LIDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.27
(Sheet 1 of 3)

PEAK FLOW VELOCITIES
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.27
(Sheet 2 of 3)

PEAK FLOW VELOCITIES
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

JOINS SHEET 2

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

BOUNDARY CREEK CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK

ST DOMINICS COLLEGE

NORTH PENRITH CATCHMENT

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRIVA PARK

WEIR RESERVE

PENRITH WEIR

NEPEAN RIVER AT PENRITH (GS 212201)

MAIN WESTERN RAILWAY

RIVER

PEACH TREE CREEK

BOUNDARY CREEK

LIMIT OF FLOOD MAPPING

R:\509eg - Cranebrook Overland Flow Flood Study\Calcs\TUFLOW\results

Flow Velocities (m/s)

0.00 to 0.10
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

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.27
(Sheet 3 of 3)

PEAK FLOW VELOCITIES
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

FLOOD HAZARD VULNERABILITY CLASSIFICATION

- H1 — Generally safe for vehicles, people and buildings.
- H2 — Unsafe for small vehicles.
- H3 — Unsafe for vehicles, children and the elderly.
- H4 — Unsafe for vehicles and people.
- H5 — Unsafe for vehicles and people. All building types vulnerable to structural damage. Some less robust building types vulnerable to failure.
- H6 — Unsafe for vehicles and people. All building types considered vulnerable to failure.

LAKE A
DURALIA LAKE
DURALIA LAKE CATCHMENT
CRANEBROOK LAKE
NORTH POND
STILLING BASIN
CRANEBROOK PARK
CRANEBROOK FIRE STATION
HENRY FULTON PUBLIC SCHOOL
RICKABYS CREEK
WIANAMATTA NATURE RESERVE
ANDROMEDA PLAYING FIELDS
CORPUS CHRISTI PRIMARY SCHOOL
BOUNDARY ROAD CATCHMENT
SAMUEL TERRY PUBLIC SCHOOL
CRANEBROOK ROAD SOUTH CATCHMENT

JOINS SHEET 2

N

100 0 100 200 300 m

Scale: 1:10,000

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

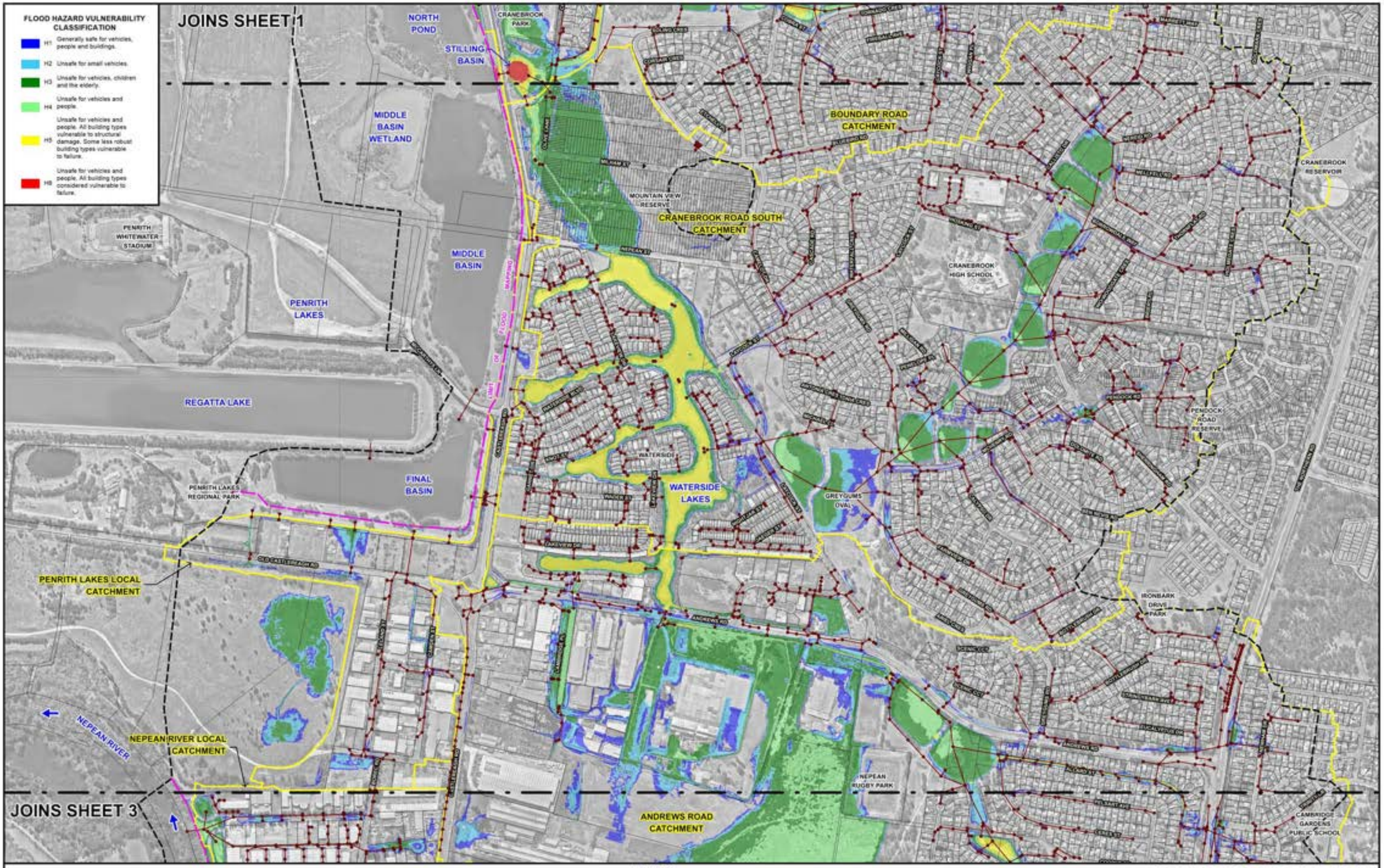
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.28
(Sheet 1 of 3)

FLOOD HAZARD VULNERABILITY CLASSIFICATION
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP


FLOOD HAZARD VULNERABILITY CLASSIFICATION
H1 Generally safe for vehicles, people and buildings.
H2 Unsafe for small vehicles.
H3 Unsafe for vehicles, children and the elderly.
H4 Unsafe for vehicles and people.
H5 Unsafe for vehicles and people. All building types vulnerable to structural damage. Some less robust building types vulnerable to failure.
H6 Unsafe for vehicles and people. All building types considered vulnerable to failure.
JOINS SHEET 1
NORTH POND
STILLING BASIN
CRANEBROOK PARK
MIDDLE BASIN WETLAND
BOUNDARY ROAD CATCHMENT
CRANEBROOK RESERVOIR
MOUNTAIN VIEW RESERVE
CRANEBROOK ROAD SOUTH CATCHMENT
PENRITH WHITEWATER STADIUM
MIDDLE BASIN
CRANEBROOK HIGH SCHOOL
PENRITH LAKES
REGATTA LAKE
PENDOCK ROAD RESERVE
FINAL BASIN
WATERSIDE LAKES
GREYGUMS OVAL
PENRITH LAKES REGIONAL PARK
IRONBARK DRIVE PARK
PENRITH LAKES LOCAL CATCHMENT
NEPEAN RIVER
NEPEAN RIVER LOCAL CATCHMENT
NEPEAN RUGBY PARK
ANDREWS ROAD CATCHMENT
CAMBRIDGE GARDENS PUBLIC SCHOOL
JOINS SHEET 3
N
100 0 100 200 300 m
Scale: 1:10,000
Lyall & Associates
Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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
Study Catchments
Modelled Stormwater Network
Two-Dimensional Model Bounday
CRANEBROOK OVERLAND FLOW FLOOD STUDY
Figure 6.28
(Sheet 2 of 3)
FLOOD HAZARD VULNERABILITY CLASSIFICATION
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

NORTH PENRITH CATCHMENT

NEPEAN RIVER AT PENRITH (GS 212201)

PENRITH WEIR

WEIR RESERVE

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ANELDORNA PARK

PENRITH SELECTIVE HIGHSCHOOL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

MAIN WESTERN RAILWAY

FLOOD HAZARD VULNERABILITY CLASSIFICATION

H1	Generally safe for vehicles, people and buildings.
H2	Unsafe for small vehicles.
H3	Unsafe for vehicles, children and the elderly.
H4	Unsafe for vehicles and people.
H5	Unsafe for vehicles and people. All building types vulnerable to structural damage. Some less robust building types vulnerable to failure.
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure.

N

100 0 100 200 300 m

Scale: 1:10,000

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

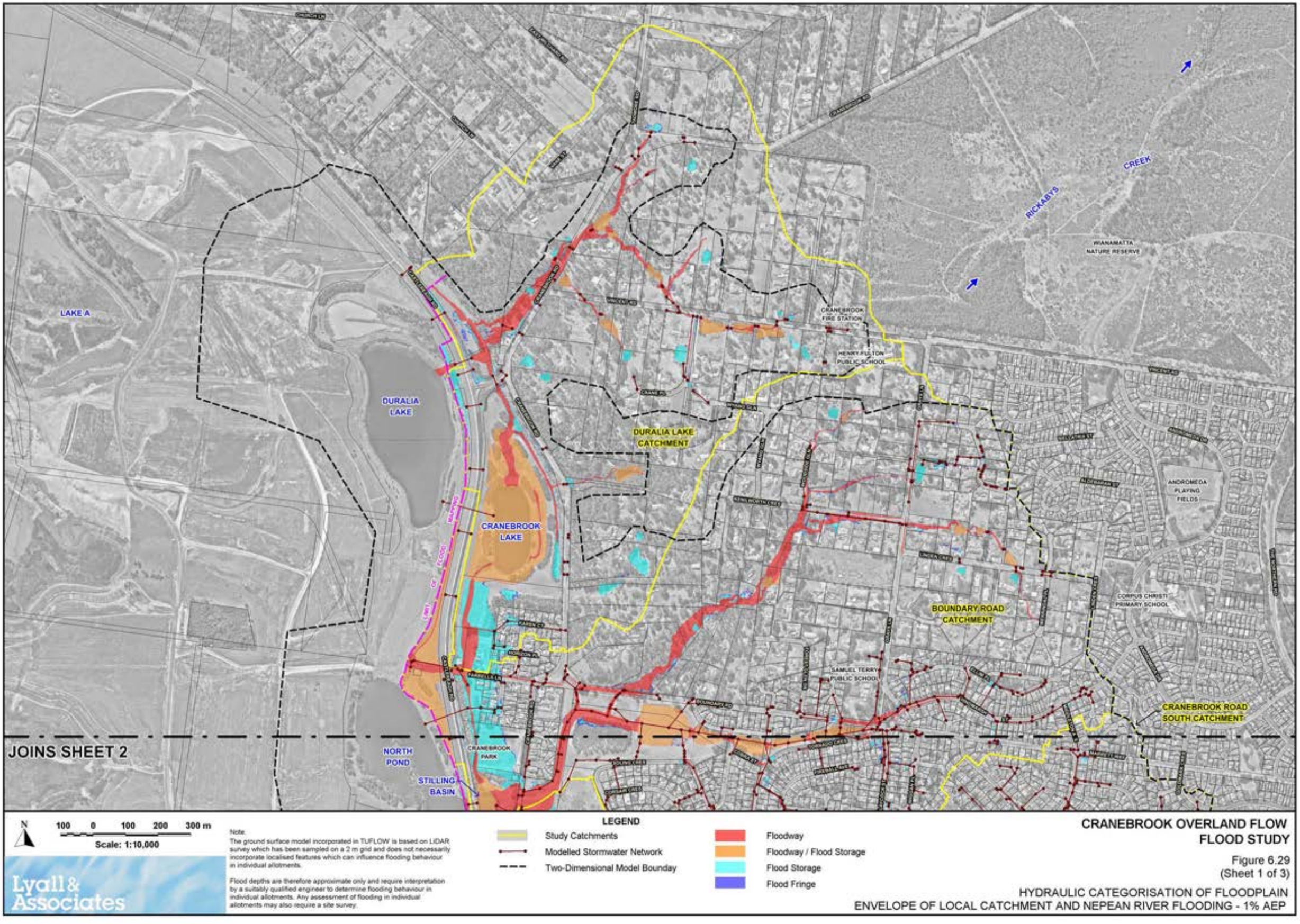
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.28
(Sheet 3 of 3)

FLOOD HAZARD VULNERABILITY CLASSIFICATION
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP



CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.29
(Sheet 1 of 3)

HYDRAULIC CATEGORISATION OF FLOODPLAIN
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

JOINS SHEET 1

NORTH POND

STILLING BASIN

CRANEBROOK PARK

MIDDLE BASIN WETLAND

BOUNDARY ROAD CATCHMENT

CRANEBROOK RESERVOIR

MOUNTAIN VIEW RESERVE

CRANEBROOK ROAD SOUTH CATCHMENT

PENRITH WHITEWATER STADIUM

MIDDLE BASIN

CRANEBROOK HIGH SCHOOL

PENRITH LAKES

REGATTA LAKE

PENNOCK ROAD RESERVE

FINAL BASIN

PENRITH LAKES REGIONAL PARK

WATERSIDE LAKES

GREYGUMS OVAL

IRONBARK DRIVE PARK

PENRITH LAKES LOCAL CATCHMENT

NEPEAN RIVER

NEPEAN RIVER LOCAL CATCHMENT

NEPEAN RUGBY PARK

JOINS SHEET 3

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS PUBLIC SCHOOL

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Floodway
- Floodway / Flood Storage
- Flood Storage
- Flood Fringe

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.29
(Sheet 2 of 3)

HYDRAULIC CATEGORISATION OF FLOODPLAIN
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

NORTH PENRITH CATCHMENT

NEPEAN RIVER AT PENRITH (GS 212201)

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PENRITH WEIR

WEIR RESERVE

PEACH TREE CREEK

NEPEAN RIVER

BOUNDARY CREEK

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDORNA PARK

MAIN WESTERN RAILWAY

LIMIT OF FLOOD MAPPING

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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.

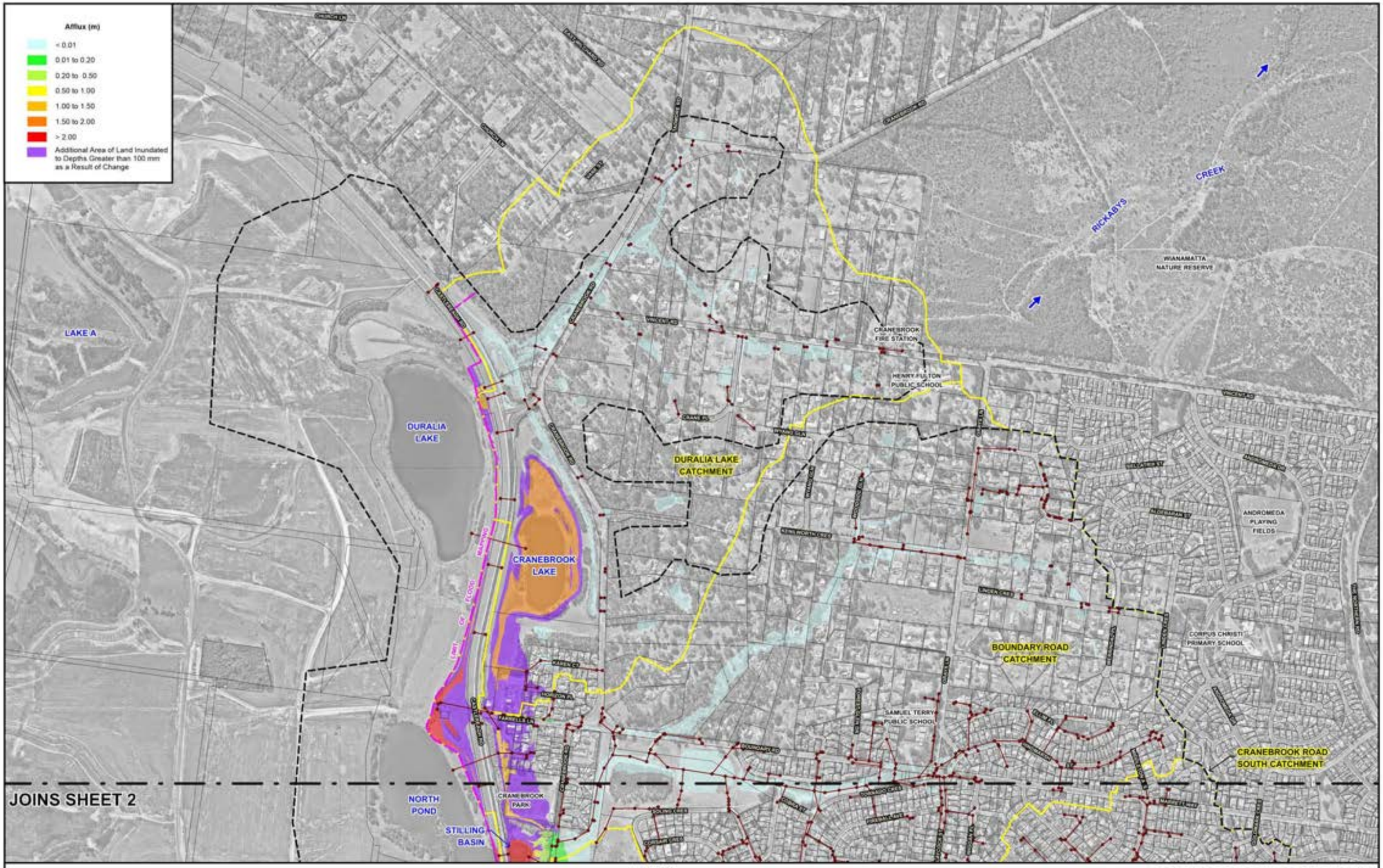
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge
- Floodway
- Floodway / Flood Storage
- Flood Storage
- Flood Fringe

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.29
(Sheet 3 of 3)

HYDRAULIC CATEGORISATION OF FLOODPLAIN
ENVELOPE OF LOCAL CATCHMENT AND NEPEAN RIVER FLOODING - 1% AEP



N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.30
(Sheet 1 of 3)

DIFFERENCE BETWEEN ENVELOPE OF NEPEAN RIVER AND LOCAL CATCHMENT FLOODING AND LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.30
(Sheet 2 of 3)

DIFFERENCE BETWEEN ENVELOPE OF NEPEAN RIVER AND LOCAL CATCHMENT FLOODING AND LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

NORTH PENRITH CATCHMENT

NEPEAN RIVER AT PENRITH (GS 212201)

PENRITH WEIR

WEIR RESERVE

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ANELDORA PARK

PENRITH SELECTIVE HIGHSCHOOL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

MAIN WESTERN RAILWAY

Afflux (m)

- < 0.01
- 0.01 to 0.20
- 0.20 to 0.50
- 0.50 to 1.00
- 1.00 to 1.50
- 1.50 to 2.00
- > 2.00
- Additional Area of Land Inundated to Depths Greater than 100 mm as a Result of Change

N

100 0 100 200 300 m

Scale: 1:10,000

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.

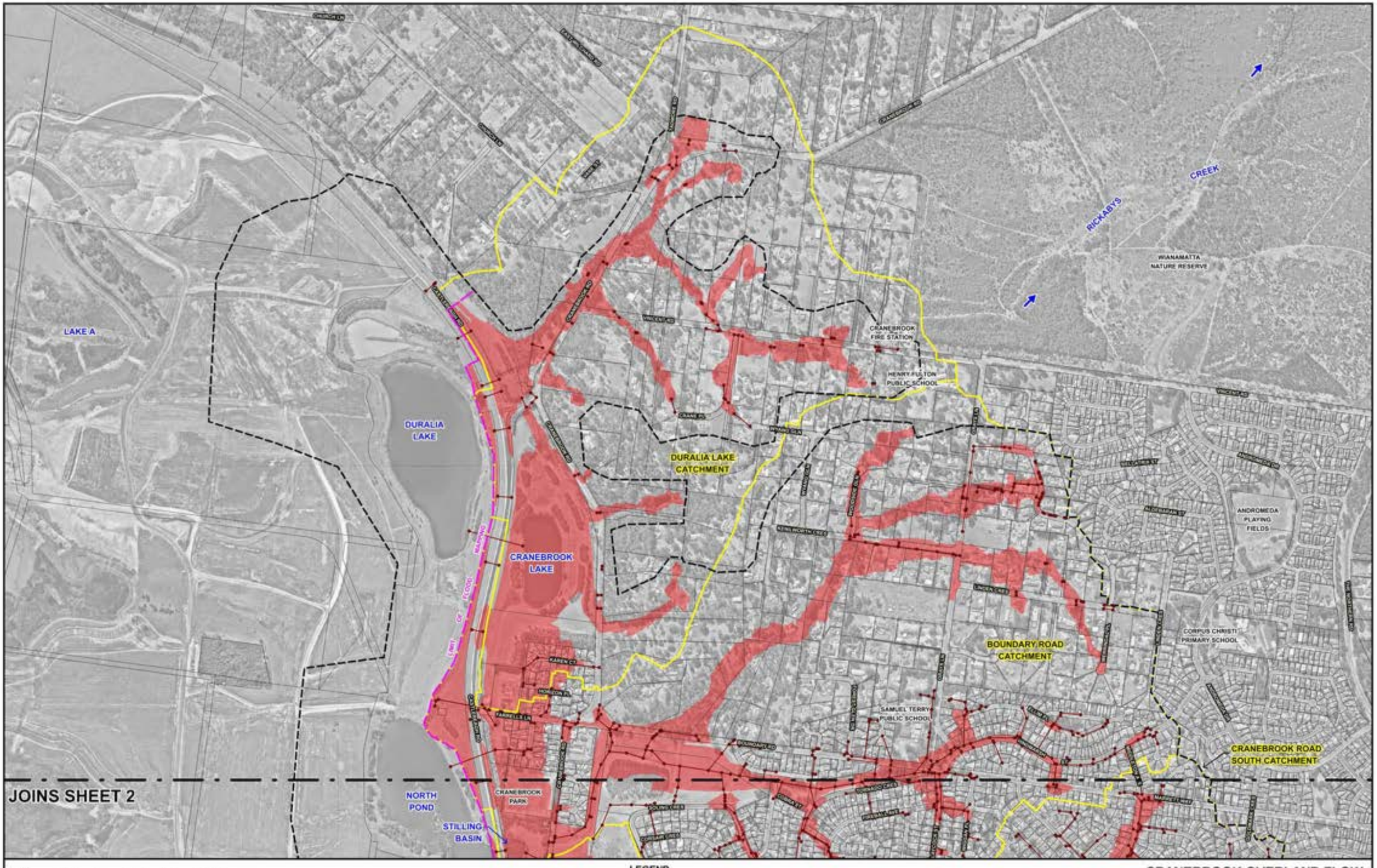
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.30
(Sheet 3 of 3)

DIFFERENCE BETWEEN ENVELOPE OF NEPEAN RIVER AND LOCAL CATCHMENT FLOODING AND LOCAL CATCHMENT FLOODING ONLY - 1% AEP


LAKE A
DURALIA LAKE
DURALIA LAKE CATCHMENT
CRANEBROOK LAKE
NORTH POND
STILLING BASIN
CRANEBROOK PARK
CRANEBROOK FIRE STATION
HENRY FUSTON PUBLIC SCHOOL
WIANAMATTA NATURE RESERVE
RICKABYS CREEK
ANDROMEDA PLAYING FIELDS
CORPUS CHRISTI PRIMARY SCHOOL
BOUNDARY ROAD CATCHMENT
SAMUEL TERRY PUBLIC SCHOOL
CRANEBROOK ROAD SOUTH CATCHMENT
JOINS SHEET 2
N
100 0 100 200 300 m
Scale: 1:10,000
Note.
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LEGEND
Study Catchments
Modelled Stormwater Network
Two-Dimensional Model Bounday
Interim Flood Planning Area
Lyall & Associates
CRANEBROOK OVERLAND FLOW FLOOD STUDY
Figure 6.31
(Sheet 1 of 3)
FLOOD PLANNING AREA

JOINS SHEET 1

NORTH POND

STILLING BASIN

CRANEBROOK PARK

MIDDLE BASIN WETLAND

MIDDLE BASIN

PENRITH WHITEWATER STADIUM

PENRITH LAKES

REGATTA LAKE

FINAL BASIN

PENRITH LAKES REGIONAL PARK

BOUNDARY ROAD CATCHMENT

MOUNTAIN VIEW RESERVE

CRANEBROOK ROAD SOUTH CATCHMENT

CRANEBROOK RESERVOIR

CRANEBROOK HIGH SCHOOL

PENDOCK ROAD RESERVE

WATERSIDE LAKES

GREYGUMS OVAL

IRONBARK DRIVE PARK

PENRITH LAKES LOCAL CATCHMENT

NEPEAN RIVER

NEPEAN RIVER LOCAL CATCHMENT

NEPEAN RUGBY PARK

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS PUBLIC SCHOOL

JOINS SHEET 3

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- Interim Flood Planning Area

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure 6.31
(Sheet 2 of 3)

FLOOD PLANNING AREA

JOINS SHEET 2

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

BOUNDARY CREEK CATCHMENT

PENRITH WATER RECYCLING PLANT

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ST DOMINICS COLLEGE

NORTH PENRITH CATCHMENT

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGHSCHOOL

ANELDRIVA PARK

WEIR RESERVE

NEPEAN RIVER AT PENRITH (GS 212201)

PENRITH WEIR

NEPEAN RIVER

BOUNDARY CREEK

PEACH TREE CREEK

MAIN WESTERN RAILWAY

LIMIT OF FLOOD MAPPING

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge
- Interim Flood Planning Area

CRANEBROOK OVERLAND FLOW FLOOD STUDY

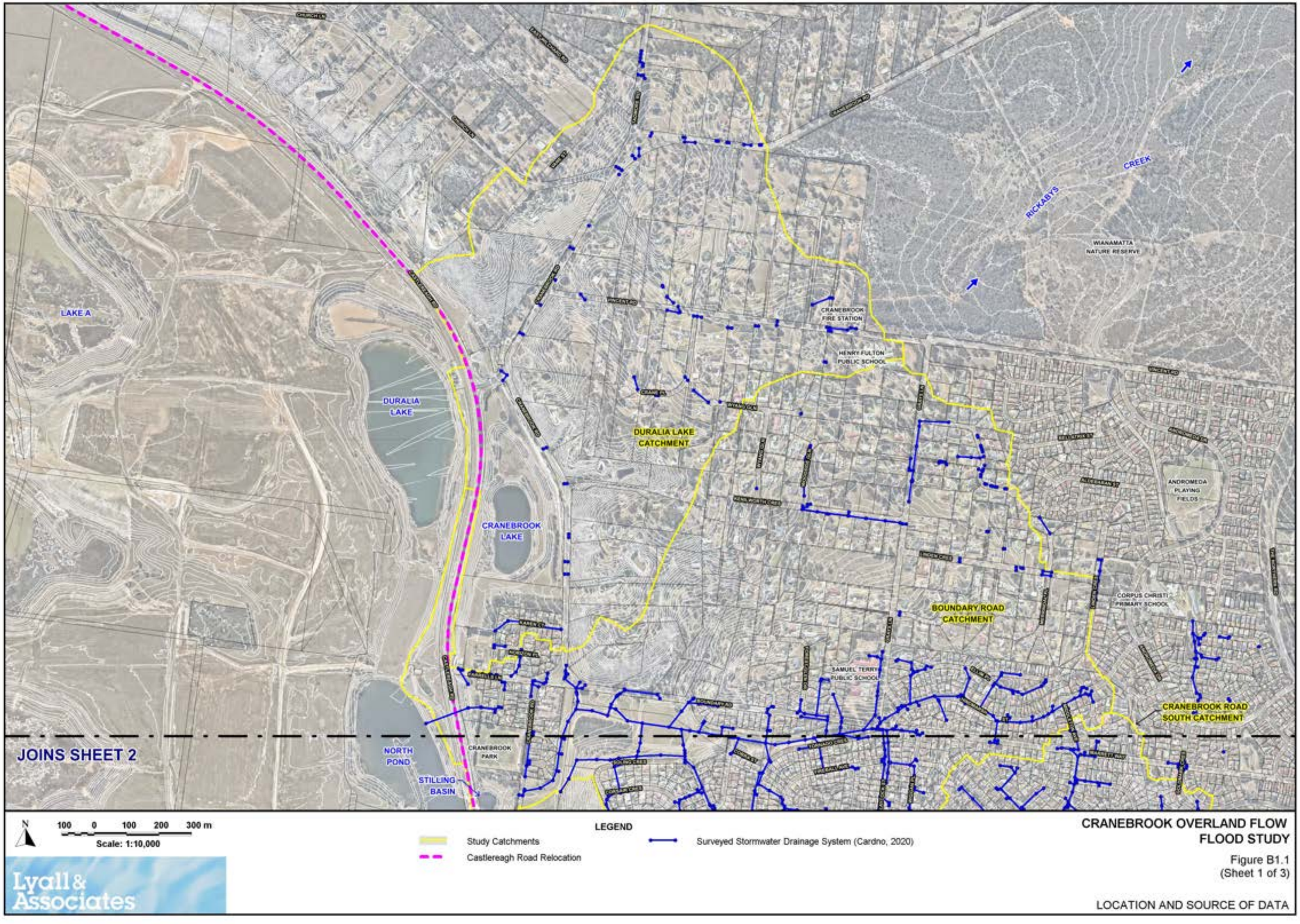
Figure 6.21
(Sheet 3 of 3)

FLOOD PLANNING AREA

APPENDIX B

DETAILS OF AVAILABLE DATA AND COMMUNITY CONSULTATION

LIST OF FIGURES (APPENDIX B)



CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure B1.1
(Sheet 1 of 3)

LOCATION AND SOURCE OF DATA

JOINS SHEET 1

NORTH POND

CRANEBROOK PARK

STILLING BASIN

MIDDLE BASIN WETLAND

MIDDLE BASIN

PENRITH WHITEWATER STADIUM

PENRITH LAKES

REGATTA LAKE

FINAL BASIN

PENRITH LAKES REGIONAL PARK

BOUNDARY ROAD CATCHMENT

MOUNTAIN VIEW RESERVE

CRANEBROOK ROAD SOUTH CATCHMENT

CRANEBROOK HIGH SCHOOL

GS 567158
CRANEBROOK RESERVOIR

PENDOCK ROAD RESERVE

WATERSIDE

WATERSIDE LAKES

GREYGUMS OVAL

PENRITH LAKES LOCAL CATCHMENT

IRONBARK DRIVE PARK

LAMBRIDGE ESTATE SUBDIVISION

NEPEAN RIVER

NEPEAN RIVER LOCAL CATCHMENT

NEPEAN RUGBY PARK

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS PUBLIC SCHOOL

JOINS SHEET 2

N

100 0 100 200 300 m

Scale: 1:10,000

LEGEND

- Study Catchments
- Castlereagh Road Relocation
- Recent Subdivsion
- Surveyed Stormwater Drainage System (Cardno, 2020)
- Sydney Water Pluviographic Rain Gauge

Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure B1.1
(Sheet 2 of 3)

LOCATION AND SOURCE OF DATA

JOINS SHEET 2

NEPEAN RIVER LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

BOUNDARY CREEK CATCHMENT

HICKEYS LANE SUBDIVISION

NORTH PENRITH SUBDIVISION

NORTH PENRITH CATCHMENT

NEPEAN RIVER AT PENRITH (GS 212201)

PENRITH WATER RECYCLING PLANT

GS 567167 PENRITH WRP

HICKEYS LANE RESERVE

KINGSWOOD PARK PUBLIC SCHOOL

CAMBRIDGE GARDENS PUBLIC SCHOOL

PATERSON OVAL

ALLSOPP OVAL

PARKER STREET RESERVE

RON MULOCK OVAL

ST DOMINICS COLLEGE

KINGSWOOD CEMETERY

PENRITH SELECTIVE HIGH SCHOOL

ANELDRIVA PARK

PENRITH WEIR

WEIR RESERVE

MAIN WESTERN RAILWAY

N

100 0 100 200 300 m

Scale: 1:10,000

Lyall & Associates

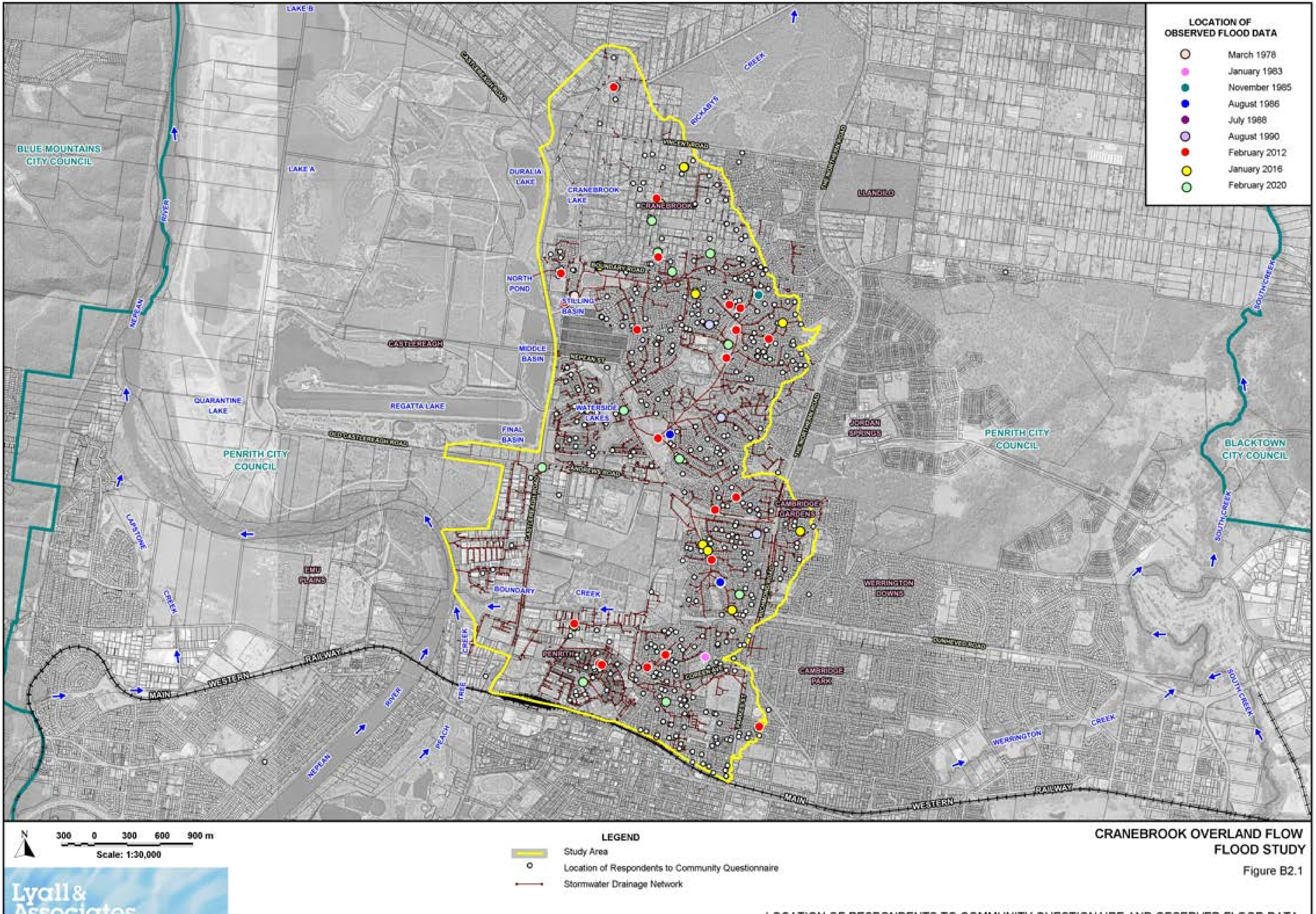
LEGEND

- Study Catchments
- Recent Subdivsion
- Mulgoa Road and Castlereagh Road Upgrade
- WaterNSW Stream Gauge
- Surveyed Stormwater Drainage System (Cardno, 2020)
- Surveyed Stormwater Drainage System (RH&C, 2020)
- Surveyed Cross Section (RH&C, 2020)
- Sydney Water Pluviographic Rain Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure B1.1
(Sheet 3 of 3)

LOCATION AND SOURCE OF DATA



Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure B2.1

LOCATION OF RESPONDENTS TO COMMUNITY QUESTIONAIRE AND OBSERVED FLOOD DATA

APPENDIX F

SENSITIVITY ANALYSES MAPS

LIST OF FIGURES (APPENDIX F)

N

300 0 300 600 900 m

Scale: 1:30,000

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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.1
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.1
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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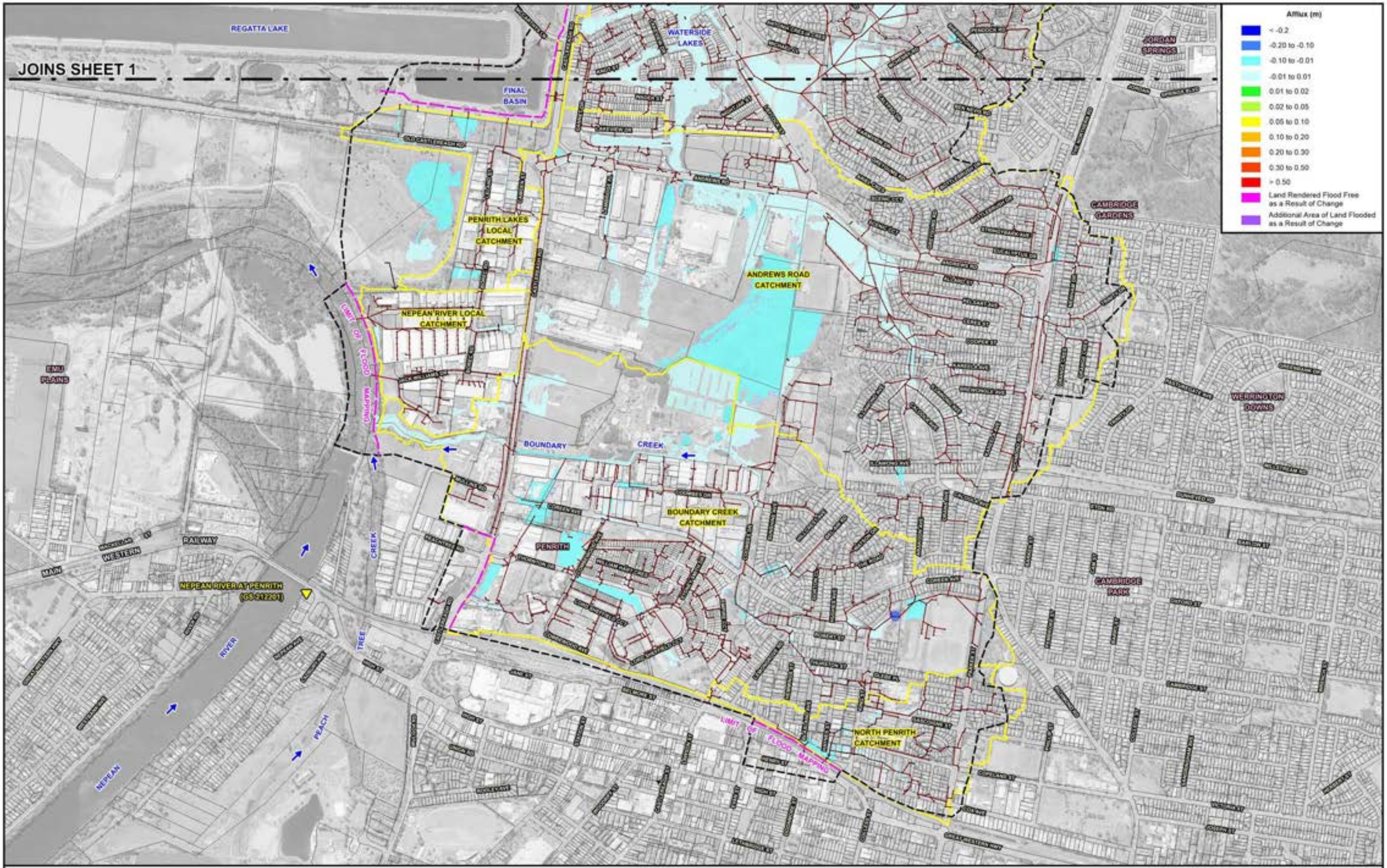
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.2
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.2
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

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

LAKE A
DURALIA LAKE
CRANEBROOK LAKE
LIMIT OF FLOOD MAPPING
DURALIA LAKE CATCHMENT
RICKABY'S CREEK
CRANEBROOK
BOUNDARY ROAD CATCHMENT
LLANDILO
NORTH POND
STILLING BASIN
CASTLEREAGH
MIDDLE BASIN
CRANEBROOK ROAD SOUTH CATCHMENT
JOINS SHEET 2
REGATTA LAKE
WATERSIDE LAKES
JORDAN SPRINGS

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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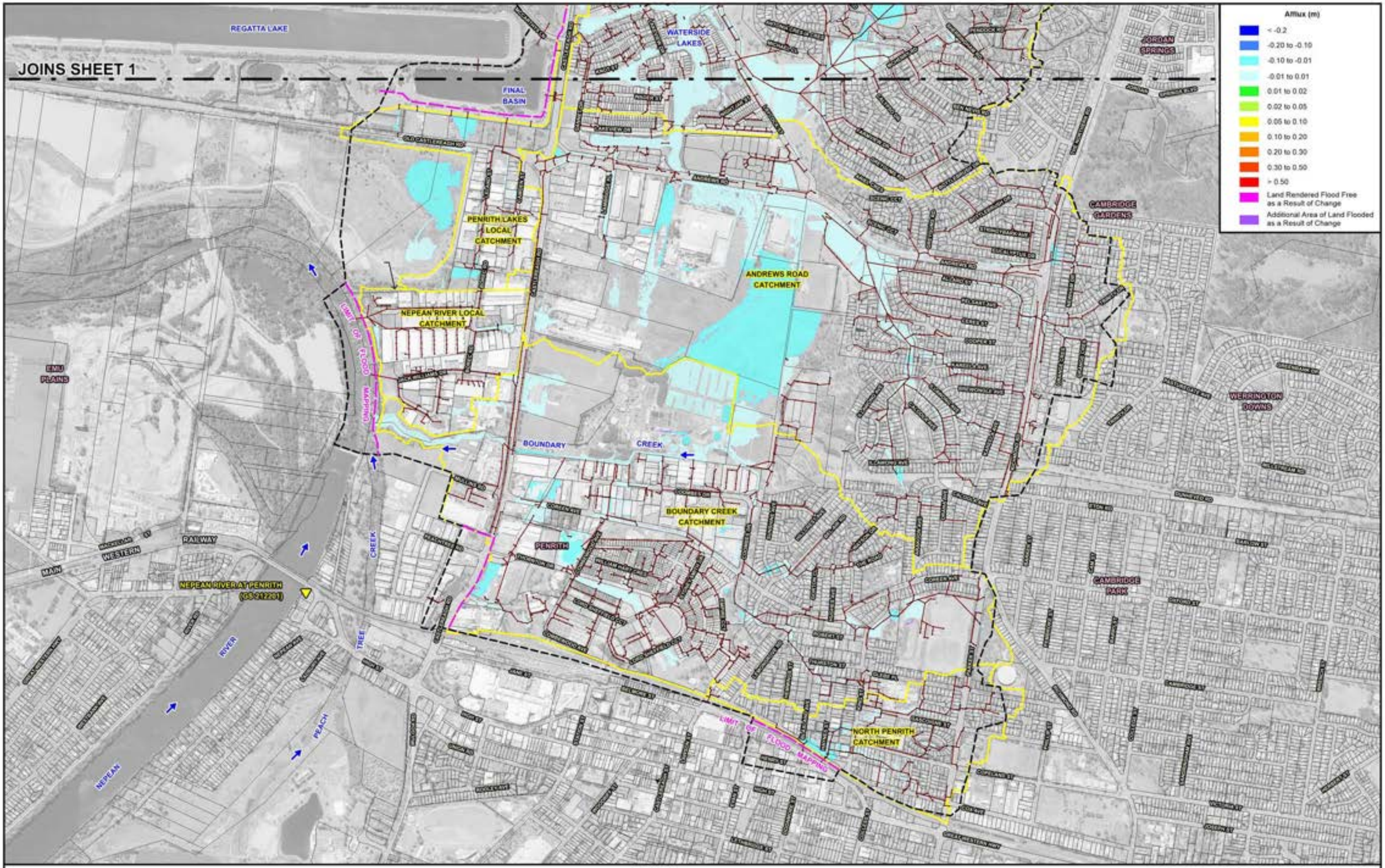
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.3
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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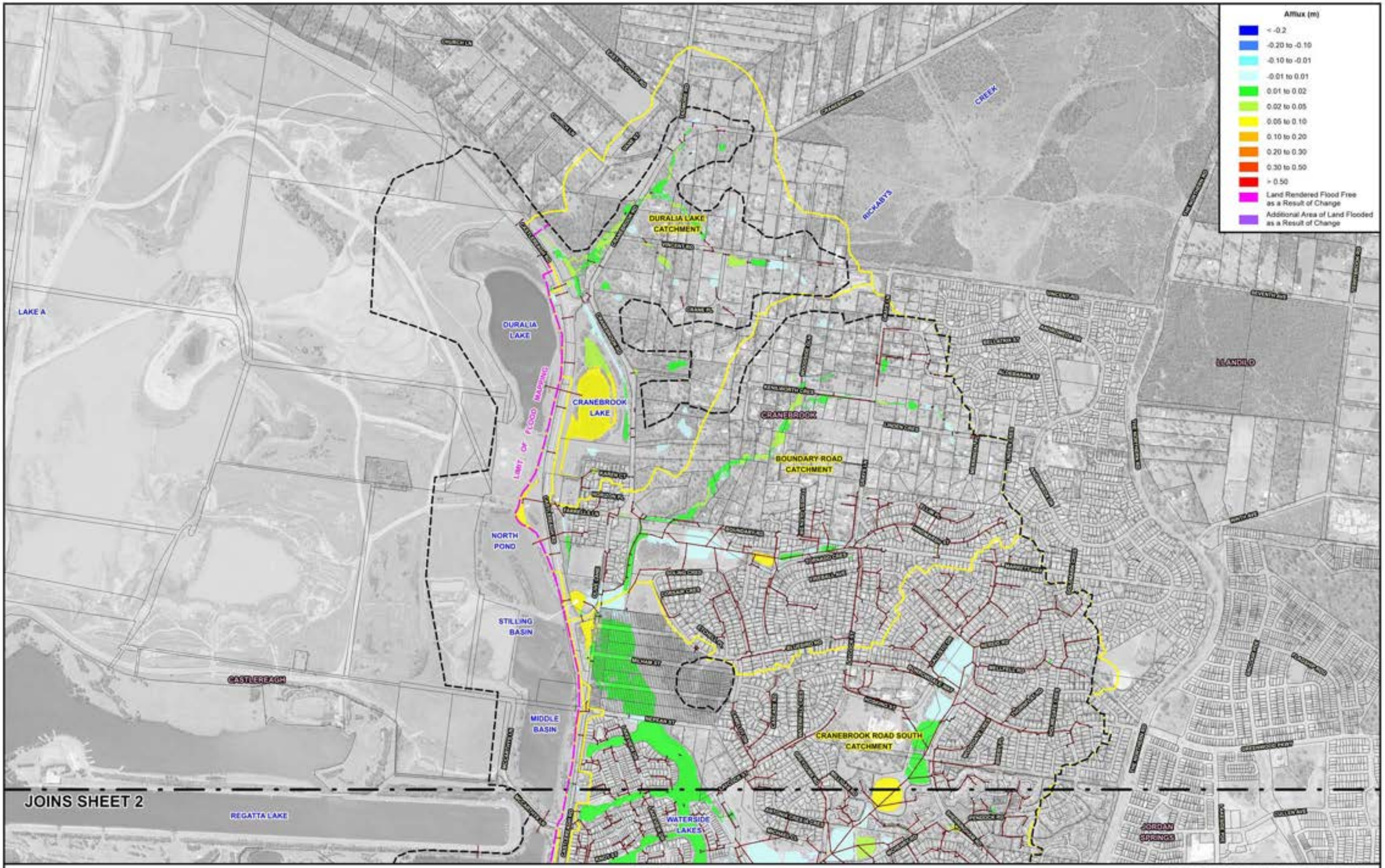
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.3
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO INCREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.4
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.4
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
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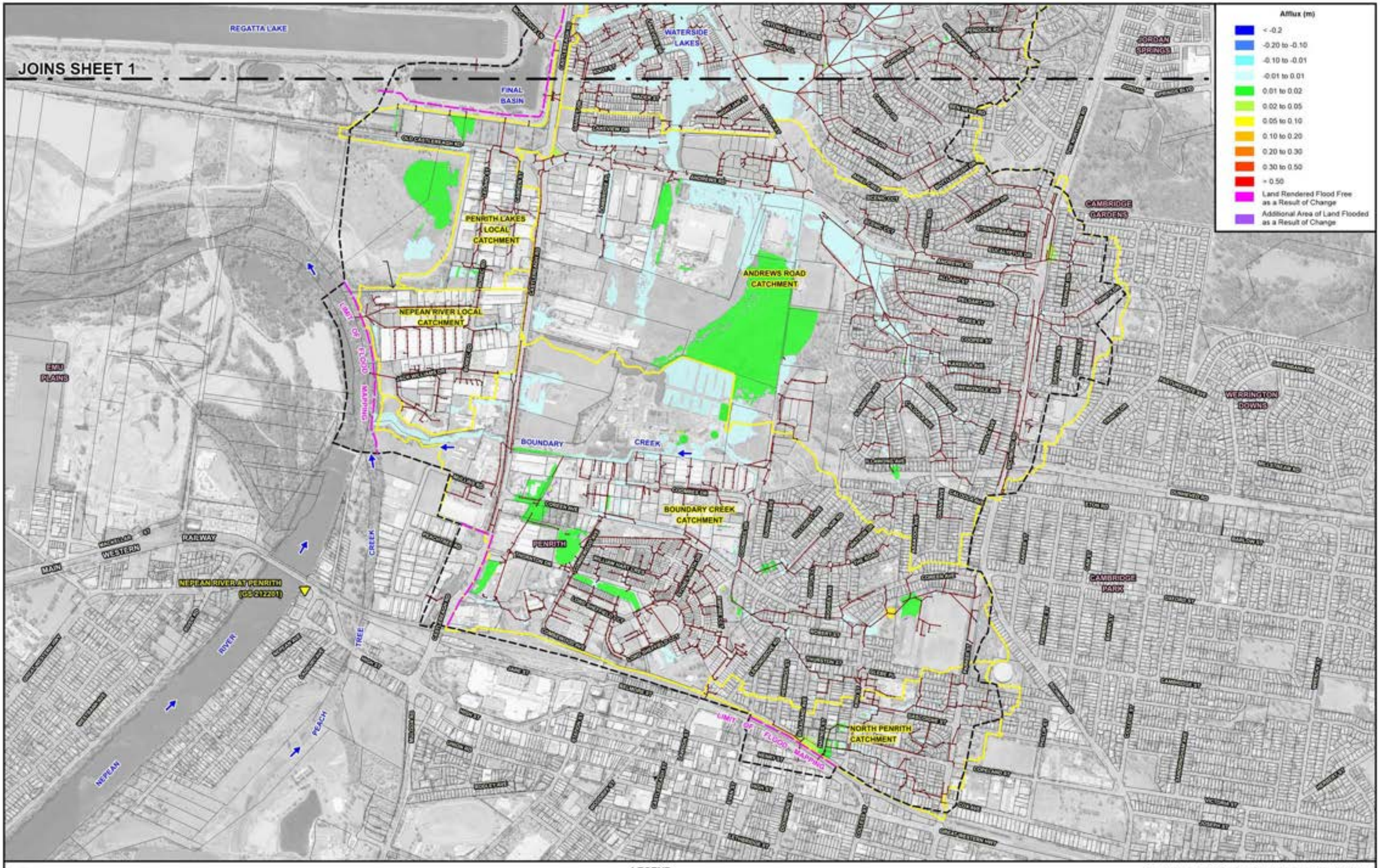
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.5
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.5
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

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

LAKE A
DURALIA LAKE
DURALIA LAKE CATCHMENT
CRANEBROOK LAKE
CRANEBROOK
BOUNDARY ROAD CATCHMENT
NORTH POND
STILLING BASIN
MIDDLE BASIN
CASTLEREAGH
CRANEBROOK ROAD SOUTH CATCHMENT
WATERSIDE LAKES
REGATTA LAKE
JORDAN SPRINGS
LLANDILO
RICKABY'S CREEK
LIMIT OF FLOOD MAPPING
JOINS SHEET 2

N
300 0 300 600 900 m
Scale: 1:30,000

Lyall & Associates

Note:
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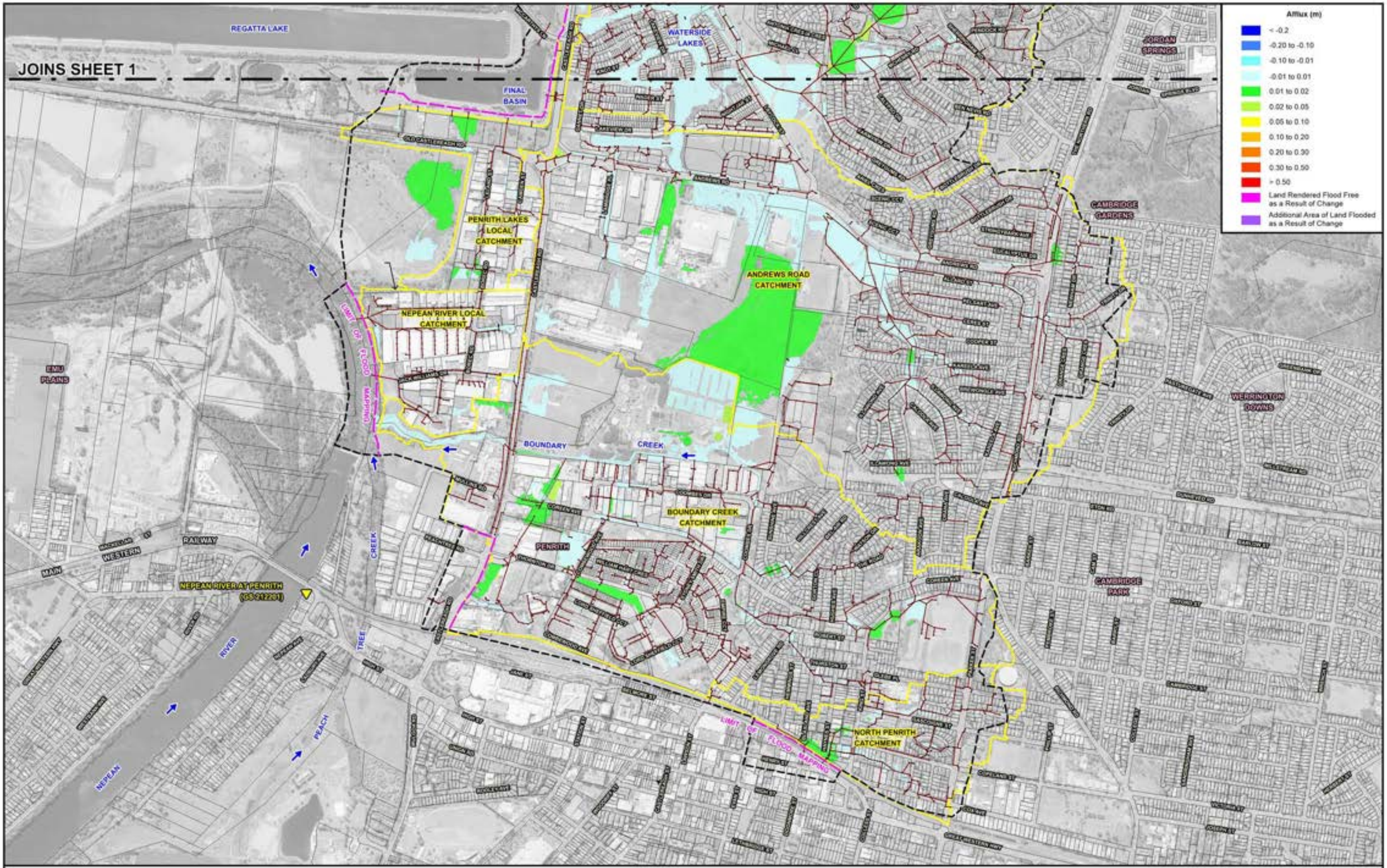
LEGEND
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.6
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F1.6
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO DECREASE IN RAINFALL LOSSES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

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

LAKE A

DURALIA LAKE

DURALIA LAKE CATCHMENT

CRANEBROOK LAKE

CRANEBROOK

BOUNDARY ROAD CATCHMENT

NORTH POND

STILLING BASIN

MIDDLE BASIN

CASTLEREAGH

CRANEBROOK ROAD SOUTH CATCHMENT

WATERSIDE LAKES

REGATTA LAKE

JORDAN SPRINGS

LLANDILO

RICKABY'S CREEK

JOINS SHEET 2

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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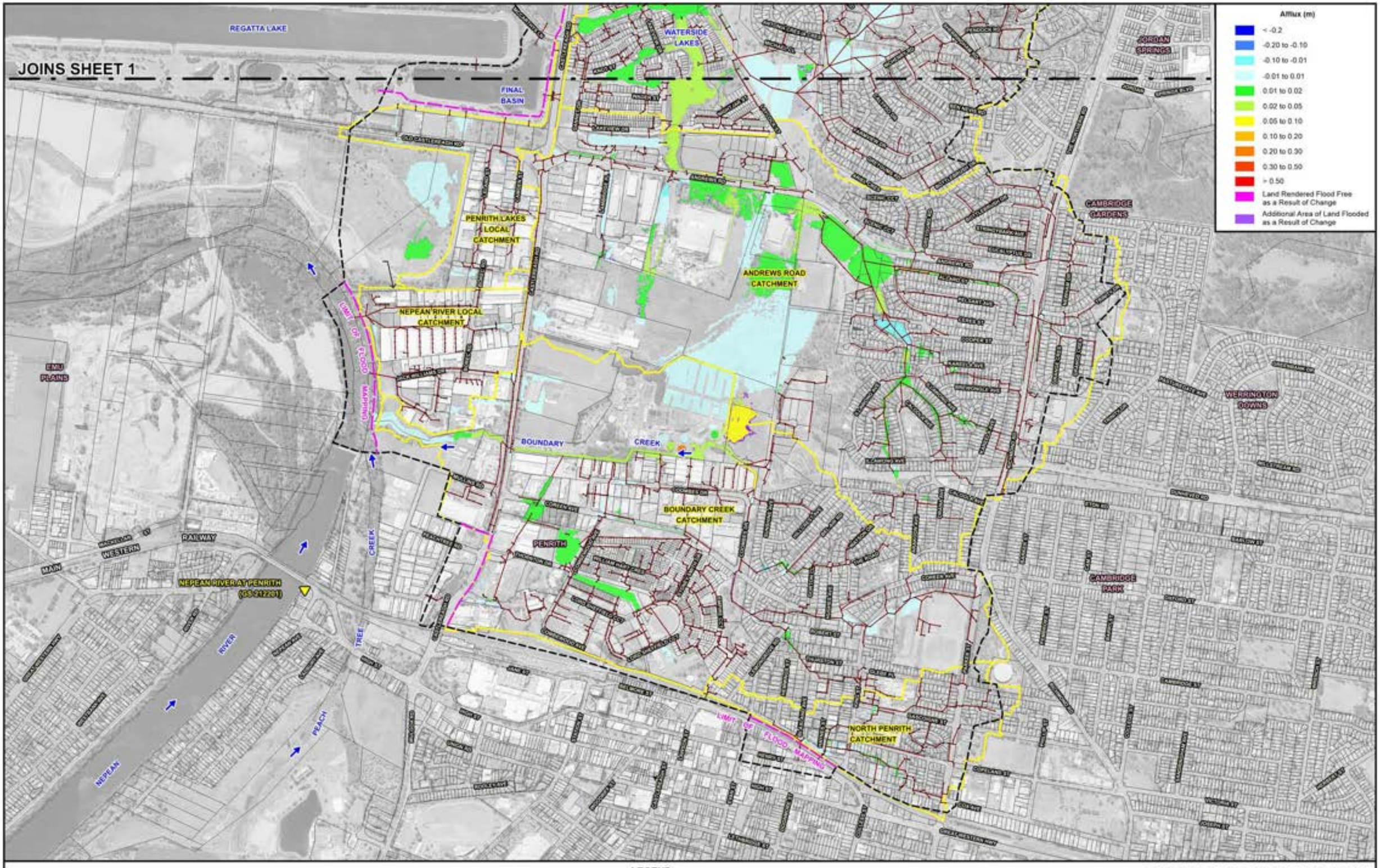
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.1
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.1
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.2
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 1

REGATTA LAKE

WATERSIDE LAKES

JORDAN SPRINGS

FINAL BASIN

PENRITH LAKES LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS

NEPEAN RIVER LOCAL CATCHMENT

LIMIT OF FLOOD MAPPING

EMU PLAINS

WERRINGTON DOWNS

BOUNDARY CREEK

BOUNDARY CREEK CATCHMENT

PENRITH

CAMBRIDGE PARK

NEPEAN RIVER AT PENRITH (GS 212201)

RAILWAY

MAIN

WESTERN

PEACH CREEK

NEPEAN RIVER

NORTH PENRITH CATCHMENT

LIMIT OF FLOOD MAPPING

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

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.2
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

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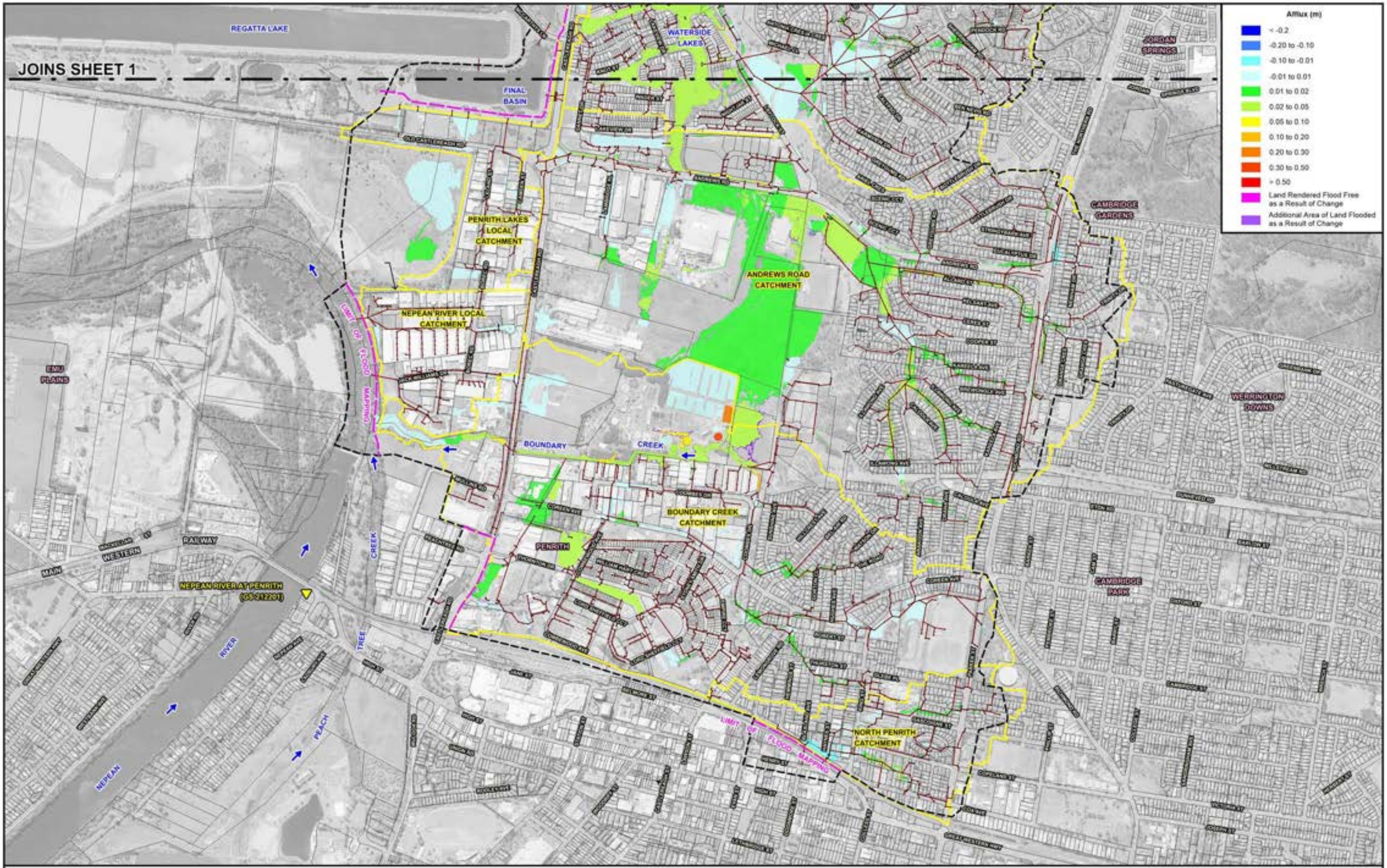
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.3
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.3
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% INCREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.4
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.4
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.5
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 1

REGATTA LAKE

FINAL BASIN

WATERSIDE LAKES

JORDAN SPRINGS

CAMBRIDGE GARDENS

PENRITH LAKES LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

LIMIT OF FLOOD MAPPING

EMU PLAINS

WERRINGTON DOWNS

BOUNDARY CREEK

BOUNDARY CREEK CATCHMENT

PENRITH

CAMBRIDGE PARK

NORTH PENRITH CATCHMENT

LIMIT OF FLOOD MAPPING

MAIN WESTERN RAILWAY

NEPEAN RIVER AT PENRITH (GS 212261)

NEPEAN RIVER

PEACH TREE CREEK

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

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.5
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.6
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

JOINS SHEET 1

REGATTA LAKE

FINAL BASIN

WATERSIDE LAKES

JORDAN SPRINGS

CAMBRIDGE GARDENS

PENRITH LAKES LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

NEPEAN RIVER LOCAL CATCHMENT

LIMIT OF FLOOD MAPPING

EMU PLAINS

BOUNDARY CREEK

BOUNDARY CREEK CATCHMENT

WERRINGTON DOWNS

PENRITH

MAIN WESTERN RAILWAY

NEPEAN RIVER AT PENRITH (GS 212201)

NEPEAN RIVER

PEACH TREE CREEK

CAMBRIDGE PARK

NORTH PENRITH CATCHMENT

LIMIT OF FLOOD MAPPING

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

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F2.6
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 20% DECREASE IN HYDRAULIC ROUGHNESS VALUES
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

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

LAKE A
DURALIA LAKE
CRANEBROOK LAKE
NORTH POND
STILLING BASIN
MIDDLE BASIN
CASTLEREAGH
REGATTA LAKE
DURALIA LAKE CATCHMENT
BOUNDARY ROAD CATCHMENT
CRANEBROOK ROAD SOUTH CATCHMENT
CRANEBROOK
WATERSIDE LAKES
JORDAN SPRINGS
LLANDILO
RICKABY'S CREEK
LIMIT OF FLOOD MAPPING
JOINS SHEET 2

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.1
(Sheet 1 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.1
(Sheet 2 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

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

LAKE A
DURALIA LAKE
CRANEBROOK LAKE
NORTH POND
STILLING BASIN
MIDDLE BASIN
CASTLEREAGH
REGATTA LAKE
WATERSIDE LAKES
DURALIA LAKE CATCHMENT
BOUNDARY ROAD CATCHMENT
CRANEBROOK ROAD SOUTH CATCHMENT
CRANEBROOK
CREEK
RICKABY'S
LLANDILO
JORDAN SPRINGS
LIMIT OF FLOOD MAPPING
JOINS SHEET 2

N
300 0 300 600 900 m
Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

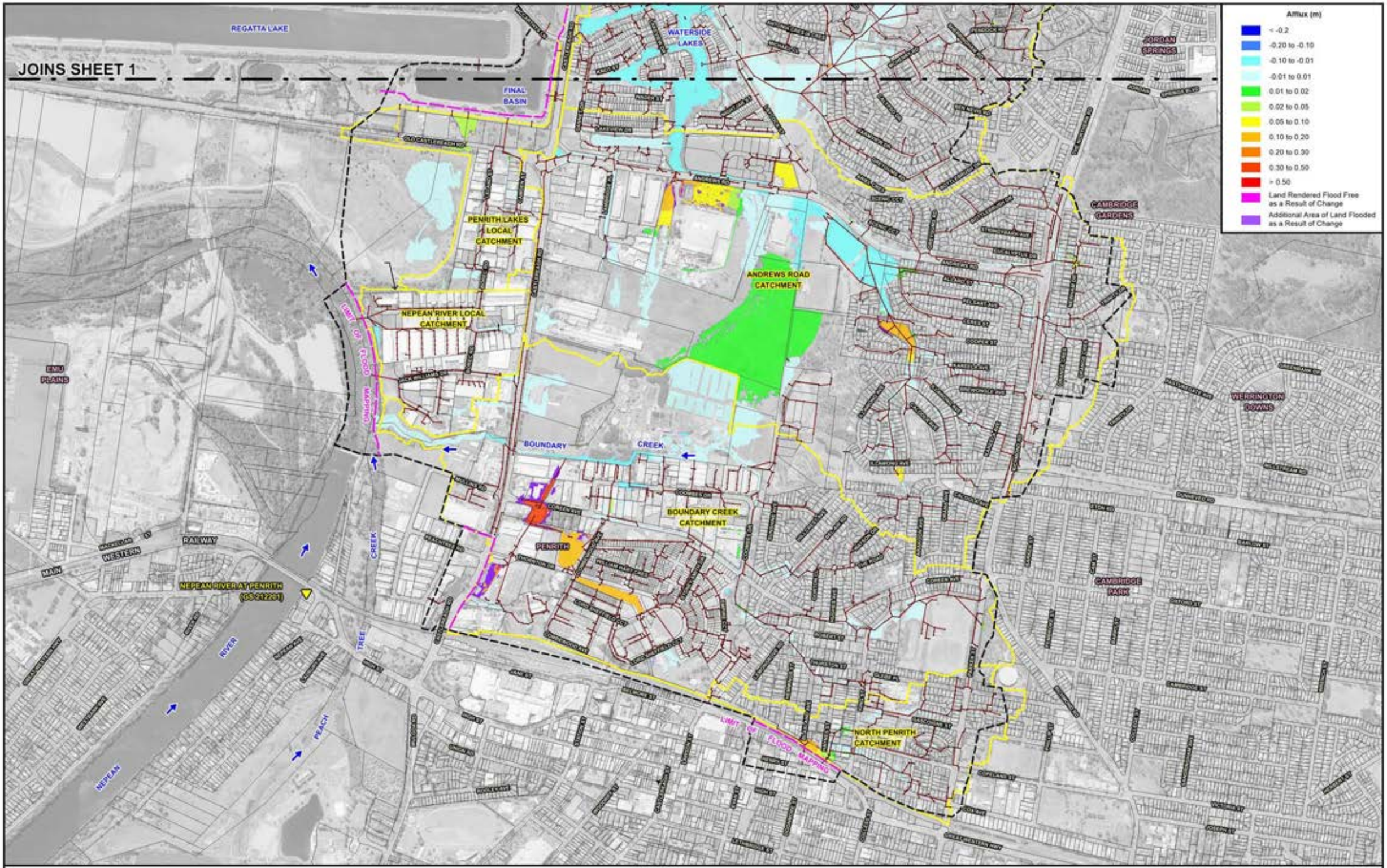
Flood depths are therefore approximate only and require interpretation by a suitably qualified engineer to determine flooding behaviour in individual allotments. Any assessment of flooding in individual allotments may also require a site survey.

LEGEND
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.2
(Sheet 1 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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.

Lyall & Associates

LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.2
(Sheet 2 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

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

LAKE A
DURALIA LAKE
CRANEBROOK LAKE
NORTH POND
STILLING BASIN
MIDDLE BASIN
CASTLEREAGH
REGATTA LAKE
DURALIA LAKE CATCHMENT
BOUNDARY ROAD CATCHMENT
CRANEBROOK ROAD SOUTH CATCHMENT
CRANEBROOK
WATERSIDE LAKES
LLANDILO
JORDAN SPRINGS
RICKABY'S CREEK
LIMIT OF FLOOD MAPPING
JOINS SHEET 2

N
300 0 300 600 900 m
Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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LEGEND
- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.3
(Sheet 1 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F3.3
(Sheet 2 of 2)

IMPACT OF PARTIAL BLOCKAGE OF HYDRAULIC STRUCTURES ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

Afflux (m)

- > -2.00
- -1.50 to -2.00
- -1.00 to -1.50
- -0.50 to -1.00
- -0.10 to -0.50
- 0.00 to -0.10
- Land Rendered Flood Free as a Result of Change
- Additional Area of Land Flooded as a Result of Change

LAKE A
DURALIA LAKE
DURALIA LAKE CATCHMENT
CRANEBROOK LAKE
CRANEBROOK
BOUNDARY ROAD CATCHMENT
CRANEBROOK ROAD SOUTH CATCHMENT
NORTH POND
STILLING BASIN
MIDDLE BASIN
CASTLEREAGH
REGATTA LAKE
WATERSIDE LAKES
JORDAN SPRINGS
LLANDILO
BICKABY'S CREEK

JOINS SHEET 2

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F4.1
(Sheet 1 of 2)

IMPACT OF LOWER TAILWATER LEVELS IN THE PENRITH LAKES SCHEME ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 1

REGATTA LAKE

WATERSIDE LAKES

JORDAN SPRINGS

FINAL BASIN

PENRITH LAKES LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS

NEPEAN RIVER LOCAL CATCHMENT

EMU PLAINS

WERRINGTON DOWNS

BOUNDARY CREEK

BOUNDARY CREEK CATCHMENT

PENRITH

CAMBRIDGE PARK

NORTH PENRITH CATCHMENT

MAIN WESTERN RAILWAY

NEPEAN RIVER AT PENRITH (GS 212201)

NEPEAN RIVER

PEACH TREE CREEK

Afflux (m)

- > -2.00
- -1.50 to -2.00
- -1.00 to -1.50
- -0.50 to -1.00
- -0.10 to -0.50
- 0.00 to -0.10
- Land Rendered Flood Free as a Result of Change
- Additional Area of Land Flooded as a Result of Change

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F4.1
(Sheet 2 of 2)

IMPACT OF LOWER TAILWATER LEVELS IN THE PENRITH LAKES SCHEME ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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.

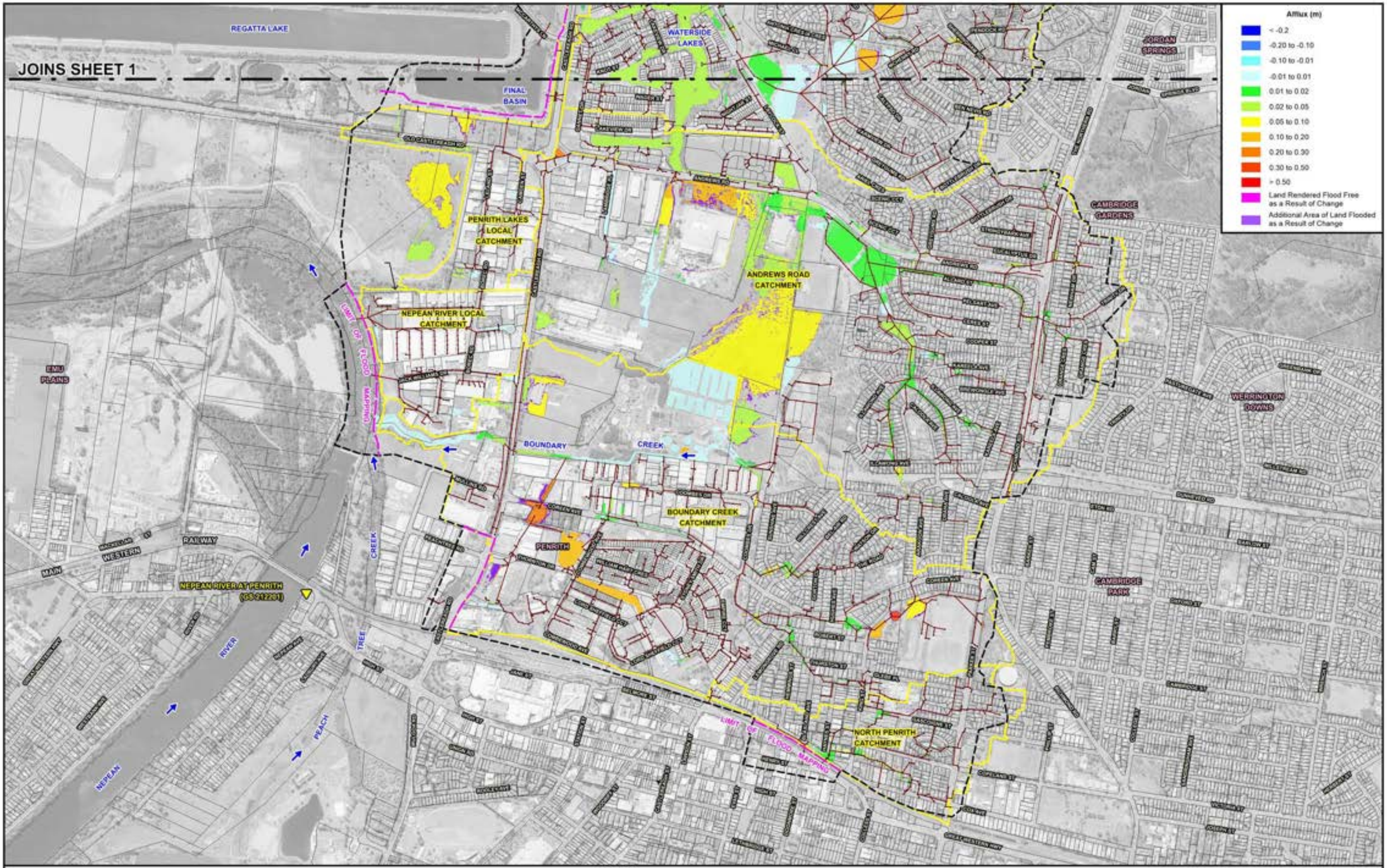
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F5.1
(Sheet 1 of 2)

DIFFERENCE IN PEAK FLOOD LEVELS DERIVED USING PROCEDURES SET OUT IN ARR87 AND ARR2019
LOCAL CATCHMENT FLOODING ONLY - 5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F5.1
(Sheet 2 of 2)

DIFFERENCE IN PEAK FLOOD LEVELS DERIVED USING PROCEDURES SET OUT IN ARR87 AND ARR2019
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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.

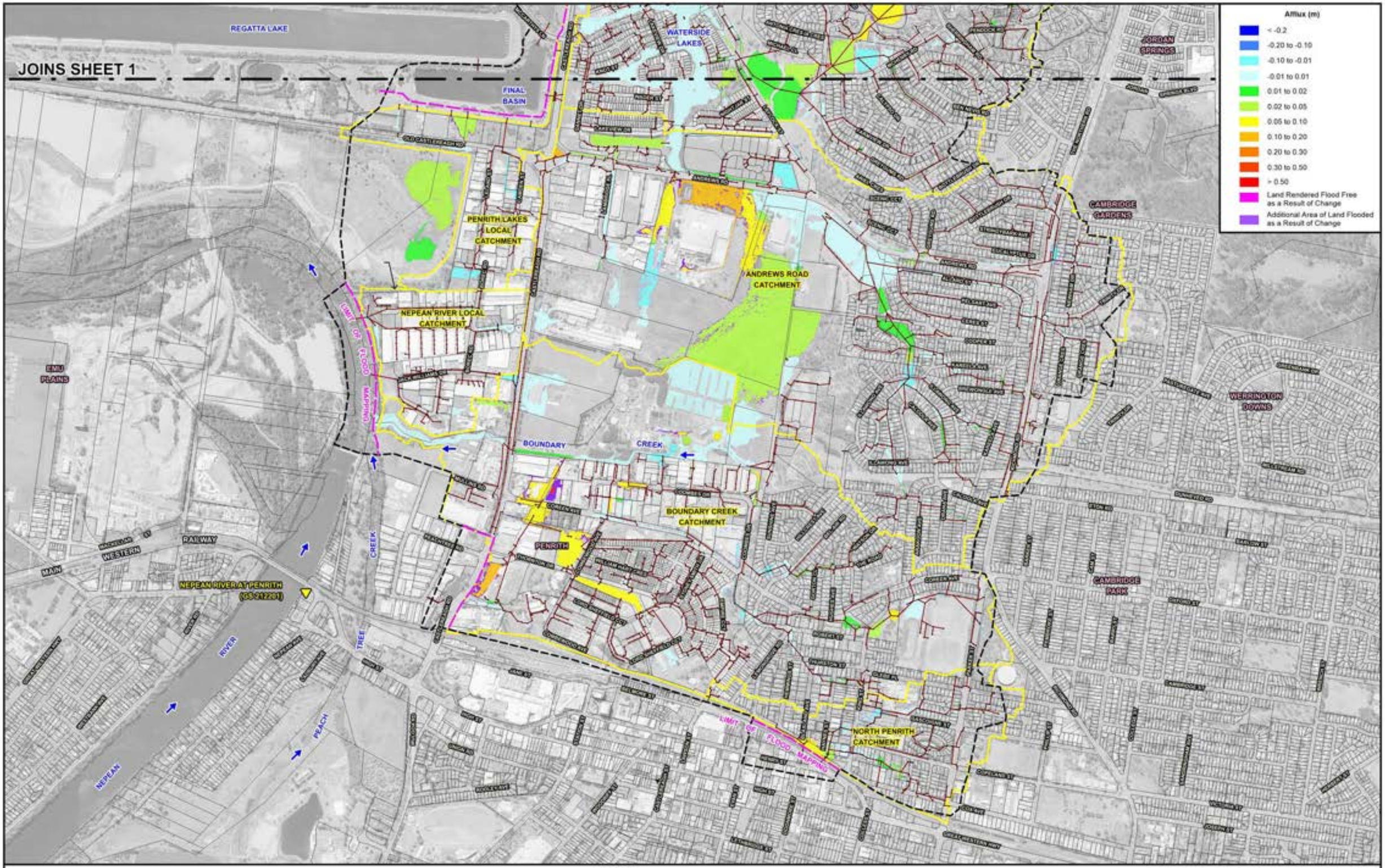
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F5.2
(Sheet 1 of 2)

DIFFERENCE IN PEAK FLOOD LEVELS DERIVED USING PROCEDURES SET OUT IN ARR87 AND ARR2019
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Note.
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Lyall & Associates

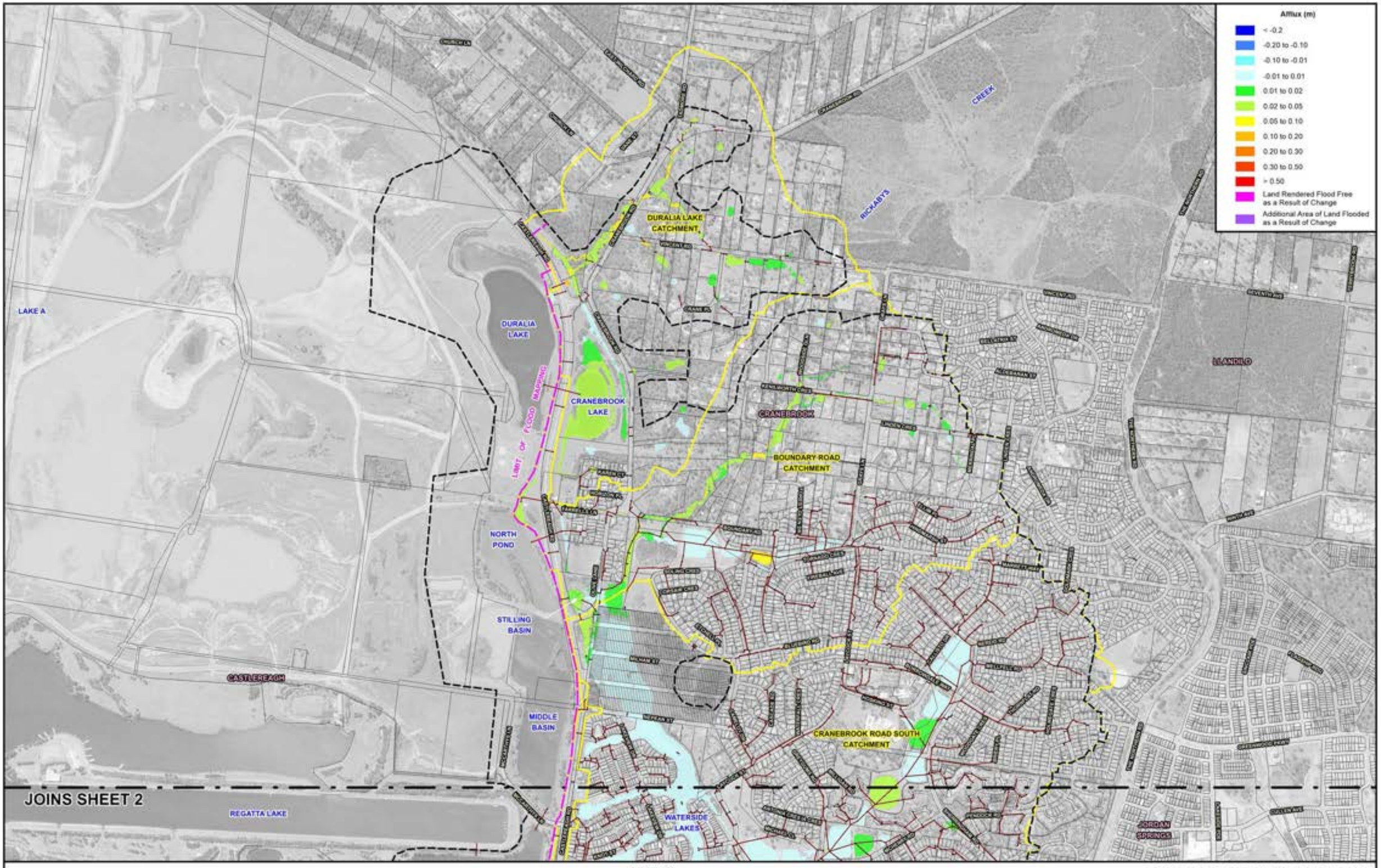
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F5.2
(Sheet 2 of 2)

DIFFERENCE IN PEAK FLOOD LEVELS DERIVED USING PROCEDURES SET OUT IN ARR87 AND ARR2019
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.1
(Sheet 1 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.1
(Sheet 2 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 m grid and does not necessarily incorporate localised features which can influence flooding behaviour in individual allotments.

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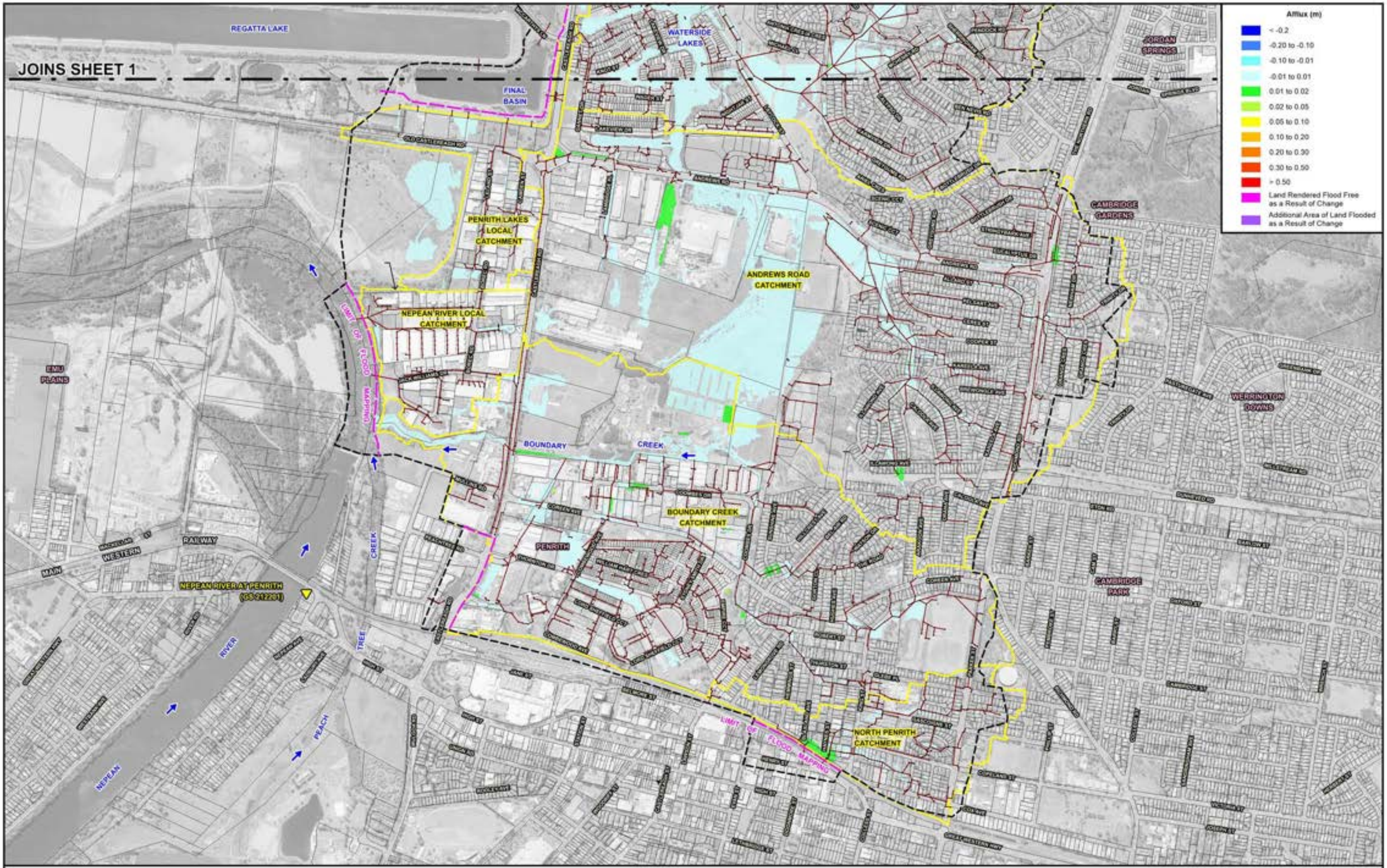
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.2
(Sheet 1 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

Lyall & Associates

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.2
(Sheet 2 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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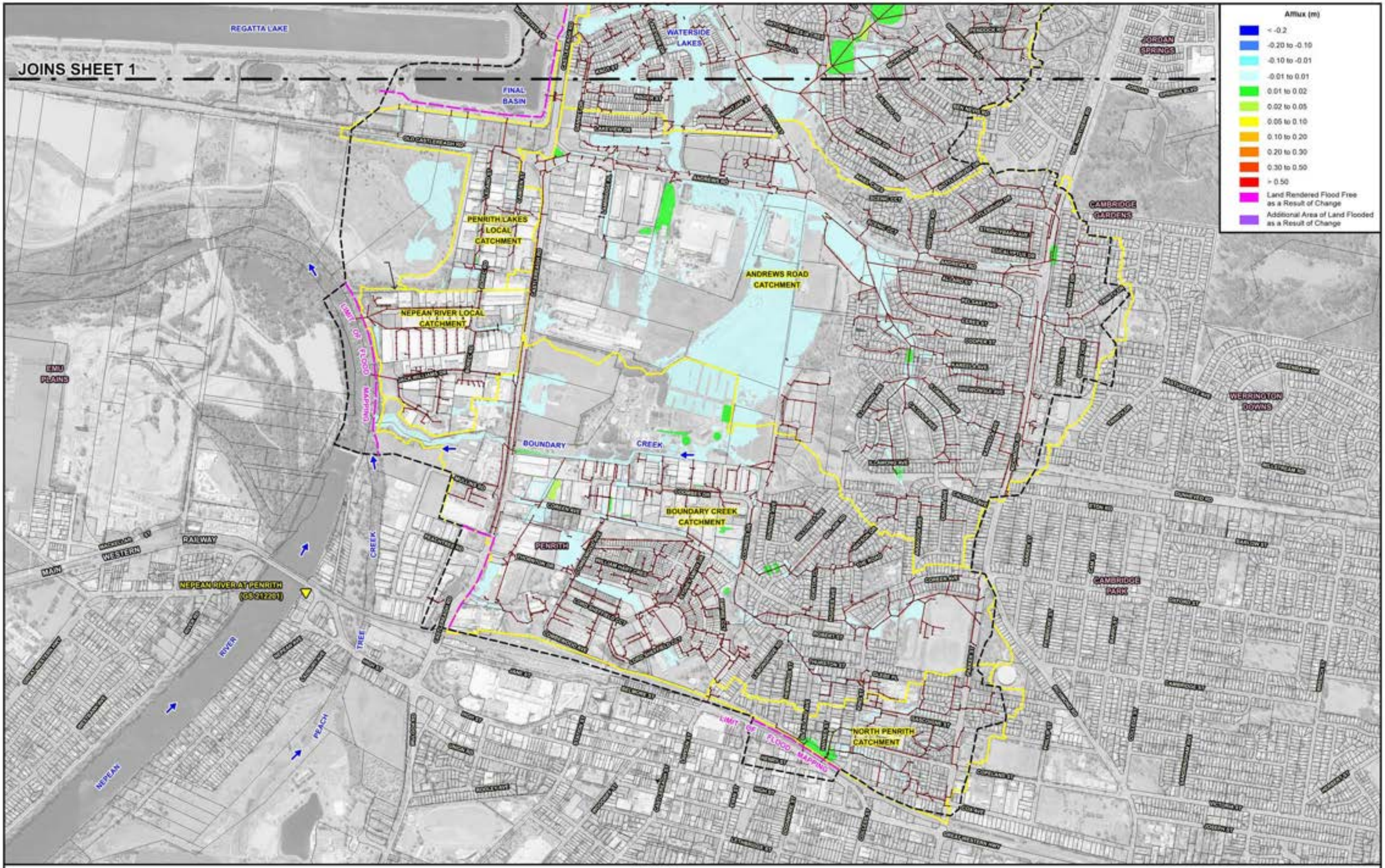
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.3
(Sheet 1 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note.
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LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F6.3
(Sheet 2 of 2)

IMPACT OF FUTURE DEVELOPMENT ON FLOOD BEHAVIOUR
LOCAL CATCHMENT FLOODING ONLY - 0.5% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note

The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Boundary

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.1
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 10% INCREASE IN RAINFALL INTENSITY
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note

The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.1
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 10% INCREASE IN RAINFALL INTENSITY
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note

The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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.

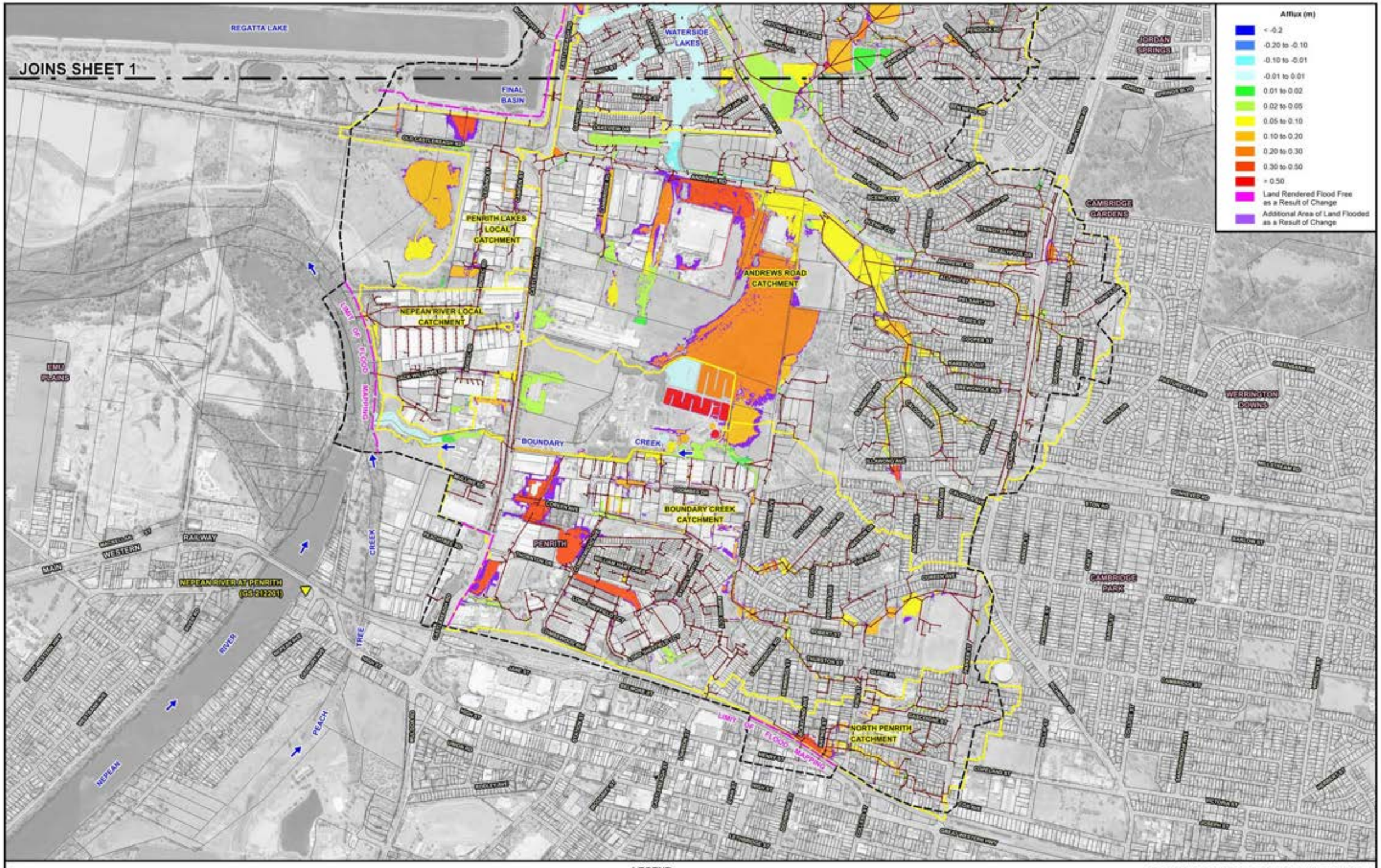
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.2
(Sheet 1 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 30% INCREASE IN RAINFALL INTENSITY
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

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.

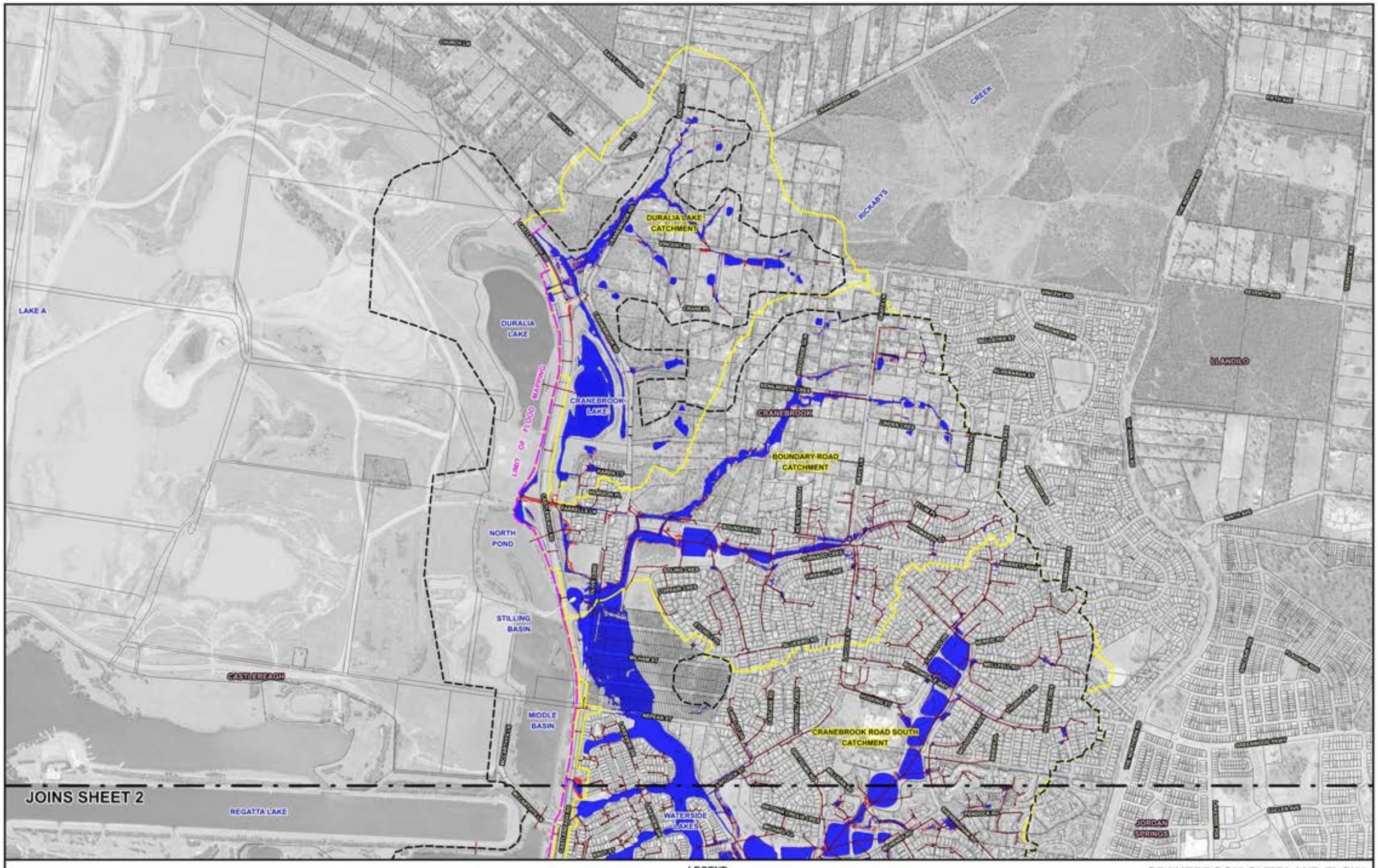
LEGEND

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.2
(Sheet 2 of 2)

SENSITIVITY OF FLOOD BEHAVIOUR TO 30% INCREASE IN RAINFALL INTENSITY
LOCAL CATCHMENT FLOODING ONLY - 1% AEP



N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note

The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- 1% AEP
- 1% AEP Rainfall Increased by 10%
- 1% AEP Rainfall Increased by 30%

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.3
(Sheet 1 of 2)

IMPACT OF INCREASED RAINFALL INTENSITIES ON EXTENT OF FLOODING
LOCAL CATCHMENT FLOODING ONLY - 1% AEP

JOINS SHEET 1

REGATTA LAKE

WATERSIDE LAKES

JORDAN SPRINGS

FINAL BASIN

PENRITH LAKES LOCAL CATCHMENT

ANDREWS ROAD CATCHMENT

CAMBRIDGE GARDENS

NEPEAN RIVER LOCAL CATCHMENT

LIMIT OF FLOOD MAPPING

EMU PLAINS

WERRINGTON DOWNS

BOUNDARY CREEK

BOUNDARY CREEK CATCHMENT

PENRITH

WESTERN RAILWAY

MAIN

NEPEAN RIVER AT PENRITH (GS 212201)

CREEK

CAMBRIDGE PARK

NORTH PENRITH CATCHMENT

NEPEAN RIVER

PEACH TREE

N

300 0 300 600 900 m

Scale: 1:30,000

Lyall & Associates

Note:
The ground surface model incorporated in TUFLOW is based on LiDAR survey which has been sampled on a 2 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

- Study Catchments
- Modelled Stormwater Network
- Two-Dimensional Model Bounday
- WaterNSW Stream Gauge
- 1% AEP
- 1% AEP Rainfall Increased by 10%
- 1% AEP Rainfall Increased by 30%

CRANEBROOK OVERLAND FLOW FLOOD STUDY

Figure F7.3
(Sheet 2 of 2)

IMPACT OF INCREASED RAINFALL INTENSITIES ON EXTENT OF FLOODING
LOCAL CATCHMENT FLOODING ONLY - 1% AEP