
FIGURE 9
HAZARD CATEGORIES
0.5 EY EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
Western Distributor Freeway
George St
Pitt St
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
George St
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Pitt St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure09 Haz 2y.mxd

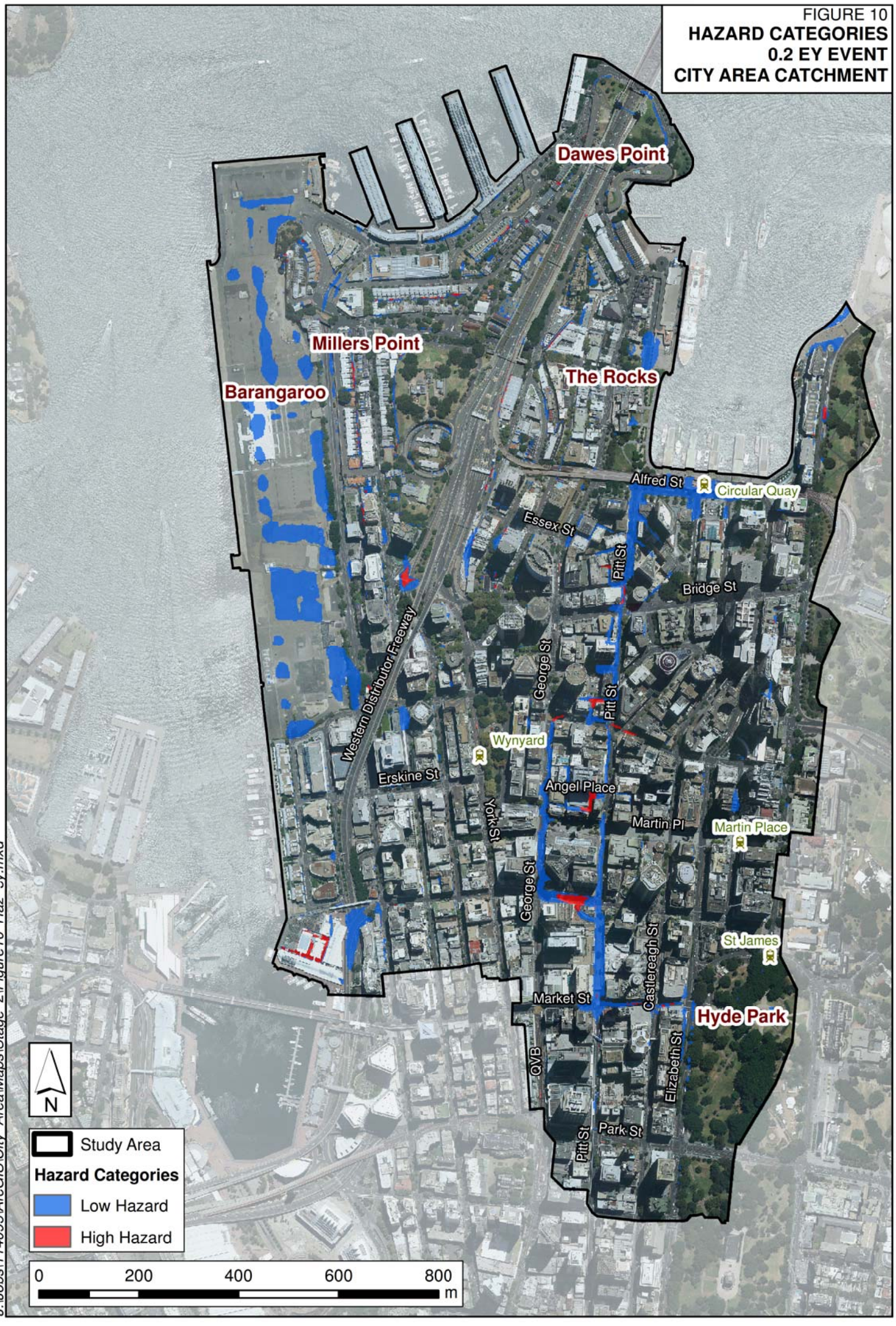


FIGURE 10
HAZARD CATEGORIES
0.2 EY EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure10 Haz 5y.mxd

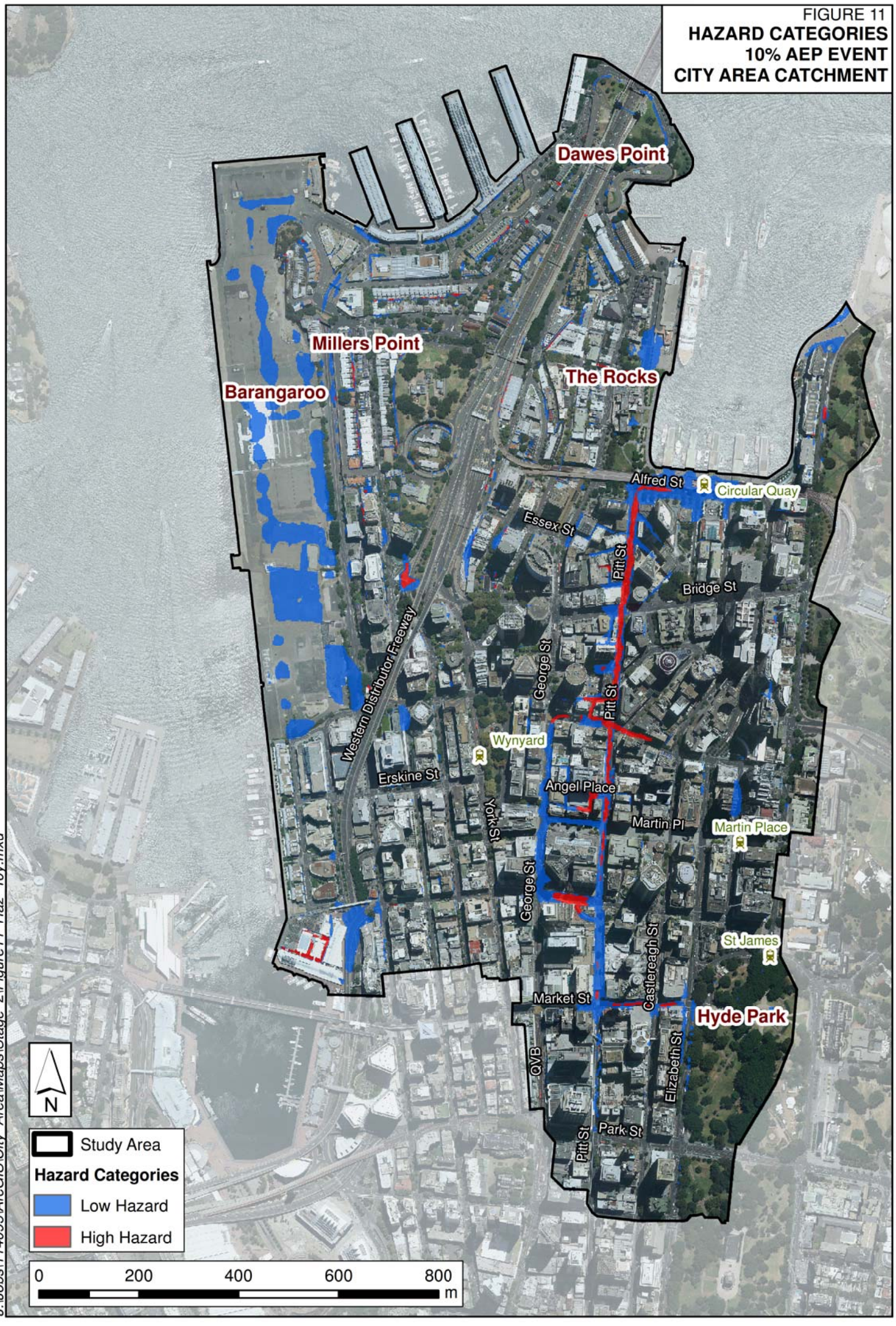


FIGURE 11
HAZARD CATEGORIES
10% AEP EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
Western Distributor Freeway
George St
Pitt St
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
George St
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Pitt St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure11 Haz 10y.mxd

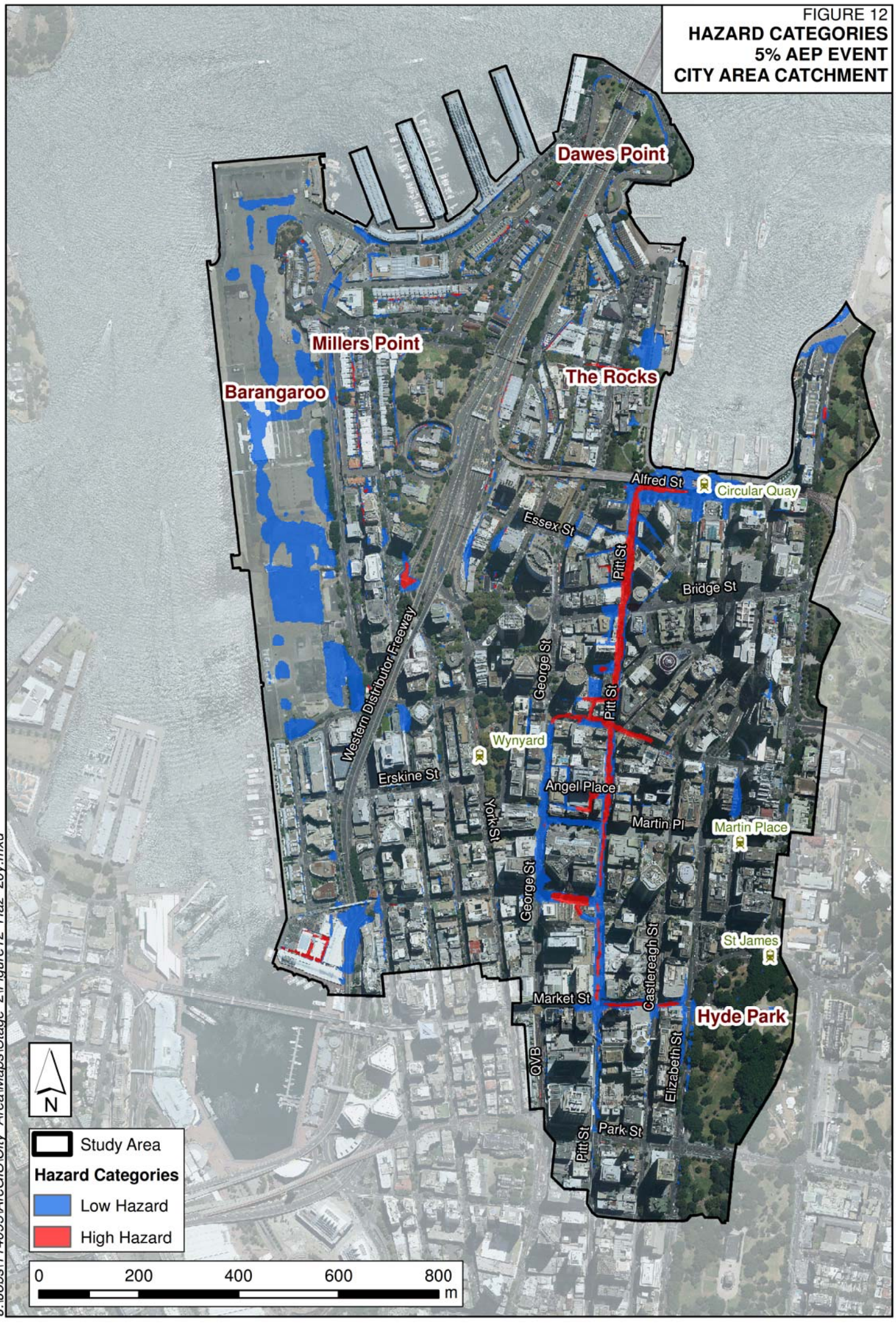


FIGURE 12
HAZARD CATEGORIES
5% AEP EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure12 Haz 20y.mxd

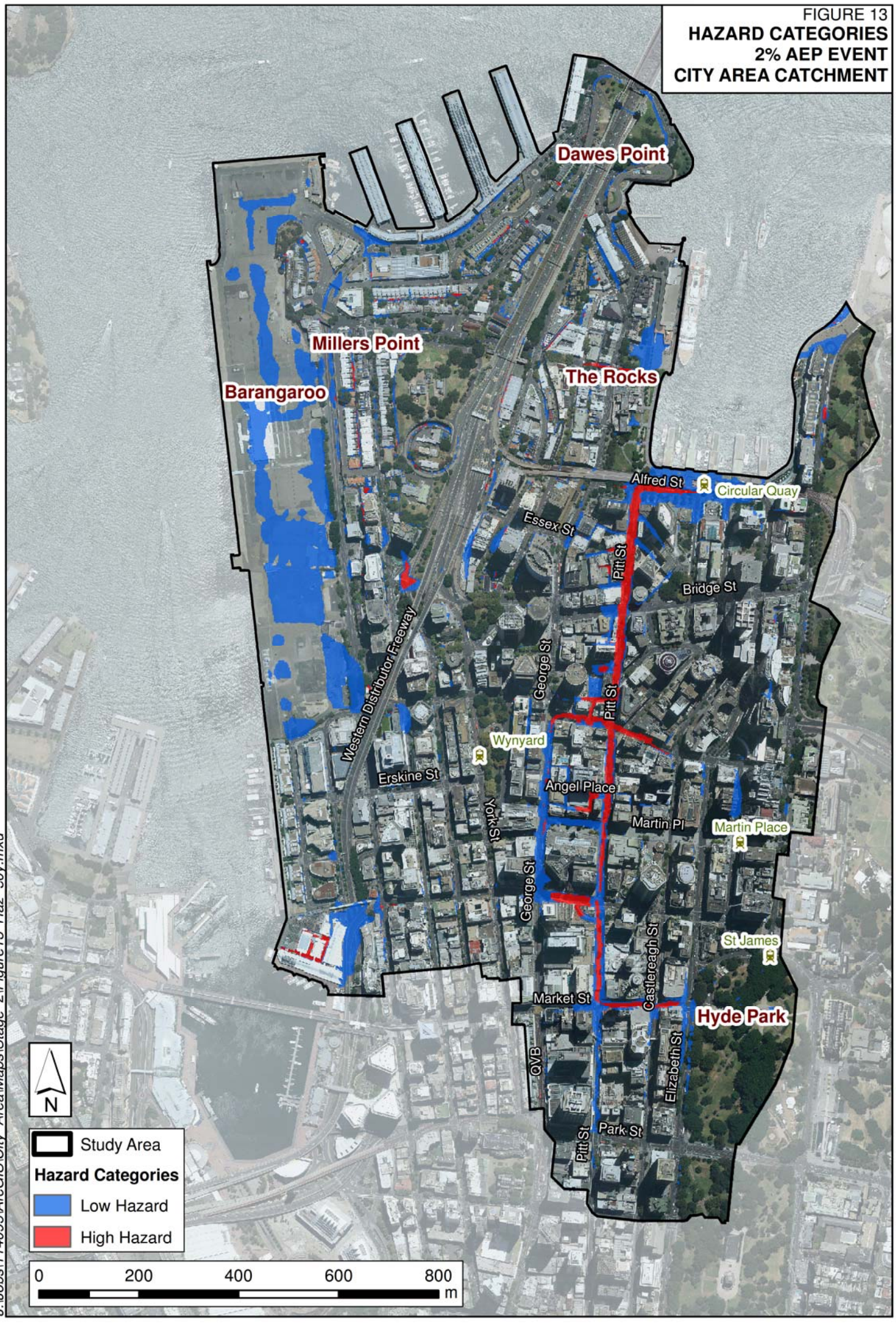


FIGURE 13
HAZARD CATEGORIES
2% AEP EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure13 Haz 50y.mxd

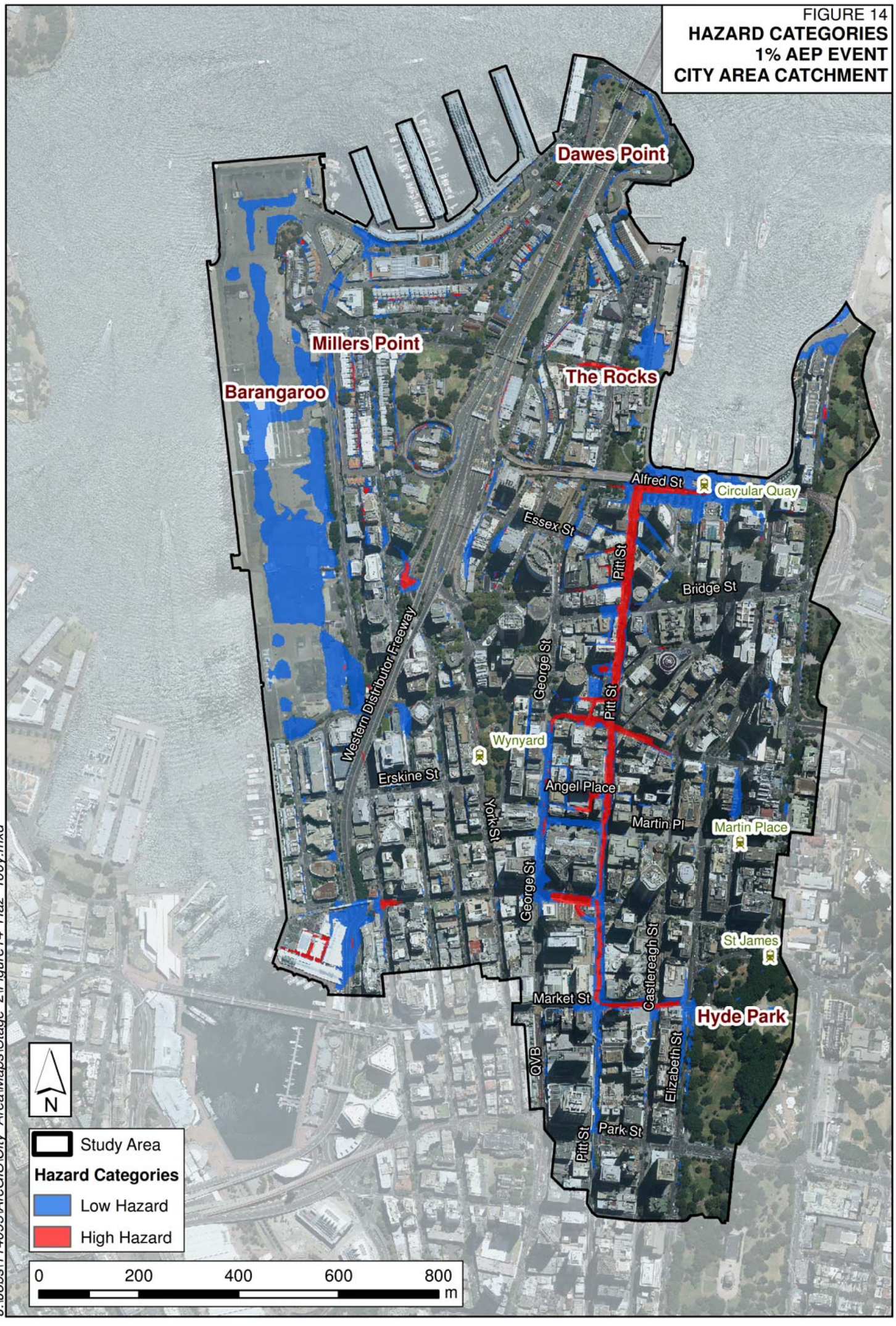


FIGURE 14
HAZARD CATEGORIES
1% AEP EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
George St
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
Pitt St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure14 Haz 100y.mxd

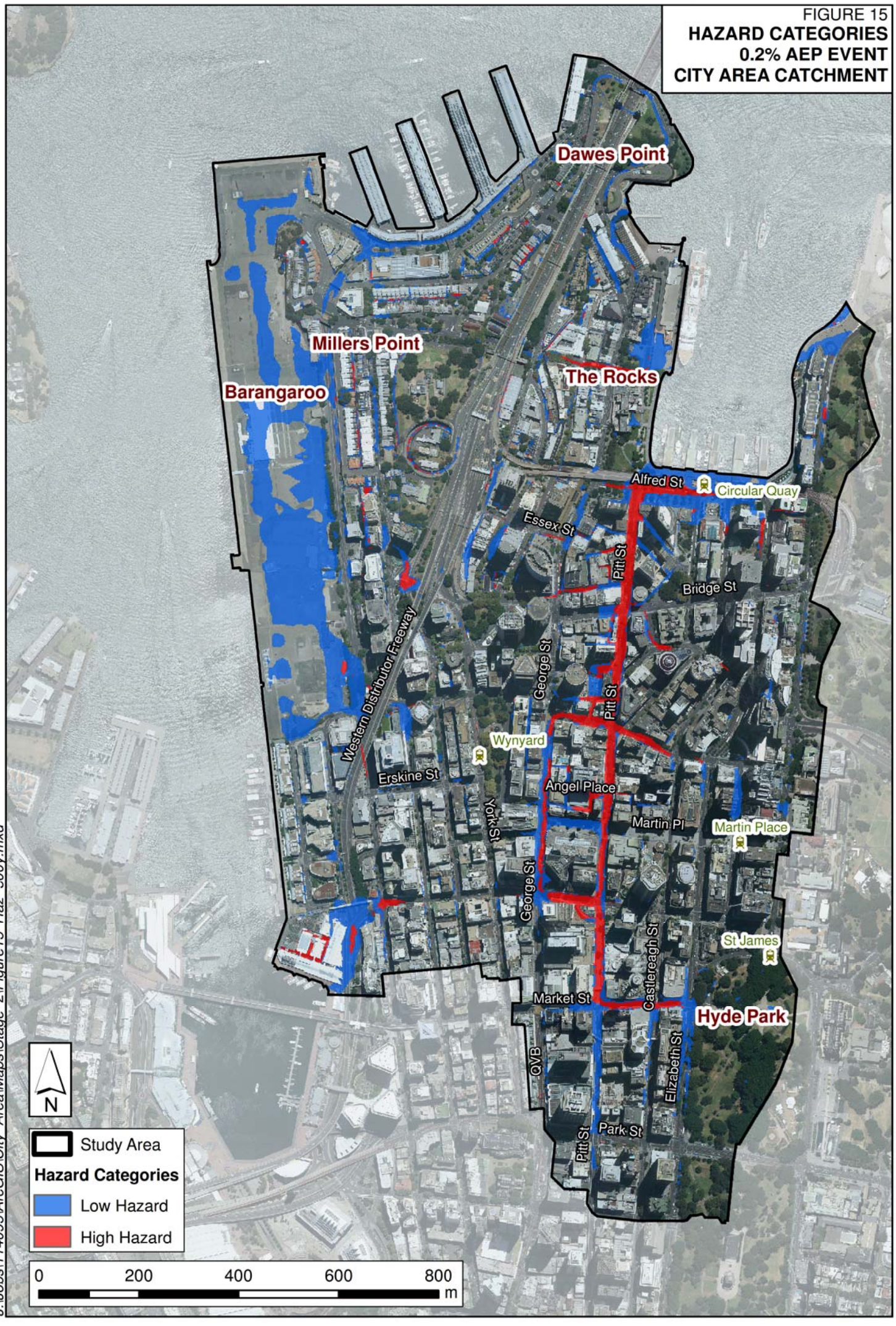


FIGURE 15
HAZARD CATEGORIES
0.2% AEP EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure15 Haz 500y.mxd

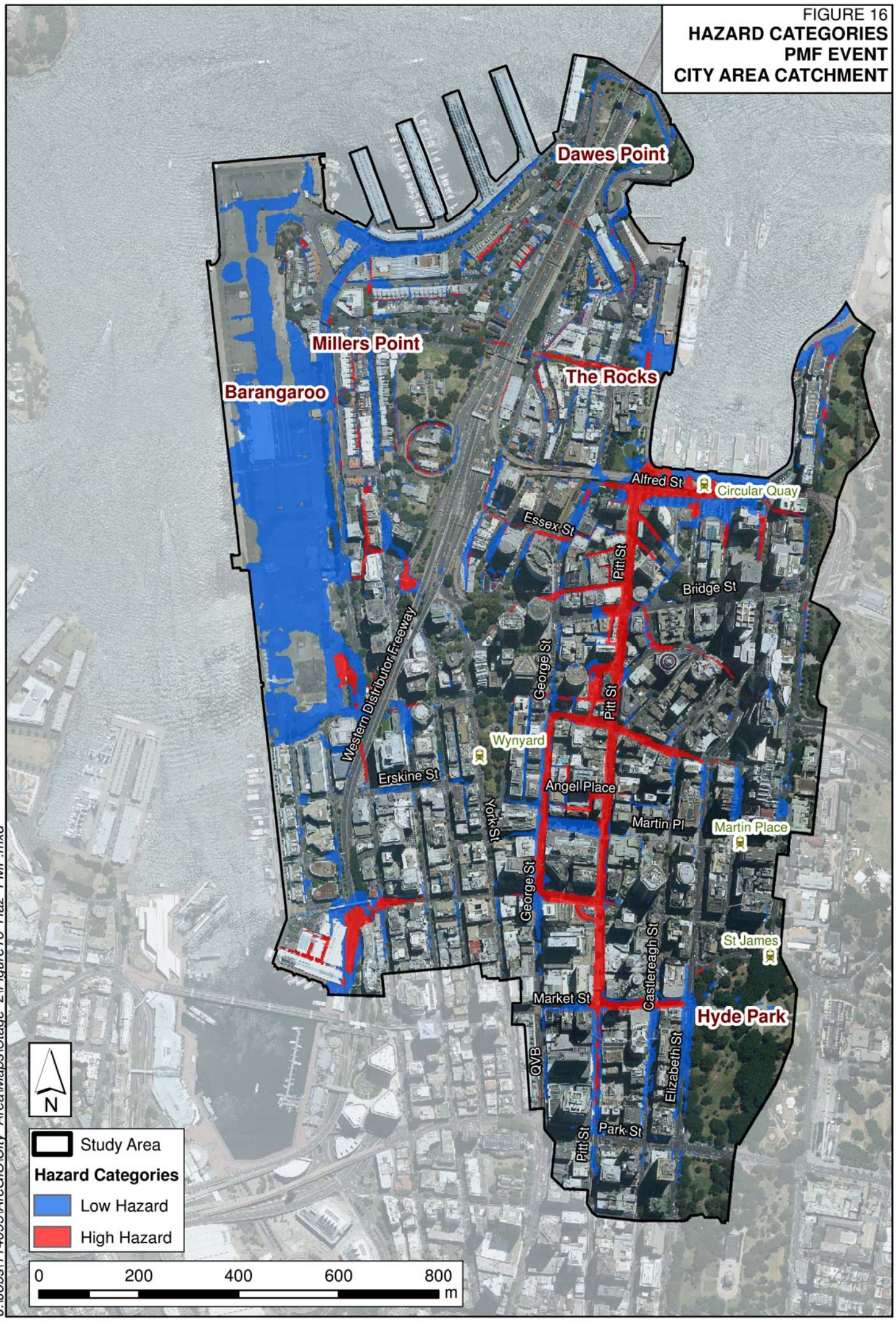


FIGURE 16
HAZARD CATEGORIES
PMF EVENT
CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
George St
Western Distributor Freeway
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Hazard Categories
Low Hazard
High Hazard
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure16 Haz PMF.mxd

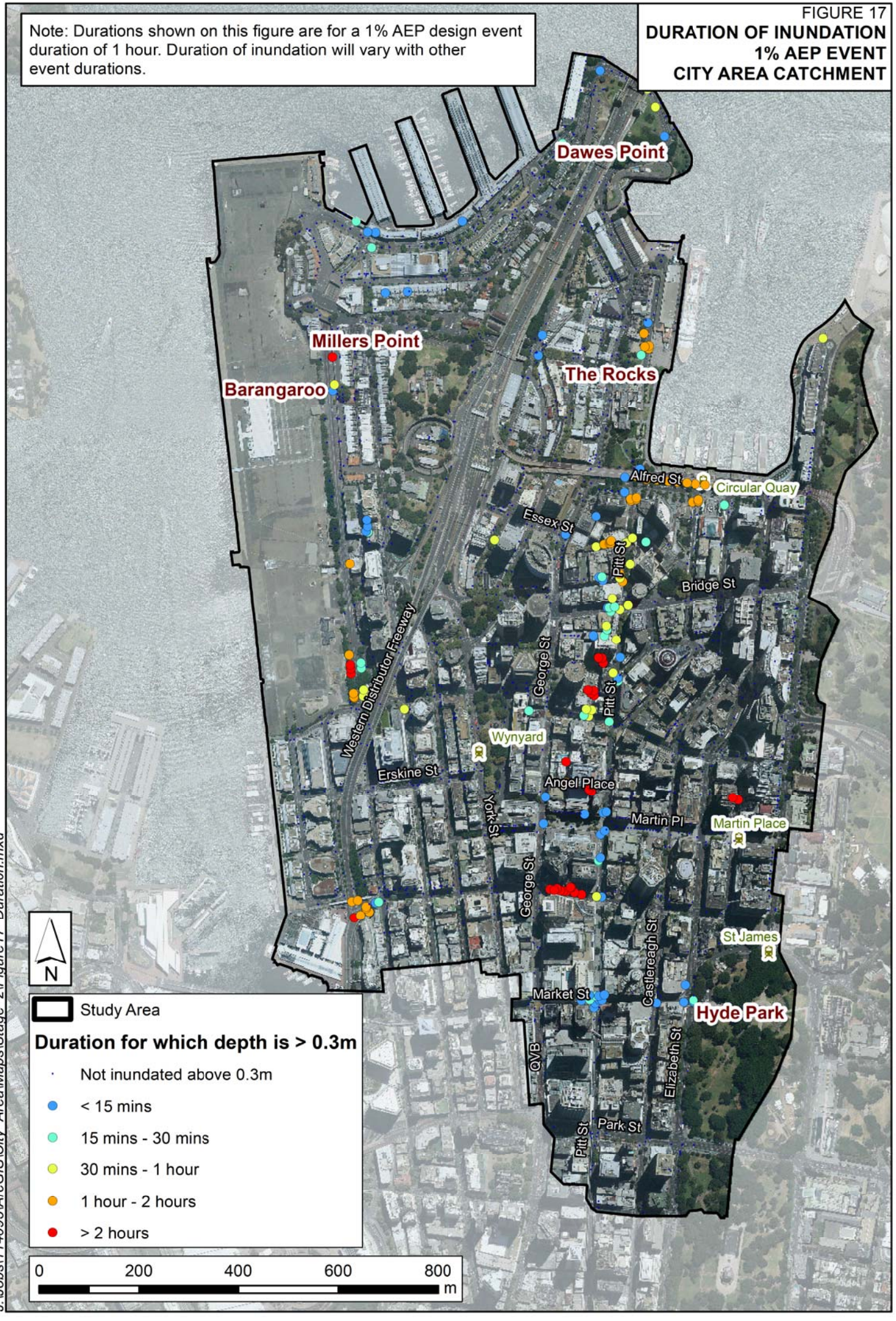
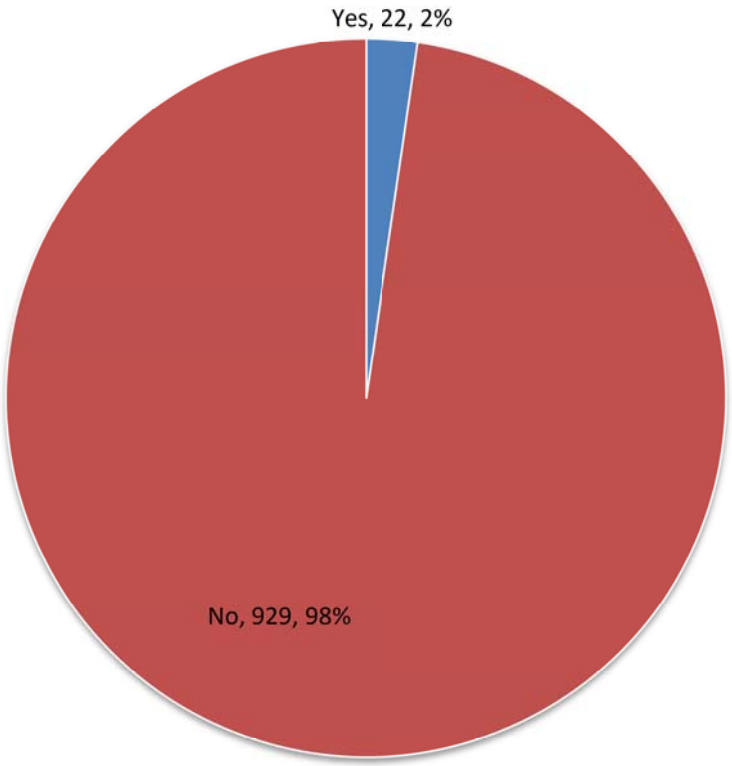


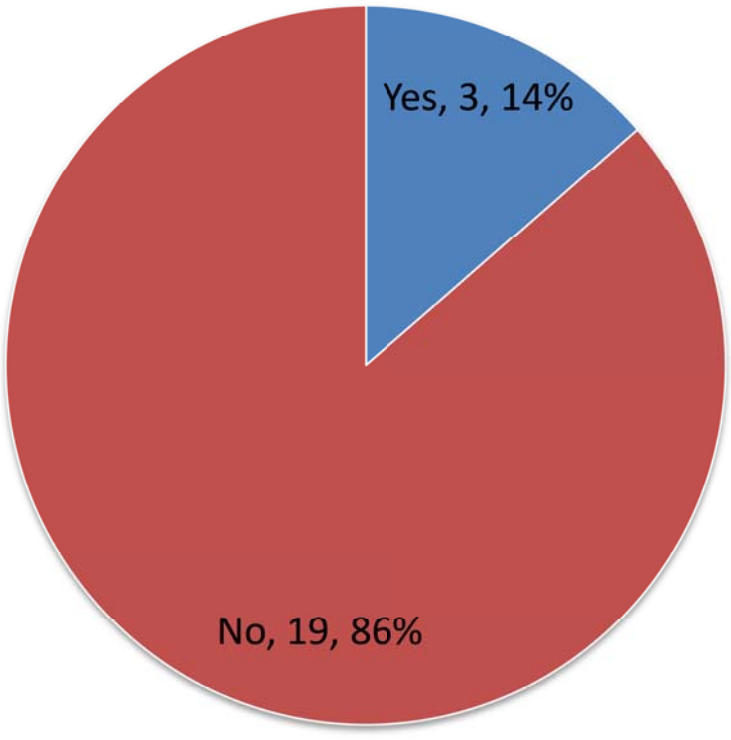
FIGURE 17
DURATION OF INUNDATION
1% AEP EVENT
CITY AREA CATCHMENT
Note: Durations shown on this figure are for a 1% AEP design event duration of 1 hour. Duration of inundation will vary with other event durations.
Dawes Point
Millers Point
Barangaroo
The Rocks
Alfred St
Circular Quay
Essex St
Pitt St
Bridge St
Western Distributor Freeway
George St
Wynyard
Erskine St
Angel Place
York St
Martin Pl
Martin Place
St James
Castlereagh St
Market St
Hyde Park
QVB
Elizabeth St
Park St
N
Study Area
Duration for which depth is > 0.3m
Not inundated above 0.3m
< 15 mins
15 mins - 30 mins
30 mins - 1 hour
1 hour - 2 hours
> 2 hours
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City AreaMaps\Stage 2\Figure17 Duration.mxd

FIGURE 18A
COMMUNITY CONSULTATION RESULTS
CITY AREA CATCHMENT

A: Number of Respondents

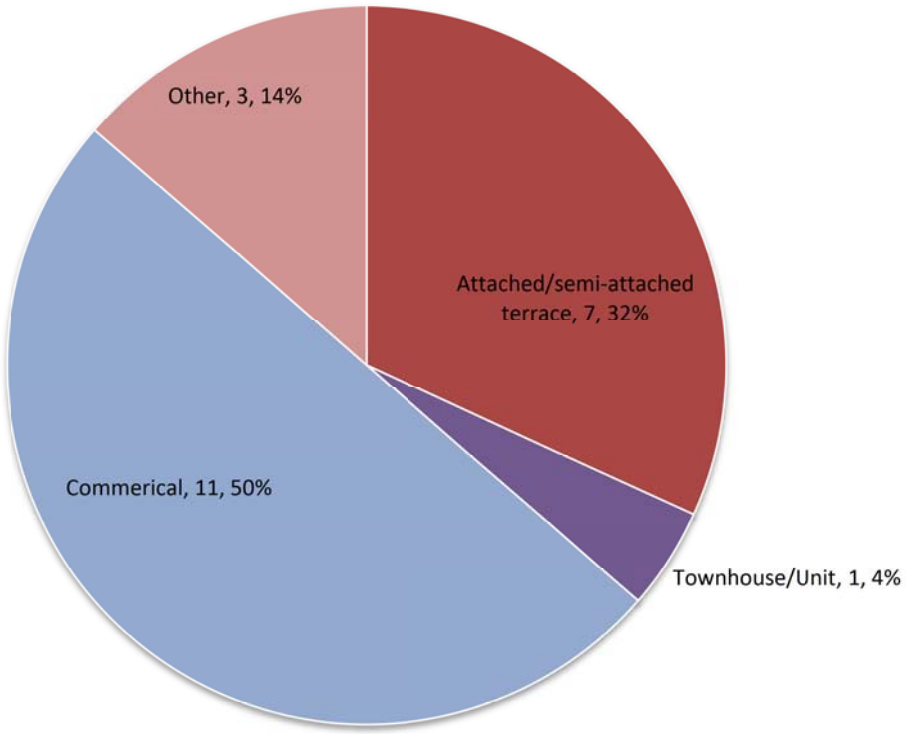


B: Experienced Flooding



\J:\Jobs\114095\Admin\Community_Consultation\results\surveys\Responses.xlsx

C: Property Type



D: Period of Living/Working/Owning Property

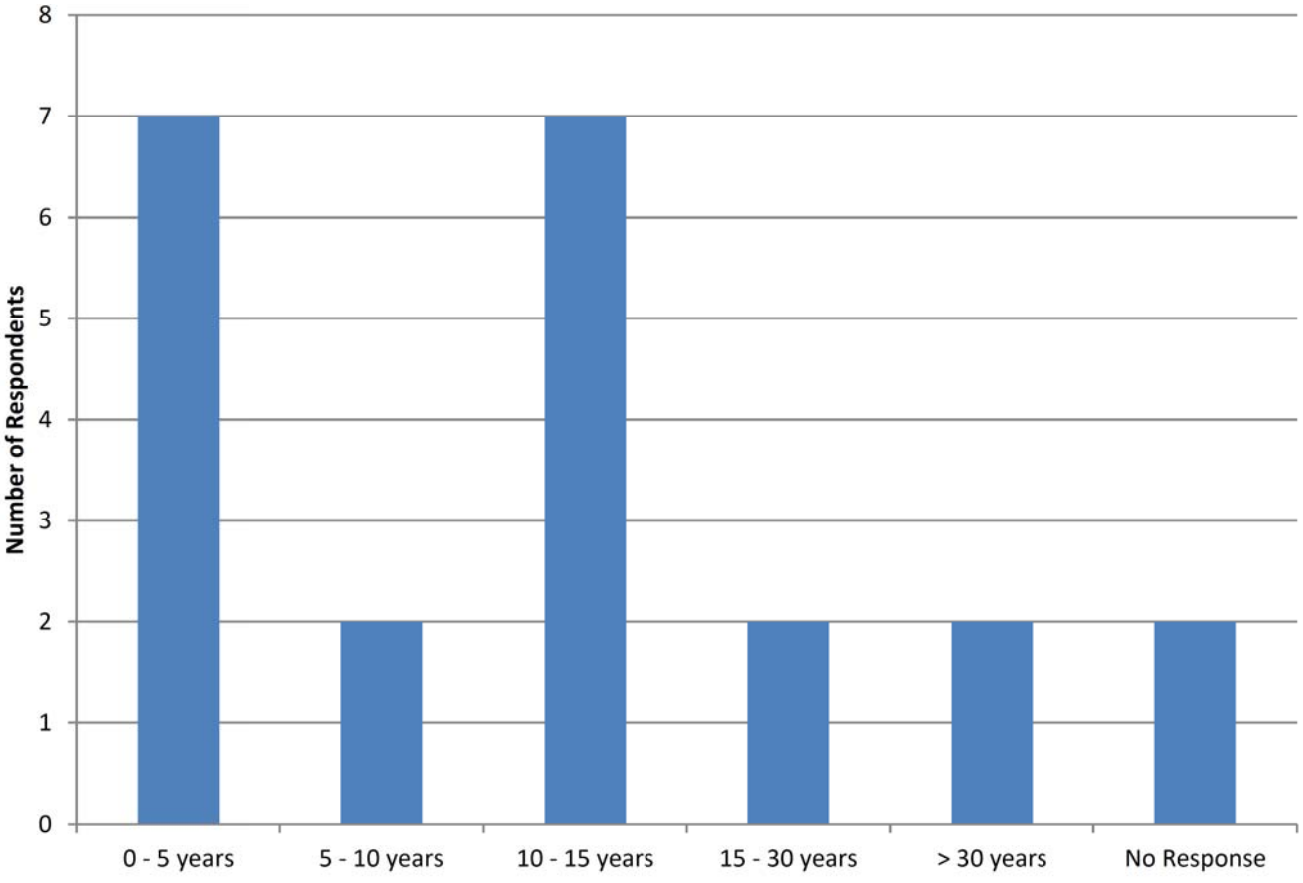


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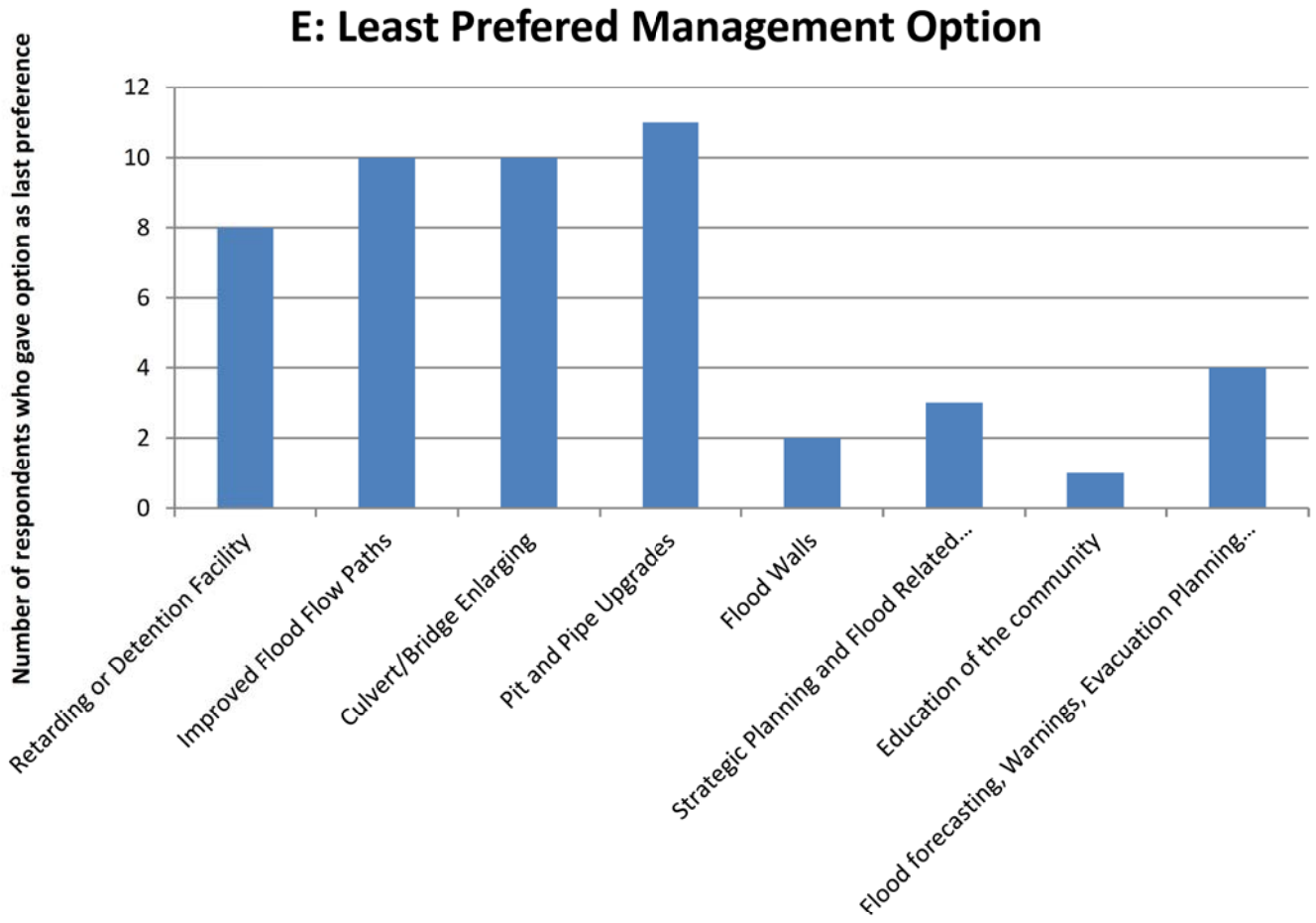
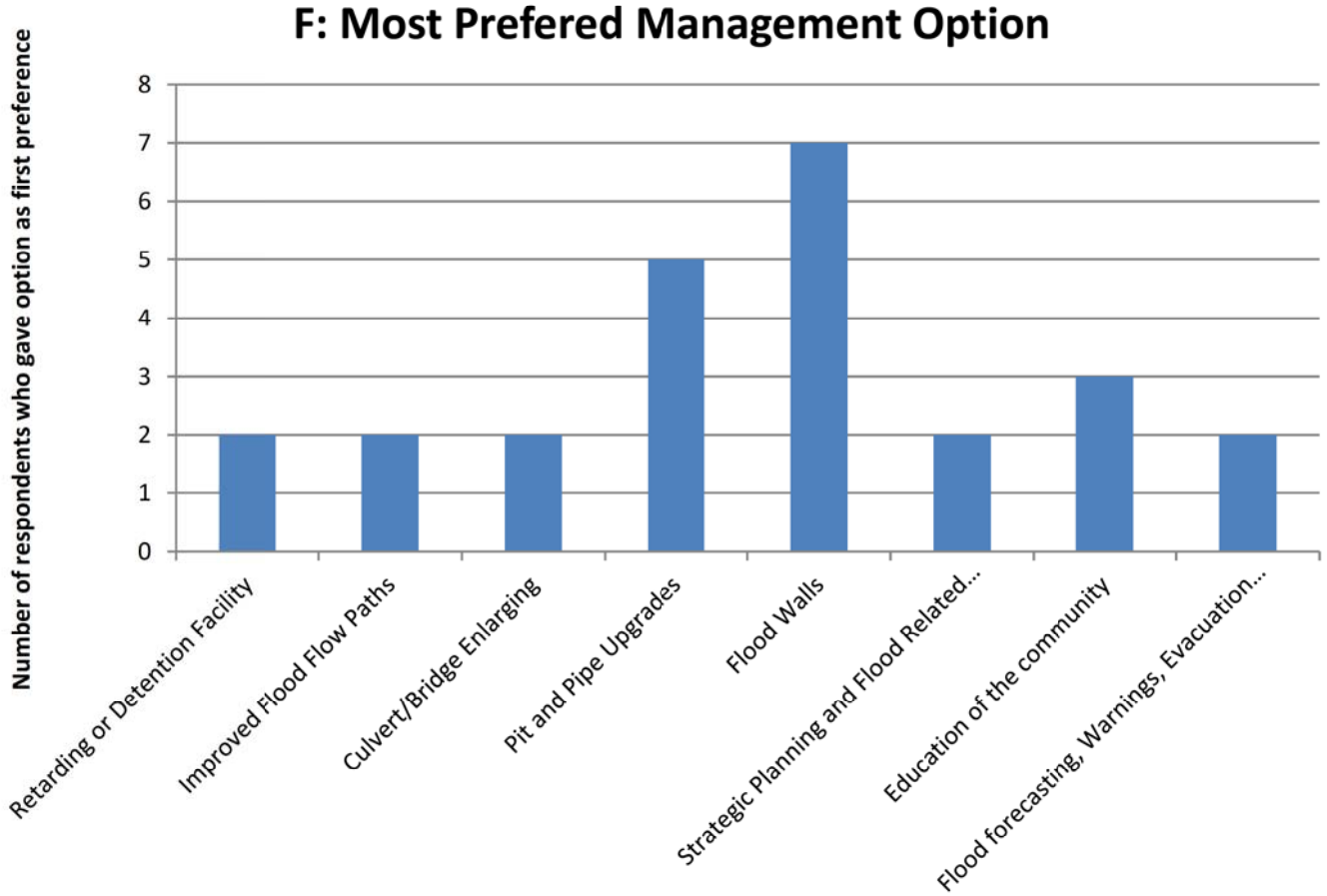
FIGURE 18C
COMMUNITY CONSULTATION RESULTS
CITY AREA CATCHMENT





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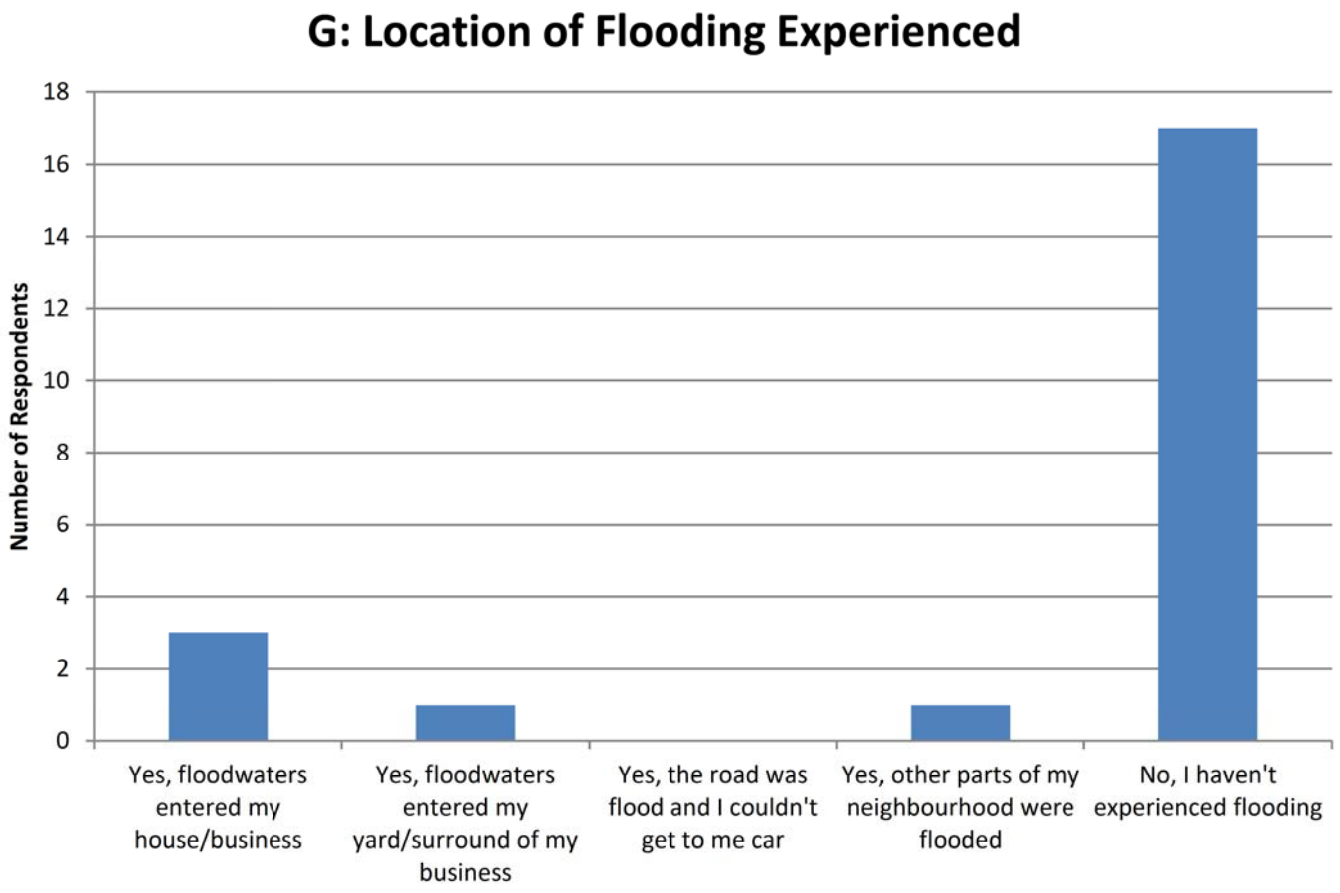
G: Location of Flooding Experienced
Number of Respondents
18
16
14
12
10
8
6
4
2
0
Yes, floodwaters entered my house/business
Yes, floodwaters entered my yard/surround of my business
Yes, the road was flood and I couldn't get to me car
Yes, other parts of my neighbourhood were flooded
No, I haven't experienced flooding

FIGURE 19
PROPERTIES FLOODED
CITY AREA CATCHMENT

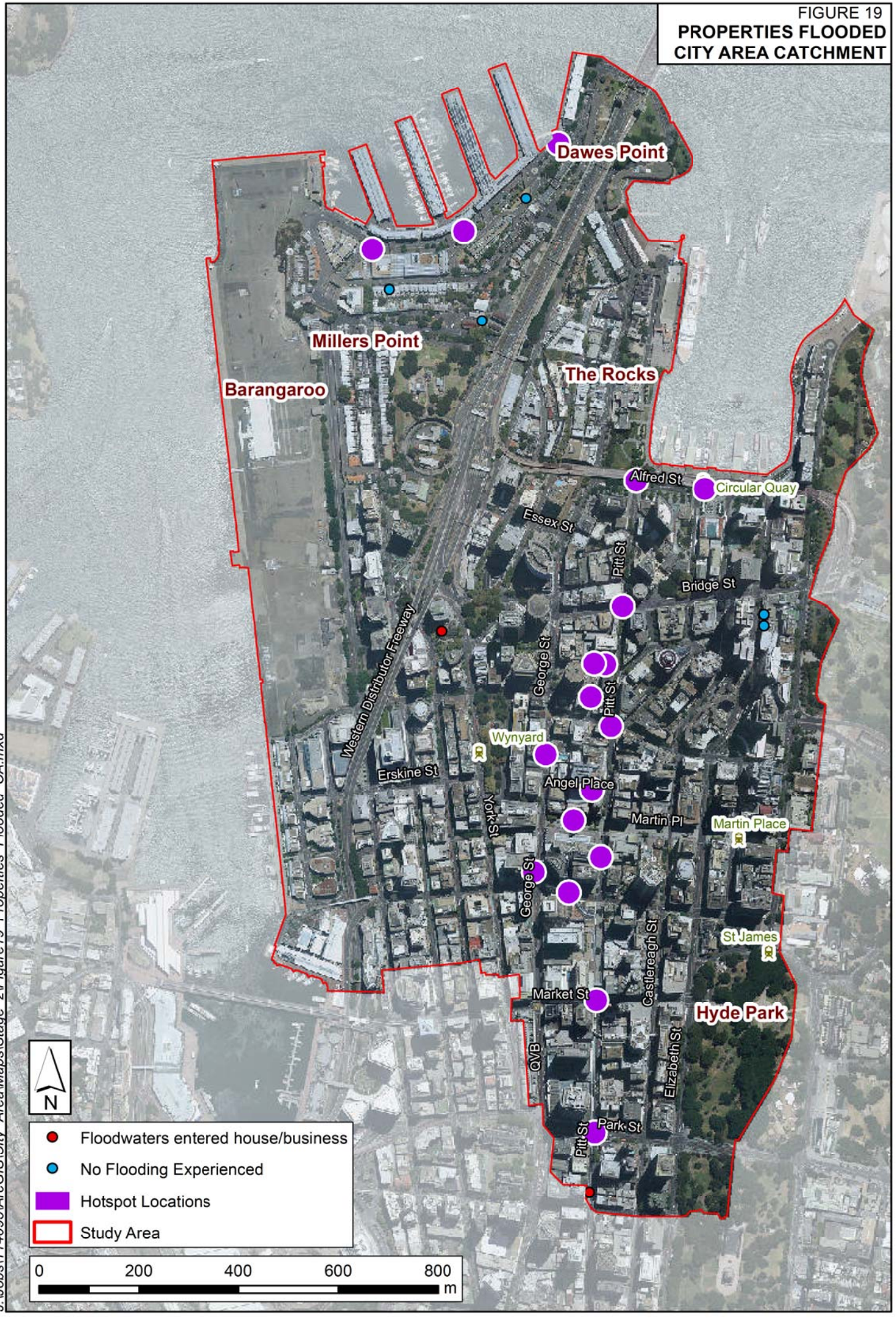

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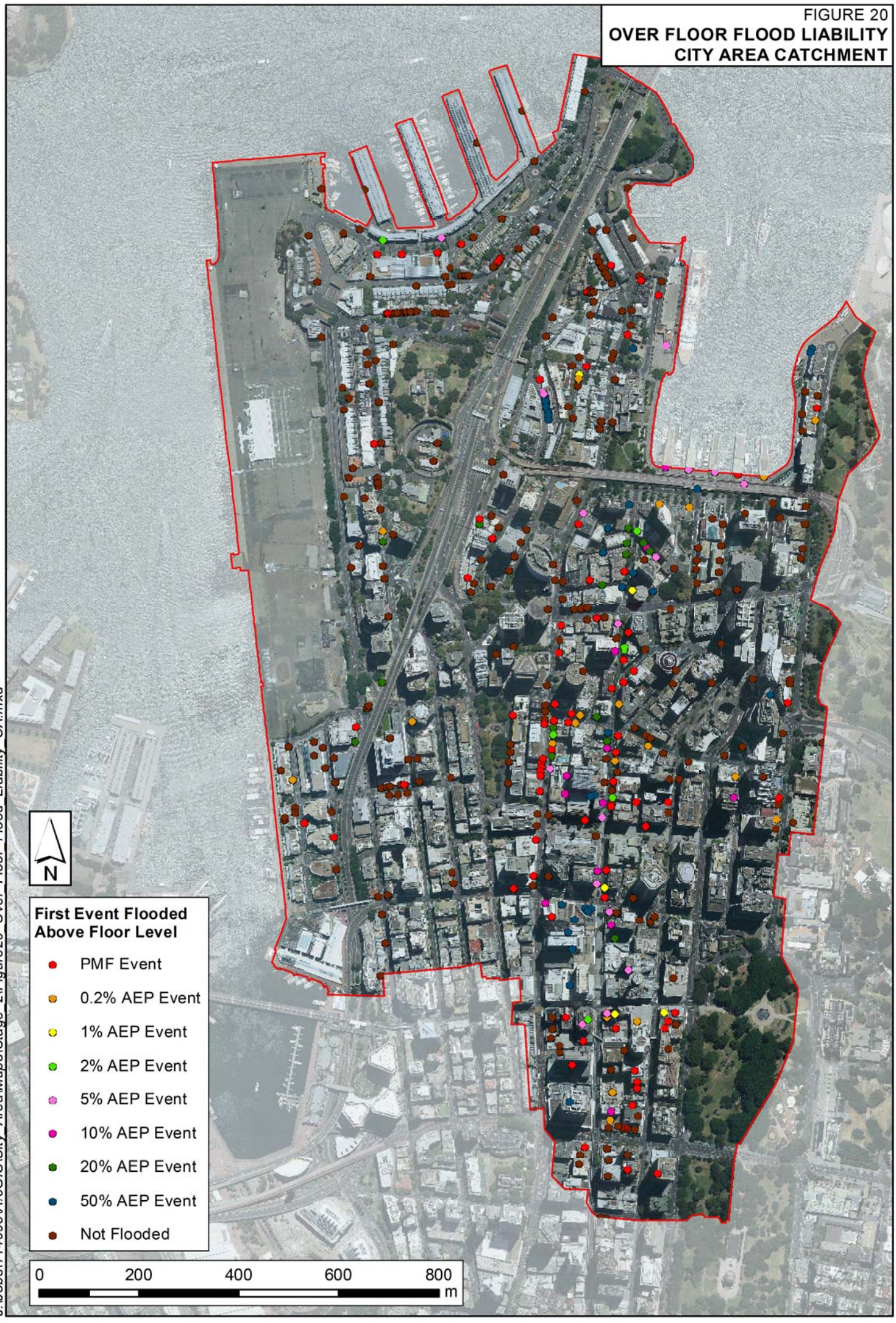
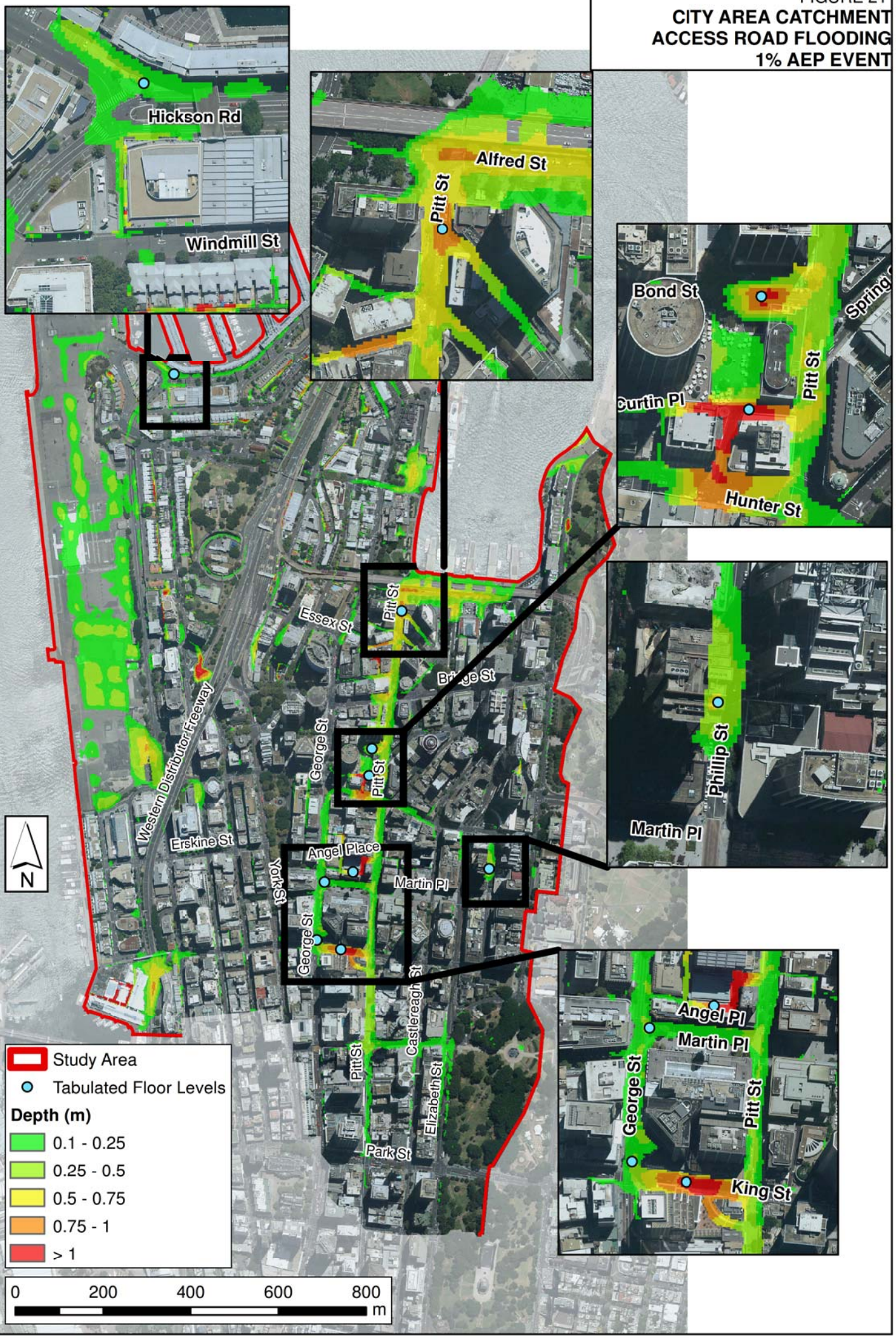
FIGURE 20
OVER FLOOR FLOOD LIABILITY
CITY AREA CATCHMENT



J:\Jobs\114095\ArcGIS\City_Area\Maps\Stage_2\Figure20_Over_Floor_Flood_Liability_CA.mxd

FIGURE 21
CITY AREA CATCHMENT
ACCESS ROAD FLOODING
1% AEP EVENT



J:\Jobs\1140951\ArcGIS\City Area\Maps\Stage 2\Figure21 Access Road Flooding CA.mxd

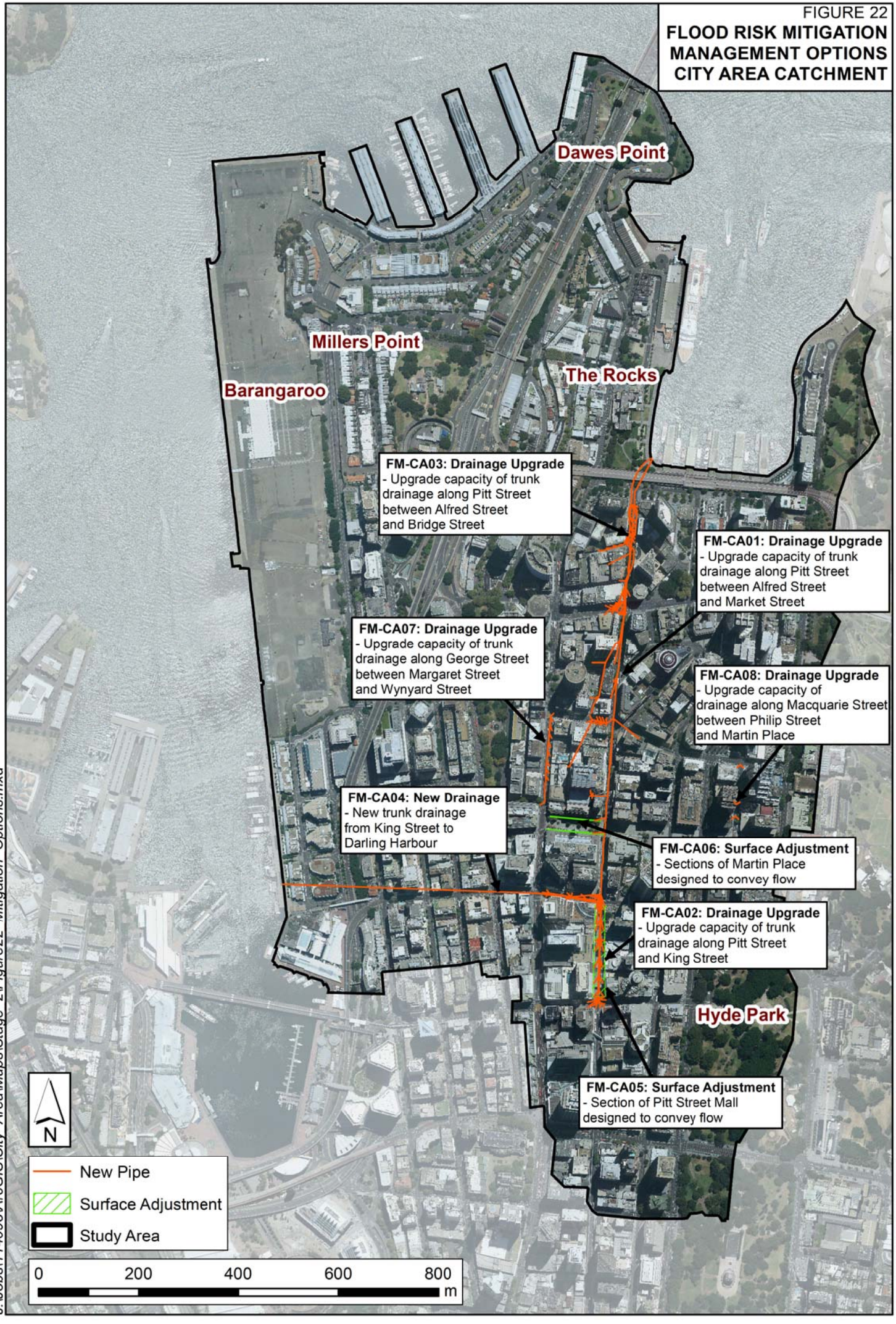


FIGURE 22
FLOOD RISK MITIGATION MANAGEMENT OPTIONS CITY AREA CATCHMENT
Dawes Point
Millers Point
Barangaroo
The Rocks
Hyde Park
FM-CA03: Drainage Upgrade
- Upgrade capacity of trunk drainage along Pitt Street between Alfred Street and Bridge Street
FM-CA01: Drainage Upgrade
- Upgrade capacity of trunk drainage along Pitt Street between Alfred Street and Market Street
FM-CA07: Drainage Upgrade
- Upgrade capacity of trunk drainage along George Street between Margaret Street and Wynyard Street
FM-CA08: Drainage Upgrade
- Upgrade capacity of drainage along Macquarie Street between Philip Street and Martin Place
FM-CA04: New Drainage
- New trunk drainage from King Street to Darling Harbour
FM-CA06: Surface Adjustment
- Sections of Martin Place designed to convey flow
FM-CA02: Drainage Upgrade
- Upgrade capacity of trunk drainage along Pitt Street and King Street
FM-CA05: Surface Adjustment
- Section of Pitt Street Mall designed to convey flow
N
New Pipe
Surface Adjustment
Study Area
0
200
400
600
800
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure22 Mitigation Options.mxd

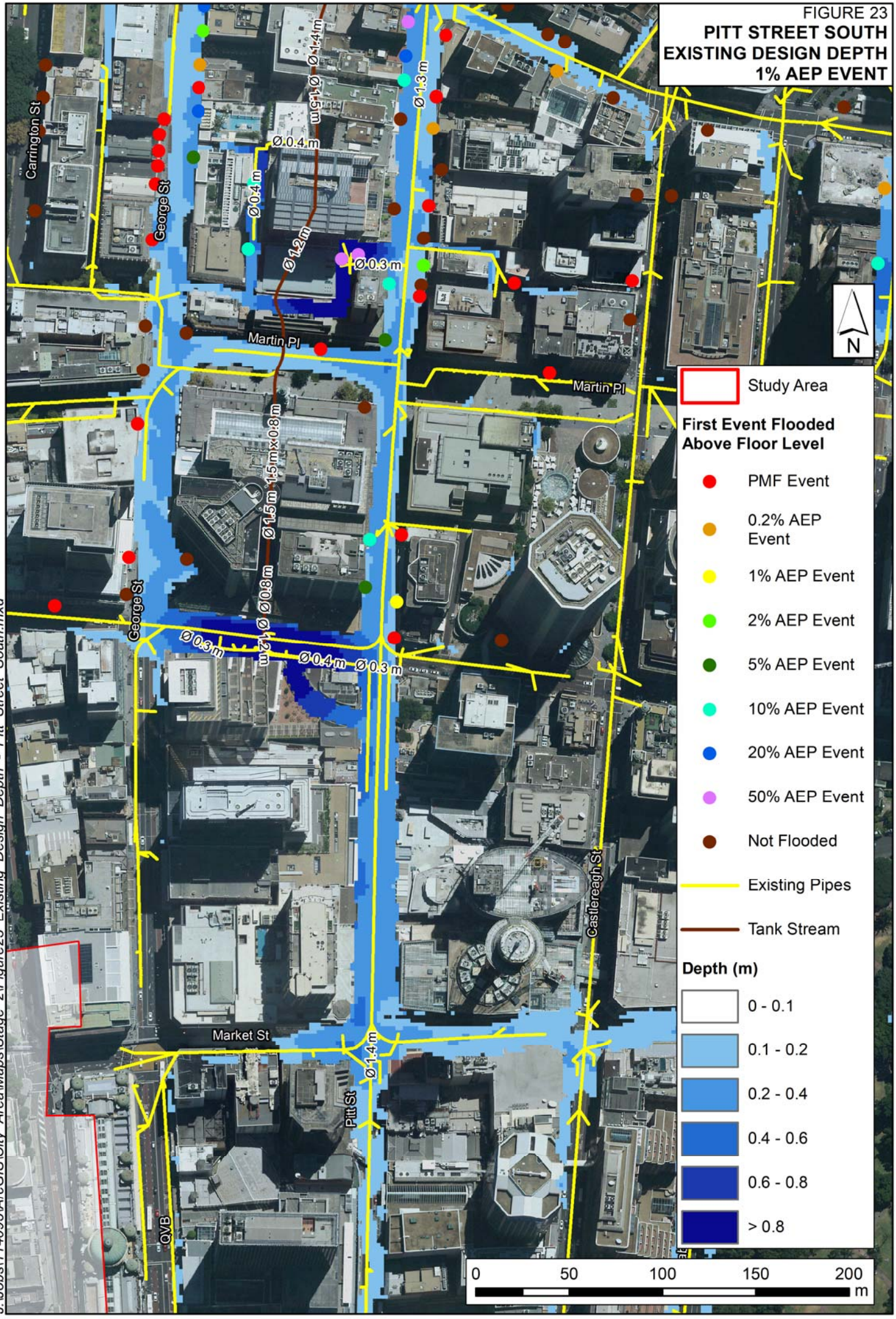


FIGURE 23
PITT STREET SOUTH
EXISTING DESIGN DEPTH
1% AEP EVENT
Carrington St
George St
Martin Pl
Market St
Pitt St
Castlereagh St
QVB
Ø 1.4 m
Ø 1.6 m
Ø 1.3 m
Ø 0.4 m
Ø 0.4 m
Ø 1.2 m
Ø 0.3 m
Ø 1.5 m x 1.5 m x 0.8 m
Ø 1.5 m
Ø 0.8 m
Ø 1.2 m
Ø 0.3 m
Ø 0.4 m
Ø 0.3 m
Ø 1.4 m
N
Study Area
First Event Flooded Above Floor Level
PMF Event
0.2% AEP Event
1% AEP Event
2% AEP Event
5% AEP Event
10% AEP Event
20% AEP Event
50% AEP Event
Not Flooded
Existing Pipes
Tank Stream
Depth (m)
0 - 0.1
0.1 - 0.2
0.2 - 0.4
0.4 - 0.6
0.6 - 0.8
> 0.8
0
50
100
150
200
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure23 Existing Design Depth - Pitt Street South.mxd

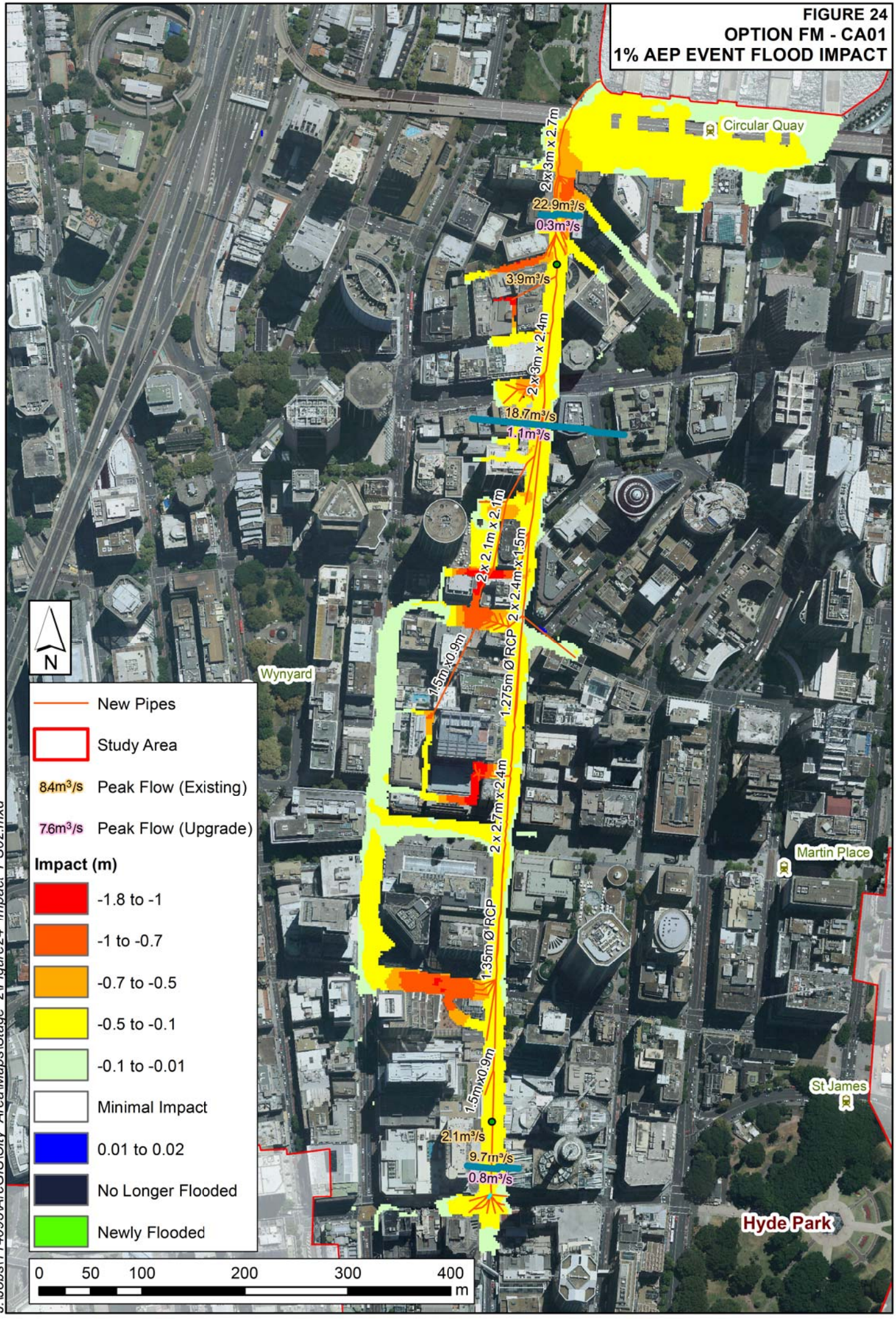


FIGURE 24
OPTION FM - CA01
1% AEP EVENT FLOOD IMPACT
Circular Quay
2x 3m x 2.7m
22.9m³/s
0.3m³/s
3.9m³/s
2x 3m x 2.4m
18.7m³/s
1.1m³/s
2x 2.1m x 2.1m
2x 2.1m x 1.5m
2 x 2.4m x 1.5m
1.5m x 0.9m
1.275m Ø RCP
2 x 2.4m x 2.4m
2 x 2.7m x 2.4m
1.35m Ø RCP
1.5m x 0.9m
2.1m³/s
9.7m³/s
0.8m³/s
Wynyard
Martin Place
St James
Hyde Park
N
New Pipes
Study Area
84m³/s Peak Flow (Existing)
76m³/s Peak Flow (Upgrade)
Impact (m)
-1.8 to -1
-1 to -0.7
-0.7 to -0.5
-0.5 to -0.1
-0.1 to -0.01
Minimal Impact
0.01 to 0.02
No Longer Flooded
Newly Flooded
0 50 100 200 300 400
m
J:\Jobs\114095\ArcGIS\City Area\Maps\Stage 2\Figure24 Impact PS02.mxd

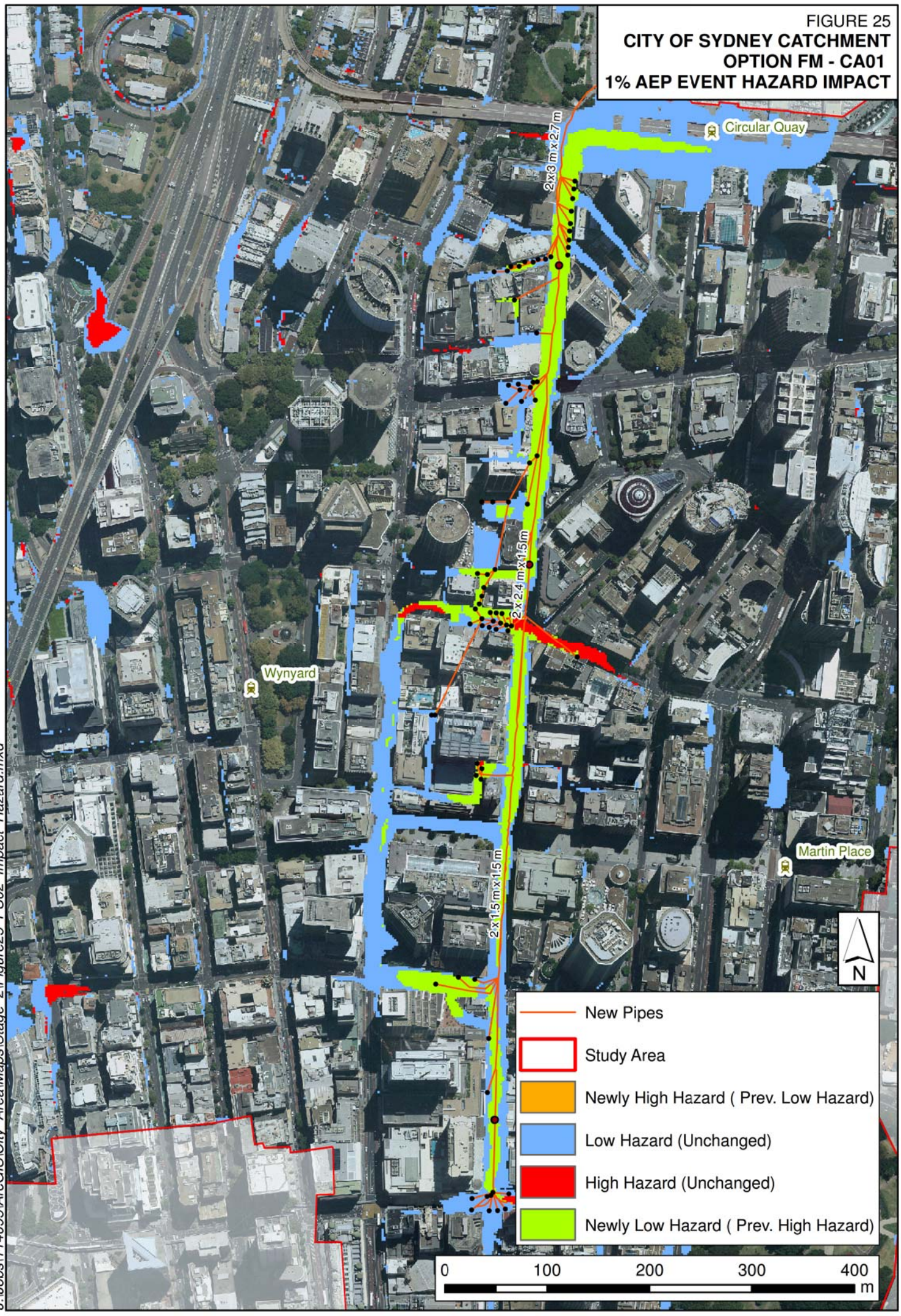


FIGURE 25
CITY OF SYDNEY CATCHMENT
OPTION FM - CA01
1% AEP EVENT HAZARD IMPACT
Circular Quay
Wynyard
Martin Place
2x3 m x 2.7 m
2 x 2.4 m x1.5m
2 x1.5 m x1.5 m
N
New Pipes
Study Area
Newly High Hazard (Prev. Low Hazard)
Low Hazard (Unchanged)
High Hazard (Unchanged)
Newly Low Hazard (Prev. High Hazard)
0
100
200
300
400
m
J:\Jobs\1140951\ArcGIS\City Area\Maps\Stage 2\Figure25 PS02 Impact Hazard.mxd

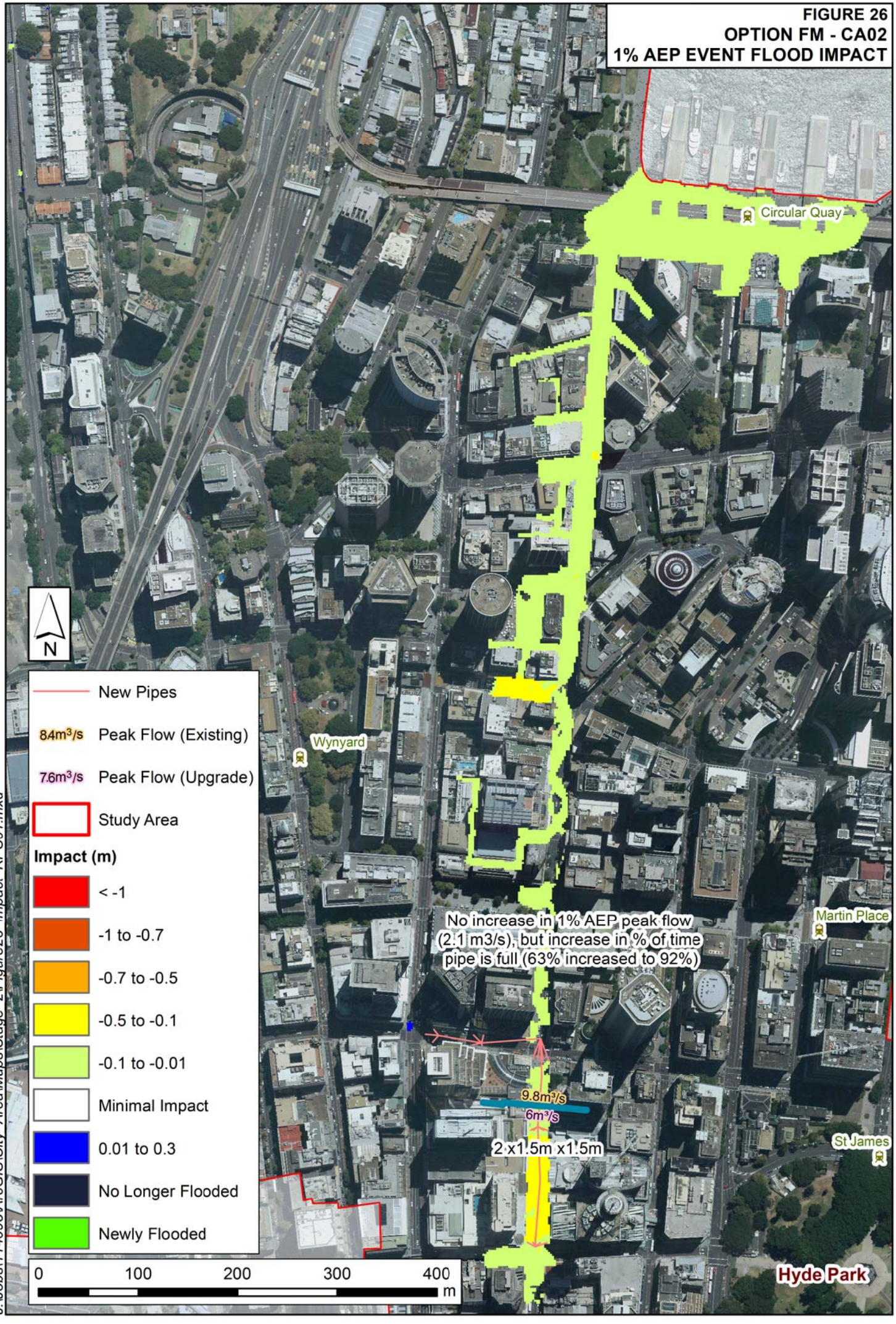


FIGURE 26
OPTION FM - CA02
1% AEP EVENT FLOOD IMPACT
Circular Quay
Wynyard
Martin Place
St James
Hyde Park
N
New Pipes
84m³/s Peak Flow (Existing)
7.6m³/s Peak Flow (Upgrade)
Study Area
Impact (m)
< -1
-1 to -0.7
-0.7 to -0.5
-0.5 to -0.1
-0.1 to -0.01
Minimal Impact
0.01 to 0.3
No Longer Flooded
Newly Flooded
No increase in 1% AEP peak flow (2.1 m3/s), but increase in % of time pipe is full (63% increased to 92%)
9.8m³/s
6m³/s
2 x1.5m x1.5m
0
100
200
300
400
m
J:\Jobs\114095\ArcGIS\City_Area\Maps\Stage_2\Figure26_Impact_KPS01.mxd

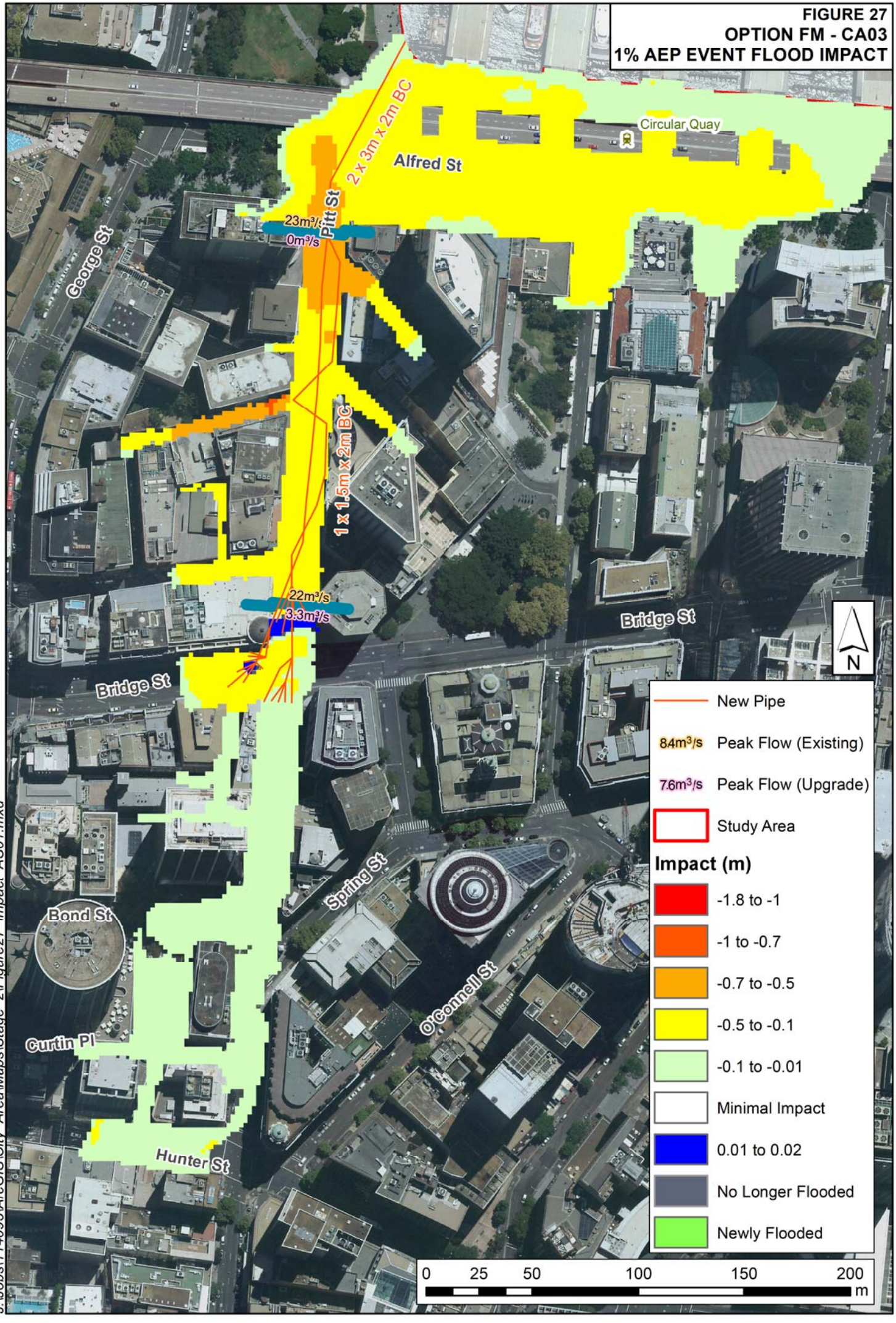


FIGURE 27
OPTION FM - CA03
1% AEP EVENT FLOOD IMPACT
Circular Quay
Alfred St
2 x 3m x 2m BC
Pitt St
23m³/s
0m³/s
George St
1 x 1.5m x 2m BC
22m³/s
3.3m³/s
Bridge St
Bridge St
Spring St
Bond St
Curtin Pl
O'Connell St
Hunter St
N
New Pipe
84m³/s Peak Flow (Existing)
7.6m³/s Peak Flow (Upgrade)
Study Area
Impact (m)
-1.8 to -1
-1 to -0.7
-0.7 to -0.5
-0.5 to -0.1
-0.1 to -0.01
Minimal Impact
0.01 to 0.02
No Longer Flooded
Newly Flooded
0 25 50 100 150 200
m
J:\Jobs\114095\ArcGIS\City AreaMaps\Stage 2\Figure27 Impact AS01.mxd