

APPENDIX A

Part 6: Figures 12-15 (part 6 of 8)

Figure 1 Proposal Area

Figure 2 Locations of proposed bridge structures within the Proposal Area

Figure 3 Greater Bunbury Region Scheme (GBRS) regional roads

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Figure 6 Vegetation types

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Figure 9 Dieback status and Protectable areas

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Figure 14 Acid Sulfate Soils Risk Mapping

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Figure 16 North Collie Catchment Flood Depth 1 % AEP Pre-Development

Figure 17 Millars Creek Flood Depth 1 % AEP Pre-Development

Figure 18 Gavin's Gully Catchment Flood Depth 1 % AEP Pre-Development

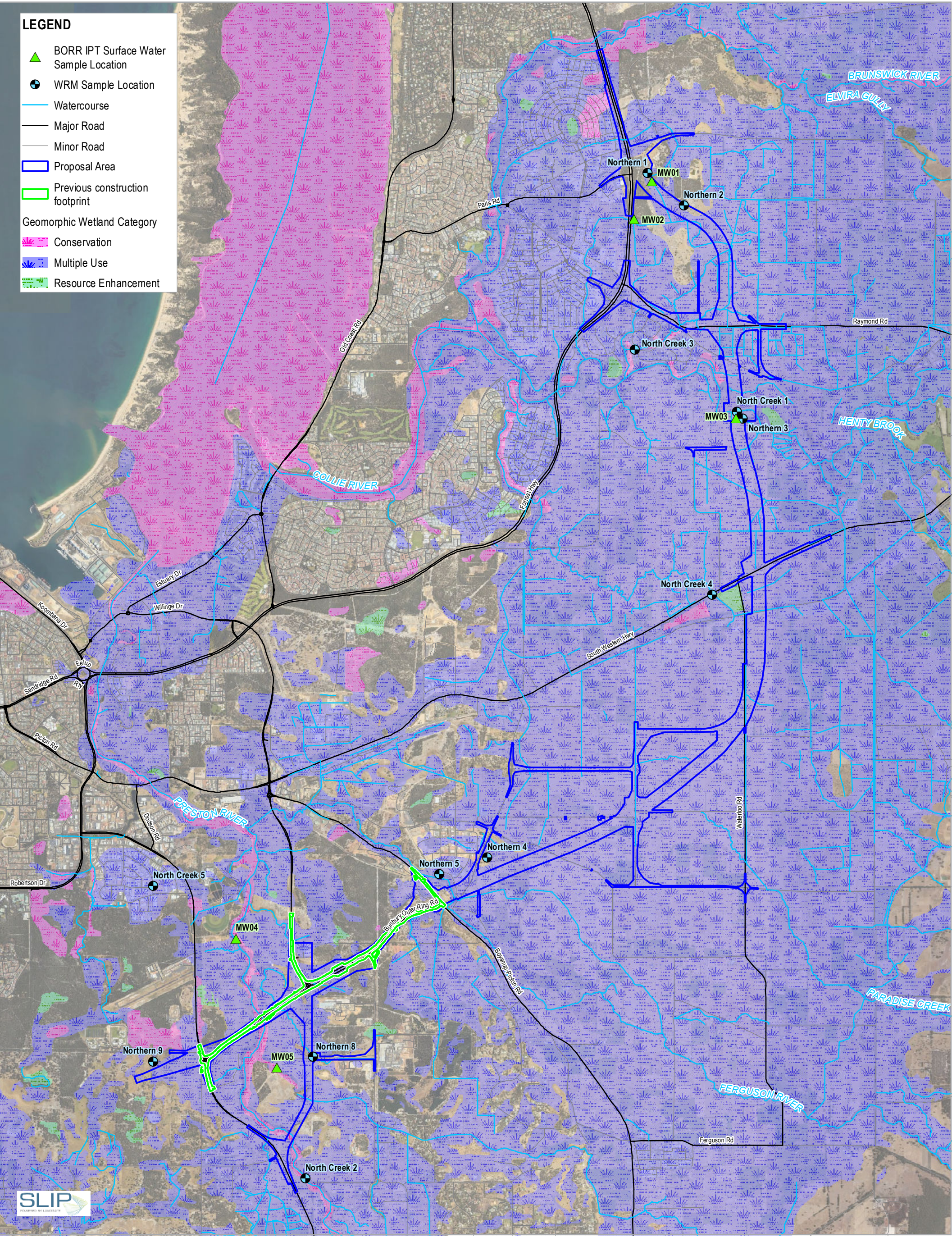
Figure 19 State Register and Municipal Inventory Places within 5 km of the Proposal Area

Figure 20 Existing land use

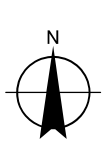
Figure 21 Forecast traffic noise $L_{Aeq, day}$ Existing 2018 noise levels at the most affected façade (dBA)

Figure 22 Forecast traffic noise $LA_{eq, day}$ Build 2041 noise levels at the most affected façade - No treatment

Figure 23 Forecast $LA_{eq, day}$ Build 2041 noise levels at the most affected façade - With barriers to meet the 60 dB noise limit at properties adversely affected by the new roads



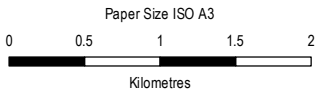
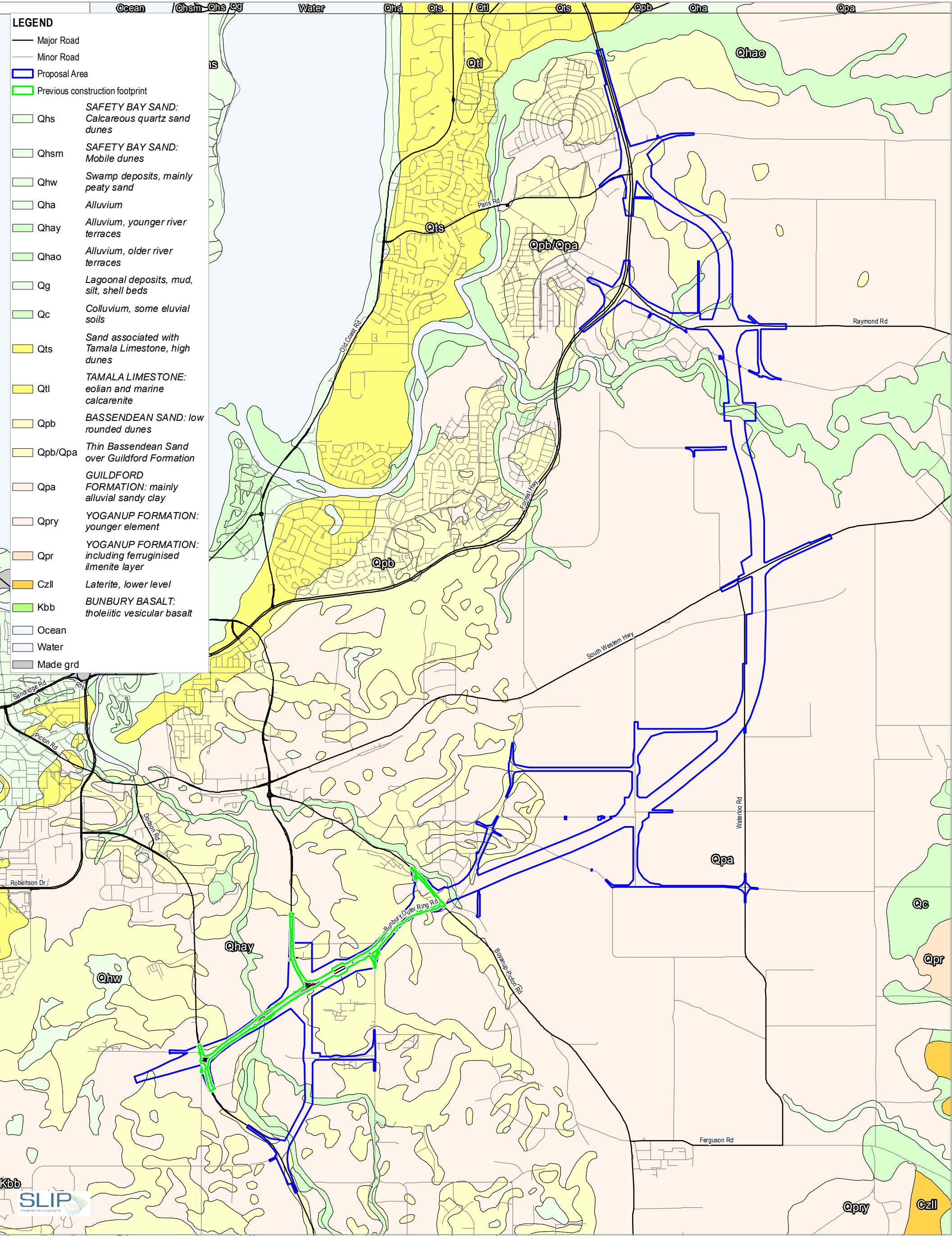
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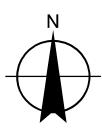
Main Roads Western Australia
Bunbury Outer Ring Road Northern and Central Section
Environmental Referral Supporting Document
**Geomorphic Wetlands, Rivers and
Surface Water Sample Locations
within the Proposal Area**

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Revision No. 0
Date 14/05/2019

FIGURE 12



Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 Perth Coastal Grid 1994

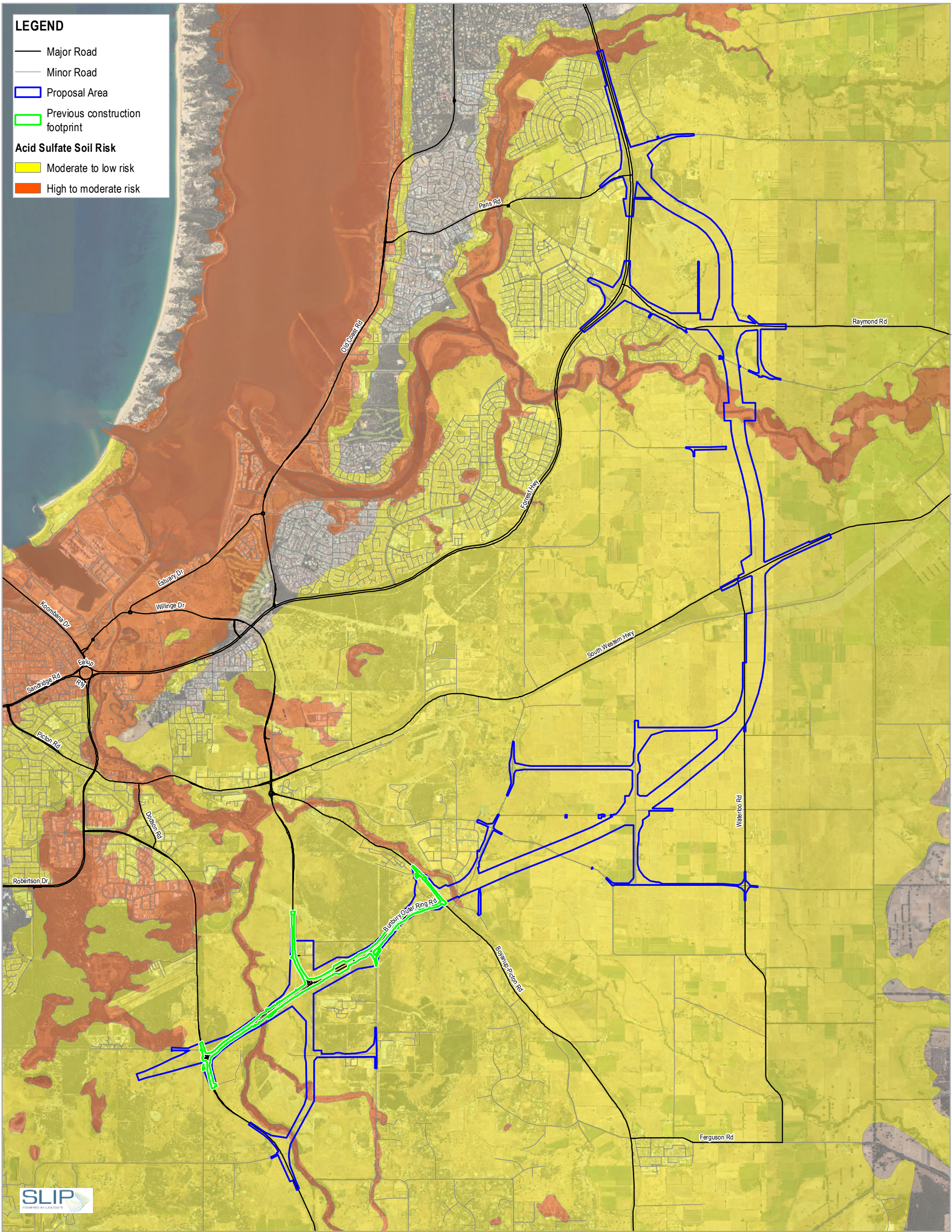


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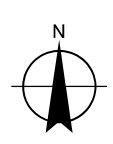
Geological Mapping
(Environmental Geology
Series of Bunbury - Burekup)

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Date 14/05/2019

FIGURE 13



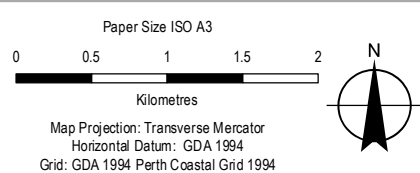
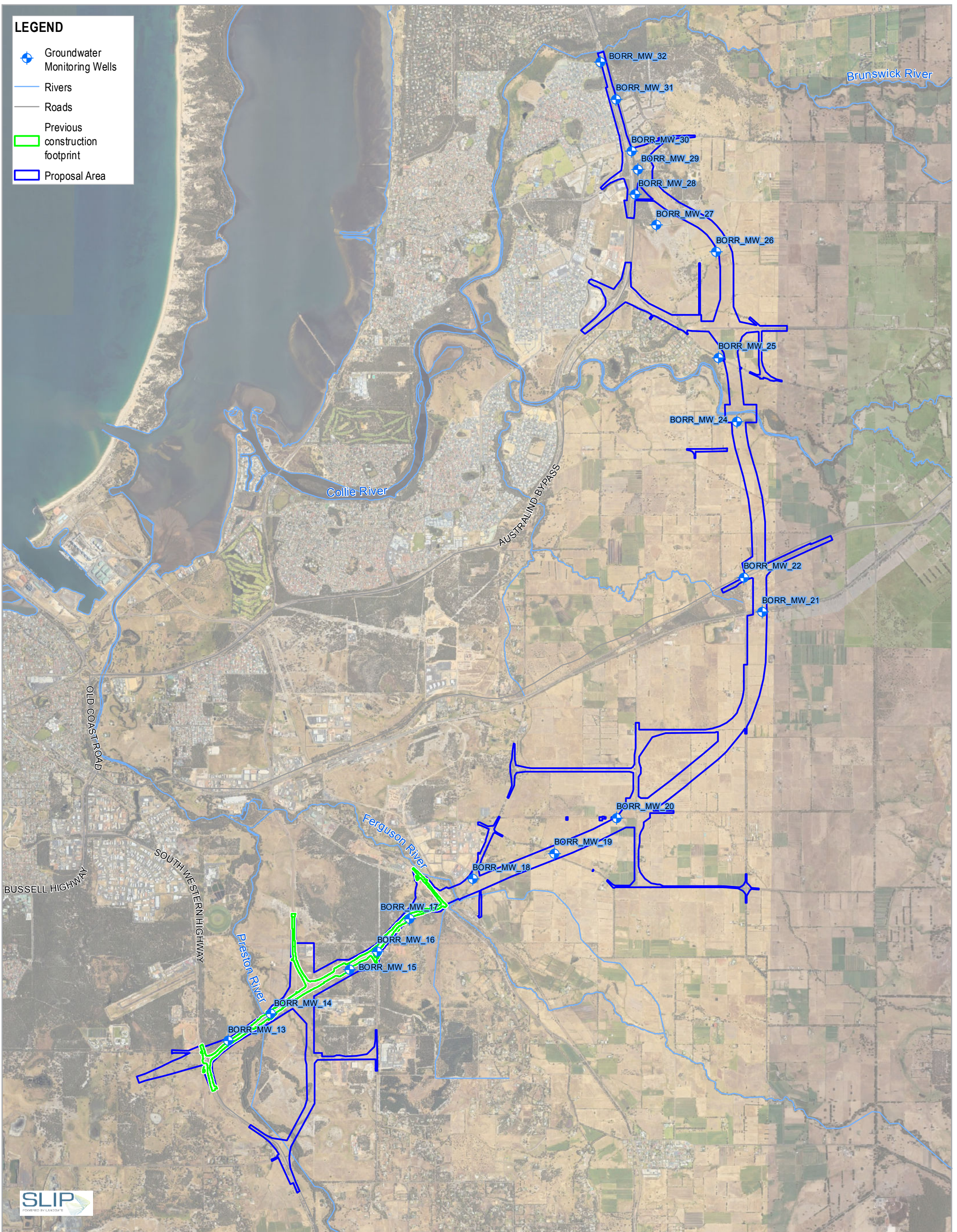
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Bunbury Outer Ring Road Northern and Central Section
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Acid Sulfate Soils Risk Mapping
(GoWA, 2018c)

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Date 14/05/2019

FIGURE 14



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Groundwater and Soil Test Locations
(BORR IPT, 2019a)

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FIGURE 15

APPENDIX A

Part 7: Figures 16-20 (part 7 of 8)

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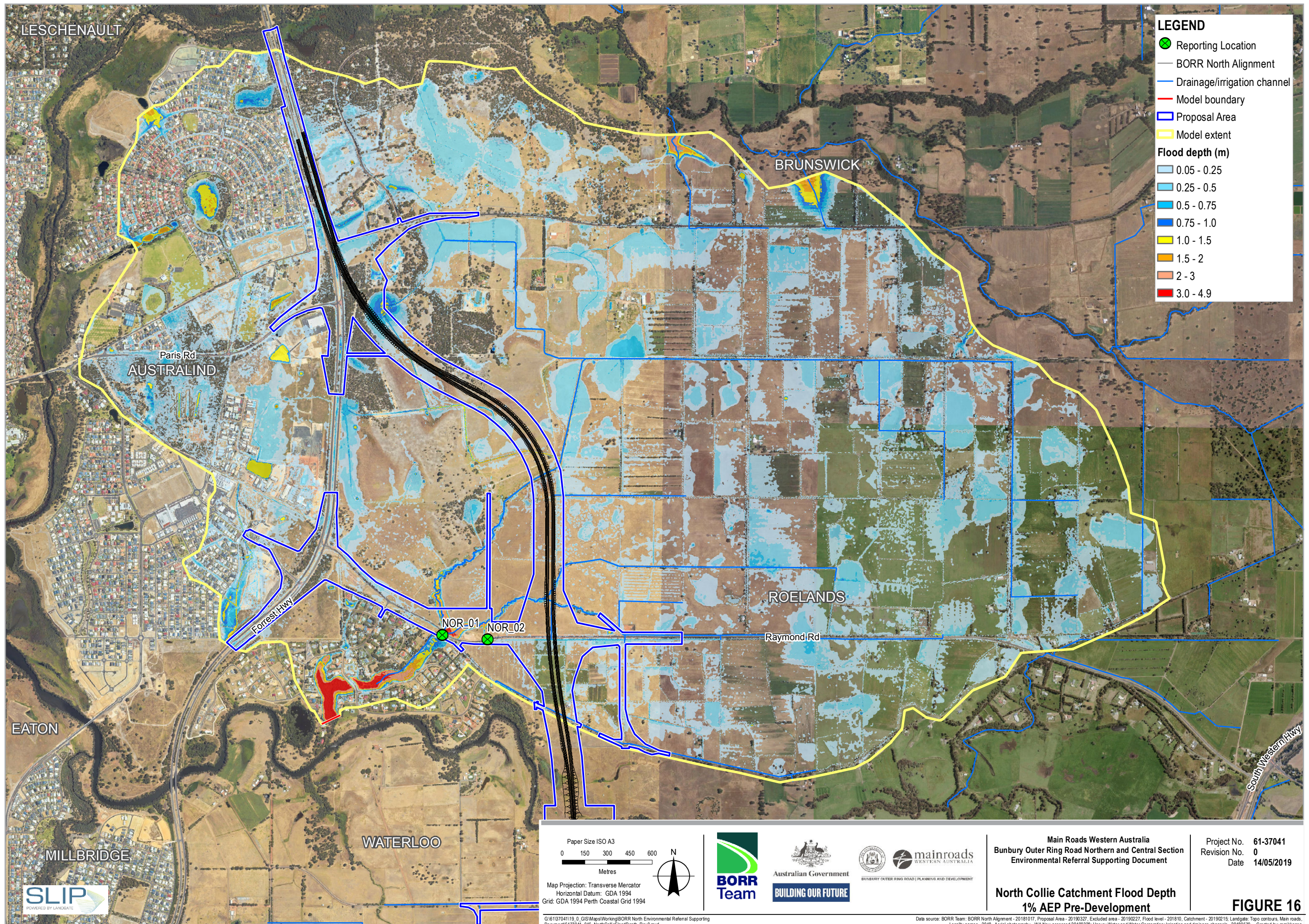
Figure 19 State Register and Municipal Inventory Places within 5 km of the Proposal Area

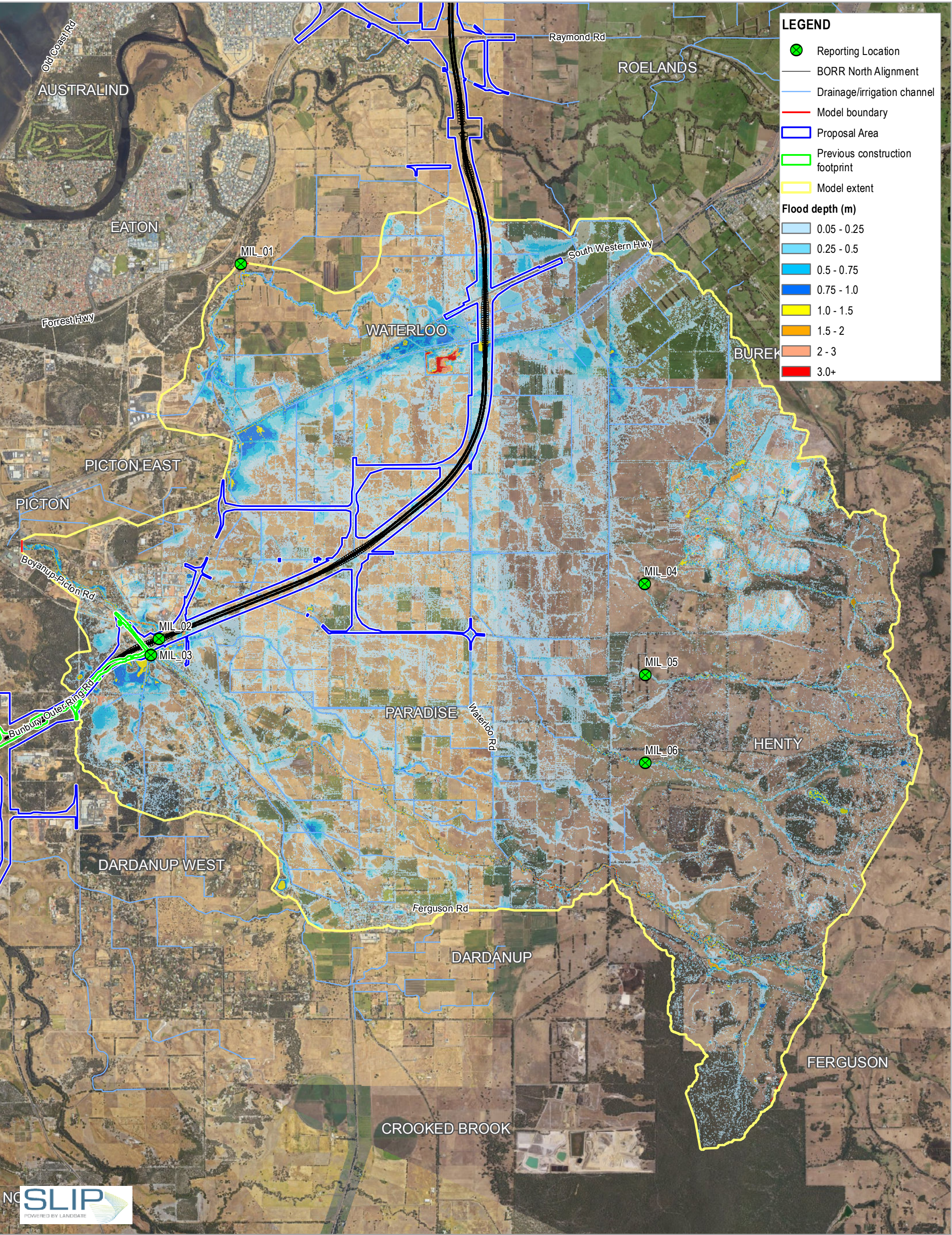
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Figure 21 Forecast traffic noise $L_{Aeq, day}$ Existing 2018 noise levels at the most affected façade (dBA)

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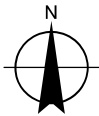
Figure 23 Forecast $LA_{eq, day}$ Build 2041 noise levels at the most affected façade - With barriers to meet the 60 dB noise limit at properties adversely affected by the new roads





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Meters

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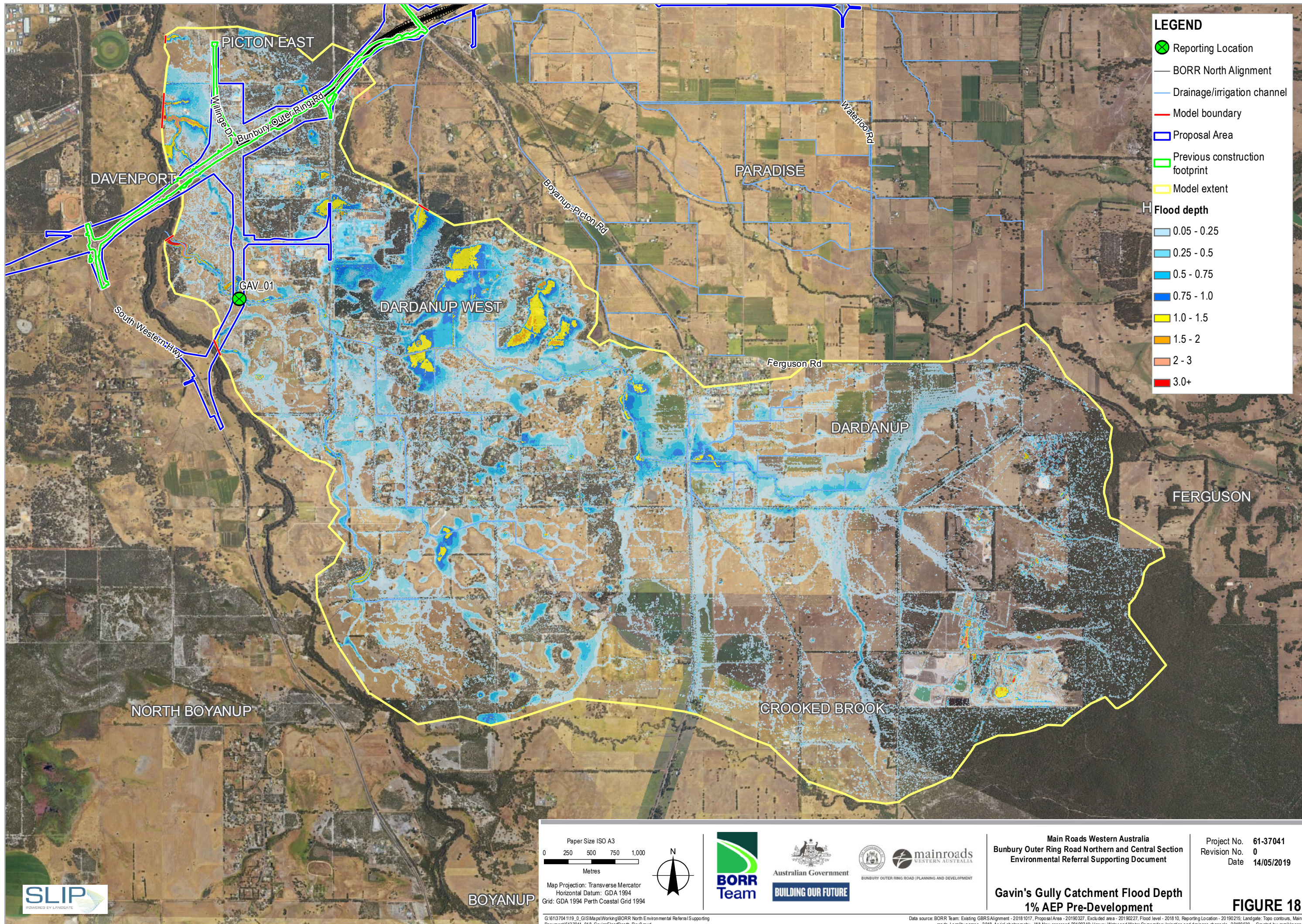
Millars Creek Flood Depth
1% AEP Pre-Development

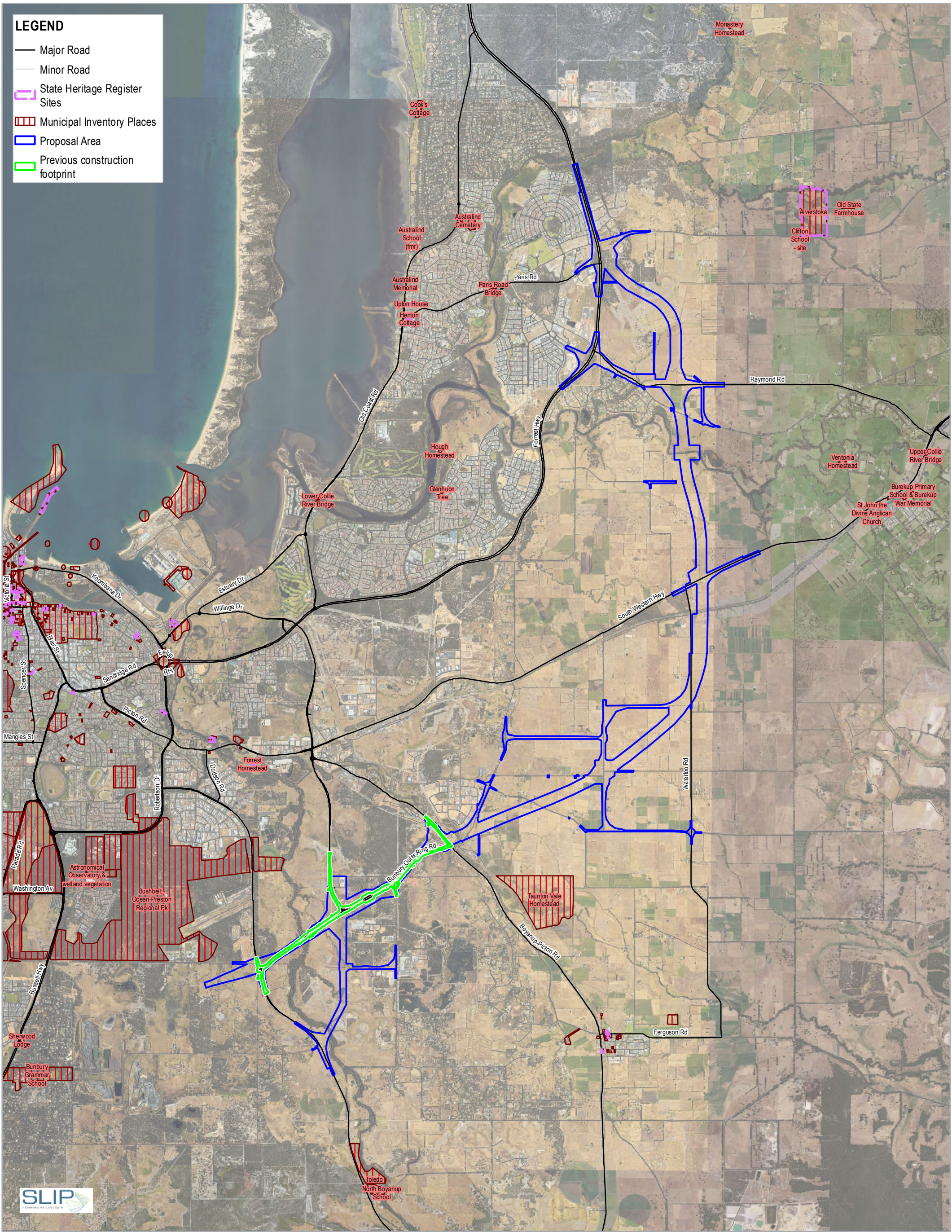
Project No. 61-37041
Revision No. 0
Date 14/05/2019

FIGURE 17

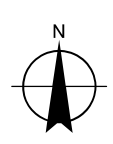
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Data source: BORR Team: BORR North Alignment - 20181017, Proposal Area - 20190327, Excluded area - 20190227, Flood level - 201810, Catchment - 20190214, Landgate: Topo contours, Main roads,
Locality names - 2018, Aerial photography - WA Now accessed 20190328. Created by: mmikonen





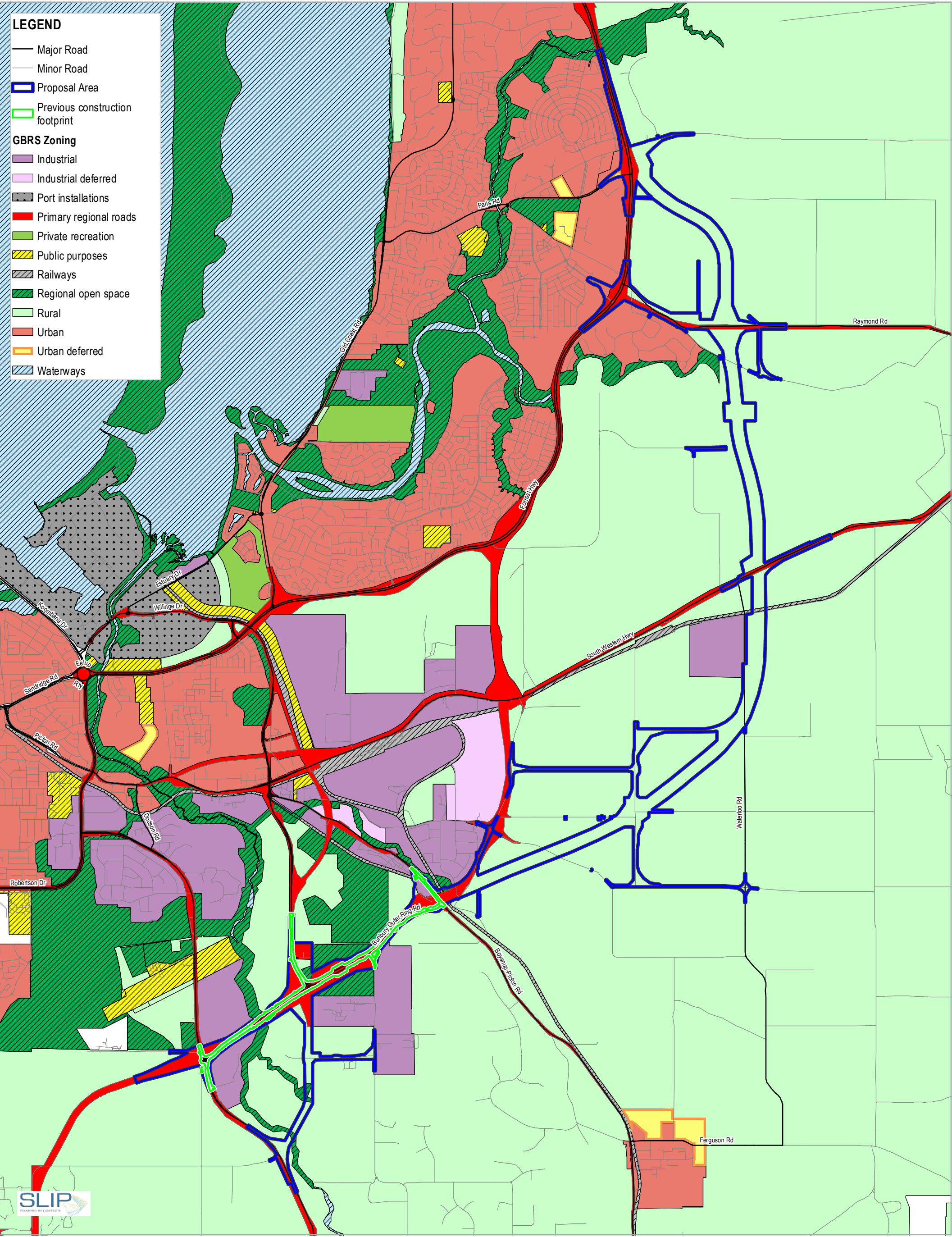
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Main Roads Western Australia
Bunbury Outer Ring Road Northern and Central Section
Environmental Referral Supporting Document
State Register and
Municipal Inventory Places
within 5 km of the Proposal Area

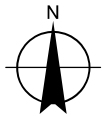
Project No. 61-37041
Revision No. 0
Date 14/05/2019

FIGURE 19



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Horizontal Datum: GDA 1994
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Existing Land Use

FIGURE 20

APPENDIX A

Part 8: Figures 21-23 (part 8 of 8)

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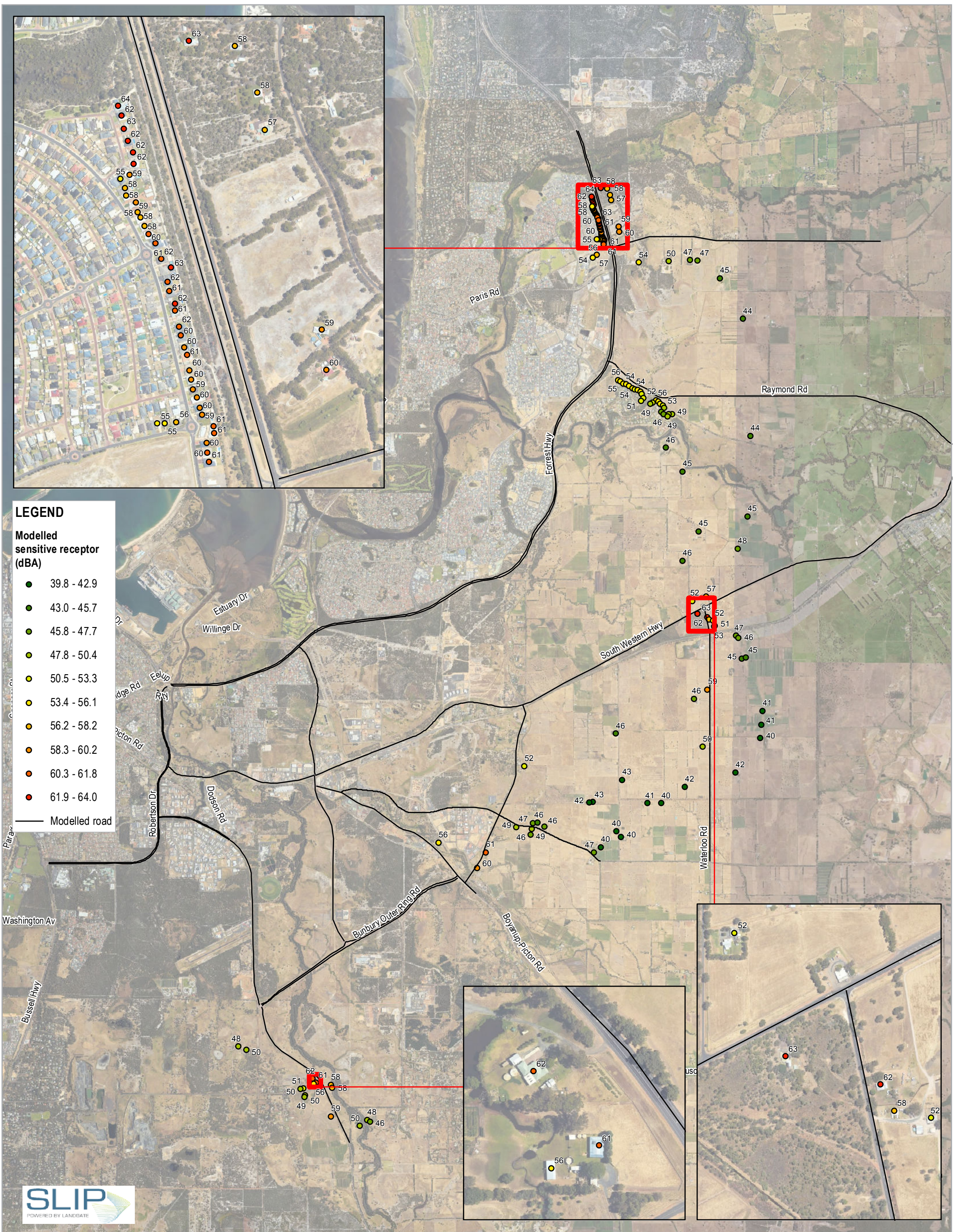
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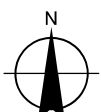
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Horizontal Datum: GDA 1994
Grid: GDA 1994 Perth Coastal Grid 1994



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Forecast Noise
(Existing 2018 Levels)

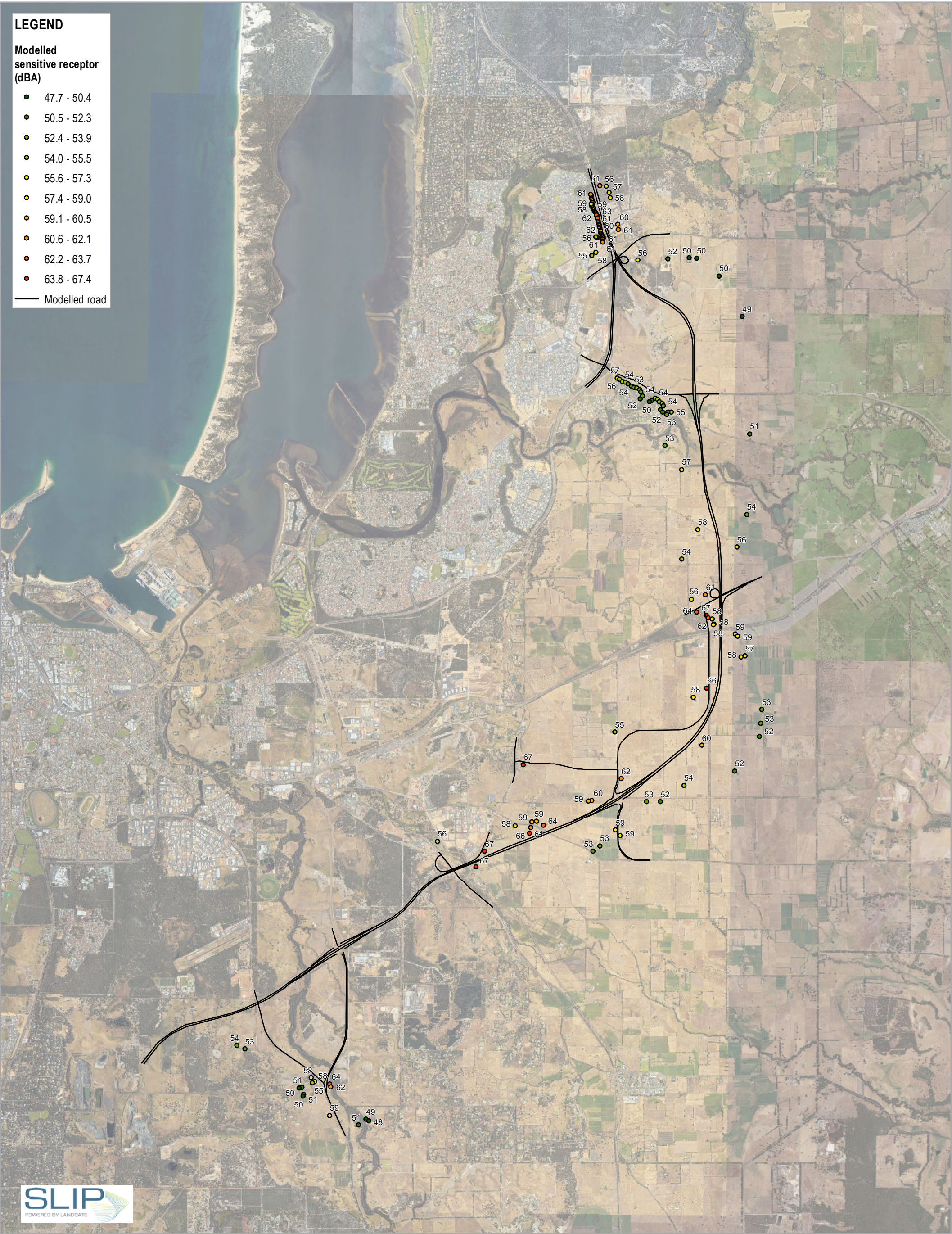
FIGURE 21

LEGEND

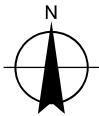
Modelled sensitive receptor (dBA)

- 47.7 - 50.4
- 50.5 - 52.3
- 52.4 - 53.9
- 54.0 - 55.5
- 55.6 - 57.3
- 57.4 - 59.0
- 59.1 - 60.5
- 60.6 - 62.1
- 62.2 - 63.7
- 63.8 - 67.4

— Modelled road



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Kilometres
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Horizontal Datum: GDA 1994
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Revision No. **0**
Date **14/05/2019**

Forecast Traffic Noise
(No Treatment)

FIGURE 22

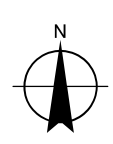


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Kilometres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
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Forecast Noise
(With Treatment)

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FIGURE 23