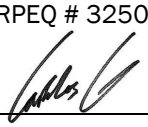
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North Lakes Anglican Education Precinct

Village Retirement Group c/- Gaskell Planning Consultants

Date: 8 July 2026

DOCUMENT	North Lakes Anglican Education Precinct
JOB NUMBER	2025.0893
PROJECT ENGINEER	Carlos Gambirazio
CLIENT	Village Retirement Group c/- Gaskell Planning Consultants
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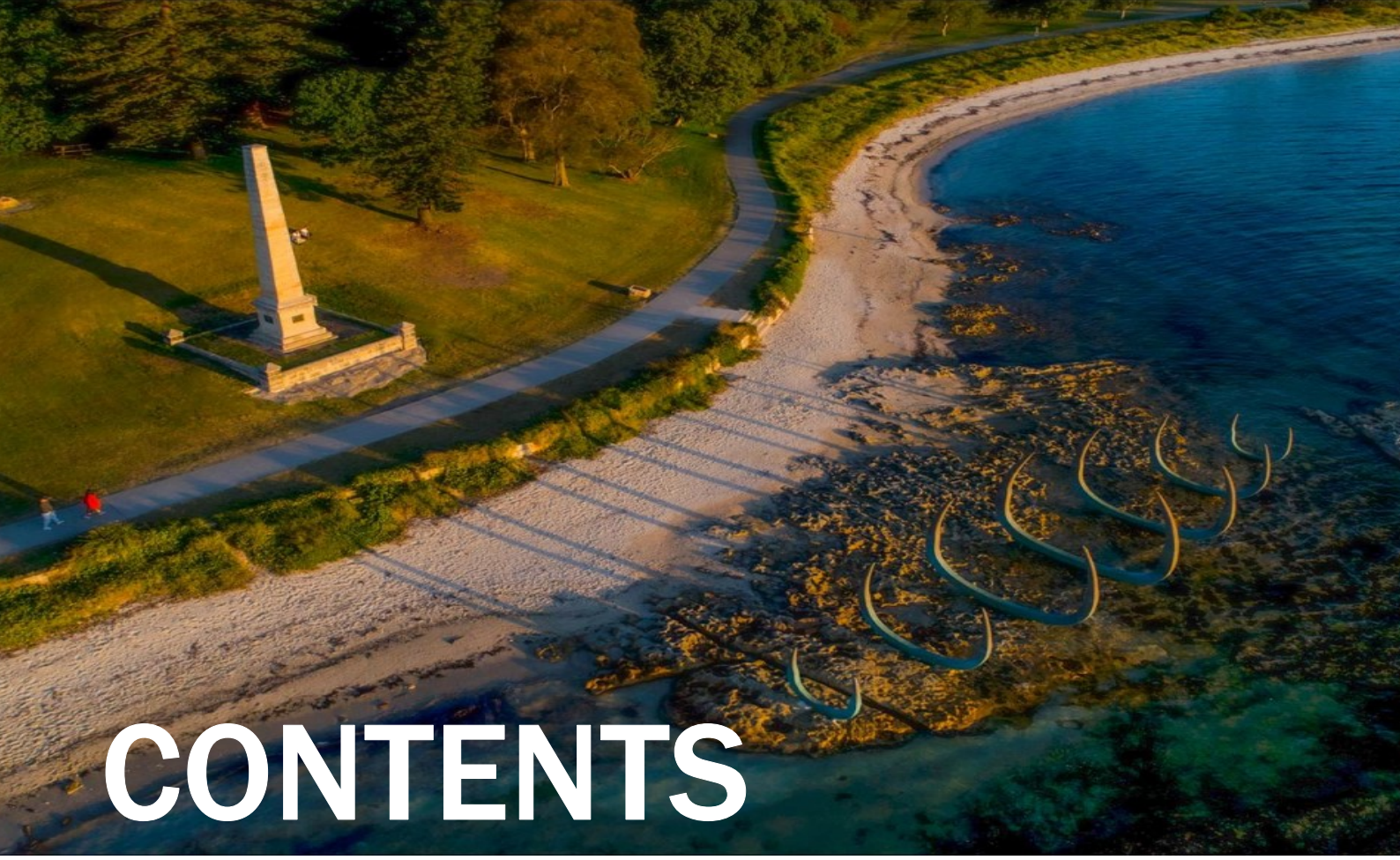
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EXECUTIVE SUMMARY

This report documents a flood study in support of a Ministerial Infrastructure Designation (MID) application for the North Lakes Anglican Education Precinct, at Lot 1 on SP148201 and Lot 2 on SP291250, North Lakes QLD 4509.

The proposed development comprises a new education precinct including learning buildings, sporting facilities, parking areas, supporting infrastructure and the restoration and realignment of two existing waterways. The site is traversed by two major external catchments that convey regional flood flows towards Saltwater Creek and Lake Eden.

Flood behaviour was assessed using Moreton Bay Regional Council's Hays Inlet TUFLOW flood model, which was refined to improve representation of site-specific conditions. Model refinements included updating hydrology to current Australian Rainfall and Runoff (ARR 2019) methodologies, incorporating conservative climate change allowances to the year 2100, updating hydraulic structures, and refining land surface representation within the study area.

A developed case scenario was established to represent the proposed education precinct, including conceptual earthworks, suspended structures, waterway realignments and flood mitigation measures. Flood impacts were assessed by comparing maximum flood levels between the developed and existing case scenarios across a range of design events from the 63.2% AEP ('1 in 1-year flood') through to the 0.1% AEP ('1 in 1000-year flood') events.

The assessment demonstrates that the proposed development can be accommodated without causing material adverse flood impacts to surrounding properties or road networks. In several locations, including along Copeland Drive, the proposed works provide localised flood mitigation benefits through reductions in flood levels and flood extents. Predicted increases in flood levels are generally minor, remain confined to existing floodways and water bodies, and do not result in measurable increases in flood extent or impacts to surrounding development. The proposed development preserves the broader flood conveyance and flood storage functions of the floodplain, demonstrating that the intended land use outcomes can be achieved without compromising floodplain performance.

The assessment also demonstrates that the proposed development can be designed to comply with the flood planning level requirements of the Moreton Bay Regional Council Planning Scheme.

The concept design assessed in this report is intended to demonstrate the feasibility of achieving the proposed development outcomes while maintaining an acceptable flood impact response. Future refinements to the layout, earthworks and stormwater management strategy may be undertaken during detailed design, provided any substantial modifications are assessed through appropriate hydraulic modelling demonstrating that surrounding properties and road networks are not materially affected.

1. INTRODUCTION

1.1 Overview

This report documents the findings of a flood study in support of a ministerial infrastructure designation application for the North Lakes Anglican Education Precinct at North Lakes QLD 4509 (Lot 1 on SP148201 and Lot 2 on SP291250).

The report includes:

+ Site context,
+ Flood modelling methodology,
+ Flood impact assessment,
+ Flood planning level compliance assessment.

1.2 Locality

Refer to Figure 1 below for a locality plan of the site of works. The northern part of the site is enclosed by Diamond Jubilee Way to the north, Copeland Drive to the east, and Endeavour Boulevard and the North Lakes Retirement Resort to the south. The southern part of the site is enclosed by the North Lakes Retirement Resort and Maddock Street to the south, and Finnegan Drive to the east. The site is close to the Bruce Highway. The locality is mostly comprised of low to medium density residential development.

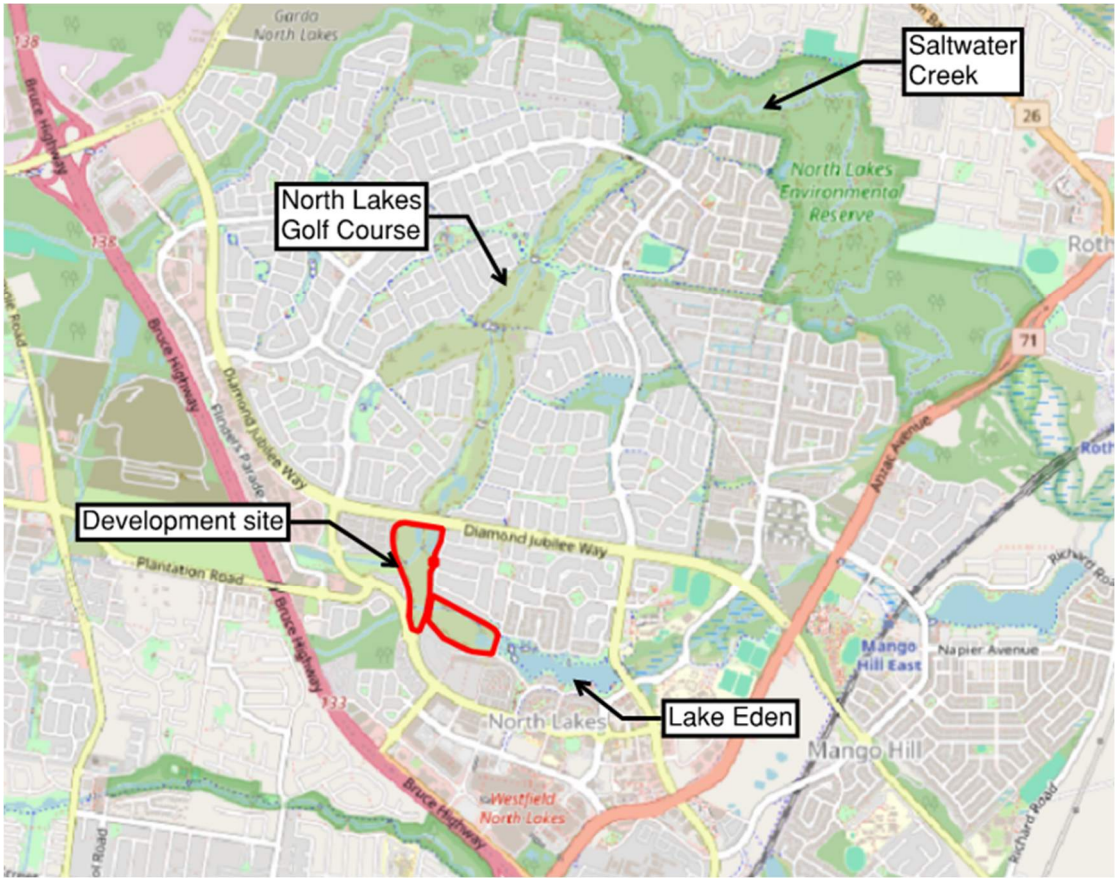


Figure 1 Locality Plan

2. SITE CONTEXT & PROPOSED DEVELOPMENT

2.1 Catchment Characteristics

The site is located within the broader Pine Rivers Catchment. Two regional catchments traverse the site and contribute to the site's flood behaviour:

- A 56-ha west catchment flowing through the northern part of the site northwards under Diamond Jubilee Way, towards Saltwater Creek and Hays Inlet. These flows enter the site via four 1050 mm diameter stormwater pipes. Under this proposal those pipes will daylight onto a naturalised and realigned channel, conveying flows northward towards the arched culvert under Diamond Jubilee Way. The northern part of the site falls generally northward with elevations ranging from 25 to 18 m AHD.
- A 71 Ha catchment flowing through the south-eastern part of the site eastwards towards Lake Eden. These flows enter the site through a combination of box culverts (2100 x 1500 mm) and some stormwater pipes. Those culverts and pipes are proposed to daylight into a naturalised channel, conveying flows eastwards towards a culvert crossing under Finnegan Drive. The south-eastern part of the site falls generally eastwards with elevations ranging from 23 to 14 m AHD.

Refer Figure 2 below.

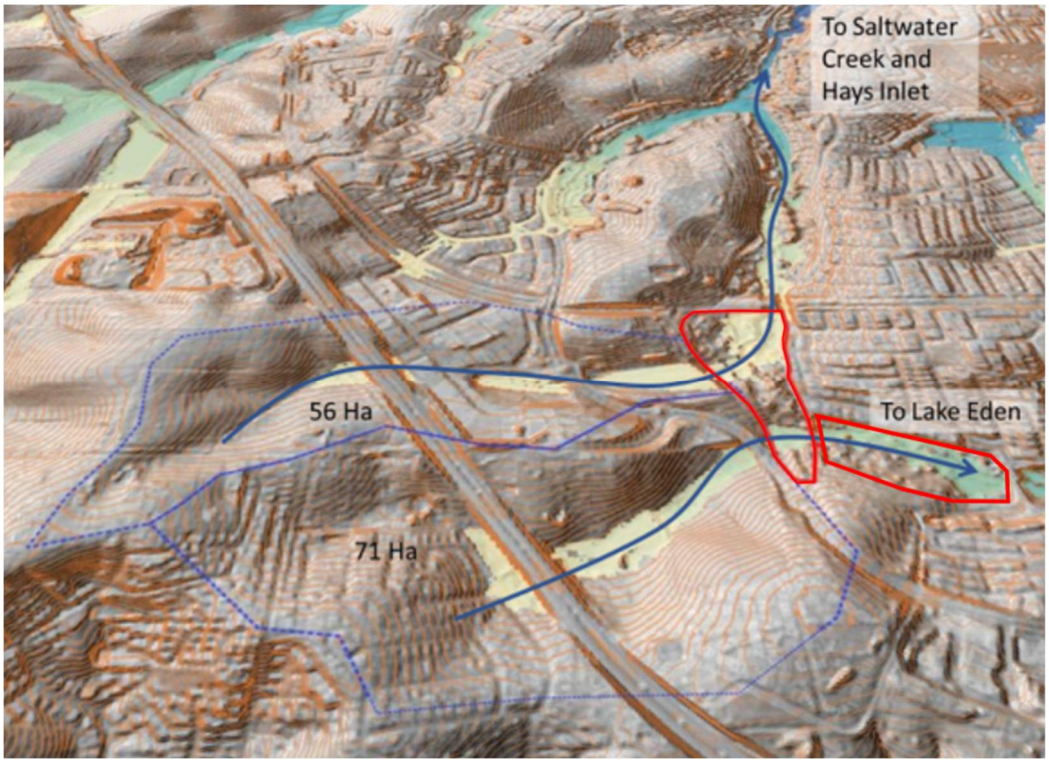


Figure 2 External catchments

While MBRC has not applied any overlays in this area, the presence of Acid Sulphate Soils should be considered at elevations below 20m. This should be considered during future design development and construction planning.

Site flooding has been modelled and assessed under existing and proposed conditions. Refer to Section 3 of this report for further details.

2.2 Description of the Proposed Development

The proposed development comprises a senior and junior education precinct, and includes parking, two playing fields, sports areas, library, learning buildings, student and staff areas, and other relevant amenities. Works also include realignment of two waterway channels designed in accordance with best practice natural channel design principles, emphasising in-stream habitat and the inclusion of light wells at crossings.

Refer Figure 3 below and Appendix A1 for the current precinct masterplan.

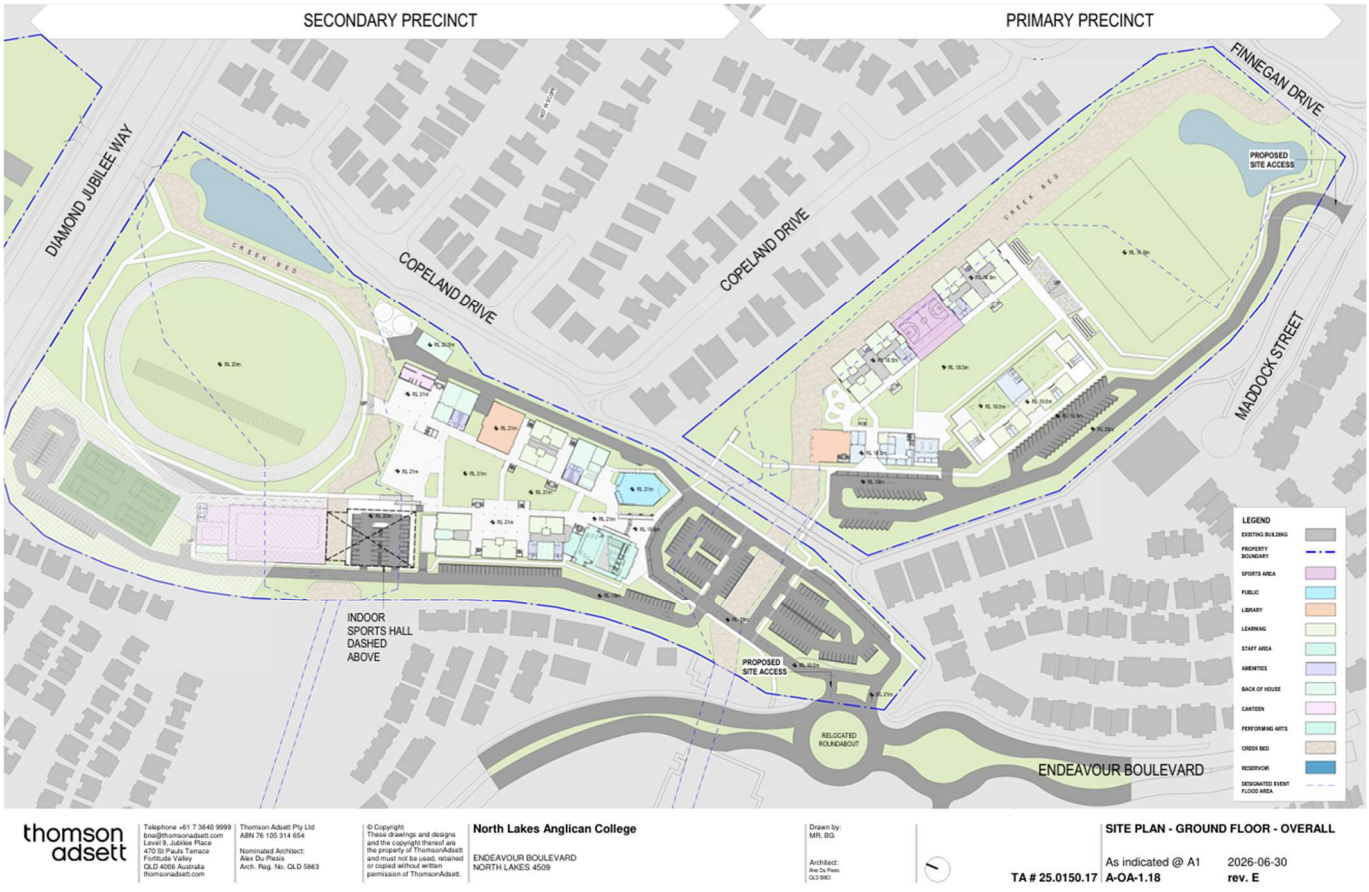


Figure 3 North Lakes Anglican Education Precinct Masterplan (Thomson Adsett, 30/06/2026)

3. FLOOD STUDY

3.1 Flood Modelling Methodology

3.1.1 Existing Flood Model

Flood modelling is based on the Hays Inlet TUFLOW flood model provided by Moreton Bay Regional Council.

Refer to the *Regional Floodplain Database, Hydrology and Hydraulic Modelling: Hays Inlet (HAY)* report (Moreton Bay Regional Council, 2016) for details.

The HAY hydrological model was developed in WBNM and utilises the following methods for design storm estimation:

+ 1-year ARI to 100-year ARI – AR&R 2001 methodology,
+ 200-year ARI To 2000-year ARI – CRC Forge methodology,
+ PMF – GDSM and GTSMR methodologies.

3.1.2 Revised Existing Case Scenario

The existing flood model was subject to the modifications described below, with the intent of improving run times and obtaining a better representation of flood behaviour at the site.

3.1.2.1 Sub-Model Establishment

A sub-model was established to improve run times, as shown in Figure 4 below.

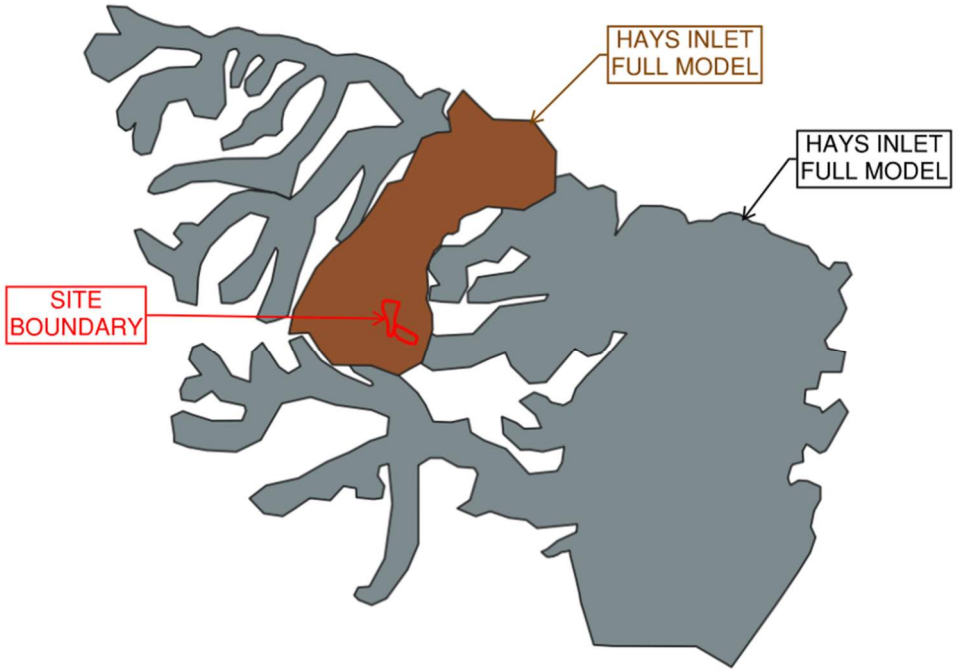


Figure 4 TUFLOW sub-model

3.1.2.2 Revision of Model Hydrology

The existing WBNM hydrology model was revised to reflect ARR 2019 methodologies.

A WBNM hydrological model of the areas of interest was developed to estimate critical storm durations and median temporal patterns.

Rainfall information and temporal patterns relevant to the site's latitude, longitude and area were extracted from the Bureau of Meteorology IFD website and the ARR 2019 datahub, respectively.

This information was input into a storm selection process that consisted of analysing 10 temporal patterns for selected storm frequencies and an ensemble of durations.

Storm durations producing the highest peak flows at the northern and southern reporting locations, as shown in Figure 5 below, were adopted as critical. Their corresponding median temporal patterns (6th highest) were selected for evaluation in the TUFLOW model.

Selected critical storm durations & temporal patterns are summarised in Table 1.

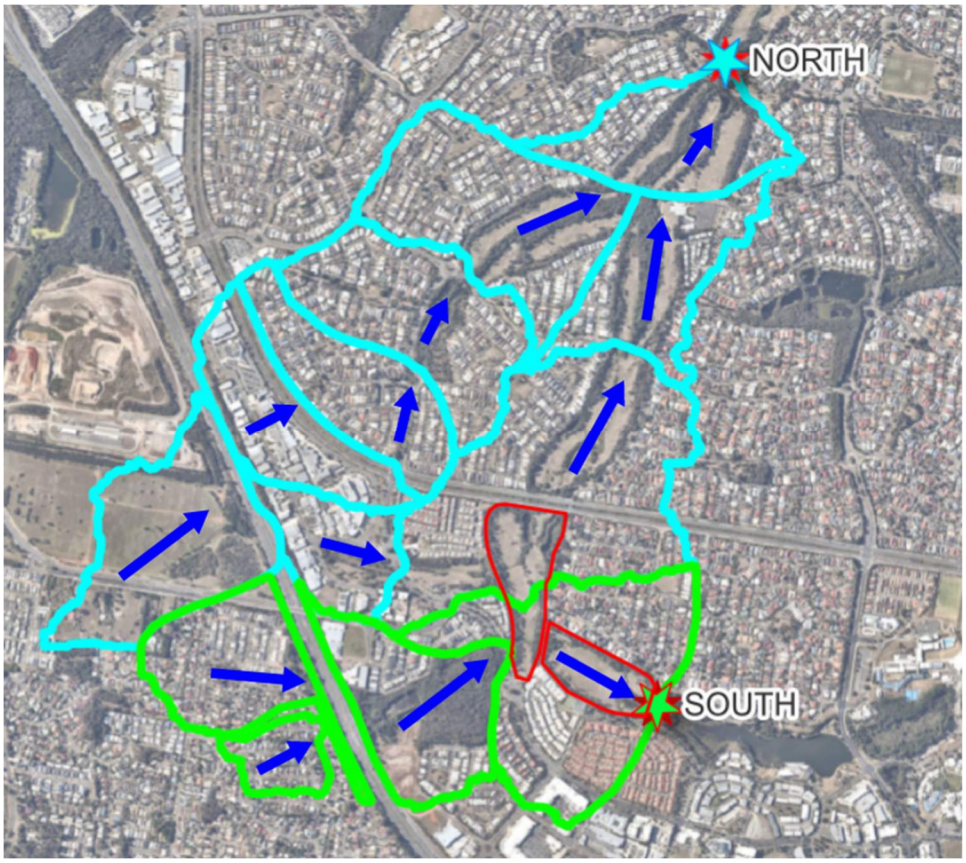


Figure 5 External Catchment Plan

Table 1 Critical Storm Durations

Frequency	North		South	
	Critical Storm Duration (min)	Temporal Pattern	Critical Storm Duration (min)	Temporal Pattern
0.1% AEP	90	5324	90	5321
1% AEP	120	5366	180	5409
2% AEP	120	5366	60	5305
5% AEP	120	5375	60	5305
10% AEP	120	5375	60	5305
20% AEP	90	5333	60	5305
50% AEP	90	5333	60	5305
63.2% AEP	90	5333	60	5305

3.1.2.3 Climate Change Considerations

This flood study adopts conservative climate change considerations corresponding to the very high climate change scenario as defined by the latest IPCC report (Intergovernmental Panel on Climate Change, 2023), adopting the relevant AR&R DataHub parameters.

- Projected year: 2100,
- Scenario: SSP5-8.5 (very high) – 4.5°C temperature change relative to 1961-1990 baseline,
- Increase in rainfall intensity: 86% to 64% (varies proportionally from 60-minute duration storms to 180-minute duration storms),
- Initial loss adjustment factor: 1.09,
- Continuing loss adjustment factor: 1.18

No modifications to tail water conditions were implemented as the extent of storm tide inundation at the year 2100 (accounting for an 800 mm sea level rise) is approximately 2.24 kilometres downstream of the site, as shown in Figure 6 below, and is therefore not expected to influence flood behaviour on-site.

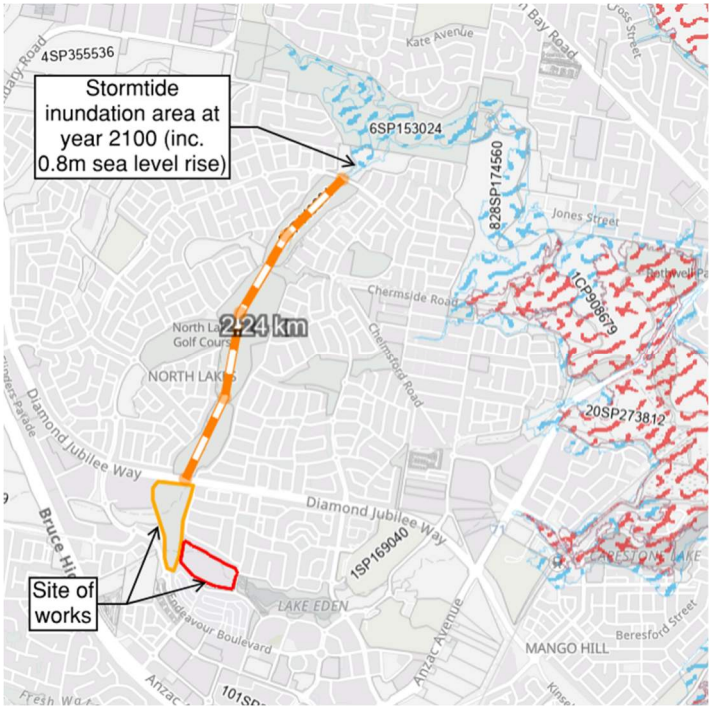


Figure 6 Storm tide Inundation Mapping – SPP Interactive Mapping System

3.1.2.4 Drainage Infrastructure

Modifications to existing drainage infrastructure relative to Council's flood model include:

+ Adoption of a 20% blockage factor for all culvert as per Table 10.4.1 of QUDM (IPWEAQ, 2017).
+ Inclusion of the arched culvert crossing under Diamond Jubilee Way at the northern site boundary, as shown in Figure 7 below.



Figure 7 Arched culvert crossing under Diamond Jubilee Way represented by the blue arrow

3.1.2.5 Material Modifications

The model generally adopts Council's material surfaces, enhancing their resolution within the study area (i.e. inclusion of trees, vegetated areas, and water bodies not captured in Council's model).

Material surfaces adopted in this flood model are summarised in Table 2 below.

Table 2 Material Surfaces in Flood Model

Material	Type	Depth Range (m)	Manning's 'n'
Dense Vegetation	Depth-Variable	0 – 1.5 3.5 – 99	0.09 0.18
Reeds	Fixed	N/A	0.08
Medium Dense Vegetation	Depth-Variable	0 – 1.5 3.5 – 99	0.075 0.15
Crops	Fixed	N/A	0.04
Low Grass	Depth-Variable	0 0.2 0.4 0.8 2 – 99	0.25 0.06 0.045 0.035 0.025
Roads and footpaths	Fixed	N/A	0.015
Buildings	Fixed	N/A	1
Water bodies	Fixed	N/A	0.03
Urban blocks	Fixed	N/A	0.3
Natural Channel	Depth-Variable	0 – 1.5 3.5 – 99	0.09 0.15

3.1.3 Developed Case Scenario

This scenario adopts the revised existing case scenario described in section 3.1.2 as a baseline, modified to represent the proposed education precinct shown in Appendix A1.

Refer to Appendix A2 for a Developed Case Scenario TUFLOW layout plan showing topographical modifications, suspended structures, and the natural channel.

3.1.3.1 Hydrology

The Developed Case Scenario adopts the same hydrology as the Existing Case Scenario, reflecting the assumption that post-development stormwater runoff will be managed so that peak discharges are comparable to existing conditions.

Further refinements to the stormwater management strategy may be undertaken during detailed design. Any substantial modifications should be assessed through appropriate hydraulic modelling and demonstrated to achieve a flood impact outcome comparable to that presented in this report, specifically confirming that surrounding properties and road networks are not materially affected.

Accordingly, the detailed stormwater management solution, including the need for on-site detention, will be confirmed during detailed design and may differ from the assumptions adopted in this assessment, provided a comparable flood impact outcome can be demonstrated.

3.1.3.2 Topographical Modifications

Topographical modifications, as shown in Figure 8 below, were represented via 2d_zsh polygons. Labels denote elevations in m AHD. Refer to Appendix A3 for a preliminary earthworks plan demonstrating the modelled difference in surface levels relative to existing conditions.

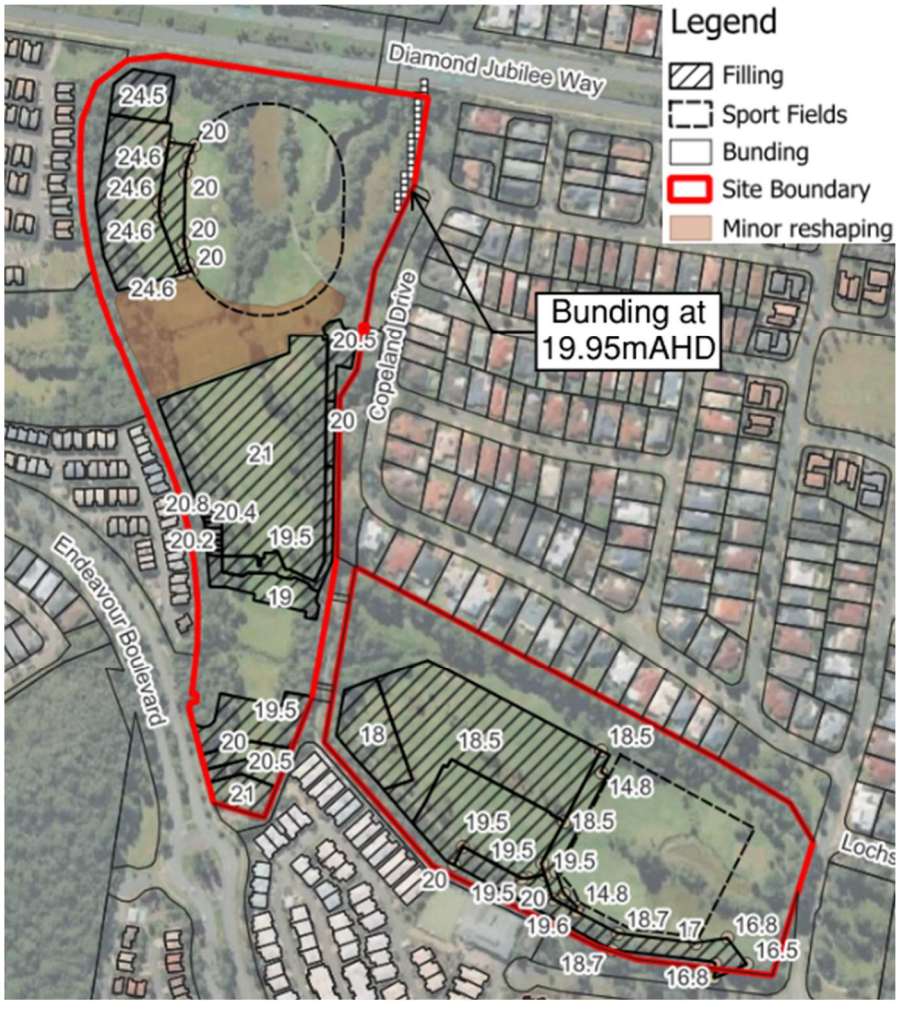


Figure 8 Developed Case Scenario Topographical Modifications

3.1.3.3 Suspended Structures

Proposed suspended structures were represented with 2d layered flow polygons. Refer to Figure 9 and Table 3 below for their locations and parameters, respectively.

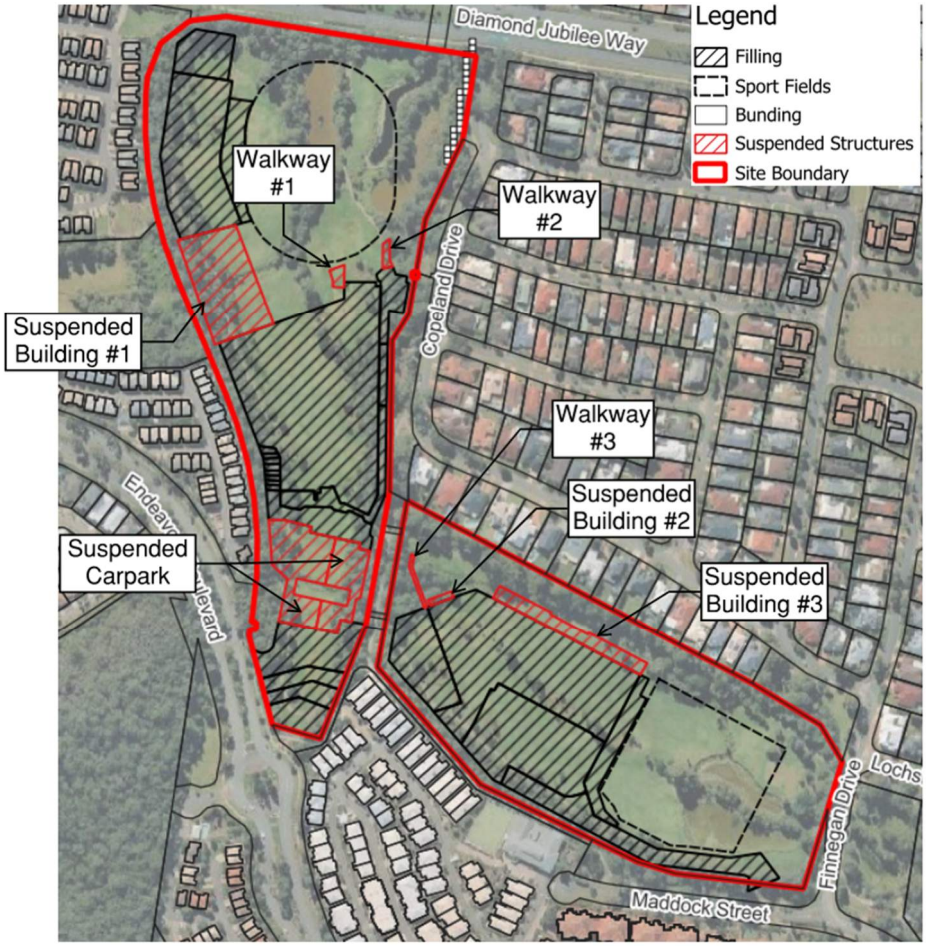


Figure 9 Proposed Suspended Structures

Table 3 Suspended Structure Parameters

Name	Walkway #1	Walkway #2	Walkway #3	Suspended Building #1	Suspended Building #2	Suspended Building #3	Suspended Carpark
Layer 1 Obvert (m AHD)	20.7	20.2	17.7	21.16	18	18	18.5
Layer 1 Blockage	10%	10%	10%	10%	10%	10%	10%
Layer 2 Depth (m)	0.3	0.3	0.3	0.5	0.5	0.5	0.5
Layer 2 Blockage	100%	100%	100%	100%	100%	100%	100%
Layer 3 Depth (m)	1.35	1.35	1.35	3	30	30	1.35
Layer 3 Blockage	100%	100%	100%	100%	100%	100%	100%

3.1.3.4 Natural Channel

Proposed works include the realignment and restoration of two waterway channels, and the replacement of a concrete weir for a rock ramp with a fish-friendly low-flow channel, as shown in spatially in Figure 10 below.

Natural channels have been represented in the flood model with depth-variable Manning's parameters ranging from 0.09 to 0.15 as indicated in Table 2.

A summary of design measures is provided below.

+ All retained waterway channels will have instream habitat improved through selective placement of large woody debris, root balls and large rock.
+ All new waterway channels will be designed in accordance with best practice natural channel design principles with an emphasis on in-stream habitat through large woody debris, root balls and large rock,
+ The net length of waterway channel will increase by about 200 m because of the new waterway alignments,
+ The suspended carpark deck will include light wells at <15 m spacings,
+ The existing concrete weir on the Eastern Waterway, which represents a significant fish barrier, will be removed and replaced with a rock ramp with a fish-friendly low-flow channel no steeper than 1:20,
+ All minor waterway crossings (associated with roads and paths) will be designed as per the Accepted Development Requirements,
+ Isolated stands of Mangrove fern (Acrostichum speciosum) will be translocated to the new waterway channels on site.

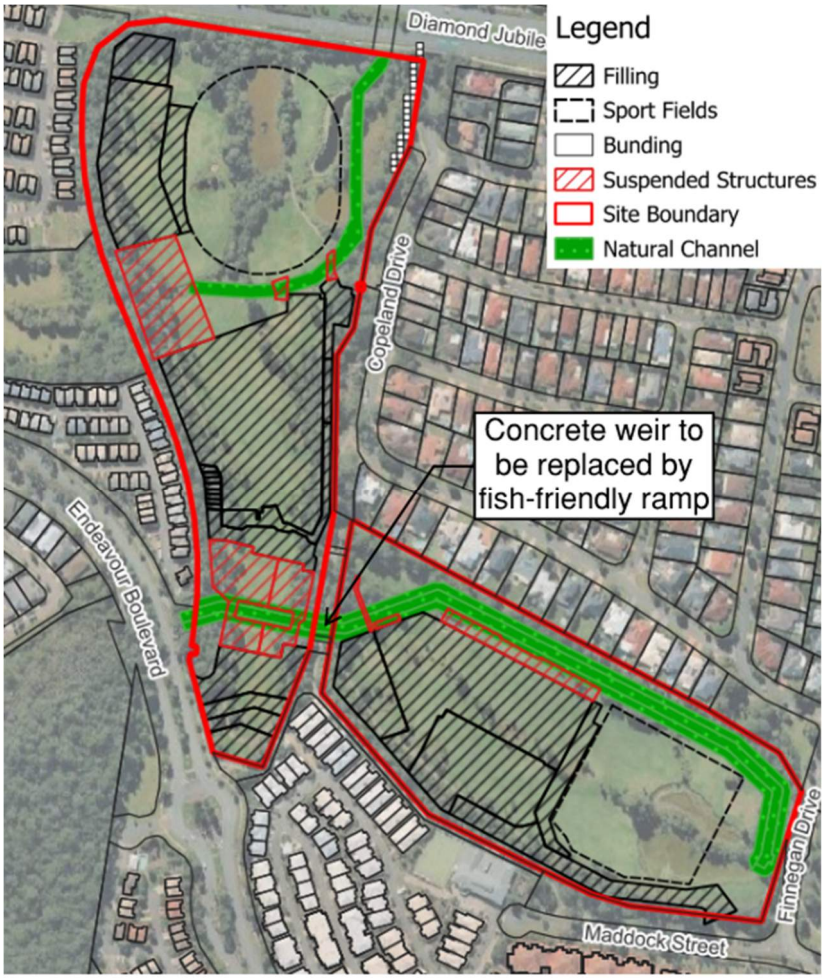


Figure 10 Proposed natural channels and weir removal

3.2 Results

3.2.1 Flood Impacts

Flood impact mapping was undertaken by comparing maximum flood levels between the developed and existing case scenarios across the full range of assessed design events, from the 63.2% AEP ('1 in 1-year flood') through to the 0.1% AEP ('1 in 1000-year flood'). Refer to Appendix A4 for flood impact mapping.

The results indicate that the proposed development will have a generally neutral to beneficial effect on flood behaviour across the broader catchment. A marginal reduction in flood levels is predicted upstream of the northern portion of the site, while reductions in both flood levels and flood extents are observed along Copeland Drive because of the proposed boundary bunding, leading to improved trafficability during flood events.

Modest increases in flood levels are predicted within the northern parklands (former North Lakes Golf Course); however, these increases remain confined to the existing floodway and do not result in any noticeable increases in flood extents. Similarly, only minor increases in flood levels are predicted within Lake Eden downstream of the southern part of the site, with no noticeable increase in flood extents.

Localised increases in flood levels are also predicted immediately upstream of the southern development area during the 10% AEP and 5% AEP events. Notably, these increases are not present in any other assessed event, including more frequent events down to the 63.2% AEP event and rarer events up to the 0.1% AEP event. Furthermore, the localised afflux areas are accompanied by corresponding reductions in flood levels immediately downstream within the development site. This behaviour suggests the predicted increases are likely attributable to local numerical redistribution of flood storage and conveyance within the hydraulic model, rather than representing a material change in flood behaviour. Regardless, the predicted afflux does not result in any noticeable increase in flood extents, impacts to surrounding residential properties, or reduction in road trafficability.

Overall, the modelling demonstrates that the proposed development does not result in any material adverse flood impacts to surrounding land or infrastructure, while providing localised flood mitigation benefits along Copeland Drive. The proposed development preserves the broader flood conveyance and flood storage functions of the floodplain, demonstrating that the intended land use outcomes can be achieved without compromising floodplain performance.

3.2.2 Flood Planning Levels

The MBRC Planning Scheme V6 Flood Hazard Overlay Code regulates the proposed development as it is subject to creek flooding per MBRC's Hays Inlet hydrologic and hydraulic model (Moreton Bay Regional Council, 2016), and is therefore an assessable development.

Table 8.2.2.3 of the Flood Hazard Overlay Code defines habitable and non-habitable building floor levels, summarised in Table 4 below:

Table 4 MBRC Planning Scheme V6 Flood Planning Levels (per Table 8.2.2.3)

Flood Planning Area	Defined Freeboard	Flood Planning Level
Flood planning area (east of the Bruce Highway and inside the Erosion Prone Area in the Coastal hazard overlay)	500mm	Defined Flood Event + 500mm
Flood planning area (east of the Bruce Highway and outside the Erosion Prone Area in the Coastal hazard overlay)	300mm	Defined Flood Event + 300mm
Flood planning area (west of the Bruce Highway)	750mm	Defined Flood Event + 750mm

The site of works is located east of the Bruce Highway and outside of the Erosion Prone Area in the Coastal hazard overlay, as shown in Figure 11 below, therefore the flood planning level is the:

Defined Flood Event + 300 mm freeboard.

Table SC1.2.2 of the MBRC Planning Scheme V6 defines the Defined Flood Event (DFE) as the *"higher of 1% Annual Exceedance Probability event for storm tide or river and creek inundation to the planning horizon year 2100 allowing for the fully developed catchment, an allowance for climate change (20% increase in rainfall intensity), predicted sea level rise (0.8 m) and blockages to drainage systems (as specified in the Queensland Urban Drainage Manual)".*

Refer to Section 3.1.2.3 of this report for the methodology adopted to account for climate change, congruent with MBRC's DFE definition.

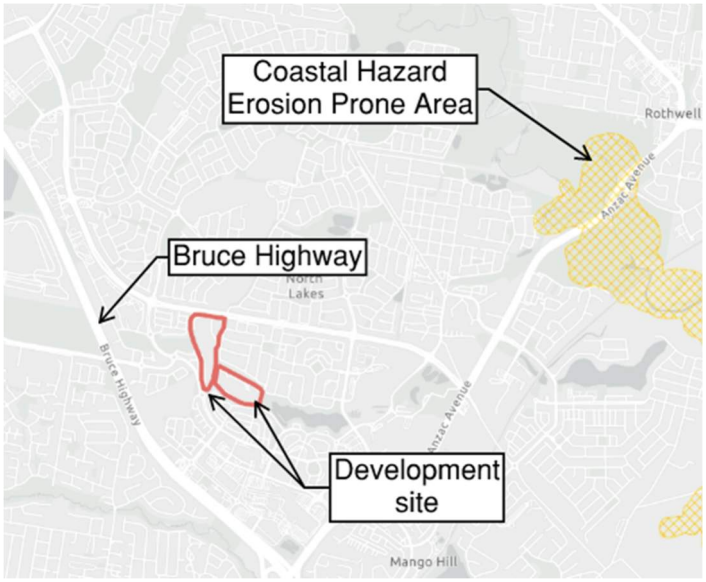


Figure 11 Site of works in relation to the Coastal Hazard Erosion Prone Area (MBRC Planning Scheme V7.1)

Refer to Appendix A5 for flood levels plots of the 1% AEP and 0.1% AEP flood events including annotated fill pad levels, demonstrating compliance with flood planning level requirements.

4. DESIGN DEVELOPMENT CONSIDERATIONS

This flood study has been undertaken based on the current concept design and demonstrates that the proposed North Lakes Anglican College Education Precinct can be accommodated without causing material adverse flood impacts to surrounding properties and roads.

We acknowledge that the development layout, earthworks design and proposed infrastructure will continue to evolve throughout the detailed design process. Accordingly, the concept design presented in this report should not be interpreted as a fixed or prescriptive arrangement. Rather, this assessment demonstrates the feasibility of achieving the intended development outcomes while maintaining an acceptable flood impact outcome.

Future refinements to the development layout and earthworks design may be undertaken as part of detailed design, provided any substantial modifications are assessed through appropriate hydraulic modelling demonstrating that surrounding properties and road networks are not materially affected.

Accordingly, the findings of this report should be considered to establish the flood impact performance objectives for future design development, rather than prescribe the specific engineering solution to achieve those objectives.

5. CONCLUSION

A flood study has been undertaken to assess the impacts of the proposed North Lakes Anglican College Education Precinct on flood behaviour and flood planning level compliance.

The assessment utilised a refined version of Moreton Bay Regional Council's Hays Inlet flood model incorporating updated ARR 2019 hydrology, conservative climate change allowances to the year 2100, revised hydraulic structures and enhanced representation of site-specific conditions. The developed case scenario included conceptual earthworks, suspended structures, waterway realignments and associated flood mitigation measures consistent with the current precinct masterplan.

Flood impact assessments undertaken across events ranging from the 63.2% AEP event to the 0.1% AEP event indicate that the proposed development will not result in material adverse flood impacts to surrounding properties or roads. Predicted increases in flood levels are minor, generally confined to existing floodways and water bodies, and do not result in noticeable increases in flood extents or adverse impacts to surrounding development. Further, the proposed works provide localised improvements in trafficability along Copeland Drive through reductions in flood levels and extents.

The assessment also demonstrates that the proposed development can be designed to satisfy the flood planning level requirements of the Moreton Bay Regional Council Planning Scheme.

Based on the findings of this study, the proposed North Lakes Anglican College Education Precinct is considered feasible from a flood management perspective and can be accommodated within the site without causing material adverse flood impacts and preserving the broader flood conveyance and flood storage functions of the floodplain, subject to ongoing design refinement and confirmation through detailed design.

A1. PRECINCT MASTERPLAN

SECONDARY PRECINCT

PRIMARY PRECINCT

DIAMOND JUBILEE WAY

COPELAND DRIVE

COPELAND DRIVE

NOT IN SCOPE

FINNEGAN DRIVE

MADDOCK STREET

CREEK BED

CREEK BED

PROPOSED SITE ACCESS

RL 20m

RL 20.5m

RL 21m

RL 21m

RL 21m

RL 21m

RL 21m

RL 21m

RL 21m

RL 20m

RL 19.5m

RL 19m

RL 19m

RL 19.5m

RL 21m

RL 14.8m

RL 18.5m

RL 18.5m

RL 18.5m

RL 19.5m

RL 19.5m

RL 19.5m

RL 20m

RL 18.5m

RL 18m

UP

UP

UP

INDOOR SPORTS HALL DASHED ABOVE

PROPOSED SITE ACCESS

RELOCATED ROUNDABOUT

ENDEAVOUR BOULEVARD

LEGEND

- EXISTING BUILDING
- PROPERTY BOUNDARY
- SPORTS AREA
- PUBLIC
- LIBRARY
- LEARNING
- STAFF AREA
- AMENITIES
- BACK OF HOUSE
- CANTEEN
- PERFORMING ARTS
- CREEK BED
- RESERVOIR
- DESIGNATED EVENT FLOOD AREA

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Arch. Reg. No. QLD 5863

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North Lakes Anglican College

ENDEAVOUR BOULEVARD
NORTH LAKES 4509

Drawn by:
MR, BG

Architect:
Alex Du Plesis
QLD 5863

SITE PLAN - GROUND FLOOR - OVERALL

As indicated @ A1

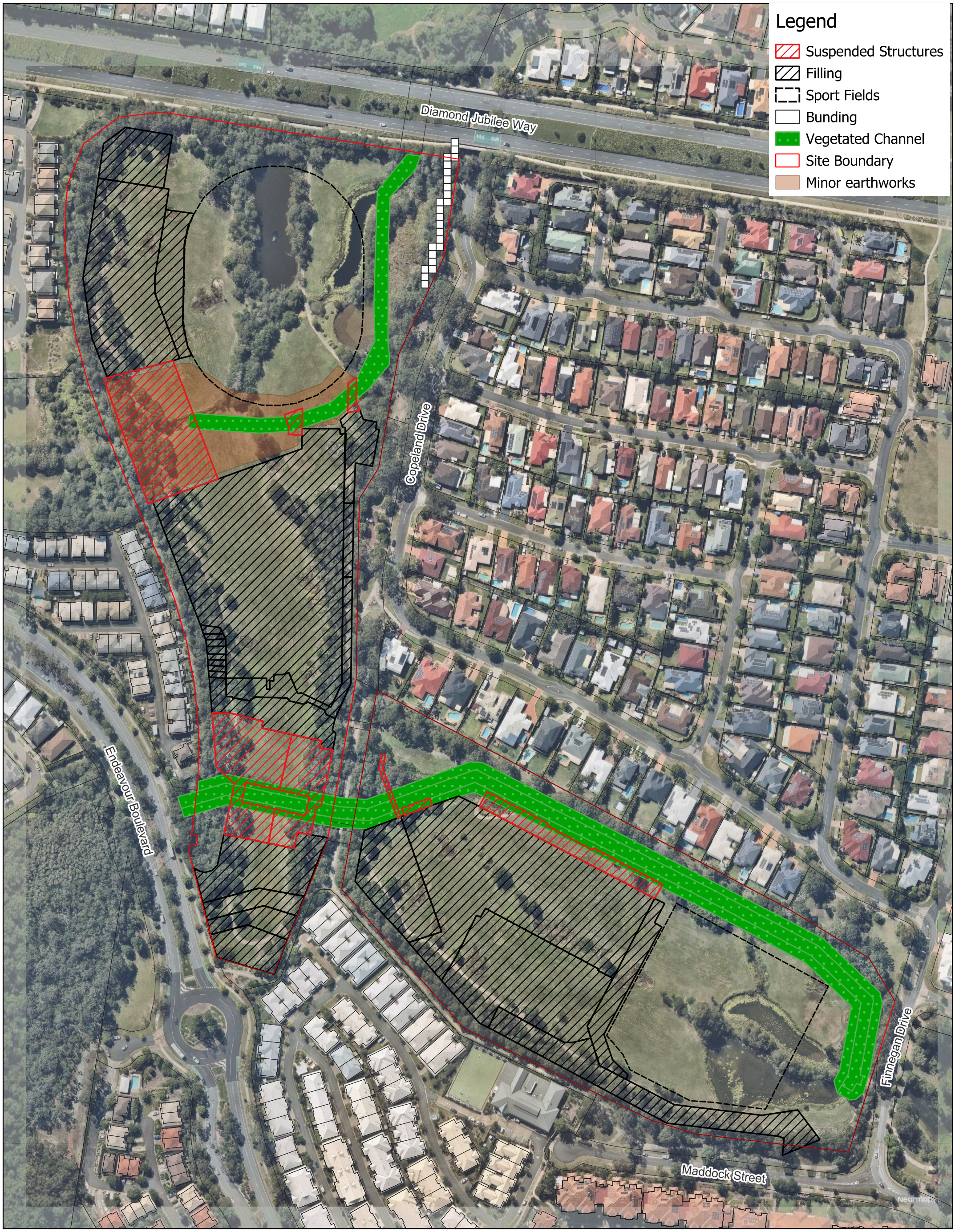
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A2. DEVELOPED CASE SCENARIO TUFLOW LAYOUT PLAN



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Title:
Anglican College TUFLOW Layout Plan

Project. North Lakes Golf Course

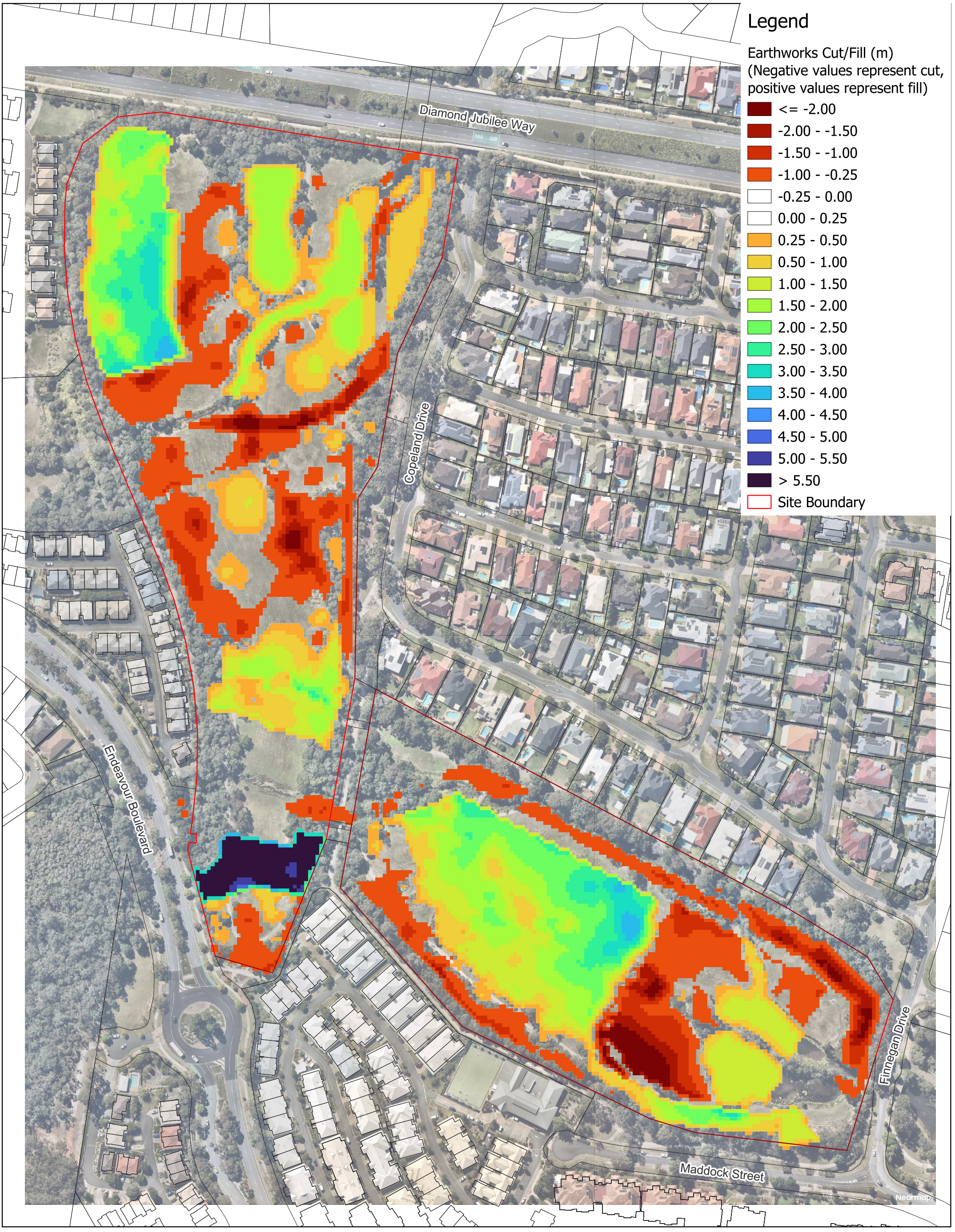
Job #	2020.0524
Engineer.	Carlos Gambirazio
Date.	12/6/2026

0 50 100 150 200 m

1 : 2,250 at A3

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A3. PRELIMINARY EARTHWORKS PLAN



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4006 Australia
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Title:
Anglican School MID Preliminary Earthworks Plan

Project. North Lakes Golf Course

Job #	2020.0524
Engineer.	Carlos Gambirazio
Date.	8/6/2026

0 50 100 150 200 m

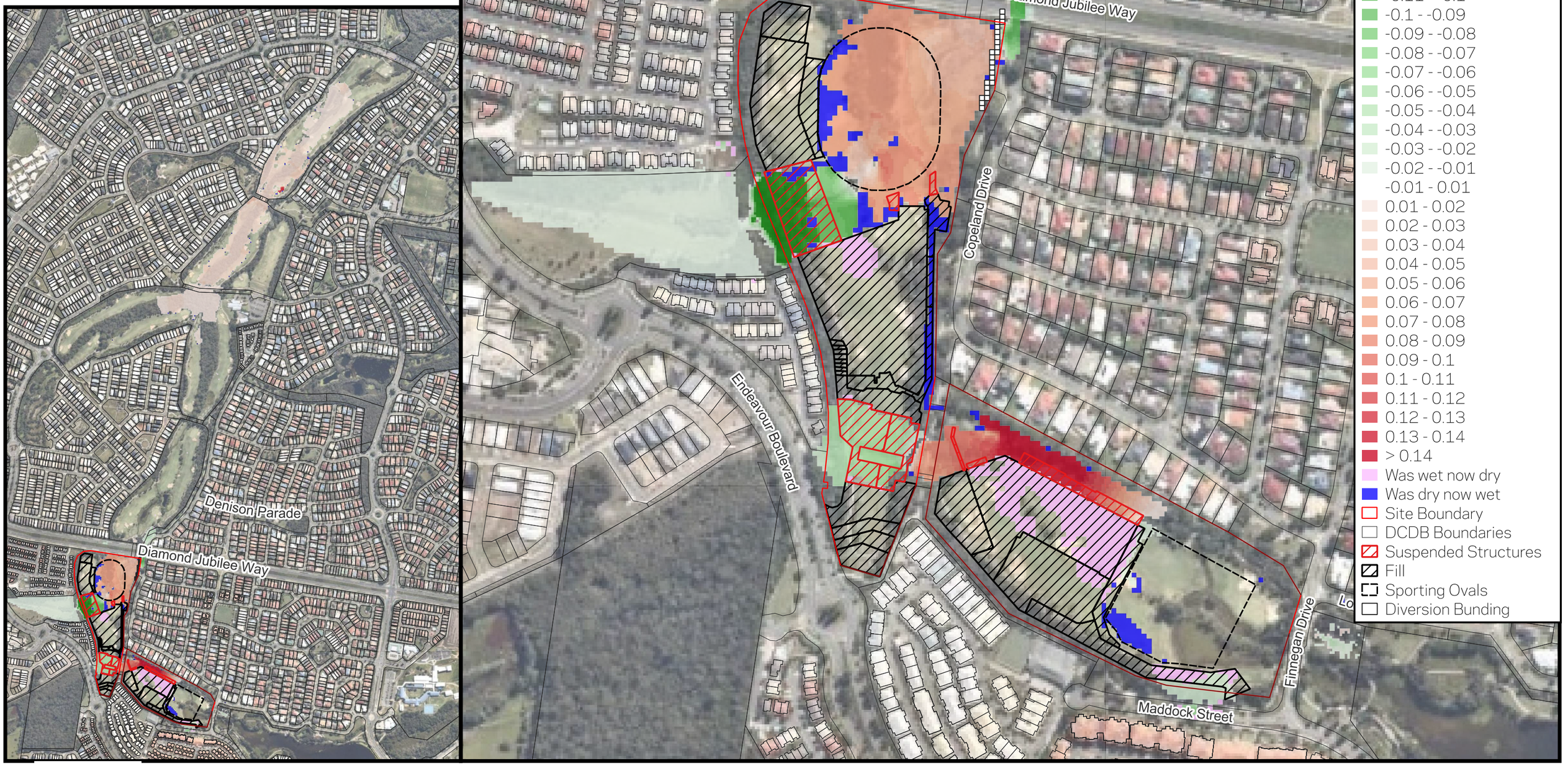
1 : 2,250 at A3

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A4. FLOOD IMPACT MAPPING

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 0.1% AEP ('1000-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

Filepath: \\bt-data\Company Data\Projects\2020\2020.0524-North Lakes Development Application\Engineering\Flood\2020.0524_North_Lakes_TUFLOW.qgz

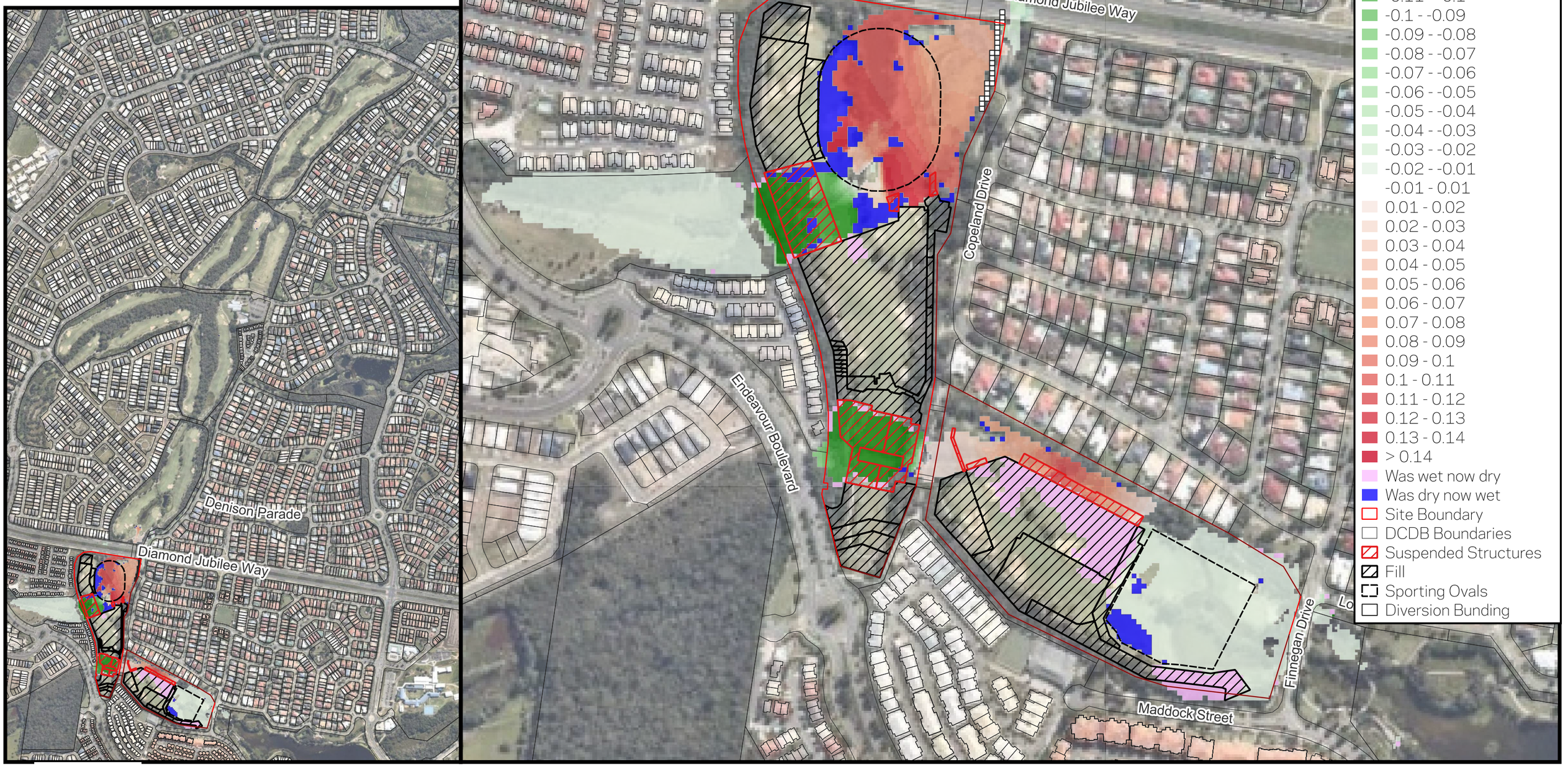
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0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 1% AEP ('100-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

Filepath: \\bt-data\Company Data\Projects\2020\2020.0524-North Lakes Development Application\Engineering\Flood\2020.0524_North_Lakes_TUFLOW.qgz

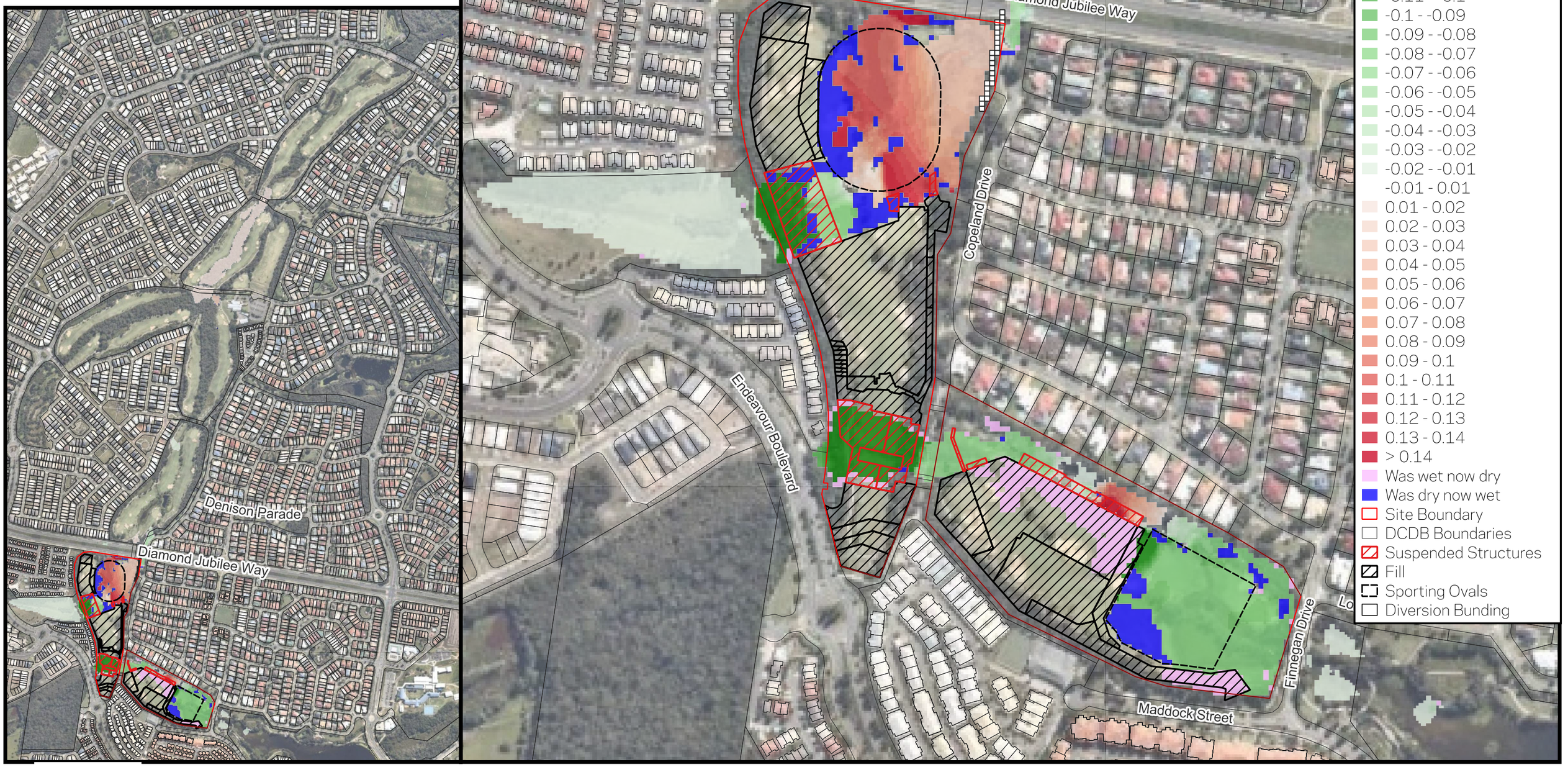
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0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 2% AEP ('50-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

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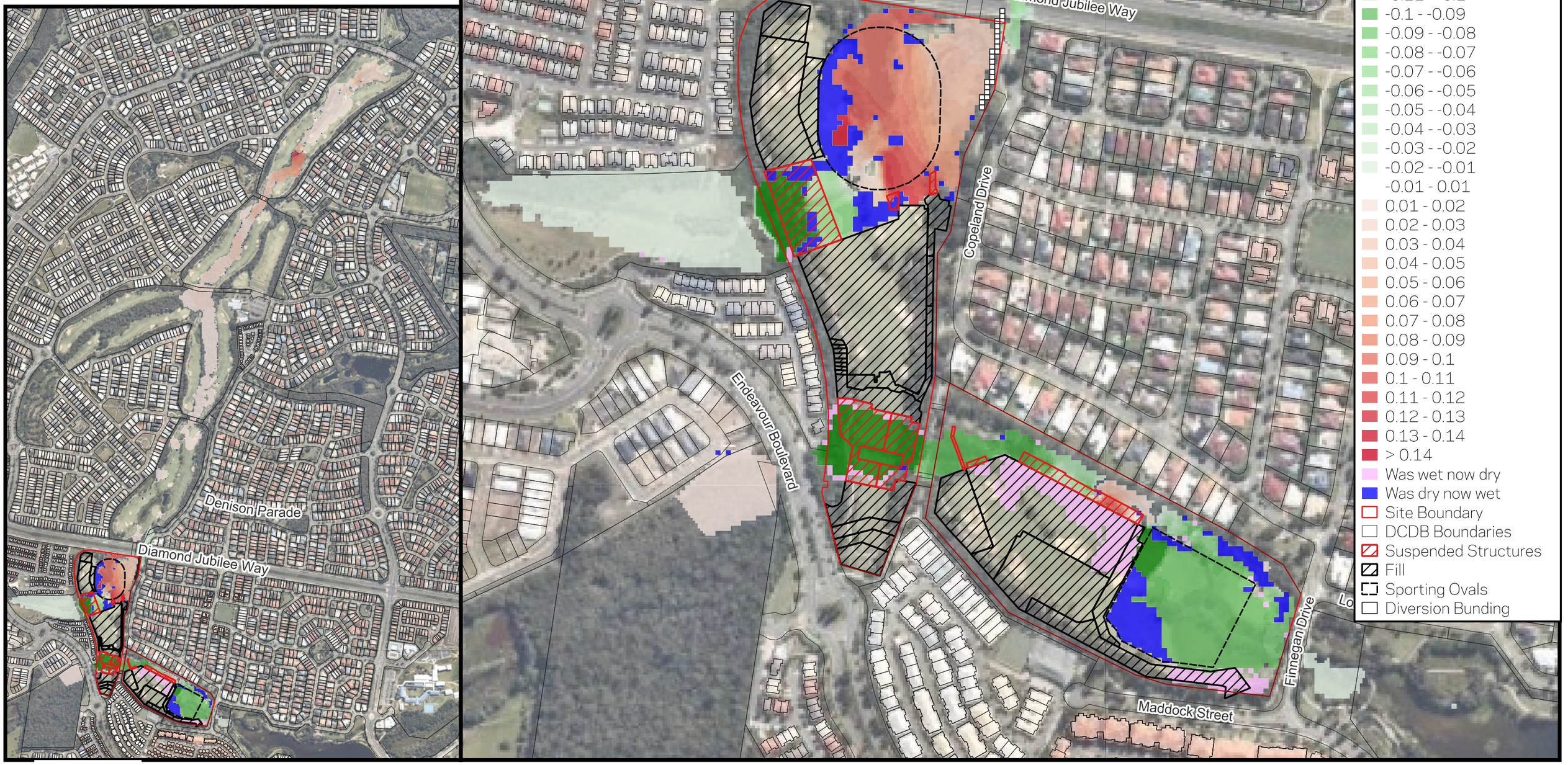
0 75 150 225 300 375 m

Scale 1:3,750 at A3

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0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 5% AEP ('20-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

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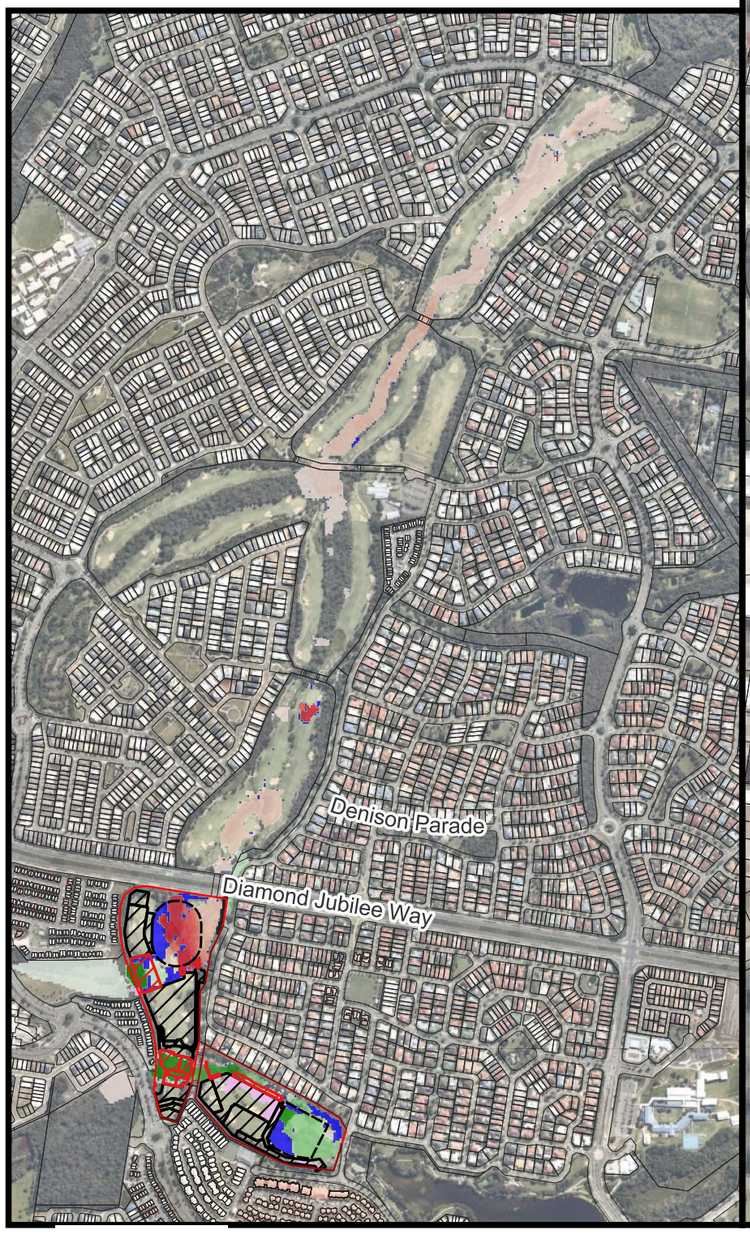
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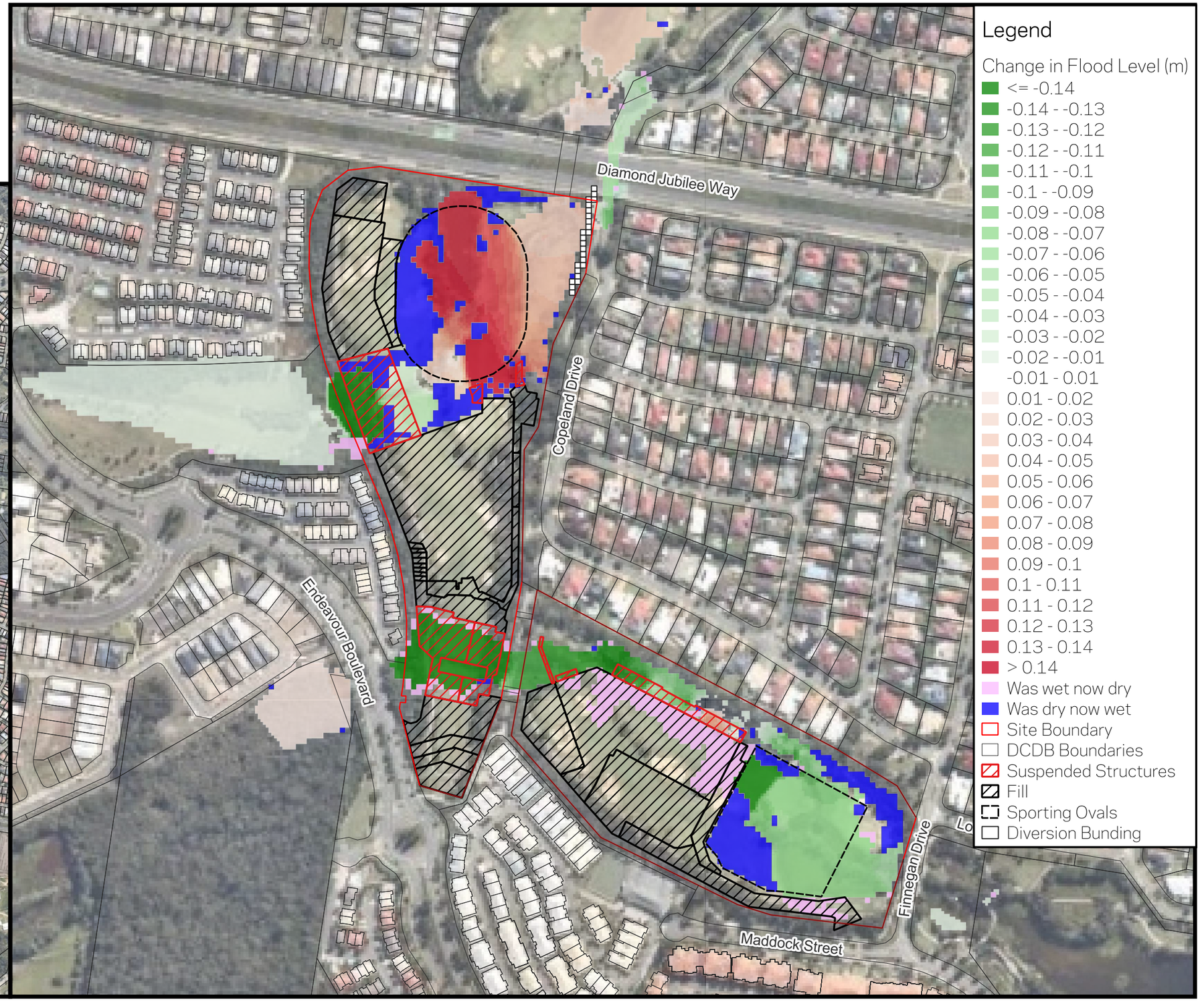
0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3





Legend

Change in Flood Level (m)

- <= -0.14
- -0.14 - -0.13
- -0.13 - -0.12
- -0.12 - -0.11
- -0.11 - -0.1
- -0.1 - -0.09
- -0.09 - -0.08
- -0.08 - -0.07
- -0.07 - -0.06
- -0.06 - -0.05
- -0.05 - -0.04
- -0.04 - -0.03
- -0.03 - -0.02
- -0.02 - -0.01
- -0.01 - 0.01
- 0.01 - 0.02
- 0.02 - 0.03
- 0.03 - 0.04
- 0.04 - 0.05
- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.1
- 0.1 - 0.11
- 0.11 - 0.12
- 0.12 - 0.13
- 0.13 - 0.14
- > 0.14
- Was wet now dry
- Was dry now wet
- Site Boundary
- DCDB Boundaries
- Suspended Structures
- Fill
- Sporting Ovals
- Diversion Bunding

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Title:

Flood Impact Assessment - 10% AEP ('10-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

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0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 20% AEP ('5-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

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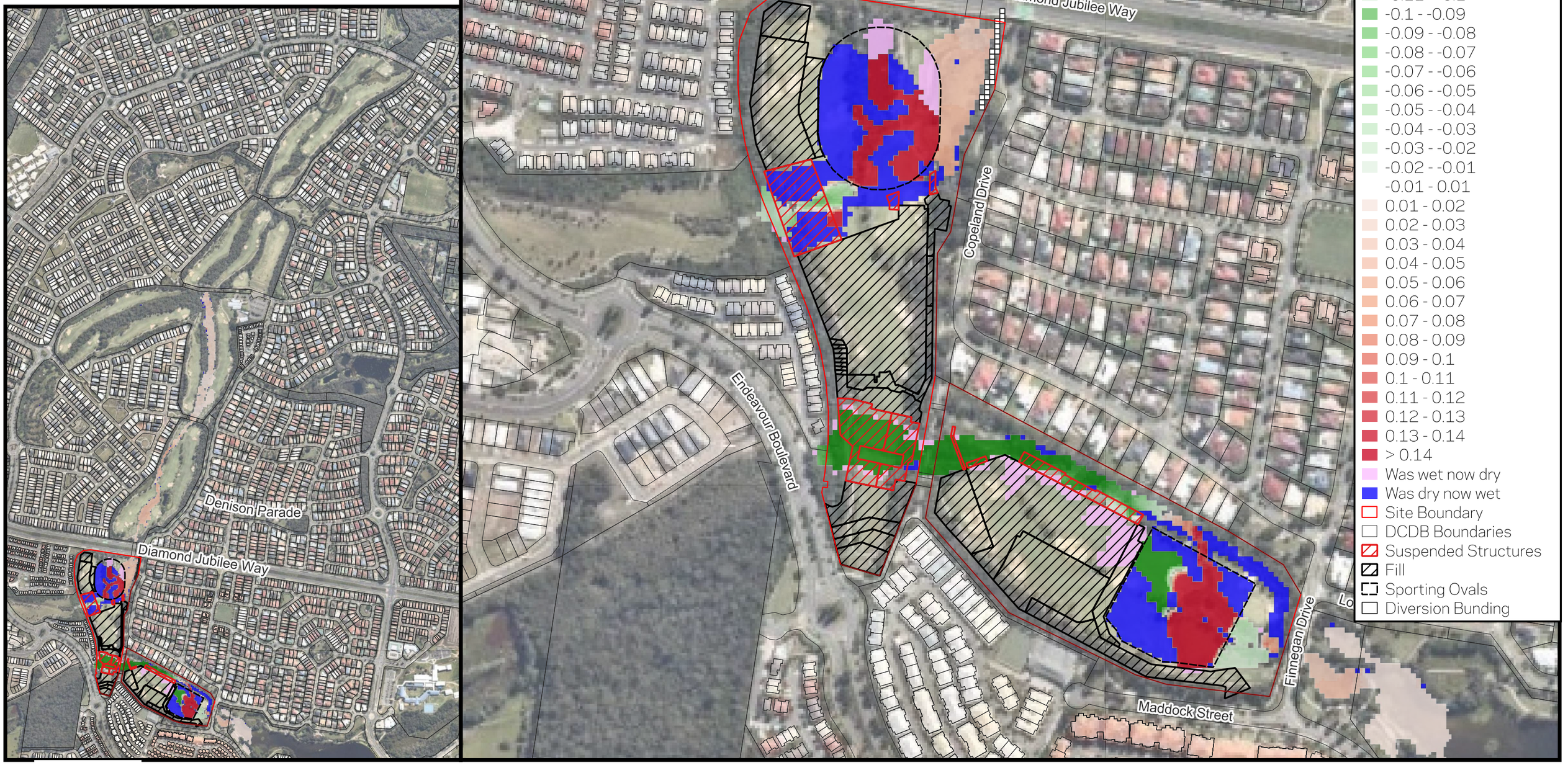
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0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



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Title:
Flood Impact Assessment - 50% AEP ('2-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

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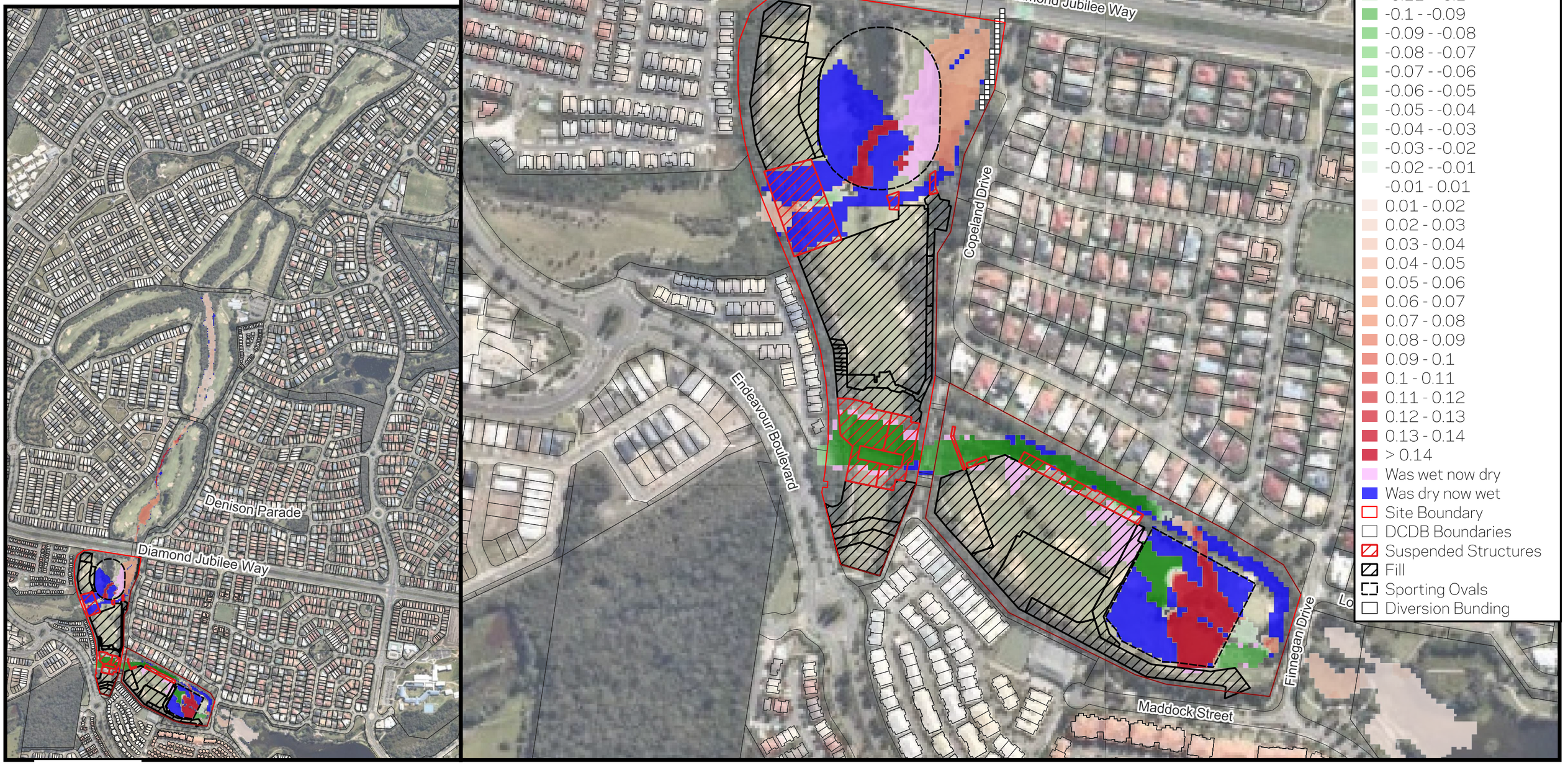
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0 75 150 225 300 375 m

Scale 1:3,750 at A3

0 250 500 750 1,000 1,250 m

Scale 1:15,000 at A3



Legend

Change in Flood Level (m)

- <= -0.14
- -0.14 - -0.13
- -0.13 - -0.12
- -0.12 - -0.11
- -0.11 - -0.1
- -0.1 - -0.09
- -0.09 - -0.08
- -0.08 - -0.07
- -0.07 - -0.06
- -0.06 - -0.05
- -0.05 - -0.04
- -0.04 - -0.03
- -0.03 - -0.02
- -0.02 - -0.01
- -0.01 - 0.01
- 0.01 - 0.02
- 0.02 - 0.03
- 0.03 - 0.04
- 0.04 - 0.05
- 0.05 - 0.06
- 0.06 - 0.07
- 0.07 - 0.08
- 0.08 - 0.09
- 0.09 - 0.1
- 0.1 - 0.11
- 0.11 - 0.12
- 0.12 - 0.13
- 0.13 - 0.14
- > 0.14
- Was wet now dry
- Was dry now wet
- Site Boundary
- DCDB Boundaries
- Suspended Structures
- Fill
- Sporting Ovals
- Diversion Bunding

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Title:

Flood Impact Assessment - 63.2% AEP ('1-year flood') - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Golf Course - Anglican Masterplan
Job # 2020.0524
Engineer. Carlos Gambirazio
Date. 12/6/2026

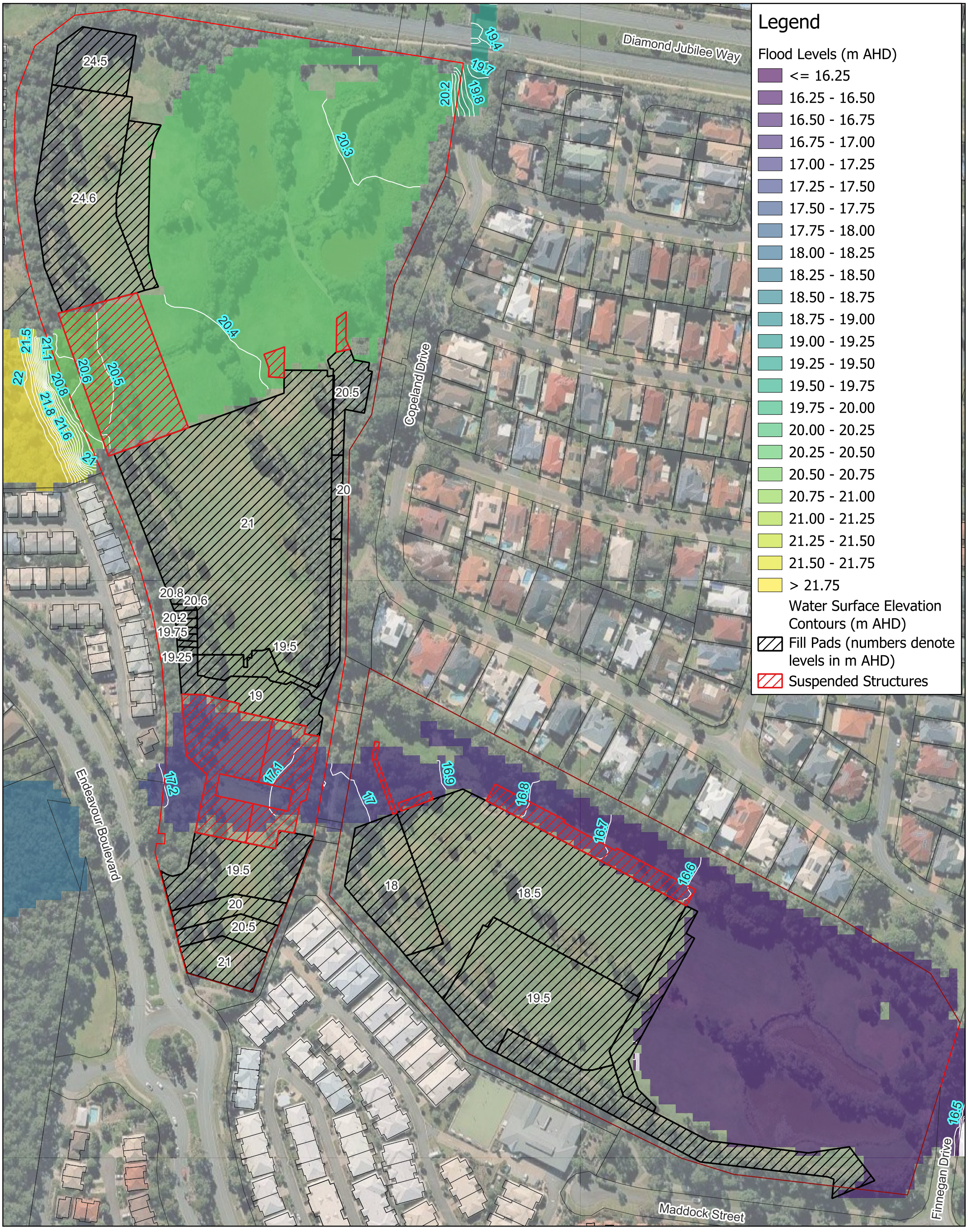
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0 75 150 225 300 375 m

Scale 1:3,750 at A3

A5. FLOOD PLANNING LEVEL COMPLIANCE ASSESSMENT



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Title:
Developed Flood Levels - 1% AEP (100-year flood) - Climate Change SSP5-8.5 at year 2100

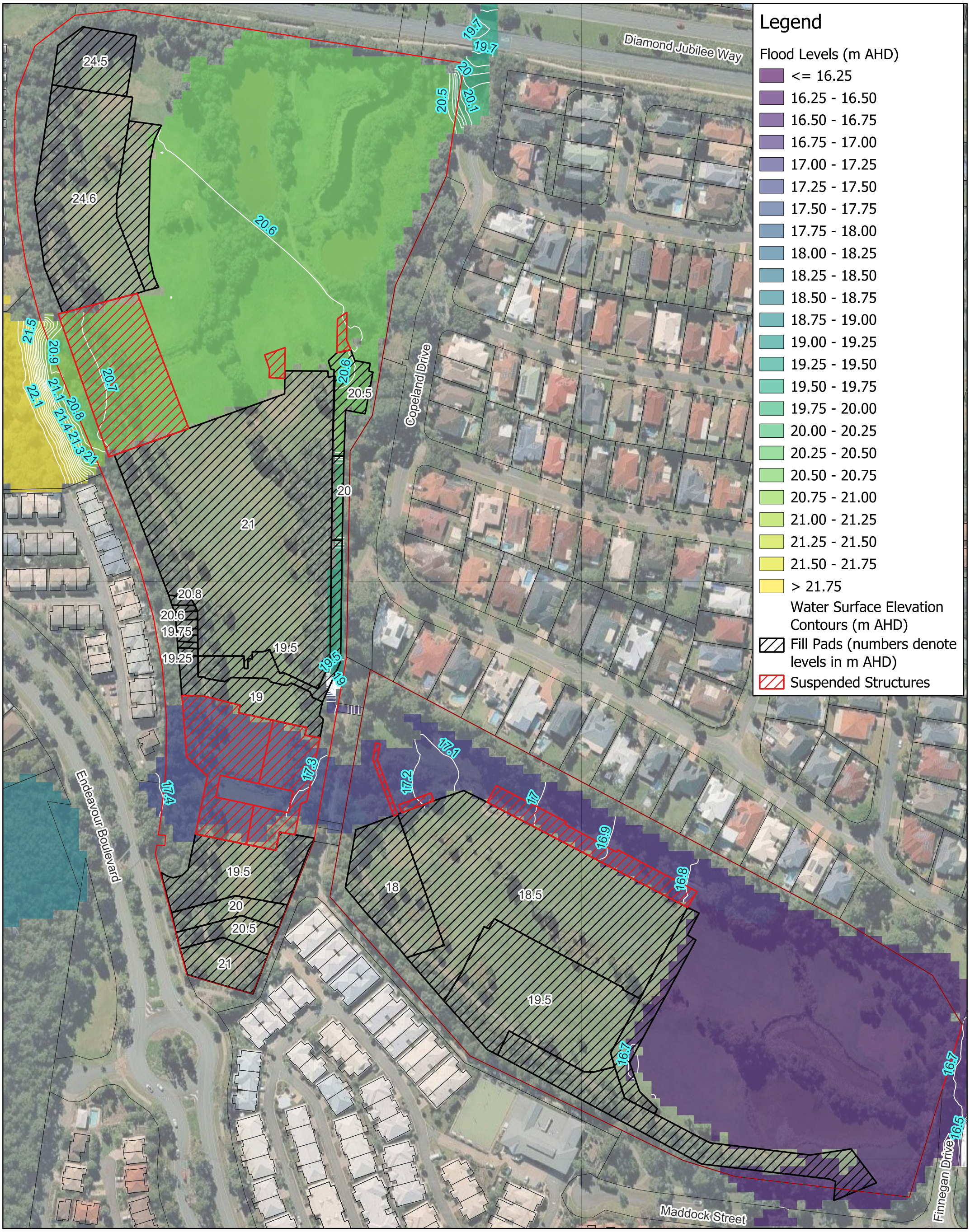
Project. North Lakes Anglican School MID

Job #	2020.0524
Engineer.	Carlos Gambirazio
Date.	12/6/2026

0 50 100 150 200 m

1:2000 at A3

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Title:
Developed Flood Levels - 0.1% AEP (1000-year flood) - Climate Change SSP5-8.5 at year 2100

Project. North Lakes Anglican School MID

Job #	2020.0524
Engineer.	Carlos Gambirazio
Date.	12/6/2026

0 50 100 150 200 m

1:2000 at A3

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