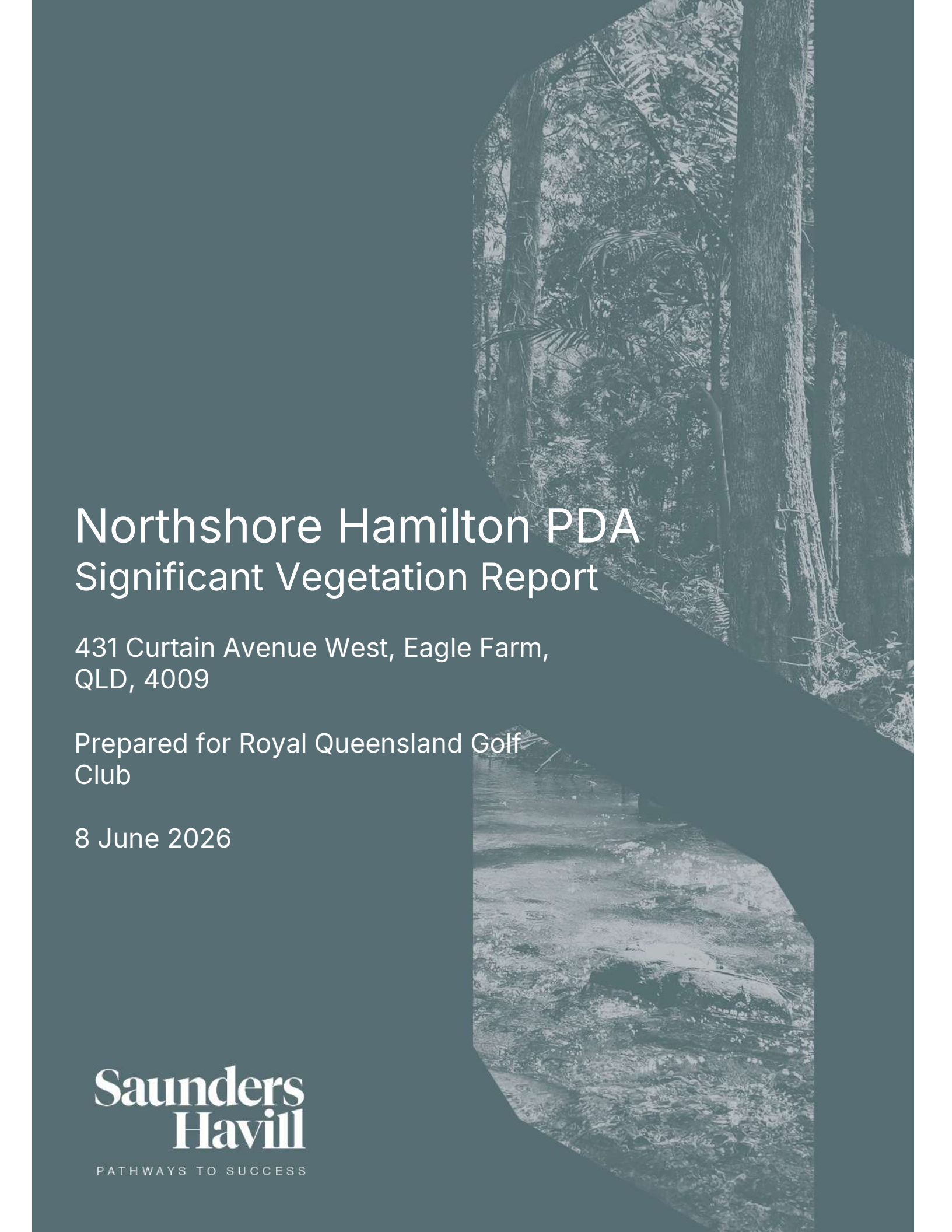




Northshore Hamilton PDA Significant Vegetation Report

431 Curtain Avenue West, Eagle Farm,
QLD, 4009

Prepared for Royal Queensland Golf
Club

8 June 2026

**Saunders
Havill**

PATHWAYS TO SUCCESS

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1. Introduction

Saunders Havill (SH) was engaged by Royal Queensland Golf Club to address the removal and damage of marine plants associated with works to upgrade the existing golf course for the 2032 Brisbane Olympic Games.

Economic Development Queensland's (EDQ) Practice Note 14 addresses state interests in development assessment in Priority Development Areas (PDAs). Appendix 1 of the Practice Note identifies operational work that is the removal, destruction or damage of a marine plant for PDA related development as exempt from state interest referral. While exempt from the *Planning Act 2016*, the Northshore Hamilton PDA Development Scheme identifies marine plants as 'significant vegetation' with impacts requiring operational works approval under the development scheme.

Even though referral under the Planning Act isn't required SH completed site investigations and prepared this report addressing *State Code 11: Removal, destruction or damage of marine plants* to demonstrate compliance with the Northshore Hamilton PDA Development Scheme.

Key site details are presented in **Table 1**. It is noted that a separate application has been lodged with the Department of State Development, Infrastructure and Planning (DSDIP – reference number 2605-52259 SDA) for the removal of marine plants associated with works to upgrade the existing golf course for the 2032 Brisbane Olympic Games in locations outside of the Northshore Hamilton PDA (lot 1158SP233736).

Table 1: Property summary

Address	431 Curtin Avenue West, Eagle Farm, QLD, 4009 (existing course)
Lot/plan	Land adjoining 45SP120367 (existing course)
Area	74.94 ha
Vegetation Management Act 1999	Category B (remnant) vegetation RE 12.1.2, 12.1.3
Fisheries Act 1994	Tidal Waterway for Waterway Barrier Works
Matters of State Environmental Significance (MSES)	MSES – Wildlife habitat (endangered or vulnerable) MSES – Wildlife Habitat (special least concern animal) MSES – Regulated vegetation (essential habitat)
Local government area	45SP120367 – Economic Development Queensland
Planning scheme, zoning	Open Space Sport and Recreation
Land use	Golf Course



1.1. Site context and Characteristics

Contextually, the Royal Queensland Golf Club (RQGC) located approximately 7.2 kilometres (km) east of the Brisbane CBD, in the suburb of Eagle Farm. Situated at the end of Curtin Avenue West, where surrounding land uses consists of the industrial area of Eagle Farm and high density residential apartments. The site has seen historical clearing and replanting consistent with a golf course land use where majority of the trees on site were observed to be planted natives/ornamentals of high aesthetic value. Being situated on the banks of the Brisbane River, the areas adjacent to the river are classified as intertidal with patches of varying density of marine plants.

The RQGC was first established in 1920 and has been operating as a working golf course since, including ongoing maintenance to facilitate the land use. Construction of the original Gateway Bridge in the 1980's, and the further duplication in 2010, has split the site with the land under the gateway providing an access easement for maintenance of the bridge structure. The land use and bridge construction has resulted in disturbance of the riverbank leading to varied levels of marine plant recruitment.

The context of the site and a recent aerial image are presented in Figure 1 and Figure 2 respectively.

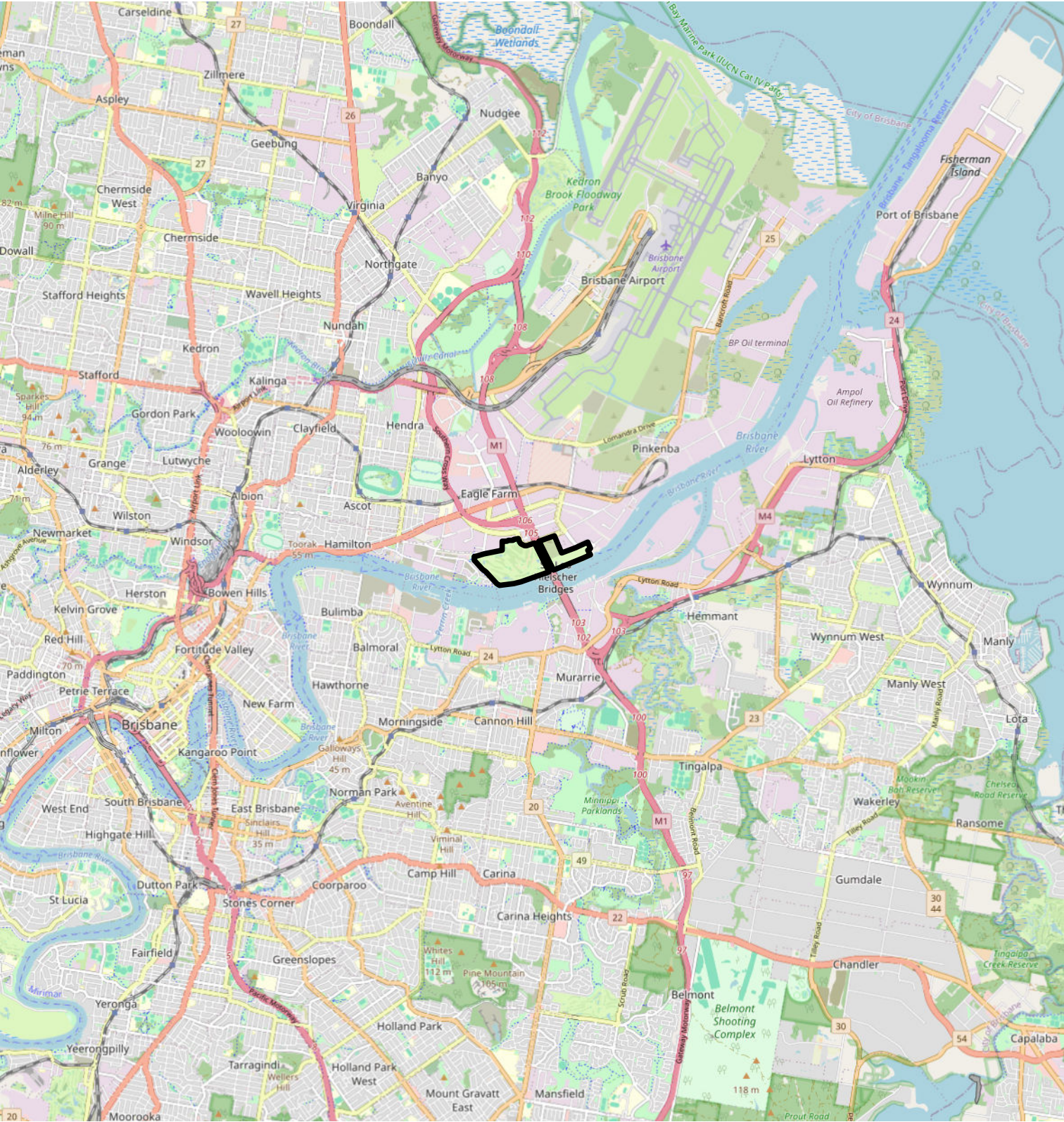
1.2. Proposed Works

The RQGC has been identified as the host venue for golf events for the Brisbane 2032 Olympic and Paralympic Games. To function as an Olympic-standard venue, a program of upgrades is required to ensure compliance with international competition standards, contemporary venue safety requirements, and the operational demands associated with hosting a major global sporting event.

Upgrades have been developed in consultation with the International Olympics Committee (ICC) and International Golf Federation (IGF) and are necessary to address Games-time requirements including athlete facilities, broadcast infrastructure, spectator capacity, circulation and access, event operations, emergency management, and security. The proposed works are intended to ensure the venue can safely and effectively accommodate competitors, officials, media, and spectators during the Games, while also delivering a fit-for-purpose facility and lasting legacy infrastructure beyond 2032.

As part of the upgrades a small number of marine plants are required to be removed or trimmed to provide features such as upgraded tee boxes and a temporary city cat terminal for spectators. Further details on the works and impacts to marine plants are included in section 4.





LEGEND

 Site DCDB

Figure 1

Site Context

CLIENT

ROYAL
QUEENSLAND
GOLF CLUB

FILE REFERENCE
11871 E Figure 1 Site Context A

DATE
28/04/2026

Marine Plants Assessment

**Saunders
Havill**
BOWENHILLS | SPRINGFIELD
1300 123 744 | mail@saundershavill.com

0 1 2 km

COORDINATE SYSTEM
GDA 2020 MGA Z56

SCALE (A4)
1:100,000





LEGEND

Qld DCDB

Site DCDB

Figure 2

Site Aerial

FILE REFERENCE
11871 E Figure 2 Site Aerial A

DATE
28/04/2026

Marine Plants Assessment



COORDINATE SYSTEM
GDA 2020 MGA Z56

SCALE (A4)
1:15,000



CLIENT

ROYAL
QUEENSLAND
GOLF CLUB

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2. Northshore Hamilton Development Scheme

The PDA-wide criteria requires that development:

- i. avoids impacts on significant vegetation, or
- ii. minimises and mitigates impacts on significant vegetation after demonstrating avoidance is not reasonably possible, and
- iii. maintains the habitat, water quality and flood mitigation values of significant riparian vegetation.

To demonstrate avoidance and minimisation of impacts, this report addresses relevant performance outcomes from *SDAP Code 11: Removal, destruction or damage of marine plants*.

2.1. Acceptable Development Requirements

The Department of Agriculture and Fisheries released the Accepted development requirements (ADR) for operational work that is the removal, destruction or damage of marine plants in July 2017. An updated draft of the ADR was released in 2025 however a final version is yet to be released.

While not applicable to the current application, a number of accepted work types would likely apply to the proposed works specifically ADR 2.18 - Construction of a jetty, pontoon, boardwalk or fishing platform which allows a maximum of 25 m² within the footprint of the structure and for construction.

The ADR also provides standards for pruning and trimming of marine plants including:

- Mangroves are pruned or trimmed by no more than a third of their height.
- Mangrove branches greater than 25 mm in diameter must be pre-cut underneath to prevent splitting.
- Cutting equipment must be kept sharp and clean at all times.
- Subsurface roots of mangroves where the trunk and branches have been removed must be left in-situ to minimise substrate disturbance.
- Marine plant material that has been removed, damaged or destroyed, is removed from tidal land.
- Chemicals are not to be used.
- Marine plants are not to be burned, unless specifically permitted.

All pruning and trimming works carried out under this approval will be carried out in accordance with the ADR standards.



3. Marine Plant Field Assessment

Two (2) Ecologists from SH assessed the project area on 10 February and 3 March 2026 with weather conditions generally fine and sunny, with limited rainfall during the field survey. Refer to **Table 2** for summarised weather conditions during the field survey effort.

Table 2: Weather conditions

Date	Min Temperature (°C)	Max Temperature (°C)	Rainfall (mm)
10 February 2026	23.5	31.6	0
3 March 2026	18.2	29.1	0

**Extracted from Brisbane Airport (Station 040842)*

The entire site was walked to ensure the extent of all marine plants were identified and all species recorded. Specifically, the following was undertaken;

- Total extent (area) of both mangrove and saltmarsh marine plants was mapped using handheld GPS units accurate to <1m.
- Detailed descriptions were recorded for each polygon including details on species, mangrove counts, ground marine plant coverages, maturity (canopy height, DBH) and canopy health.

The full ecological findings are outlined in **Section 3.1** and **Section 3.2**.



3.1. General Site Observations

The following observations have been made based on detailed field survey.

- The marine habitat on site is dominated by *Avicennia marina* (Grey Mangrove) with some regenerating *Aegicera coniculatum* (River Mangrove) within areas of disturbed mangrove habitat. Generally, the intact mangrove habitat was observed to be healthy and mature (>6m tall and 100mm DBH) however areas were identified that were disturbed from the existing use as a golf course.
- Saltmarsh plants were observed and mapped as well consisting of *Sporobolus virginicus* (marine couch), *Tetragonia tetragonioides* (NZ Spinach), *Enchylaena tomentosa* (Ruby Saltbush), *Wollastonia uniflora* (Beach Sunflower), *Suaeda australis* (Seablite) and *Sesuvium portulacastrum* (Sea Purslane). Weeds (Including Guinea Grass, Tall Fleabane, Stinking Passion and Rhodes Grass) were observed to be infiltrating within the saltmarsh areas.
- Marine plants (and other vegetation) has been cleared under the Gateway Motorway and the land built up to accommodate the bridge, therefore no mature mangroves were found. Limited regenerating specimens were observed growing in the new, constructed, riverbank.

3.2. Marine Plant Habitat Field Assessment Results

Despite the disturbed nature of the golf course and surrounding land uses, the marine plants on site are well established. No marine plants were identified immediately west of the Gateway Bridge however dense mangrove stands are present in the southwestern corner associated with the mapped remnant vegetation. Dense pneumatophores were present from the edge of the onsite rockwall to the water edge when the surveys were conducted (incoming high and outgoing low on the respective field days).

Saltmarsh patches were highly disturbed with many areas east of the Gateway Bridge infiltrated by weeds. Less weed intrusion was observed west of the Gateway Bridge likely due to maintenance of the golf course up to the marine habitat boundary and more regular interaction with tidal waters.

Marine plant patches are shown on **Plan 1** with high resolution plans, descriptions and photos included as **Appendix A**.



01 IDENTIFIED MARINE PLANT ASSESSMENT



Notes:
The information on this plan is not suitable for any purpose other than the expressed use of the Client. Property dimensions, areas, numbers of lots and contours and other physical features may need verification if the development application is approved and development proceeds, and may change when a full survey is undertaken or in order to comply with development approval conditions. No reliance should be placed on the information on this plan for detailed design or for any financial dealings involving the land. Saunders Havill therefore disclaims any liability for any loss or damage whatsoever or howsoever incurred, arising from any party using or relying upon this plan for any purpose other than as a document prepared for the sole purpose of accompanying a development application and which may be subject to alteration beyond the control of Saunders Havill. Unless a development approval states otherwise, this is not an approved plan.

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LEGEND

Site DCDB
Qld DCDB

Marine polygon Assessment Areas

Mangroves
Marine Cover

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	29/04/2026	Preliminary	HW	HC



4. Proposed Development

The RQGC has been identified as the host venue for golf events for the Brisbane 2032 Olympic and Paralympic Games. To function as an Olympic-standard venue, a program of upgrades is required to ensure compliance with international competition standards, contemporary venue safety requirements, and the operational demands associated with hosting a major global sporting event. Upgrades developed in consultation with the ICC and IGF that will impact on marine plants include:

- Construction of a temporary ferry terminal east of the Gateway Motorway.
- Reconfiguration of the tee box on hole 7 to increase the length and difficulty of the hole.
- Removal of a small amount of mangroves to facilitate broadcast requirements such as positioning tv camera's and allowing improved access for spectators.
- Trimming mangroves to provide site lines for spectators and broadcast cameras.

For the most part, works will result in temporary impacts with trimming carried out where possible and mangroves allowed to grow back once the games are completed. Areas identified for clearing and trimming are shown on **Plan 2**. More detailed plans are included as **Appendix B**.

All saltmarsh areas will be retained however some temporary impacts may occur during construction. New saltmarsh areas will be created to the east of the Gateway Bridge as part of the course refurbishments (refer to **Plan 2**). The new tidal areas are to be incorporated into the course design and result in an overall increase in saltmarsh as a part of the development.

The proposed upgrades will result in the removal of 0.2 ha from within the identified marine plants area outside of clearing allowed under the ACR (**Plan 2**). A further 1.83 ha will be subject to pruning and some minor selective clearing to allow for camera placement, site lines and spectator movement associated with the Olympic golf event. To compensate for any impacts to the identified marine plants, a financial Environmental Offset is to be delivered in accordance with the *Queensland Environmental Offsets Policy*.

Sections 5 and 6 detail the management and mitigation measures to be implemented as part of this development proposal to manage the proposed impacts.



02.1 MARINE PLANTS IMPACT ASSESSMENT



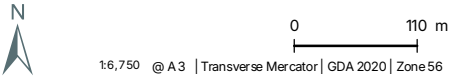
Notes:
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LEGEND

- Site DCDB
- Qld DCDB
- Marine Plant Impact Area**
 - Mangrove Habitat to Remove (0.2 ha)
 - Retain Marine Ground Cover (0.85 ha)
 - Selective Mangrove Clearing to Occur (1.83 ha)
- Rehabilitation Zones**
 - New Constructed Tidal Wetland [3.0 ha] including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC



Address / RPD: Lot 45SP120367
Lot 1158SP233736
Date: 28/04/2026



5. Management and Mitigation Measures

5.1. Marine Plants Clearing Management Plan (MPCMP)

A Marine Plants Clearing Management Plan (MPCMP) will be developed to guide all marine plants clearing and trimming works carried out. This document will be submitted to the Department of Agriculture and Fisheries (DAF) prior to any clearing or trimming occurring on site and will include at a minimum:

- Clear delineation of marine plants to be retained, removed or trimmed.
- Measures for onsite identification of marine plants to be removed to ensure clearing only occurs in approved areas.
- Stockpiling locations and procedures for disposing of the trimmed and removed marine plants. Marine plant material that has been removed, damaged or destroyed, must be removed from tidal land and must not be burned.
- Procedures for clearing and trimming including:
 - Mangroves are pruned or trimmed by no more than a third of their height.
 - Mangrove branches greater than 25 mm in diameter must be pre-cut underneath to prevent splitting.
 - Cutting equipment must be kept sharp and clean at all times.
 - Subsurface roots of mangroves where the trunk and branches have been removed must be left in-situ to minimise substrate disturbance.
 - Marine plant material that has been removed, damaged or destroyed, is removed from tidal land.
 - Chemicals are not to be used.



6. State Development Assessment Provisions

While not required under the Northshore Hamilton PDA Development Scheme responses to relevant performance outcomes from SDAP Code 11: Removal, destruction or damage of marine plants has been provided to demonstrate avoidance and minimisation of impacts,

The purpose of the code is to ensure that development which involves the removal, destruction or damage of marine plants and fish habitat.

1. *maintains the extent, distribution, diversity and condition of marine plant communities and protects the ecological functions to which they contribute;*
2. *maintains the health and productivity of fisheries resources and fish habitat;*
3. *minimises impacts on the management, use, development and protection of fisheries resources and fish habitat;*
4. *is designed and located to avoid impacts or, where the matters of state environmental significance cannot be reasonably avoided, impacts are reasonably minimised and mitigated;*
5. *does not result in a **significant residual impact on a matter of state environmental significance** unless the significant residual impact is acceptable, and an offset is provided.*

A response to relevant performance outcomes of State Code 25 is provided in **Table 3**.



Table 3: Response to State Code 11, Table 11.1 Reconfiguring a Lot.

Performance outcomes	Acceptable outcomes	Response
All development - Impacts to marine plants		
PO1 The design, construction and maintenance of the development does not result in adverse impacts to marine plants and fish habitat.	No acceptable outcome is prescribed.	Complies with PO1 The proposed has been designed to avoid adverse impacts to marine plants and fish habitat. The proposed development seeks to temporarily impact marine plants to make way for the increased visitors/traffic that will accompany the 2032 Olympic games. This development has been located within areas of the Royal Queensland Golf Club (RQGC) to, where are all possible, avoid areas observed to contain marine plants and retain all fish habitat within the Brisbane River. While some marine plants are set to be removed impacts will be limited to those required to deliver the requirements of the ICC and IGF. Impacts will generally be temporary with marine plants allowed to regrow after completion of the games. Mangroves will only be cleared to accommodate a temporary city cat stop and extension to some tee boxes (specifically hole 7). The majority of the remaining on site mangrove are proposed to be selectively trimmed in accordance with Section 5.1 of the Marine Plants Accepted Development Requirements (ADR) specifically for maintenance requirements (refer to section 2.1 and 5.1.



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
		These modifications to the RQGC have been requested by the ICC and IGF and are required for the course to be suitable to host the 2032 Olympic games events.
PO2 Development is designed, constructed and maintained to avoid and minimise impacts on matters of state environmental significance .	No acceptable outcome is prescribed.	Complies with PO2 The proposed development has been designed to avoid and minimise impacts to Matters of State Environmental Significance. The proposed development only seeks to remove mangroves to meet the requirements of the ICC and IGF. The majority of marine plants will be retained with pruning to occur in accordance with the state governments ADRs. This will ensure fisheries values associated with the mangroves are retained. New saltmarsh areas will be created to the east of the Gateway Bridge as part of the course refurbishments. The new tidal areas are to be incorporated into the course design and result in an overall increase in saltmarsh as a part of the development.
PO3 Where development impacts on matters of state environmental significance, development mitigates impacts and provides an offset for any acceptable significant residual impact on matters of state environmental significance. Statutory note: For Brisbane core port land, an offset may only be applied to development on land identified as E1 Conservation/Buffer, E2 Open Space or Buffer/Investigation in the Brisbane Port LUP precinct plan.	No acceptable outcome is prescribed.	PO3 not applicable
All development in general		
PO4 Aspects of development are only permitted on tidal land where there is a functional requirement and the	No acceptable outcome is prescribed.	Complies with PO4



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
development cannot be feasibly located elsewhere. Ancillary elements (such as rest rooms and offices) are to be located outside of tidal land .		No works will occur in tidal land
PO5 The development does not result in adverse impacts on fish movement or fragmentation of fish habitats .	No acceptable outcome is prescribed.	Complies with PO5 The proposed development is not anticipated to have an impact on fish movement or fragment fish habitat.
PO6 The design, construction and maintenance of the development does not result in adverse impacts on fisheries resources .	No acceptable outcome is prescribed.	Complies with PO6 No adverse impacts to fisheries resources are anticipated as a part of this development.
PO7 The development is designed, constructed and maintained to encourage fish habitats and fisheries resource values to naturally regenerate.	No acceptable outcome is prescribed.	Complies with PO7 The proposed development only seeks a temporary impact, through selective clearing and pruning, to make way for the increased foot traffic that will be associated with the Olympic games. Post games, the small areas impacted will be free to naturally regenerate and paired with the newly constructed tidal wetlands, more habitat areas will be available. Therefore, the development will encourage the natural regeneration of the waterway corridor, contribute to fish habitat, and ecological processes will return to the area.
PO8 Development likely to cause drainage or disturbance to acid sulfate soils, prevents the release of contaminants and impacts on fisheries resources and fish habitats .	No acceptable outcome is prescribed.	Not applicable Works covered by this application are limited to removal and pruning of marine plants. No acid sulphate soils are present on site.



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
PO9 The development maintains or restores drainage patterns, the extent and timing of tidal and freshwater inundation.	<i>For bridges:</i> A09.1 Bridges are designed with abutments above the highest astronomical tide. AND <i>For water, sewer or stormwater infrastructure:</i> A09.2 Infrastructure is placed below the existing natural substrate surface level, and natural substrate, surface levels and habitat condition and values are reinstated. <i>For any other development, no acceptable outcome is prescribed.</i>	Not applicable The development will not impact drainage patterns or tidal wetland areas
PO10 The design, construction and maintenance of the development maintains natural erosion and accretion processes.	No acceptable outcome is prescribed.	Not applicable No erosional processes are set to be impacted with the proposed development. Any earth works will have an approved Erosion Control Plan pre works to minimise runoff into the Brisbane River.
PO11 The development is designed, constructed and maintained so that it does not increase the risk of scour or erosion of waterway bed or banks.	No acceptable outcome is prescribed.	Not applicable The proposed development offers no risk to an increase in scour erosion on the Brisbane Riverbanks as runoff regimes will not change off the golf course.
PO12 The development is designed, constructed and maintained so that it does not increase the risk of shoreline or foreshore erosion.	No acceptable outcome is prescribed.	Not Applicable The development is not located near shoreline or foreshore habitats therefore they cannot be adversely impacted.



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
PO13 Development does not have an adverse impact on public use of or access to tidal land and waterways .	<i>For development for a material change of use or reconfiguration of a lot:</i> AO13.1 Tidal land and fish habitats are separated from development and are available for public use . <i>For any other development, no acceptable outcome is prescribed.</i>	Not Applicable The tidal land onsite is located within an operational golf course where no general public access is currently granted. Therefore, this performance outcome is not applicable.
PO14 Development does not adversely impact on community access to fisheries resources and fish habitats including recreational and indigenous fishing access.	AO14.1 The development does not alter existing infrastructure or existing community access arrangements.	Not Applicable There are no fisheries resources located on site therefore they cannot be adversely impacted.
PO15 Development does not adversely impact on commercial fishing access and linkages between a commercial fishery and infrastructure, services and facilities.	No acceptable outcome is prescribed.	Not applicable Commercial fishing access and linkages are not currently facilitated on this site therefore they cannot be adversely impacted.
Erosion control structures and beach replenishment		
PO16 Removal, destruction or damage to marine plants as a result of erosion control structures or beach replenishment only occurs where there is an immediate and significant threat of erosion to: 1. the use of the land for its existing or approved purpose; 2. infrastructure, structures or buildings are not expendable or not able to be relocated.	No acceptable outcome is prescribed.	Not applicable No erosional control structures are proposed to be implemented within marine plant zones as a part of this development.
PO17 The area that the beach replenishment is to be carried out on is a high-energy, sandy sediment shoreline with biological communities adapted to mobile sediments.	No acceptable outcome is prescribed.	Not applicable No beach areas exist on site therefore they cannot be adversely impacted.
PO18 Erosion control structures including beach replenishment does not create terrestrial land , unless they form an integral part of the erosion control design.	No acceptable outcome is prescribed.	Not applicable



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
PO19 The beach replenishment work is undertaken in a way that minimises the frequency of any ongoing replenishment requirements.	AO19.1 Beach replenishment will not require maintenance more often than every two years. AND AO19.2 A source of replenishment material for future maintenance is identified and secured.	Not applicable Beach replenishment works are not proposed.
PO20 Erosion control structures are located as far landward as possible to reduce adverse impacts to tidal land and marine plants .	No acceptable outcome is prescribed.	Complies with PO20 No erosional control structures are proposed to be implemented within marine plant zones as a part of this development.
Dredging		
PO21 Disposal of dredge spoil does not cause adverse impacts on marine plants .	No acceptable outcome is prescribed.	Not Applicable No disposal of dredge spoil is proposed.
Temporary works		
PO22 Temporary works are designed, constructed and maintained to be in place for the shortest possible time or are undertaken for a specified period.	No acceptable outcome is prescribed.	Complies with PO22 The proposed development seeks to implement a temporary works to prune and remove mangroves to facilitate delivery of an Olympics venue at the RQGC.
PO23 A temporary structure is in place for a specified period and is designed to be completely removed and fish habitat is restored to pre-existing or improved condition on completion.	No acceptable outcome is prescribed.	Complies with PO23 The proposed development seeks to implement a temporary works to prune and remove mangroves to facilitate delivery of an Olympics venue at the RQGC.
Restoration		
PO24 Restoration works do not result in: 1. substitution of fish habitats ;	No acceptable outcome is prescribed.	Not applicable



■ Significant Vegetation Report

Performance outcomes	Acceptable outcomes	Response
2. adverse impacts to the condition of fish habitats or fisheries productivity .		No restoration works are proposed as a part of this development.
<u>PO25 Marine plants to be used</u> for revegetation purposes have local provenance.	No acceptable outcome is prescribed.	Complies with PO25 New saltmarsh area created within the golf course will be allowed to colonise naturally by tidal waters.



7. Conclusion

This report was prepared on behalf of Royal Queensland Golf Club to demonstrate compliance with the Northshore Hamilton PDA Development Scheme at 431 Curtain Avenue West, Eagle Farm, QLD, 4009 (described as Lot 45 on SP120367). The proposed development is to accommodate necessary renovations the course required to accommodate the hosting of the 2032 Brisbane Olympic Games.

As detailed in this report, in order to function as an Olympic-standard venue, a variety of upgrades are required to the venue which are proposed to remove or 'damage' some parts of the on-site mangrove and marine plant habitat areas. Upgrades for the Olympic Games will result in temporary impacts to the marine plant habitat where post-games, the impacted plants will have the ability to naturally regenerate.



Appendix A

Detailed Marine Plants Descriptions





Polygon 27: 17 grey mangroves in total all immature (<100mm DBH, ~2m tall average). This polygon is inclusive of a small patch of immature mangroves under the highway all on the bank beyond the southern sea wall (offsite). Construction has clearly influenced the community as the recently repaired Rockwall is still visible where the mangroves are. No pneumatophores present at



Polygon 28: Scattered patch of juvenile mangroves ~32 in total, all <0.5m tall and <100mm DBH. It is evident this patch is just regrowth after the most recent highway construction where all observed specimens exist south of the seawall (offsite). the time of survey.



Polygon 29-34: Polygons 29-34 were identified as small, scattered patches of marine couch with some Sea Purslane (1%). These descriptions have been combined as the patches are extremely small and scattered and above are some photos to show the patches



Polygon 35: All the polygon area is noted to be marine plant area. Coverage; 15% water/sediment buildup, 40% marine couch, 15% *Enchylaena tomentosa* (Ruby Saltbush), 15% Sea Purslane, 15% *Suaeda australis* (Seablite). Some *Wollastonia uniflora* (Beach sunflower) present in non-descript patches. Small <30cm budding mangroves regenerating throughout in the waterlogged areas.



Polygon 36: ~155 mature grey mangroves in the patch. Canopy is ~12 m tall with DBH >200mm on average. Scattered regrowth of the mangroves was observed along the edges of the canopy zones and dense pneumatophores were observed within the canopy zone however these pneumatophores were observed within the waterlogged areas of the surrounding area (time of survey was high tide). Water was observed to infiltrate past the sea wall, leading to the ideal environment for mangrove growth. Thus, all the specimens of mangroves observed were found on site, north of the Rockwall.



Polygon 37: ~170-180 mature mangroves av 10m tall and 200mm DBH. This patch is inclusive of a 'single line' of dense mangroves which were found mostly north (on site) of the sea wall. Similar issue where water is infiltrating from the sea wall leading to waterlogged area on site. Pneumatophores are present within these waterlogged areas however they were not observed within the river itself due to high tide.



Polygon 38 (Ground cover): Marine plant cover (ground species) polygon. Mostly consists of water and marine couch (85% but ~15% of the area also consists of a mix of seablite, saltbush and purslane. Regenerating mangrove buds (<30cm) present within the waterlogged sections.



Polygon 39: ~15 mangroves/10m². Due to high density and leaf cover, individual counts could not be completed so a density estimate was completed instead. Please use the above density estimate for the area of the polygon. All mangroves are mature mangroves where the height of the canopy is ~10m tall and DBH of the mangrove's averages 250mm DBH. The same density continues the entire way up the creek for future reference is we need to estimate. Water was

Appendix B

Detailed Marine Plant Impact Plans



02.6 MARINE PLANTS IMPACT ASSESSMENT



Notes:
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LEGEND

Site DCDB

Qld DCDB

Marine Plant Impact Area

Mangrove Habitat to Remove (0.2 ha)

Retain Marine Ground Cover (2.23 ha)

Selective Mangrove Clearing to Occur (1.83 ha)

Rehabilitation Zones

New Constructed Tidal Wetland [3.0 ha] including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC

N

0 10 m

1:960 @ A3 | Transverse Mercator | GDA 2020 | Zone 56



02.7 MARINE PLANTS IMPACT ASSESSMENT



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LEGEND

Site DCDB

Qld DCDB

Marine Plant Impact Area

Mangrove Habitat to Remove (0.2 ha)

Retain Marine Ground Cover (2.23 ha)

Selective Mangrove Clearing to Occur (1.83 ha)

Rehabilitation Zones

New Constructed Tidal Wetland [3.0 ha] including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC

N

0 10 m

1:960 @ A3 | Transverse Mercator | GDA 2020 | Zone 56



02.8 MARINE PLANTS IMPACT ASSESSMENT



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LEGEND

Site DCDB
 Qld DCDB

Marine Plant Impact Area

Mangrove Habitat to Remove (0.2 ha)
 Retain Marine Ground Cover (2.23 ha)
 Selective Mangrove Clearing to Occur (1.83 ha)

Rehabilitation Zones

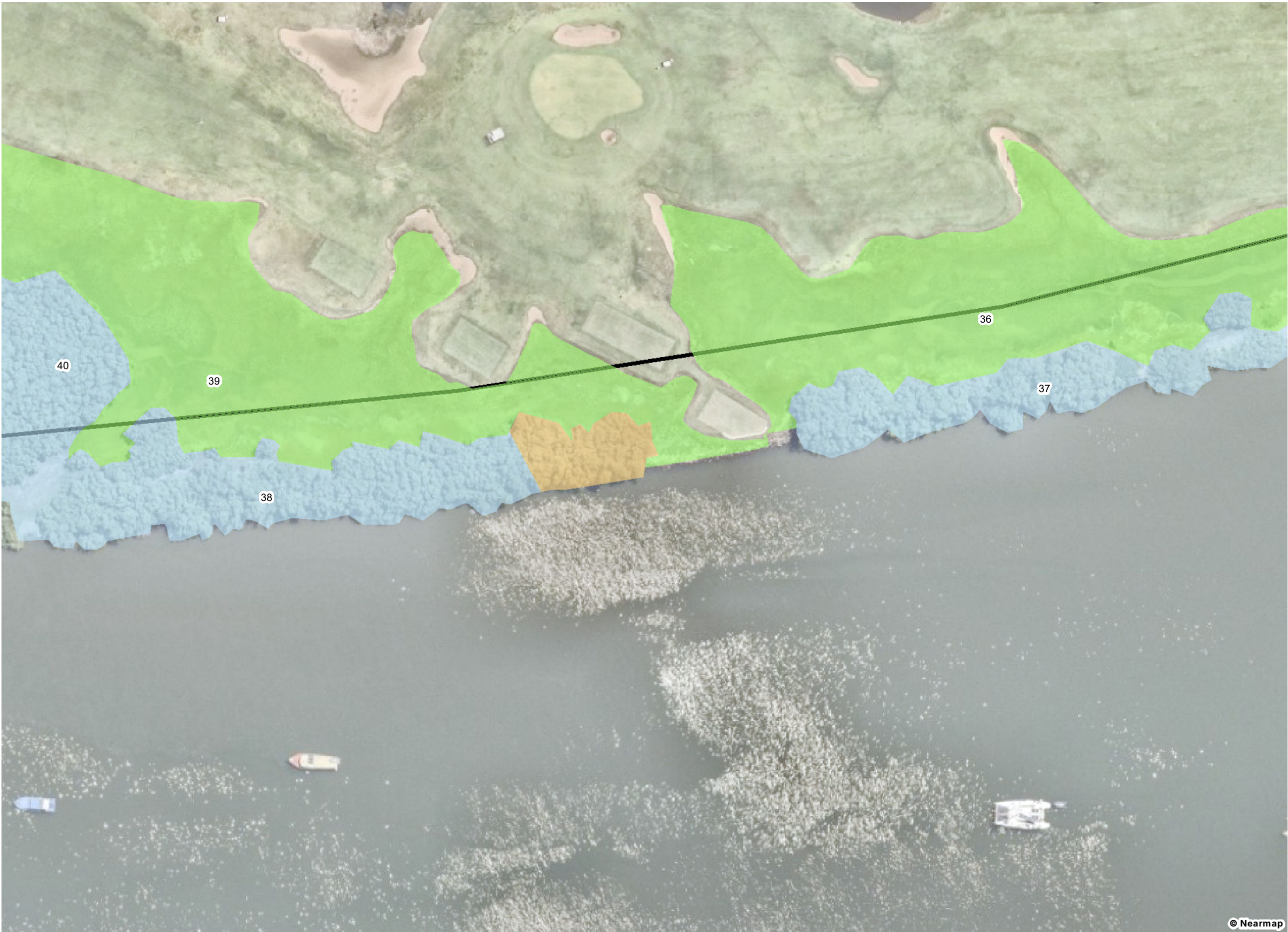
New Constructed Tidal Wetland [3.0 ha] including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC

N
1:960 @ A3 | Transverse Mercator | GDA 2020 | Zone 56
0 10 m



02.9 MARINE PLANTS IMPACT ASSESSMENT



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LEGEND

Site DCDB
Qld DCDB

Marine Plant Impact Area

Mangrove Habitat to Remove (0.2 ha)
Retain Marine Ground Cover (2.23 ha)
Selective Mangrove Clearing to Occur (1.83 ha)

Rehabilitation Zones
New Constructed Tidal Wetland [3.0 ha]
including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC

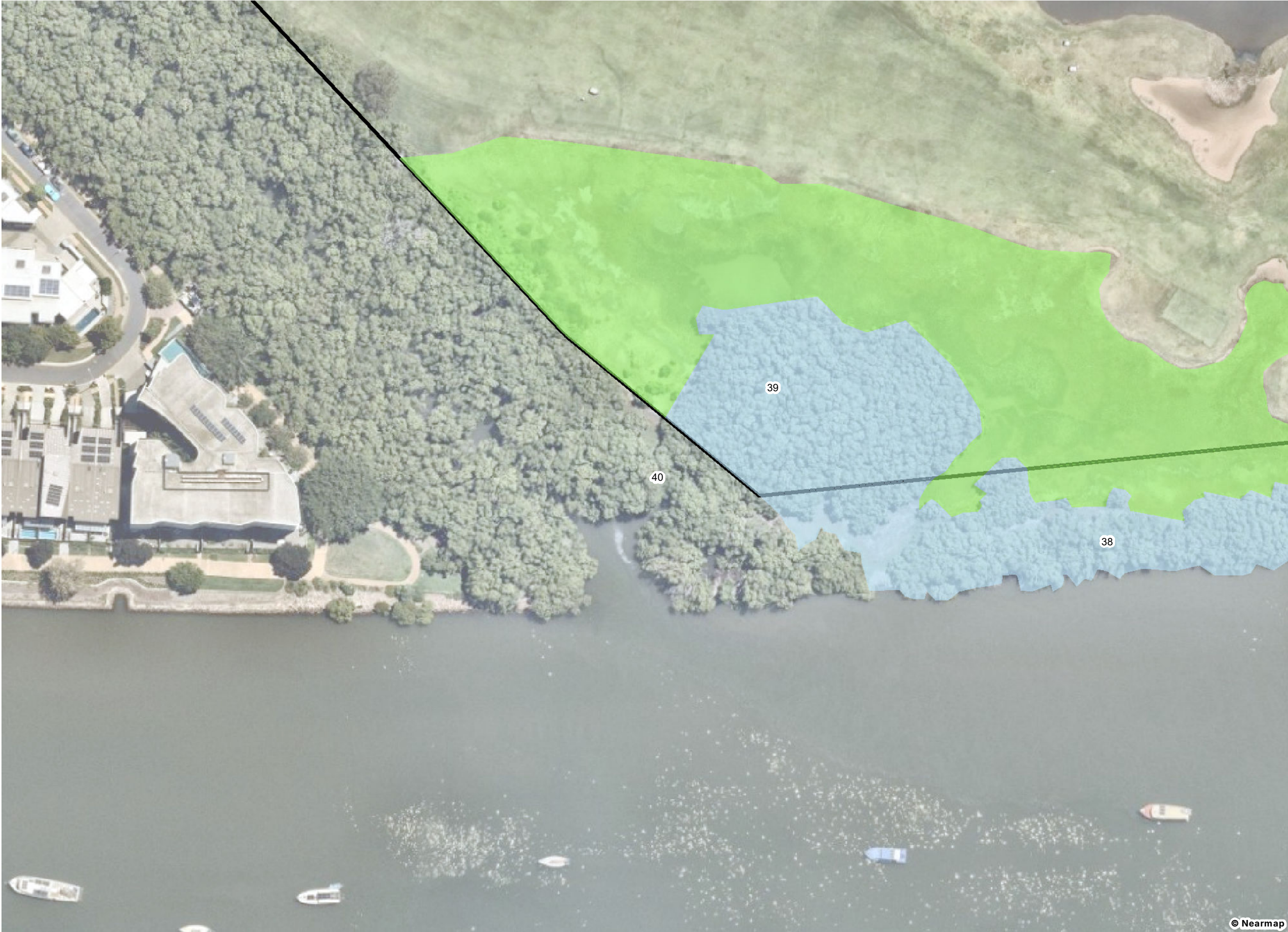
N

0 10 m

1:960 @ A3 | Transverse Mercator | GDA 2020 | Zone 56



02.10 MARINE PLANTS IMPACT ASSESSMENT



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LEGEND

Site DCDB
 Qld DCDB

Marine Plant Impact Area

Mangrove Habitat to Remove (0.2 ha)
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Rehabilitation Zones

New Constructed Tidal Wetland [3.0 ha] including propagation of saltcouch and endemic sedges, rushes and succulents

AMENDMENTS				
Issue	Date	Description	Drawn	Checked
A	28/04/2026	Preliminary	HW	HC

N

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1:960 @ A3 | Transverse Mercator | GDA 2020 | Zone 56

