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6 September 2023

Mr John Ramsay
Chair of delegate panel
Tasmanian Planning Commission
Level 3, 144 Macquarie Street
HOBART TAS 7000

Dear Mr Ramsay

**Tasmanian Planning Scheme – Clarence
Draft Amendment PDPSAMEND-2021-022808
Apply airport limitation area overlay to lands around Cambridge airport**

I am instructed to represent the landowner of 269 Kennedy Drive, Vancheng Pty Ltd.

It provides this additional submission in response to your letter dated 15 August 2023. It has previously made a submission, by Ireneinc dated 21 November 2022.

This submission should be read in conjunction with that submission, and the plans contained within it.

The submission filed by the applicant Airlines of Tasmania Pty Ltd from Gray Planning dated 4 August 2023 is, it is submitted, misleading in a critical aspect concerning the landowner's land. That is because the landowner's land is not all zoned within the same zone.

Figure 1 in the attached Natural Values Assessment (prepared by the landowner for the purpose of an application for 2 warehouses) shows the landowner's land in blue, and Figure 3 shows the zoning. More than half the property (from the shoreline) is zoned Open Space, and therefore development is severely restricted to essentially non-commercial uses, but practically it is prevented by the topography. The remainder is zoned light industrial.

It is only on the light industrial zoned portion of the land that commercial development can proceed. The purposes of that zone are broadly to provide for manufacturing, processing, storage and distribution of goods and materials where off-site impacts are minimal, and to provide for use and development that supports industrial activity.



Permitted uses, which means uses for which a permit must be granted, include Equipment Machinery Sales and Hire, Manufacturing and Processing, Service Industry, Storage, Transport Depot and Distribution (18.2 Use Table).

The Acceptable Solution for height is building height not more than 10 m above existing ground level. (Clause 18.4)

Existing development in the same area is between 6m and 10m above ground level generally, but in some instances higher. This is reflective of the size of buildings necessary for the permitted uses.

The landowner of 269 Kennedy Drive obtained a permit for 2 warehouses as shown in the approved site plan attached to this submission dated 20 November 2020, which has been extended to 2024. The approved height is maximum 9 m above ground level. That ground level has changed. The owner has undertaken fill works to address inundation issues and has applied for a third warehouse on the part of the property closest to the aerodrome.

The submission filed by the applicant contains a series of plans and data collected demonstrating the "residual height level" of many titles surrounding the aerodrome. This is not explained, but is assumed to be the height between the ground level on the site and the relevant AHD plane above it. The data concerning the landowner's land (CT 156902/1 – page 22 of the pdf file) purports to record a mean residual height level of 12.43m. This is misleading because it is across the whole of the area of that lot. More than half of that lot is low, near the shore and is zoned open space, meaning its residual height is greater.

In order to properly demonstrate the situation on the landowner's land, the residual height calculation should be concerning the light industrial portion of the land only, on which the ground level is higher.

That will demonstrate the true impact of the proposed OLS height limits on this light industrial land, and the restrictions intended to be placed on what would be developments meeting *existing* acceptable solutions concerning *existing* permitted uses.

If the OLS as proposed is introduced into the Tasmanian Planning Scheme – Clarence, it will mean that the landowner, along with many other owners, is likely to be significantly restricted in its ability to undertake any further development on its land, if not prevented entirely.

This situation is deeply concerning because the landowner's lot was created by a subdivision undertaken by the owner of the aerodrome, in or about 2009 and the lot was sold by the owner of the aerodrome with the light industrial zoning in place, for which it obtained a substantial price.

Having received that sale price, it subsequently contended at the hearings into the Local Provisions Schedule that "if development occurs within Cambridge Airport's obstacle limitation surface, the airport would have to reduce its runway and



potentially close.” There is no evidence provided to support either of those extraordinary contentions.

Given that it was the owner of the airport which subdivided and sold part of the airport as light industrial land, such a submission must be regarded with the greatest caution. This sharp practice has created a potential land use conflict.

The application of the 10m OLS to the land at 269 Kennedy Drive, in all of these circumstances, does not promote sustainable development, does not provide for the fair and orderly development of land, and does not facilitate economic development. Indeed, it does the opposite.

The application of a 10m OLS to the landowner’s land, and to the Cambridge airport, is not justified on any rational land use basis.

Yours faithfully,



Andrew Walker
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Natural Values Assessment

269 Kennedy Drive Cambridge

14 August 2020



LANDOWNER/S: Vancheng Pty Ltd
LOCALITY: Cambridge
Land title number: FR 156902/1
PID: 3134805
Property address: 269 Kennedy Drive Cambridge 7170
Area of property: 2.50ha
Bioregion: South East
PDA Ref: 45734LM

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Sources

Background investigations:	Tas. Department of Primary Industries, Parks, Water and the Environment (DPIPWE) online resources (<i>Natural Values Atlas; theLIST; Threatened Species listings</i>).
Field assessment:	Jim Mulcahy, Ecologist, PDA Surveyors.
Report production:	Jim Mulcahy.
Habitat and vegetation mapping:	Jim Mulcahy.
Base data for mapping:	TasMap, <i>theLIST</i> .
Digital and aerial photography:	Jim Mulcahy; <i>theLIST</i> .
Cover Illustration:	looking east across the subject land from the south-west corner

Background

This *Natural Values Assessment* has been undertaken in support of an application for bulk landfill of the subject land (Clarence City Council reference PDPLANPMTD-2020/009032). More specifically, it is prepared in response to a request for additional information from Council dated 4 March 2020 in respect of *E10.0 Natural Assets Code (High risk)* and *E11.0 Waterway and Coastal Protection Code*.

Summary findings

- With application of appropriate management controls and buffers from wetlands, the proposed development will have little direct or indirect impact on native vegetation or other natural values on the subject land or adjoining land.

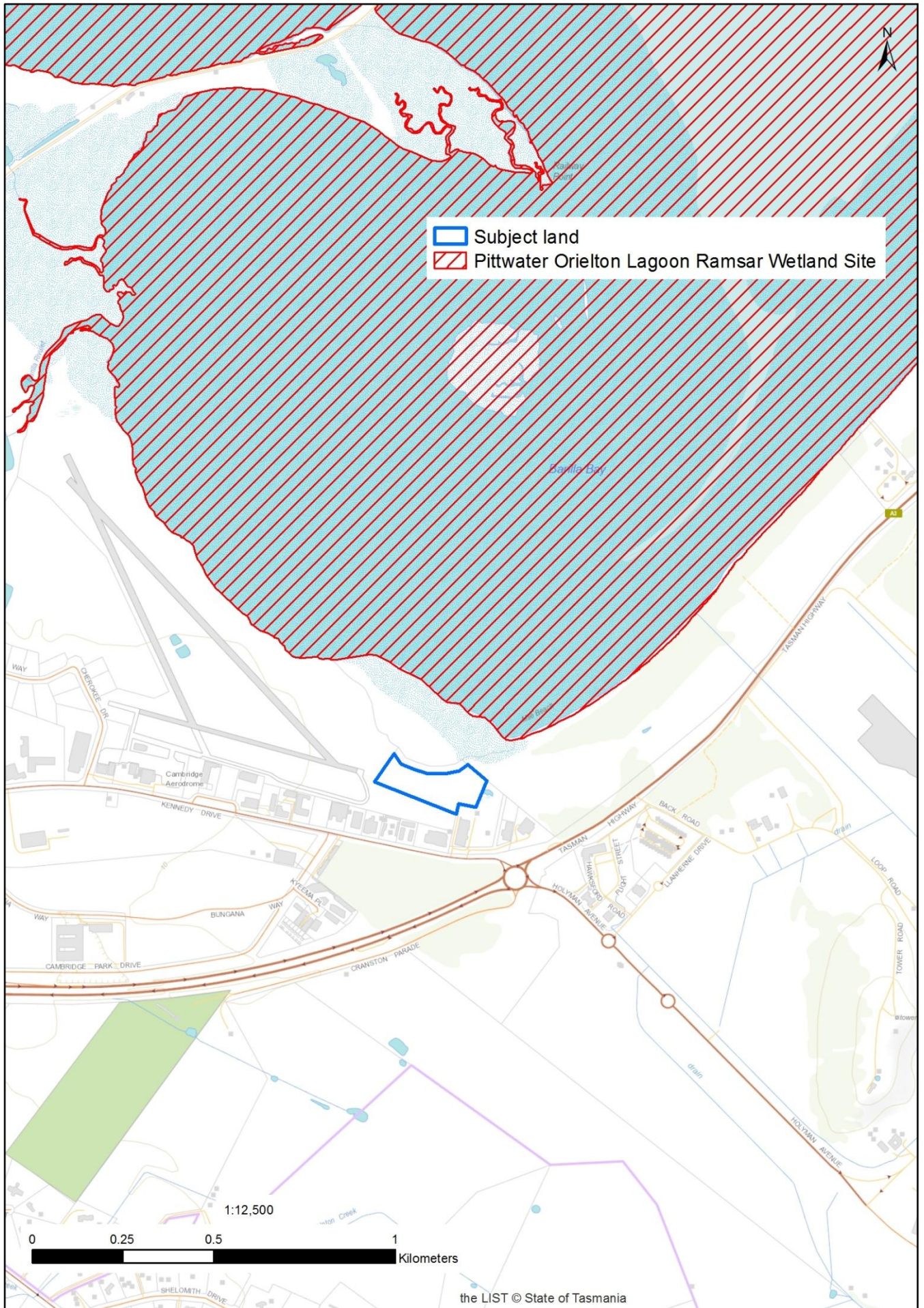


Figure 1. Property location and landscape context

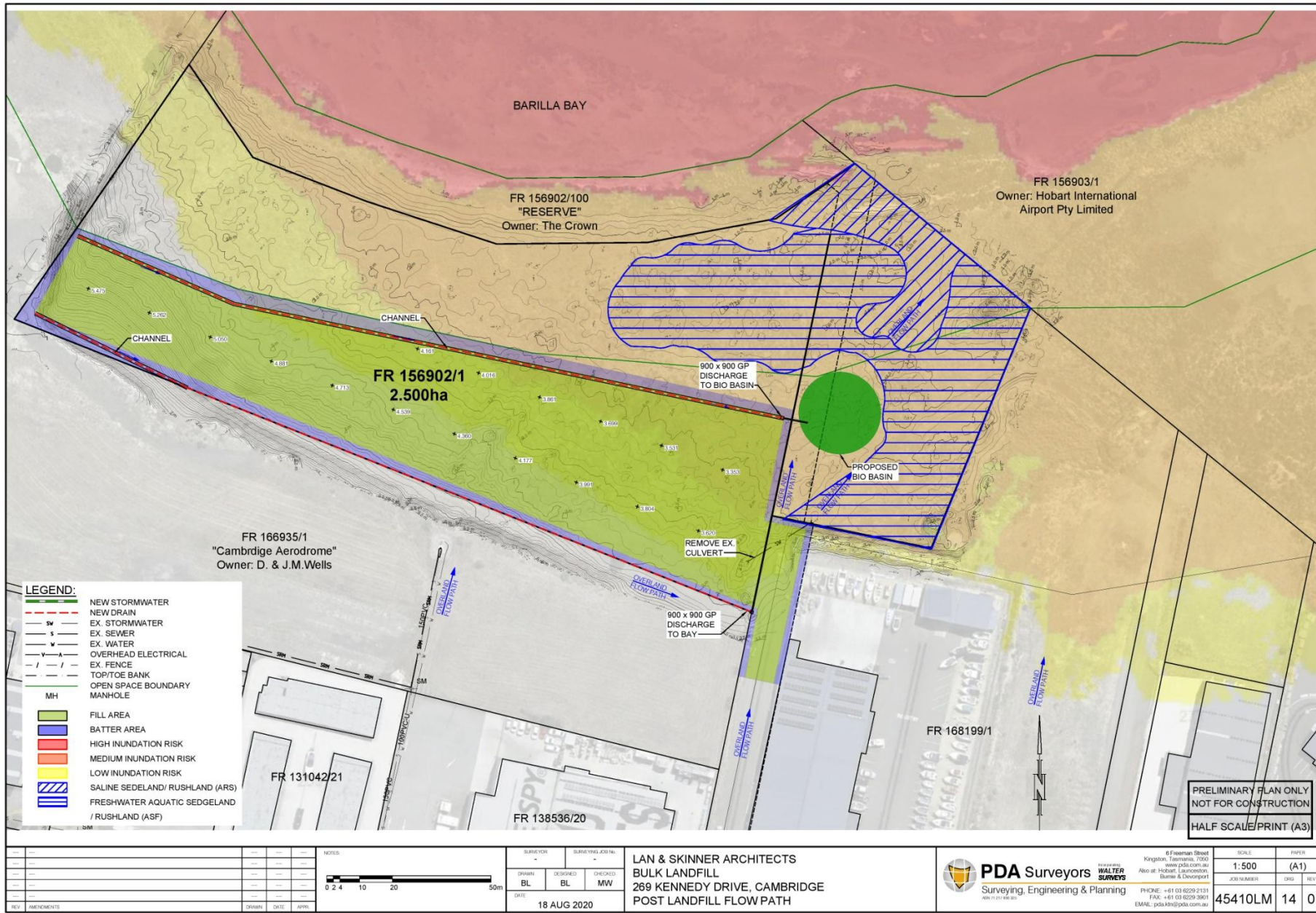


Figure 2. Development proposal plan

Natural Values Assessment, 269 Kennedy Drive Cambridge, July 2020

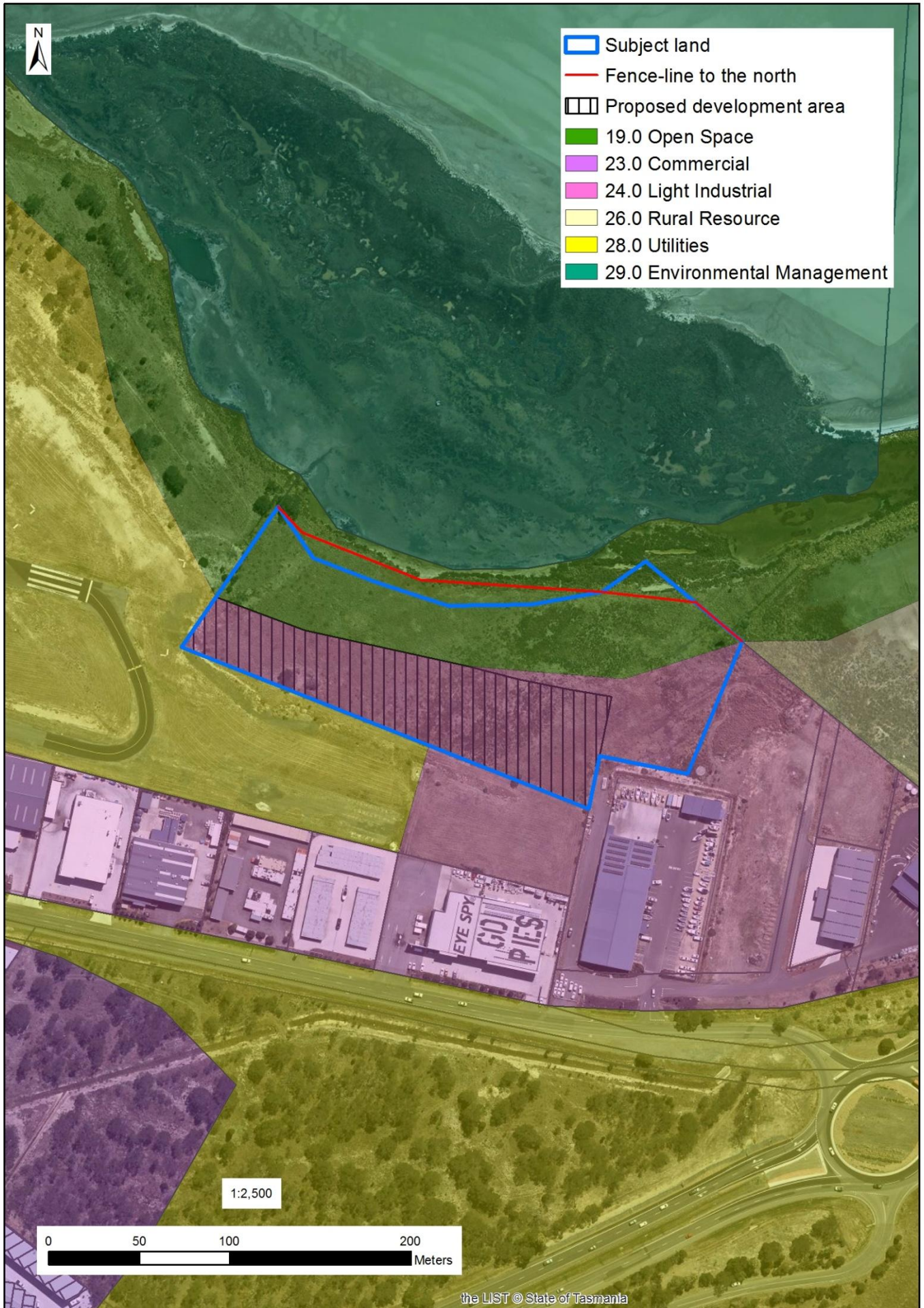


Figure 3. Zoning & immediate context



Figure 4. Spatial overlap between Scheme overlays and proposed development

Scope

This *Natural Values Assessment* addresses:

- vegetation within the areas of the *Biodiversity Protection Area* overlay and the *Waterway and Coastal Protection Area* overlay that may be directly or indirectly impacted by development works, in particular any communities meeting the definition of ‘wetland’ under the *Clarence City Council Interim Planning Scheme 2015* (the Planning Scheme);
- the suitability of vegetation communities on the subject land as habitat for threatened flora and fauna species or any other species of conservation significance;
- general threats and management issues;
- any specific threats to natural values within the areas of the overlays as a result of the proposed development; and
- legislative, regulatory and policy considerations.

The mapping of wetland vegetation is a particularly important aspect of the assessment because wetlands (generic) are listed as a threatened vegetation community under Schedule 3 of the *Nature Conservation Act 1993* and landfill of a wetland is prohibited under Clause E11.7.1 P1 (h) of the *Waterway and Coastal Protection Code* of the Planning Scheme.

Methodology

Background investigations

A desktop assessment of the vegetation, threatened species habitat potential and other relevant issues was conducted using available online resources, including the *DPIPWE Natural Values Atlas* and the various layers available on *theLIST*. Scientific and common names used in this report follow the listings in the attached *Natural Values Atlas* (NVA) report (Appendix B). Vegetation classification follows TASVEG3.0.

Botanical survey

The survey assessed the affected vegetation and habitat types present by meandering around the subject land in a clockwise direction and recording the various plant species and management issues encountered. With the exception of a few areas that were inundated, the site afforded good access and the vast majority of the relevant vegetation was traversed during the survey.

The structure and composition of the vegetation was assessed to produce a vegetation map (see Figure 10) and a preliminary floral species list for the site (see Appendix A). Records of flora were largely confined to vascular plants due to the time constraints of the survey.

Defining a ‘wetland’

Despite being listed as threatened under the *Nature Conservation Act 1993*, wetlands are not defined in the Act. For the purposes of reporting against the Act, the intersectional key in the seminal text on Tasmania’s vegetation communities, *From Forest to Fjaeldmark* (Kitchener and Harris, 2013) has been relied upon. A wetland is defined in this key as:

“Treeless vegetation regularly or permanently submerged by water ... (excludes vegetation dominated by Sphagnum spp., Poa spp., Gymnoschoenus sphaerocephalus, Lepidosperma filiforme, and members of Restionaceae other than Sporadanthus brownii)”.

Under the Planning Scheme, a wetland: *“means a depression in the land, or an area of poor drainage, that holds water derived from ground water and surface water runoff and supports plants adapted to partial or full inundation and includes an artificial wetland”.*

With the need to report against two different definitions, the following issues are relevant to defining wetlands at this site.

- Neither definition requires that the wetland be natural or that the vegetation be dominated by native species. Under the definition in the Planning Scheme, the intent in referencing '*artificial wetland*' may only be to capture wetlands that exist by design, but this is not clear, so it must be assumed that it also includes artificial wetlands that exist by accident (eg a ditch or drainage system of sufficient scale and vegetation structure).
- *From Forest to Fjaeldmark* clearly distinguishes between wetlands (fresh and sometimes brackish water) and saltmarsh (subject to strong influence from saline tidal water). The intent in the Planning Scheme definition in referencing *ground water and surface water runoff* may also be to limit the definition to fresh water, but this is not clear, since salt marshes may occur in response to saline groundwater. As a result, for the purposes of reporting against the Planning Scheme, any 'inland' saltmarsh vegetation is interpreted as falling within the definition.
- The importance of inundation is not clear under the definition in the Planning Scheme. The terms '*poor drainage*', '*holds water*' and '*partial ... inundation*' are not very precise and '*plants adapted to partial or full inundation*' could mean plants tolerant of inundation, plants that require inundation for survival or competitive advantage, or both. Nevertheless, *inundation* features in both definitions and allows a distinction between vegetation that contains plants tolerant of inundation but which is only submerged during surface flow events (eg areas of poor or impeded drainage supporting sedges and rushes) and areas subject to occasional or regular inundation that persists for a period beyond a surface flow event.

For the purposes of this report, only areas that show clear evidence of being submerged for a period following a surface flow event are considered to meet the definitions. Mapping of these areas on-site was assisted by a heavy rainfall event in the week before the site visit, but LIDAR-derived *Digital Elevation Modelling* and historical aerial photography were also used to assist the mapping process.

Scale

For broad-scale vegetation mapping any feature smaller than 1ha in size is generally considered too small to map. When assessing smaller properties it is appropriate to map at a smaller scale, but practicality requires that some scaling threshold be employed. For the purposes of this report, vegetation patches smaller than 1000m² have not been mapped, but the presence of any distinct patches is noted in vegetation descriptions and illustrative photos.

Zoological survey

Zoological survey work was limited to desktop assessment and focused on potential habitat for threatened species or other species of conservation significance. Potential habitat was assessed by reference to past records from the property and surrounding landscape, the vegetation communities present and the site characteristics encountered.

Limitations

The definition of wetlands relies on limited available evidence (conditions at the time of the site visit, modelling of topography and recent historical imagery).

A number of limiting factors makes it inevitable that not all flora species on the site will have been recorded, including: limits in the author's knowledge; limited survey time and effort; the survey methodology; the ephemeral or seasonal flowering or growth habits of particular species; and the potential for patchy distribution of some species.

Management history & distribution of poorly drained areas

When considering past and future management of the site, it should be noted that the existing fence-line at the northern end of the property is not on the boundary and lies predominantly within the adjoining public reserve (see approximate fence alignment in Figures 3 & 10).

An analysis of recent historical aerial imagery covering the site reveals that some topographic features along the eastern boundary are man-made (see Figures 6 & 9) and that the property was subject to regular disturbance through slashing (and possibly occasional ploughing) until at least 2012 (see Figures 5-9).

Vegetation containing a high proportion of sedges and rushes is readily identifiable on aerial photography as a darker shade through the eastern half of the subject land. The aerial photography indicates that this vegetation rapidly re-establishes following disturbance, with almost exactly the same distribution as pre-disturbance. This suggests relatively stable underlying hydrological processes which have not been significantly disrupted by surface disturbance.

LIDAR-derived *Digital Elevation Modelling* (see 0.1m contours on Figure 2) suggests three separate categories of poorly drained land supporting vegetation dominated by sedges and rushes:

- two minor drainage lines running north-east from the southern boundary over very gently sloping land and ultimately discharging to relatively flat land in the north-east corner (these appear to derive from stormwater discharge, with a stormwater main terminating near the southern boundary of the subject land where these drainage lines begin);
- relatively flat land in the north-east corner; and
- relatively flat land and man-made depressions along the eastern boundary.

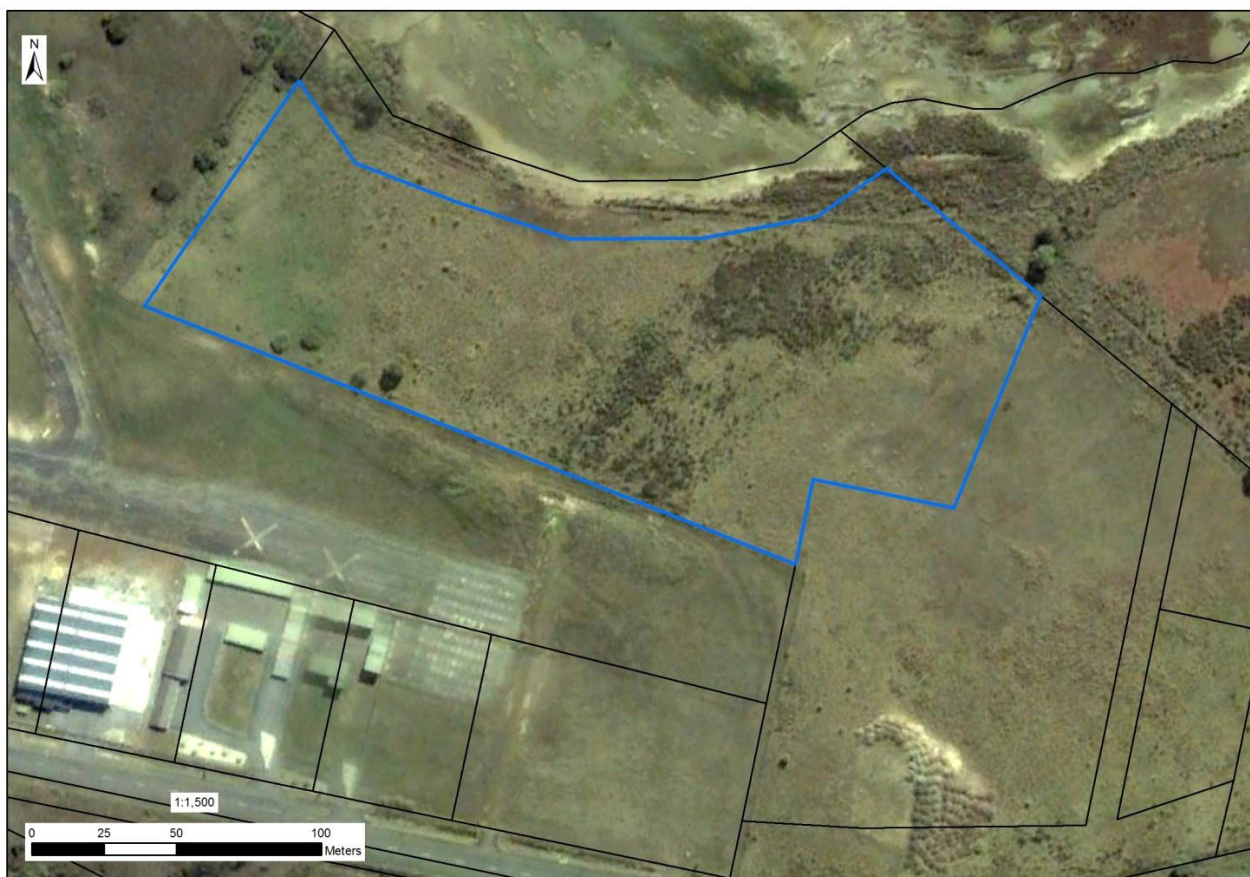


Figure 5. Aerial photograph from 2005 (Google Earth, 2020)



Figure 6. Aerial photograph from 2008 showing dam & drain construction (Google Earth, 2020)



Figure 7. Aerial photograph from 2012 showing slashing and/or ploughing (Google Earth, 2020)



Figure 8. Aerial photograph from 2013 showing slashing (Google Earth, 2020)



Figure 9. Aerial photograph from 2015 clearly showing drain in south-east (Google Earth, 2020)

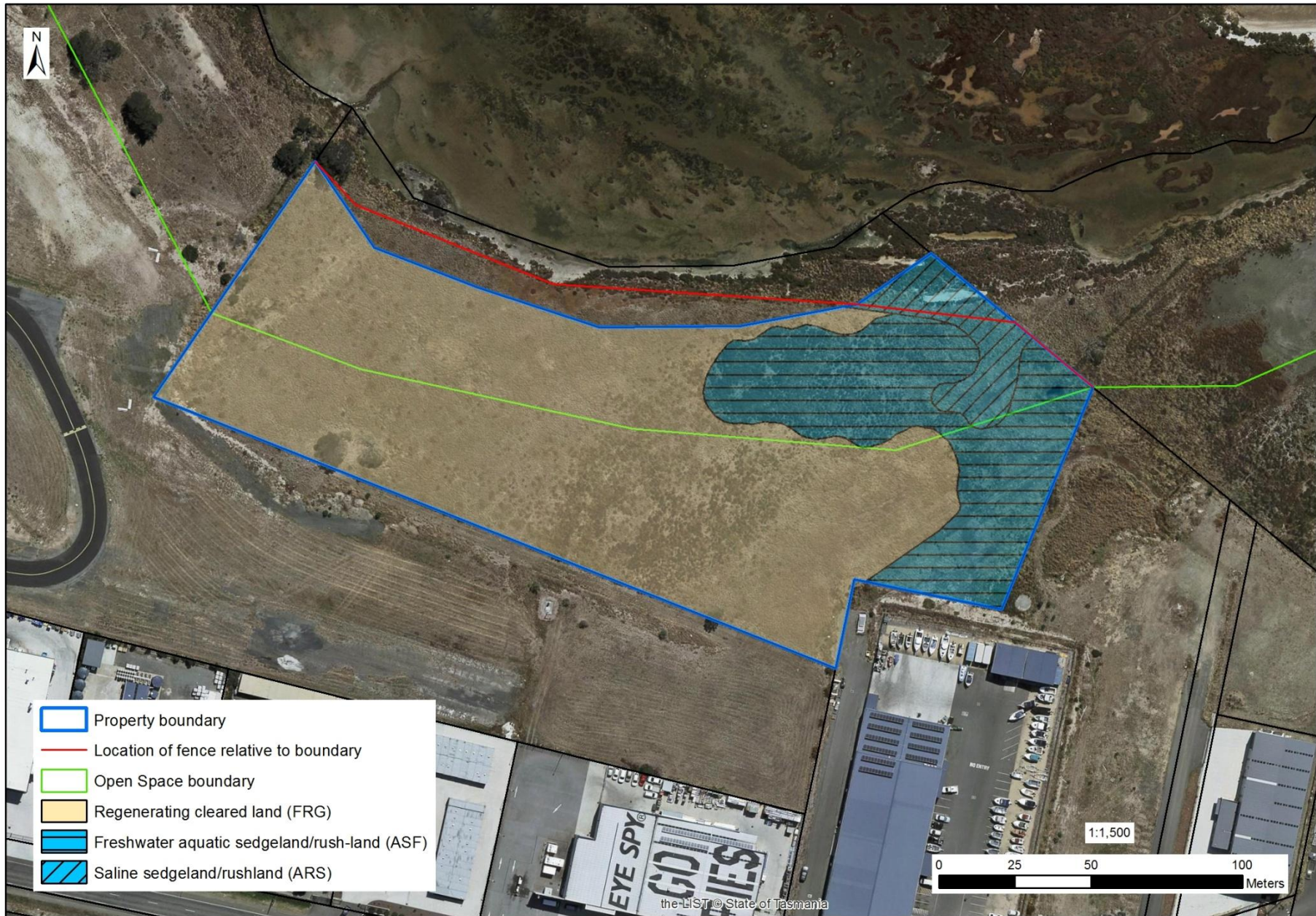


Figure 10. Vegetation on the subject land

Vegetation

The following vegetation communities were recorded on the subject land, pursuant to TASVEG 3.0 and *Forest to Fjaeldmark* (see vegetation map at Figure 10).

Plant community	TASVEG code	Status under NCA* and/or EPBCA**	Area (ha)
Regenerating cleared land	FRG	-	1.8361
Freshwater aquatic sedgeland/rushland	ASF	endangered/-	0.5389
Saline sedgeland/rushland	ARS	-	0.1231
Total area:			2.5

*Tasmanian *Nature Conservation Act 2002*

**Commonwealth *Environment Protection and Natural Assets Conservation Act 1999*

Regenerating cleared land (FRG)

Apart from occasional black wattles (*Acacia mearnsii*) on the southern and western boundaries, there are no large shrubs or trees on the subject land.

Given the past level of disturbance and vegetation modification (see Figures 5-9), it is not surprising that the majority of the site contains a large number of exotic species, including many recognised environmental weeds. Areas mapped as FRG are generally dominated by cocksfoot (*Dactylis glomerata*), along with a range of other exotic pasture species, occasional native rushes and sedges and occasional weedy shrubs, including briar rose (*Rosa rubiginosa*) and African boxthorn (*Lycium ferocissimum*).



Figure 11. Looking across cocksfoot dominated FRG from the SW corner of the subject land

Poorly drained areas within the FRG have a higher proportion of sedges and rushes, with rush sedge (*Carex tereticaulis*) being the overwhelmingly dominant species in most areas. Two minor drainage lines running north-east from the southern boundary over very gently sloping land support a relatively large patch of sedgey vegetation dominated by a dense cover of rush sedge, briar rose and cocksfoot. Given that there is no evidence of sustained inundation in this area and that there is such a high proportion of briar rose, this vegetation does not meet the definition of a wetland.

Along the margins of the coastal reserve at the northern end of the subject land are small areas of FRG with a higher proportion of native species and localised prevalence of silver tussock grass.



Figure 12. FRG dominated by rush sedge, cocksfoot and briar rose

Freshwater aquatic sedgeland/rushland (ASF)

Areas of the subject land mapped as ASF are characterised by:

- being at or below 1.7m above sea level;
- having slopes that are predominantly 1.5° or less;
- showing evidence of being submerged for periods following surface flow events; and
- being generally free of shrubs and being generally dominated by freshwater sedges & rushes.

Most of the area mapped as ASF is dominated by rush sedge, with occasional occurrences of other sedge and rush species. The ASF mapping includes small dams and drains along the eastern boundary which feature species typical of permanent water bodies, such as common bulrush (*Typha latifolia*) and red water fern (*Azolla rubra*).

The ASF mapping also includes a small area of succulent saltmarsh in the south-east corner of the land, which is dominated by beaded glasswort (*Sarcocornia quinqueflora*). The presence of this isolated patch of saltmarsh, along with some evidence from historic aerial photography, suggests that flat land along the eastern boundary may have been subject to higher surface salinity levels in the past. It is possible that nearby earthworks, drains and discharge of stormwater from adjacent developments has resulted in an increased influence from fresh water in this area in the recent past.

Where ASF intergrades with adjoining sedgey areas of FRG it contains high proportions of cocksfoot and briar rose. Where it intergrades with adjoining ARS in the south-west corner it

features occasional coast tussock grass (*Poa poiformis*) and open areas dominated by a carpet of buckshorn plantain (*Plantago coronopus*).



Figure 13. ASF where it intergrades with FRG



Figure 14. ASF associated with drains and small dams in the south-east corner

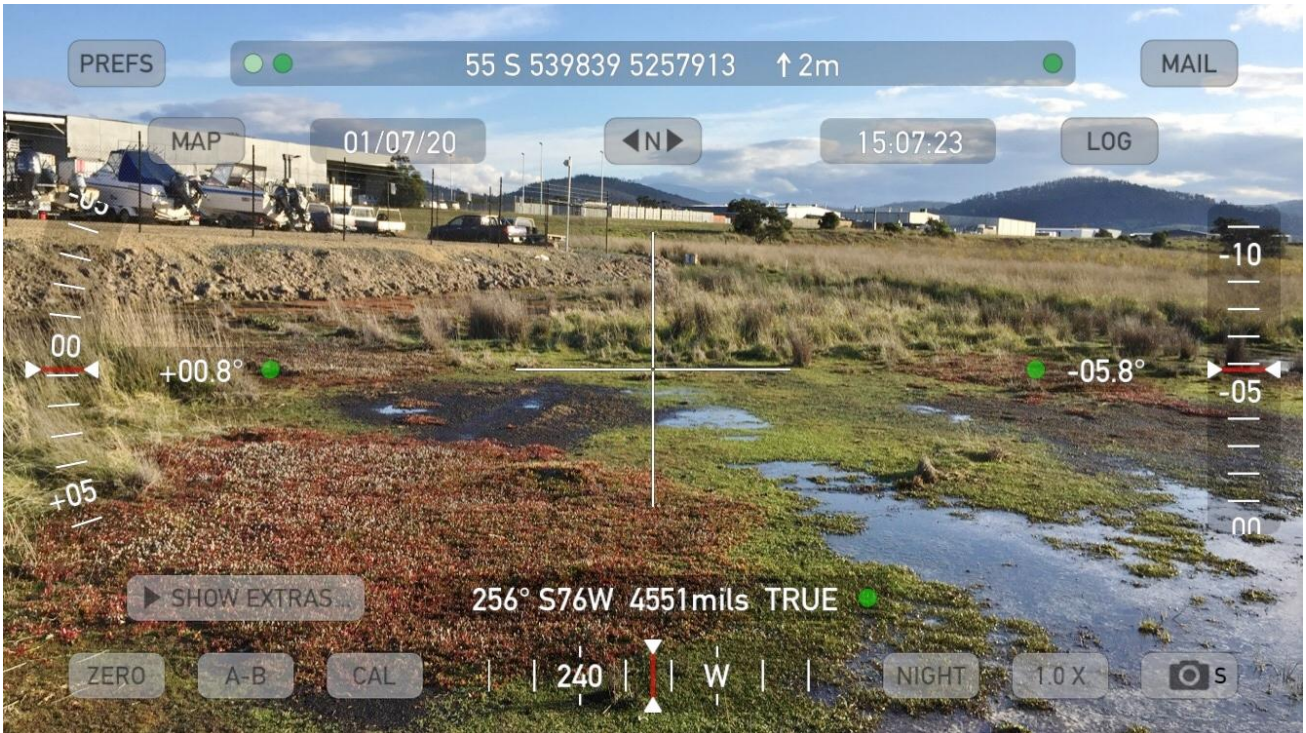


Figure 15. Small area of succulent saltmarsh within ASF in the south-east corner

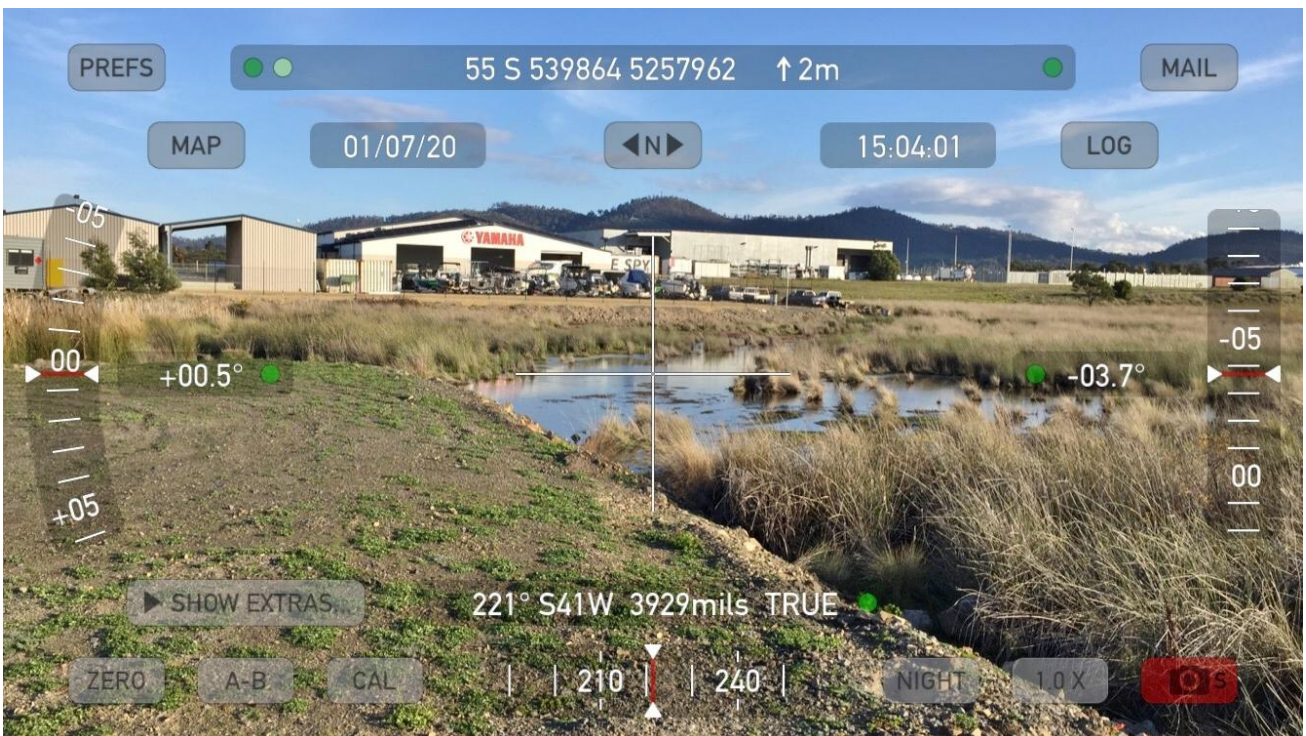


Figure 16. Looking over inundated area in SE corner where ASF intergrades with ARS (taken from adjoining property)

Saline sedgeland/rushland (ARS)

Areas of the subject land mapped as ARS are characterised by:

- being at or below 1.7m above sea level;
- having slopes that are predominantly 1.5° or less;
- showing evidence of being submerged for periods following surface flow or tidal events; and
- being generally free of shrubs and being dominated by typical saltmarsh species.

Most of the area mapped as ARS is very open, with scattered coast tussock grass (*Poa poiformis*) and occasional sea rush (*Juncus kraussii*) over a herbaceous ground cover dominated by buckshorn plantain (*Plantago coronopus*). Given the level of past disturbance in this area, it is unclear what a climax community might look like, but the current situation is interpreted as an early stage of regeneration to sedgeland/rushland rather than a weedy facies of a saline herbland.

The ARS mapping includes the only area of intact, healthy native vegetation on the subject land – the area of permanent water and saltmarsh fenced out in the far north-eastern corner. This area is a mosaic of succulent saltmarsh dominated by beaded glasswort (*Sarcocornia quinqueflora*) and shrubby glasswort (*Tecticornia arbuscula*) and saline sedgeland/rushland dominated by coast tussock grass, sea rush and salt grass (*Distichlis distichophylla*). ARS intergrades with adjoining areas of ASF, the mapped boundary is fairly arbitrary and on the available evidence the boundary is likely to be fairly dynamic in response to varying levels of freshwater input.



Figure 17. ARS dominated by coast tussock grass (*Poa poiformis*)



Figure 18. Healthy ARS fenced out in the far NE of the subject land

Threatened and priority species

The only threatened species previously recorded from the subject land is hollow rush (*Juncus amabilis*), which is listed as rare under the Tasmanian *Threatened Species Protection Act 1995*, but is in the process of being de-listed (DPIPWE, 2020). With the limited survey effort undertaken for this report, hollow rush was not recorded, but may well be present in the north-east corner.

Despite the degraded nature of the available habitat, the vegetation present on the subject land does provide potential habitat for a number of threatened species.

Table 1. Threatened flora species **not recorded on the land** but potential habitat present

Species	Status under TSPA/EPBCA	Comment
Lemon beauty heads (<i>Calocephalus citreus</i>)	rare/-	Potential habitat along margins of coastal reserve
Yellow sea lavender (<i>Limonium australe australe</i>)	rare/-	Potential habitat in far NE corner
Poison lobelia (<i>Lobelia pratioides</i>)	vulnerable/-	Potential habitat present on the margins of drains & wetlands
Tiny watermilfoil (<i>Myriophyllum integrifolium</i>)	vulnerable/-	Potential habitat present on the margins of drains & wetlands
Small triggerplant (<i>Stylidium despectum</i>)	rare/-	Potential habitat present on the margins of drains & wetlands
Round leaf wilsonia (<i>Wilsonia rotundifolia</i>)	rare/-	Potential habitat around margins of succulent saltmarsh

TSPA – Tasmanian *Threatened Species Protection Act 1995*

EPBCA – Commonwealth *Environment Protection and Natural Assets Conservation Act 1999*

Table 2. Threatened fauna species not recorded on the land but potential habitat present

Species	Status under TSPA/EPBCA	Comment
Eastern barred bandicoot (<i>Perameles gunnii</i>)	-/vulnerable	Potential foraging habitat
Green and gold frog (<i>Litoria raniformis</i>)	vulnerable/vulnerable	Potential habitat in SE corner
Chequered blue (<i>Theclinesthes serpentata lavara</i>)	rare/-	Potential habitat in far NE corner
Chevron looper moth (<i>Amelora acontistica</i>)	vulnerable/-	Potential habitat in far NE corner

TSPA – Tasmanian *Threatened Species Protection Act 1995*

EPBCA – Commonwealth *Environment Protection and Natural Assets Conservation Act 1999*

Threats and management issues

Given that the proposed development area is limited to regenerating cleared land (FRG), potential threats to natural values are largely limited to potential indirect impacts.

Vegetation clearance

Vegetation clearance in the proposed development area is highly unlikely to directly impact any significant natural values, but could result in bare ground, erosion and sedimentation, which could indirectly impact wetlands and saltmarsh down-slope. Any works should be subject to appropriate soil and water management planning to avoid such impacts, which is most appropriately required as a permit condition.

Weeds

The subject land is already incredibly weedy and some weed control in association with proposed works would be desirable.

Any physical works or introduction of foreign materials carries the risk of weeds being transported between sites on boots, equipment, vehicle tyres, introduced soil or other foreign materials. The risk of new weeds being introduced to the site or weeds being exported from the site to other areas can be managed through appropriate vehicle and equipment hygiene and management controls, which are most appropriately applied as permit conditions.

Disease

Fungal diseases such as root-rot pathogen (*Phytophthora cinnamomi*) and Chytrid frog disease (*Batrachochytrium dendrobatidis*) can easily be transported between sites on boots, equipment, vehicle tyres, introduced soil or other foreign materials, and could potentially be introduced to the property during development works. This risk can be managed through appropriate vehicle and equipment hygiene and management controls, which are most appropriately applied as permit conditions.

Stormwater discharge

In many respects, wetlands are very resilient systems and they can provide important buffering of energy, nutrients and sediment from terrestrial drainage. It is possible in any given circumstance that the water quality or quantity associated with stormwater drainage could pose a threat to specific values within a wetland system or result in a significant change to the structure and function of a wetland system. This would be a legitimate concern if the discharge of stormwater was to a healthy and diverse wetland, particularly if it was providing habitat for species of conservation significance.

In this case, the wetland system in the east of the subject land is already heavily modified and degraded and is currently subject to untreated stormwater discharge. It contains few natural values, but does act as an important buffer between development to the south and more significant natural values to the north.

Subject to appropriate controls on stormwater quality, which are most appropriately applied as permit conditions, the wetlands on the site should continue to provide an effective buffer between stormwater point discharges and the more significant natural values associated with the saltmarsh in the adjoining coastal reserve to the north. With no further physical disturbance, the wetland area is also likely to improve in condition and support more significant natural values into the future.

Legislative, regulatory and policy considerations

Disclaimer

The information provided below is the author's assessment of relevant legislative, regulatory and policy implications and does not constitute legal advice. Other legislative and policy instruments may also be applicable. Detailed advice in relation to specific legislative and regulatory controls should be sought from the relevant agencies.

Commonwealth *Environment Protection and Biodiversity Conservation Act 1999 (EPBCA)*

Under the EPBCA, an action requires approval from the Minister if the action has, will have, or is likely to have, a significant impact on a matter of national environmental significance. Matters of national environmental significance considered under the EPBCA include:

- listed threatened species and communities
- listed migratory species; and
- Ramsar wetlands of international importance.

Listed ecological communities

'*Sub-tropical and Temperate Coastal Saltmarsh*' is listed as a vulnerable community under the EPBCA. While the vegetation in the *Coastal Reserve* to the north of the subject land and in the far north-eastern corner of the subject land meets the definition provided in the formally endorsed *Conservation Advice* linked to the listing (TSSC, 2013), it is arguable whether any other vegetation on the subject land meets the definition due to the exclusions outlined on page 16. Exclusions from the defined community include the following.

- *Saltmarsh occurring on inland saline soils with not tidal connection.* It is unclear whether any of the subject land except the far north-eastern corner is currently subject to occasional tidal connection, but it is not subject to regular tidal connection. At the very least, this exclusion is applicable to the small area of saltmarsh in the south-east corner which lies well outside the current tidal range of Pittwater (~1.4m).
- *Isolated patches of saltmarsh <0.1ha.* This is also applicable to the small area of saltmarsh in the south-east corner.
- *Patches or areas of saltmarsh that contain >50% weed species.* Presumably this means percentage cover, in which case much of the vegetation on the site would be excluded.
- *Patches of saltmarsh within the coastal margin that are disconnected (either naturally or artificially) from a tidal regime but were once connected* As outlined above, it is unclear whether any of the subject land except the far north-eastern corner is currently subject to occasional tidal connection, but it is certainly not subject to regular tidal connection.

For the purposes of this report, it is assumed that the area of ARS mapped in the north-eastern corner of the land is sufficiently weed free to meet the definition of '*Sub-tropical and Temperate Coastal Saltmarsh*'.

The formal *Conservation Advice* for the listing of 'Sub-tropical and Temperate Coastal Saltmarsh' highlights the issue of 'coastal squeeze', whereby the range of saltmarsh communities is being restricted on the seaward side by rising sea levels and on the landward side by human development, and the importance of maintaining the capacity for landward migration of these communities as sea levels rise. In the light of these issues, recommendations in the *Conservation Advice* include the following (to paraphrase):

- avoid landfill in saltmarsh communities;
- apply buffers from the edges of saltmarsh communities; and
- map the likely future extent of saltmarsh due to landward migration in response to rising sea levels and climate change.

This last recommendation has been picked up in Tasmania in the development of the *Future Coastal Refugia Area* overlay for the *State Planning Provisions*. In future, this overlay will be applied to areas 'identified for the protection of land for the landward retreat of coastal habitats, such as saltmarshes and tidal wetlands, which have been identified as at risk from predicted sea level rise' (DPIPWE, 2020). A *Future Coastal Refugia Area Guidance Map* has been prepared and published on *theLIST* to guide preparation of the overlay.

The current upper extent of tidal saltmarsh corresponds roughly with the current maximum 1% *Annual Exceedance Probability* storm surge height (1% AEP or 'one in one hundred year storm') (DPIPWE, 2020). The guidance map identifies potential future coastal saltmarsh and tidal wetland areas based on predicted sea level rise and 1% AEP storm surge height mapping for 2100 (DPAC, 2016). Where current coastal LiDAR coverage is available (as at this site), the guidance map includes the spatial area defined by the 'low, medium and high' *Coastal Inundation Hazard Bands* (DPAC, 2016).

In terms of the applicability of these issues to the proposed development, I would note the following.

1. It is not proposed to fill any of the subject land mapped as wetland or saltmarsh.
2. The proposal provides buffers between the proposed development area and the adjoining RAMSAR site (190m), adjoining Coastal Reserve (30m+), any healthy saltmarsh (30m+) and areas of wetland (10m+). The adequacy of buffers is open to debate and depends on management objectives (see section below).
3. Although the underlying issues raised by the modelling are not irrelevant to consideration of the proposal, the *Future Coastal Refugia* overlay is not applicable to the subject land under the current Scheme.
4. The methodology used to map *Future Coastal Refugia Areas* captures all potential areas based on sea level and storm surge modelling (ie how 'low' is the land). In reality, saltmarsh requires land which is both 'low' and 'flat' to establish. Assuming the topography at the site remains relatively unchanged under rising sea levels, the likely future extent of saltmarsh through landward migration is more likely to match the current distribution of wetland (which is also determined largely by 'low' and 'flat' land). No fill is proposed in these areas of the subject land.
5. Management and treatment of stormwater through a GPT & 'Biobasin' is proposed before discharge to the environment to minimise any indirect impacts on wetlands or saltmarsh communities downstream.

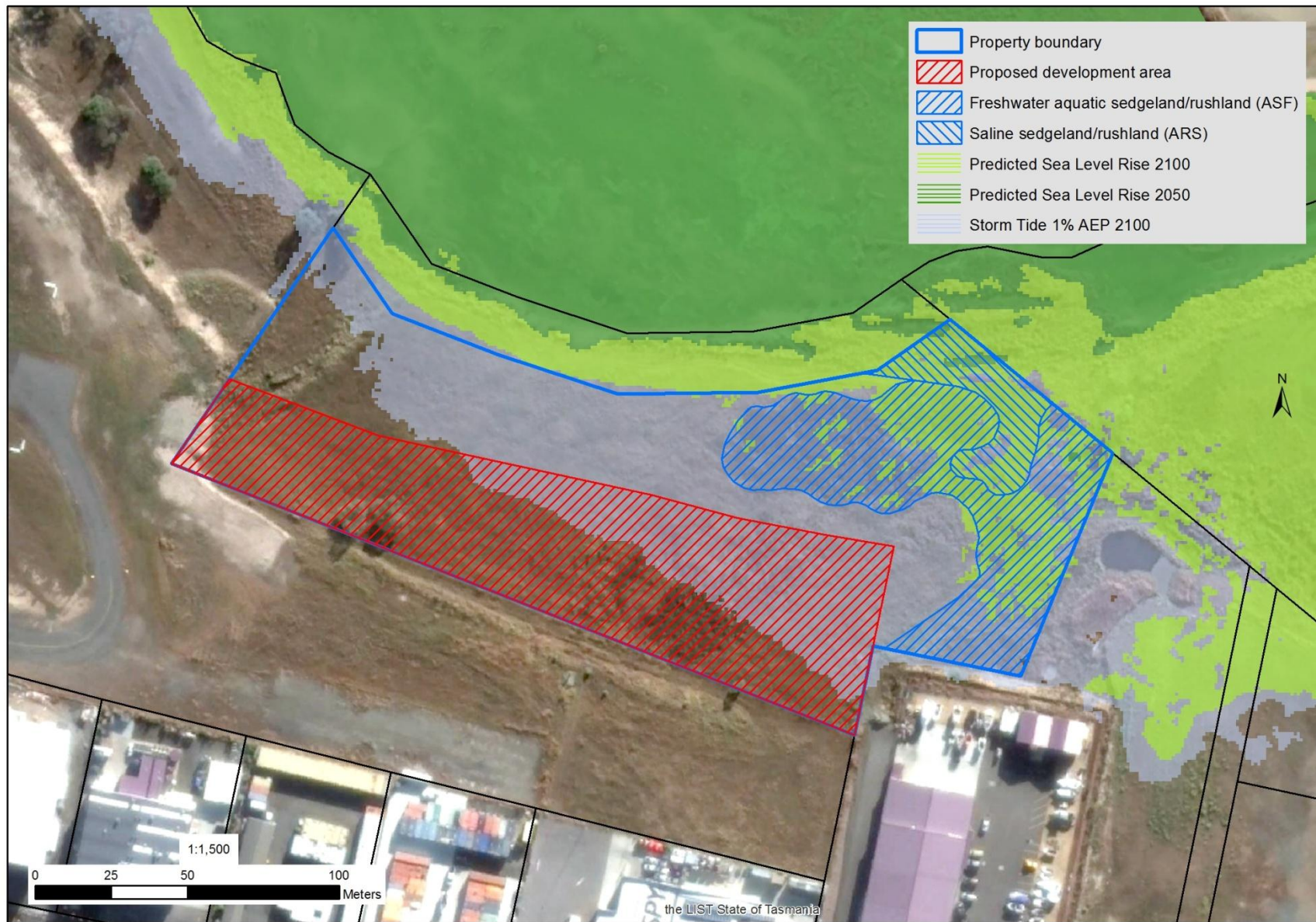


Figure 19. Proposed development area relative to 1% AEP (potential future saltmarsh habitat) and wetlands (likely future saltmarsh habitat)

Adequacy of Buffers

Buffers are an important management tool to help protect natural values from both direct and indirect impacts. The size of the buffer required depends on the values being protected, the nature of the site and the management objectives. Given that the vegetation on the subject land is in a modified and degraded state, this report assumes that the following management objectives are reasonable and achievable at this site:

- prevent direct or indirect impacts on the nearby RAMSAR site;
- prevent direct or indirect impacts on the healthy saltmarsh communities in the adjoining Coastal Reserve and in the north-east corner of the subject land;
- prevent any impacts that would undermine the potential for wetlands on the subject land to act as an effective physical buffer between development to the south and more significant natural values to the north;
- prevent any impacts that would undermine the potential for wetlands on the site to improve in condition and habitat value into the future; and
- preserve likely future habitat for saltmarsh and saline wetlands due to landward migration in response to rising sea levels and climate change.

In combination with the proposed stormwater treatment, it is considered that the proposed buffers are probably adequate to achieve these objectives.

Tasmanian Threatened Species Protection Act 1995 (TSPA)

Under Section 51 of the TSPA a permit is required to knowingly “take” a species listed as threatened (which includes kill, injure, catch, damage, destroy and collect), keep, trade in or process any specimen of a listed species. The proposal does not raise any issues in relation to ‘taking’ or ‘significantly impacting’ species listed under the TSPA or the EPBCA.

Tasmanian Nature Conservation Act 2002 (NCA)

Schedule 3A of the NCA lists vegetation communities classified as threatened within Tasmania, including *Wetlands* (generic). The *Freshwater and Aquatic Sedgeland* (ASF) identified on the subject land is a wetland for the purposes of the NCA. No vegetation clearance, fill or any other direct disturbance is proposed within the area of the wetlands on the subject land.

Tasmanian Weed Management Act 1999 (WMA)

Four species listed as declared weeds under the WMA were recorded on the subject land:

- boneseed (*Chrysanthemoides monilifera*);
- gorse (*Ulex europaeus*);
- African boxthorn (*Lycium ferocissimum*); and
- blackberry (*Rubus fruticosus*).

The Clarence Municipality is classified as a *Zone B* municipality for all of these species, with ‘containment’ identified as the most appropriate management strategy. The ongoing management objective for these municipalities is to prevent the spread of declared weeds from existing infestations.

Clarence Interim Planning Scheme 2015 (the Scheme)

The provisions of the *Light Industrial Zone* will be addressed separately by the proponent.

No fill is proposed in areas of the subject land affected by the *Biodiversity Protection Area* overlay.

As noted elsewhere in this report, the mapping of wetland vegetation is a particularly important aspect of the assessment because landfill of a wetland is prohibited under Clause E11.7.1 P1 (h) of

the *Waterway and Coastal Protection Code* of the Planning Scheme. No fill is proposed within wetland areas.

Conclusions

- With the exception of areas of saltmarsh and wetland, which are outside the proposed development area, there are few natural values to consider on the subject land.
- While degraded vegetation can still potentially support habitat for threatened species, all of the species listed in Tables 1 & 2 rely on saltmarsh or wetland with the exception of the eastern barred bandicoot. The proposal is very unlikely to impact any threatened species habitat.
- Wetlands perform important physical and ecological functions, even if weedy and degraded. The proposal preserves wetland habitat and the potential for improvement of condition and habitat value over time.
- Parts of the land provide potential future habitat for landward migration of saltmarsh. The proposal preserves that potential.
- With appropriate management controls, the proposed development will have little direct or indirect impact on native vegetation or other natural values on the subject land.
- Development permit conditions should include requirements for appropriate practices in terms of weed management, equipment hygiene and stormwater management.

REFERENCE SOURCES

- DPIPWE (Department of Primary Industries, Parks, Water & Environment) (2020). Natural Values Atlas Report dated 7 July 2020 (DPIPWE 2020) – Appendix B.
- DPIPWE (2013b). Threatened Native Vegetation Communities List July 2007 as per Schedule 3A of the *Tasmanian Nature Conservation Act 2002*.
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- DPIPWE (2020). Data layers publically available through *theLIST*, including *Future Coastal Refugia Guidance Map*.
- environment.gov.au/epbc (2020). Pursuant to the *Environmental Protection and Biodiversity Conservation Act 1999*.
- Harris, S. & Kitchener, A. (editors) (2005). From Forest to Fjaeldmark: Descriptions of Tasmania's Vegetation. Department of Primary Industries, Water & Environment, Hobart.
- legislation.tas.gov.au (2020) Pursuant to the Tasmanian *Threatened Species Protection Act 1995*, *Tasmanian Nature Conservation Act 2002* and the *Tasmanian Weed Management Act 1999*.
- Commonwealth Threatened Species Scientific Committee (2013). Conservation Advice for Subtropical and Temperate Coastal Saltmarsh (EPBC Act s266B).

Appendix A. Flora Species list

DICOTYLEDONAE

AIZOACEAE

Carpobrotus rossii pigface

ASTERACEAE

Cirsium vulgare spear thistle **introduced**

Senecio quadridentatis cottony fireweed

CHENOPODIACEAE

Sarcocornia quinqueflora beaded glasswort/samphire

Tecticornia arbuscula shrubby glasswort

FABACEAE

Acacia mearnsii black wattle

Ulex eurpoeus gorse **introduced**

PLANTAGINACEAE

Plantago coronopus buckshorn plantain **introduced**

ROSACEAE

Acaena novaehollandiae buzzy

Rosa rubiginosa sweet briar **introduced**

Rubus fruticosus blackberry **introduced**

SOLANACEAE

Lycium ferocissimum African boxthorn **introduced**

Solanum laciniatum kangaroo apple

MONOCOTYLEDONAE

CYPERACEAE

Carex tereticaulis rush sedge

Cyperus eragrostis umbrella sedge **introduced**

Ficinia nodosa knotted club rush

Juncus australis austral rush

Juncus pallidus pale rush

HEMEROCALLIDACEAE

Dianella brevicaulis coast flax lily

JUNCACEAE

Juncus kraussii sea rush

Juncus sarophorus broom rush

LAXMANNIACEAE

Lomandra longifolia sagg

Appendix A. Flora Species list

POACEAE

<i>Agrostis capillaris</i>	common bent grass	<i>introduced</i>
<i>Austrostipa stipoides</i>	coast spear grass	
<i>Dactylis glomerata</i>	cocksfoot	<i>introduced</i>
<i>Distichlis distichophylla</i>	salt grass	
<i>Paspalum dilatatum</i>	caterpillar grass	<i>introduced</i>

POACEAE cont.

<i>Poa labillardieri</i>	silver tussock grass	
<i>Poa poiformis</i>	blue tussock grass	

TYPHACEAE

<i>Typha latifolia</i>	common bulrush	<i>introduced</i>
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PTERIDOPHYTA

SALVINIACEAE

<i>Azolla rubra</i>	red water fern	
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Appendix B. Natural Values Atlas report

Attached as a separate .pdf document