

REEVES STREET SOMERSBY

CONSOLIDATED CONSTRAINTS MAPPING AND INDICATIVE STRUCTURE PLAN

PREPARED FOR

DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL

17 APR 2020

FINAL REPORT

INTRODUCTION

This document provides a summary of the technical investigations undertaken to inform and support the progression of the Planning Proposal for the 178.5 ha site, located at Reeves Street Somersby. It consist of two sections as follow:

- Consolidated Constraints Mapping; and
- Indicative Development Footprint Identification
- Indicative Structure Plan and Subdivision Plan

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CONSOLIDATED CONSTRAINTS MAPPING

Technical investigations have been consolidated through a sieve mapping process to identify the consolidated development footprint for the subject site.

The sieve mapping process considers the following environmental constraints to determine the development footprint:

- Land Zoning;
- Aboriginal Heritage Items;
- Biodiversity;
- Regional Biodiversity Corridor;
- Flora and Fauna;
- Riparian Corridor;
- Flooding;
- Slope and Topography;
- Road Access; and
- Consolidated Constraints Mapping.

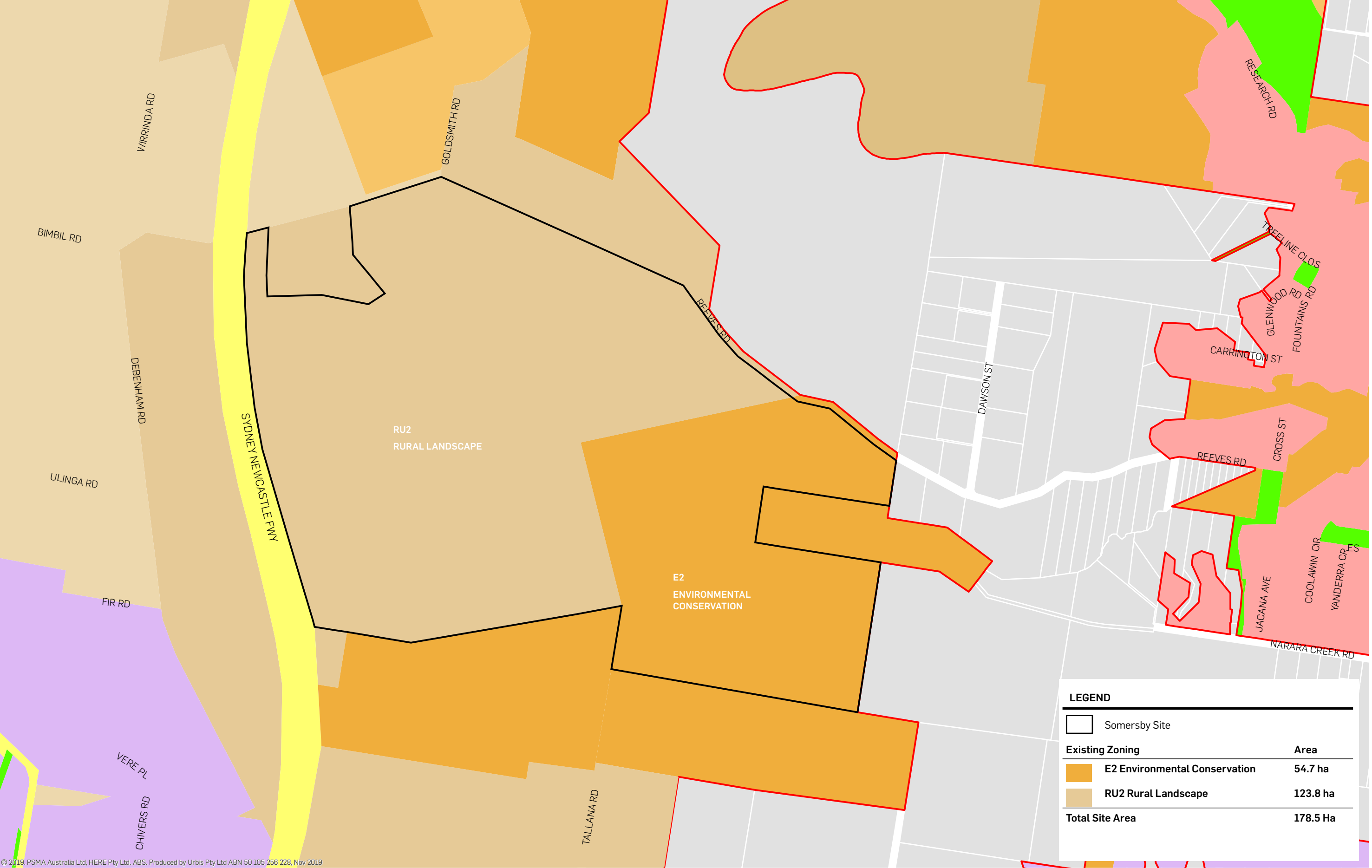
In addition to the above analysis, the following development constraints analysis has been undertaken to identify the development footprint and subdivision plan:

- Proposed Vegetated Buffer;
- Existing Mature Trees to be retained; and
- Bushfire Zone Assessment.

Each constraint has been classified under 3 categories as follow:

- **Encumbered (No Development):** Areas affected by constraints that are unsuitable for any future development.
- **Encumbered (Mitigation Required):** Areas affected by constraints that can be mitigated, where future development is possible prior to further investigation and implementation of mitigation strategies.
- **Unencumbered (Developable):** Areas not affected by any constraints, where future development can more likely be placed.

Assumption informing the constraints categorisation are noted on each page.



DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL

DEVELOPMENT CONSTRAINTS MAPPING - EXISTING ZONING



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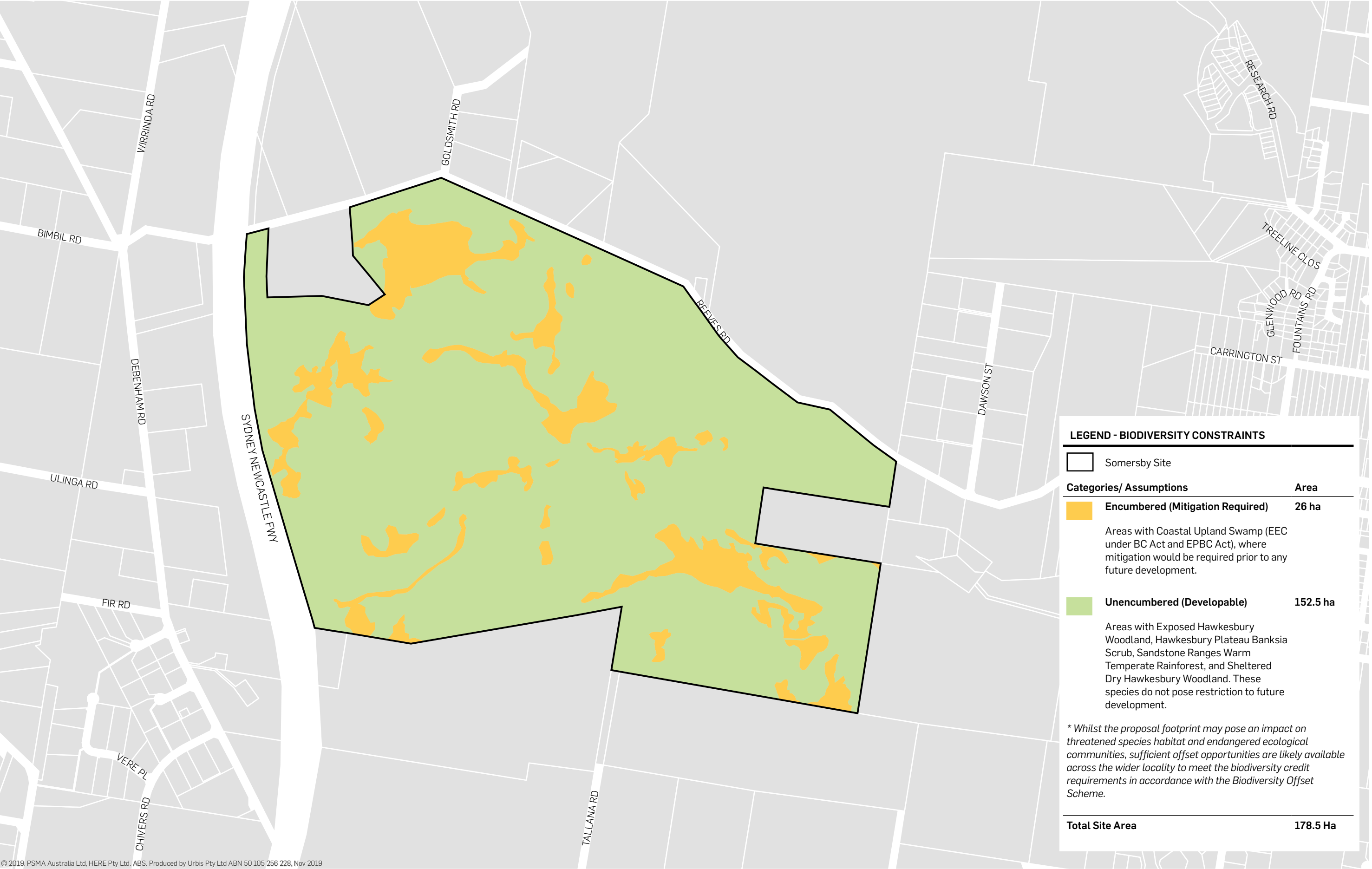
DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL

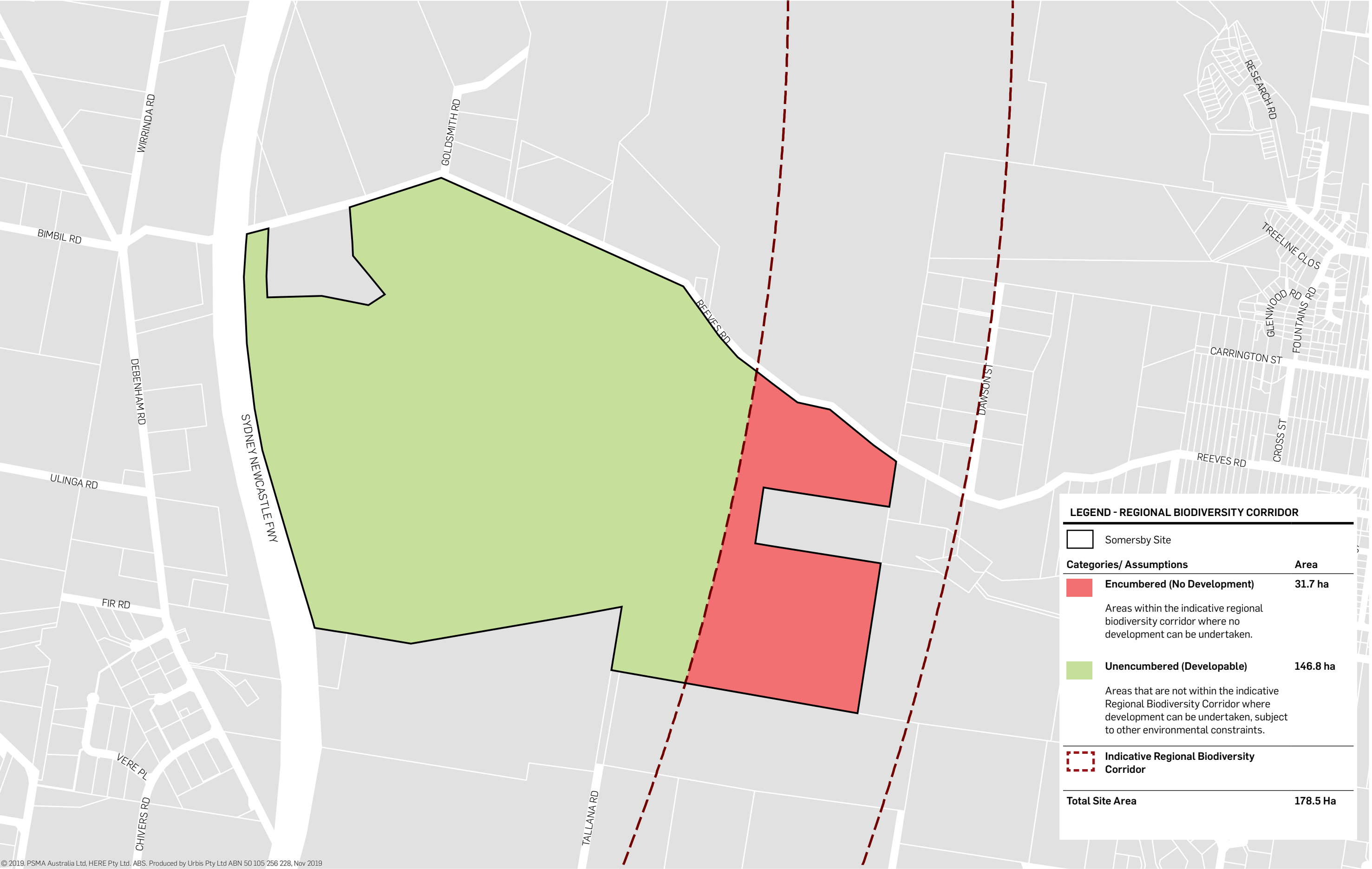
DEVELOPMENT CONSTRAINTS MAPPING - ABORIGINAL HERITAGE



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LEGEND - REGIONAL BIODIVERSITY CORRIDOR

 Somersby Site

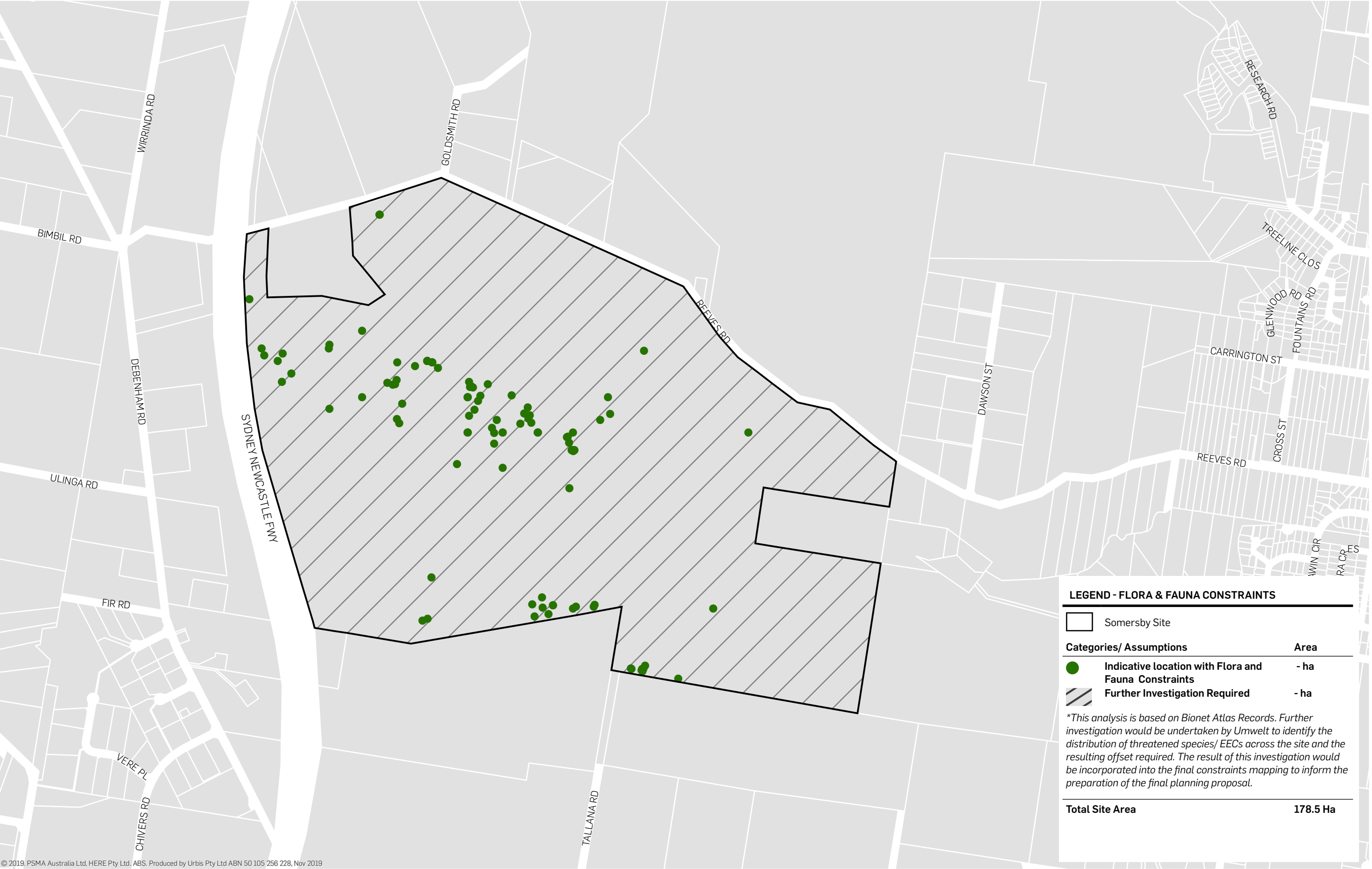
Categories/ Assumptions	Area
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 Encumbered (No Development)	31.7 ha
Areas within the indicative regional biodiversity corridor where no development can be undertaken.	

 Unencumbered (Developable)	146.8 ha
Areas that are not within the indicative Regional Biodiversity Corridor where development can be undertaken, subject to other environmental constraints.	

 **Indicative Regional Biodiversity Corridor**

Total Site Area	178.5 Ha
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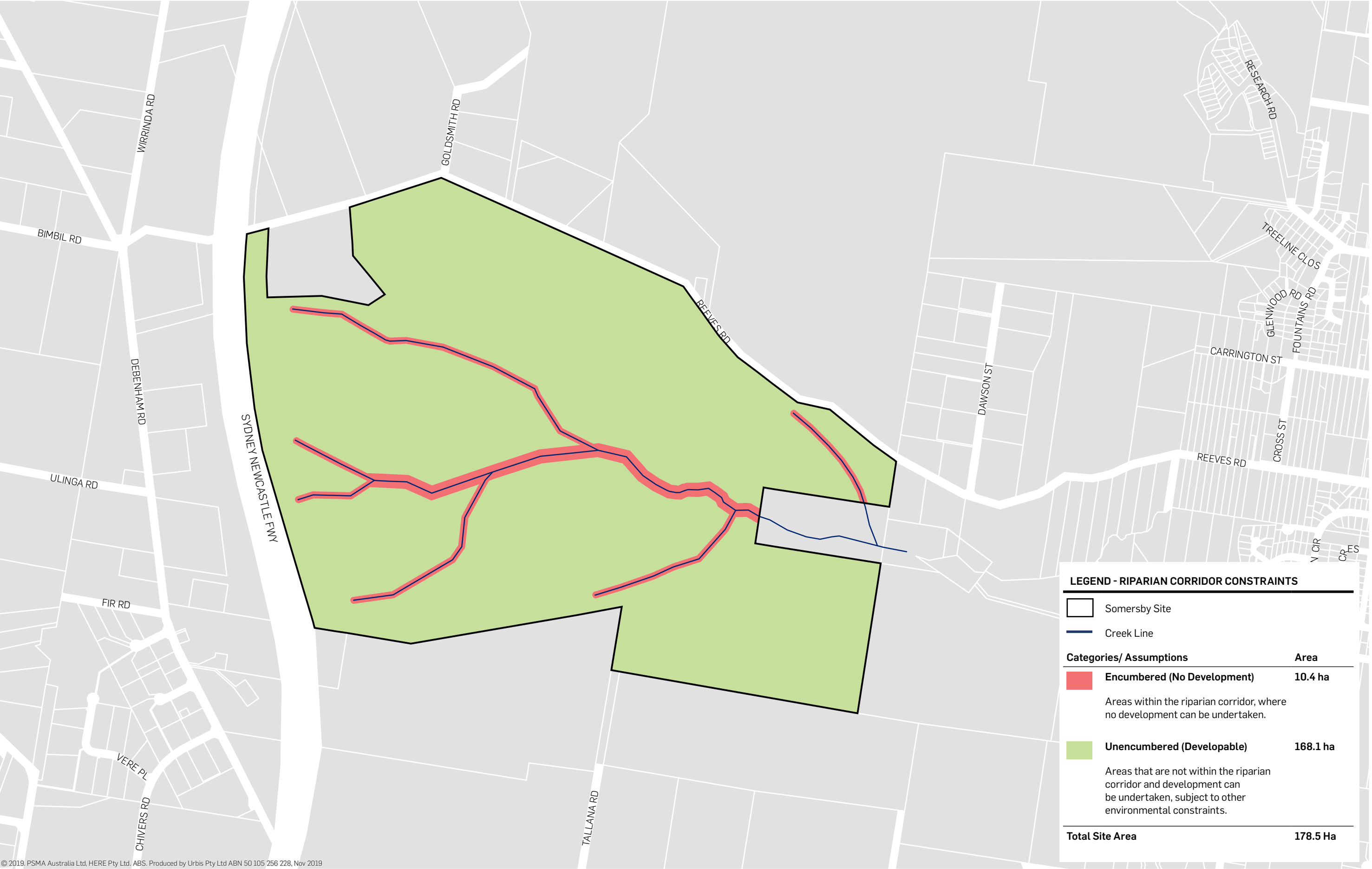
DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL

ENVIRONMENTAL CONSTRAINTS MAPPING - FLORA AND FAUNA



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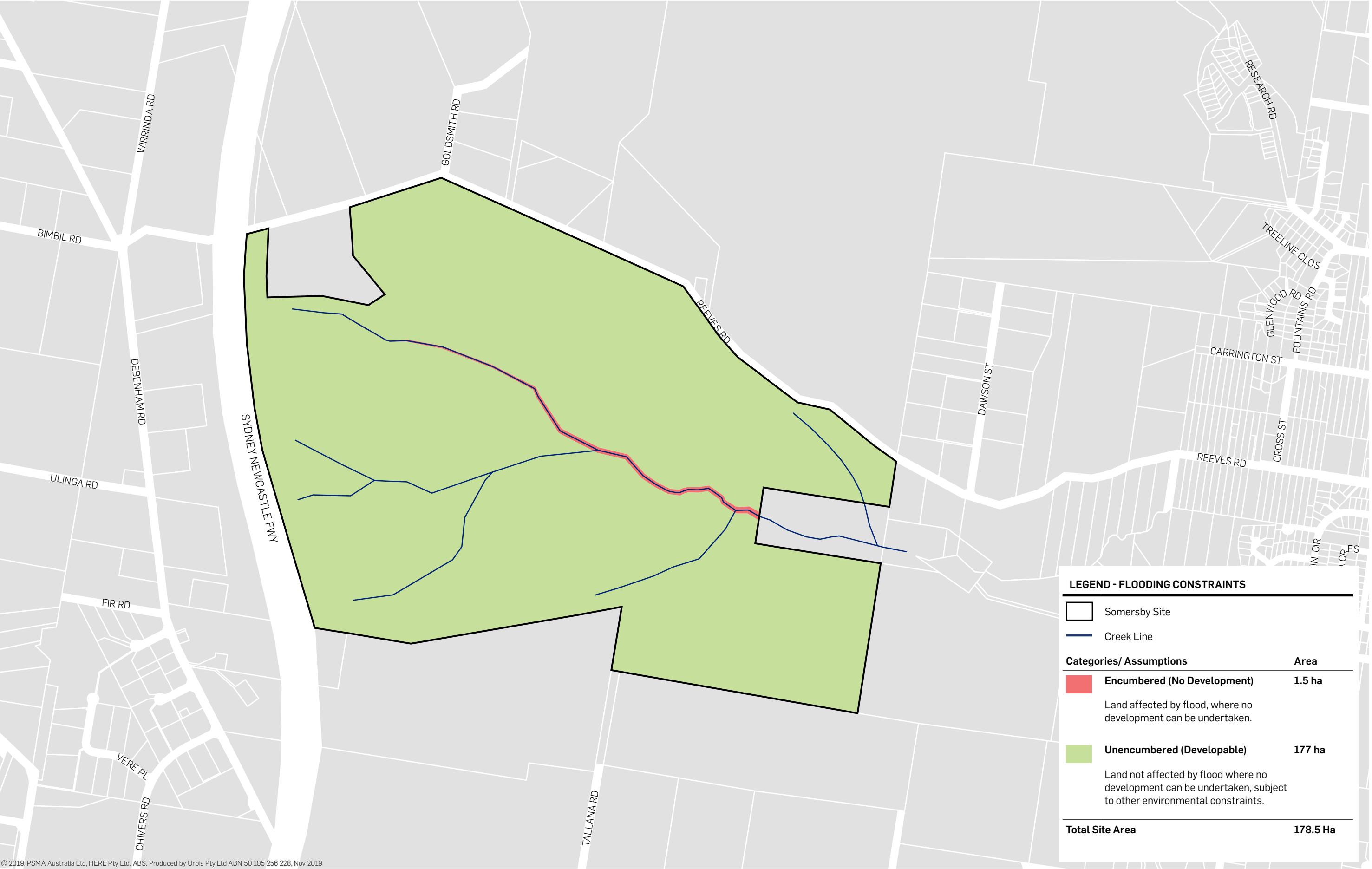
DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL

ENVIRONMENTAL CONSTRAINTS MAPPING - RIPARIAN CORRIDOR



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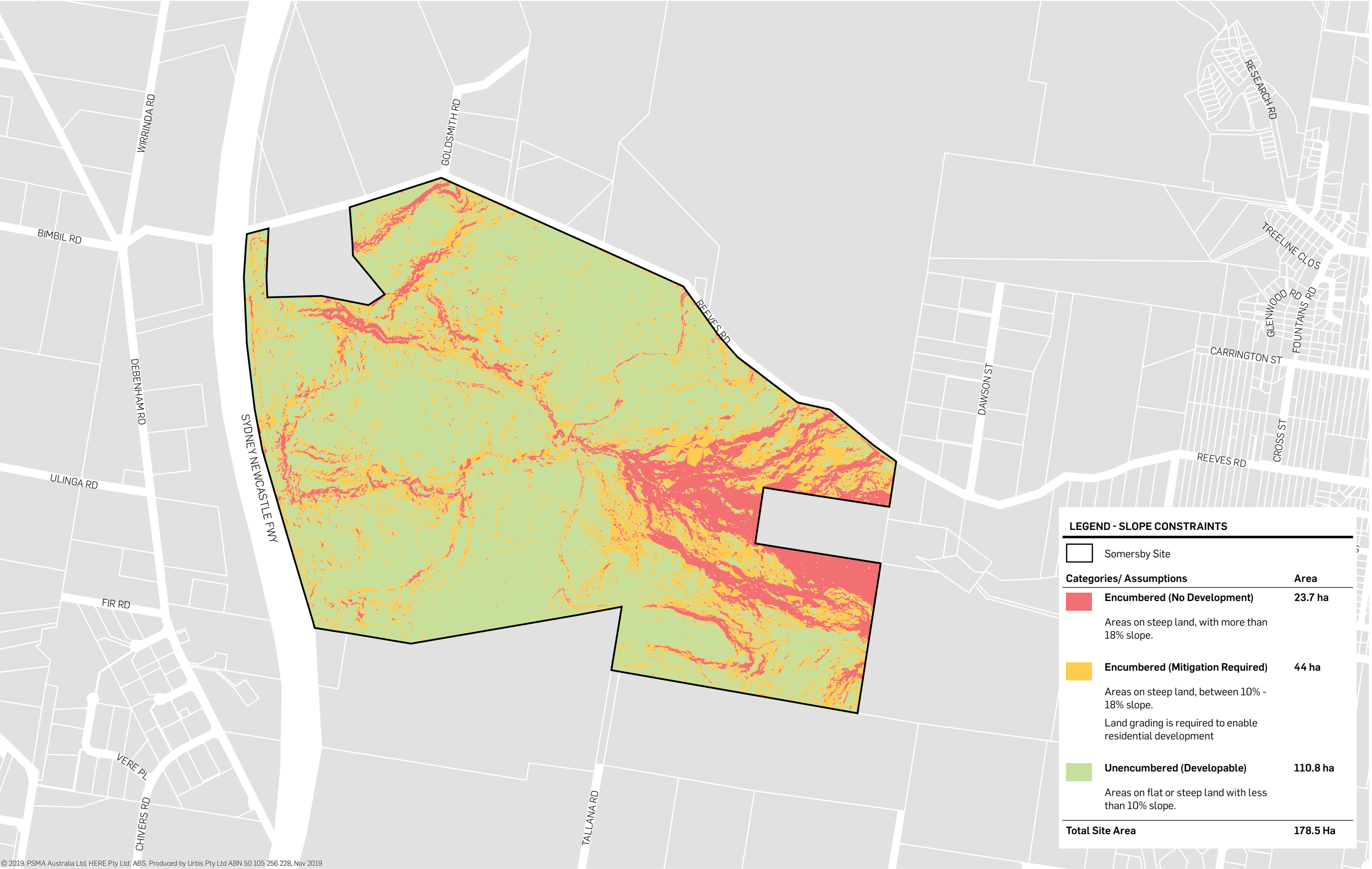
DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL

ENVIRONMENTAL CONSTRAINTS MAPPING - FLOODING



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LEGEND - SLOPE CONSTRAINTS		
	Somersby Site	
Categories/ Assumptions		Area
	Encumbered (No Development)	23.7 ha
Areas on steep land, with more than 18% slope.		
	Encumbered (Mitigation Required)	44 ha
Areas on steep land, between 10% - 18% slope.		
Land grading is required to enable residential development		
	Unencumbered (Developable)	110.8 ha
Areas on flat or steep land with less than 10% slope.		
Total Site Area		178.5 Ha

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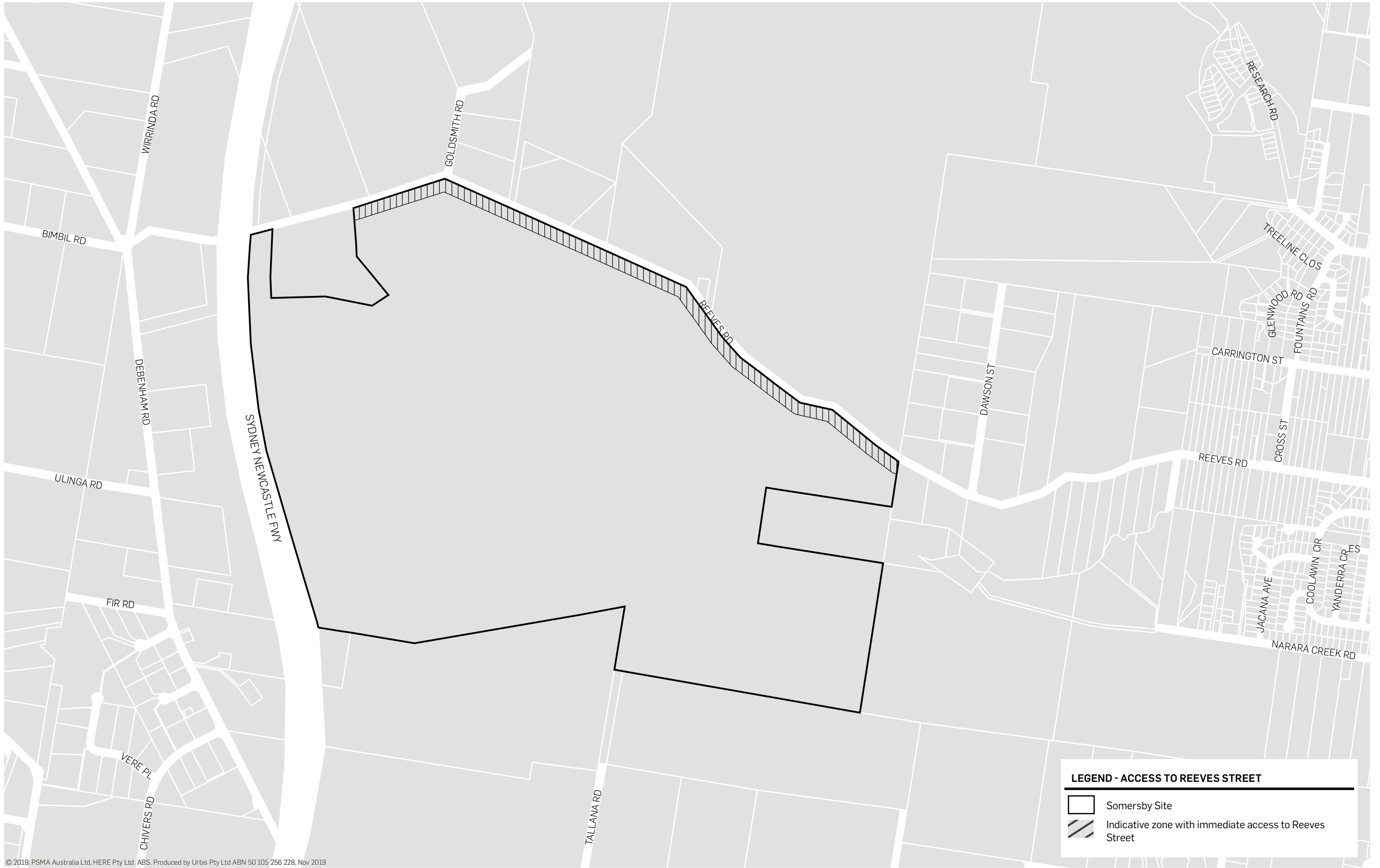
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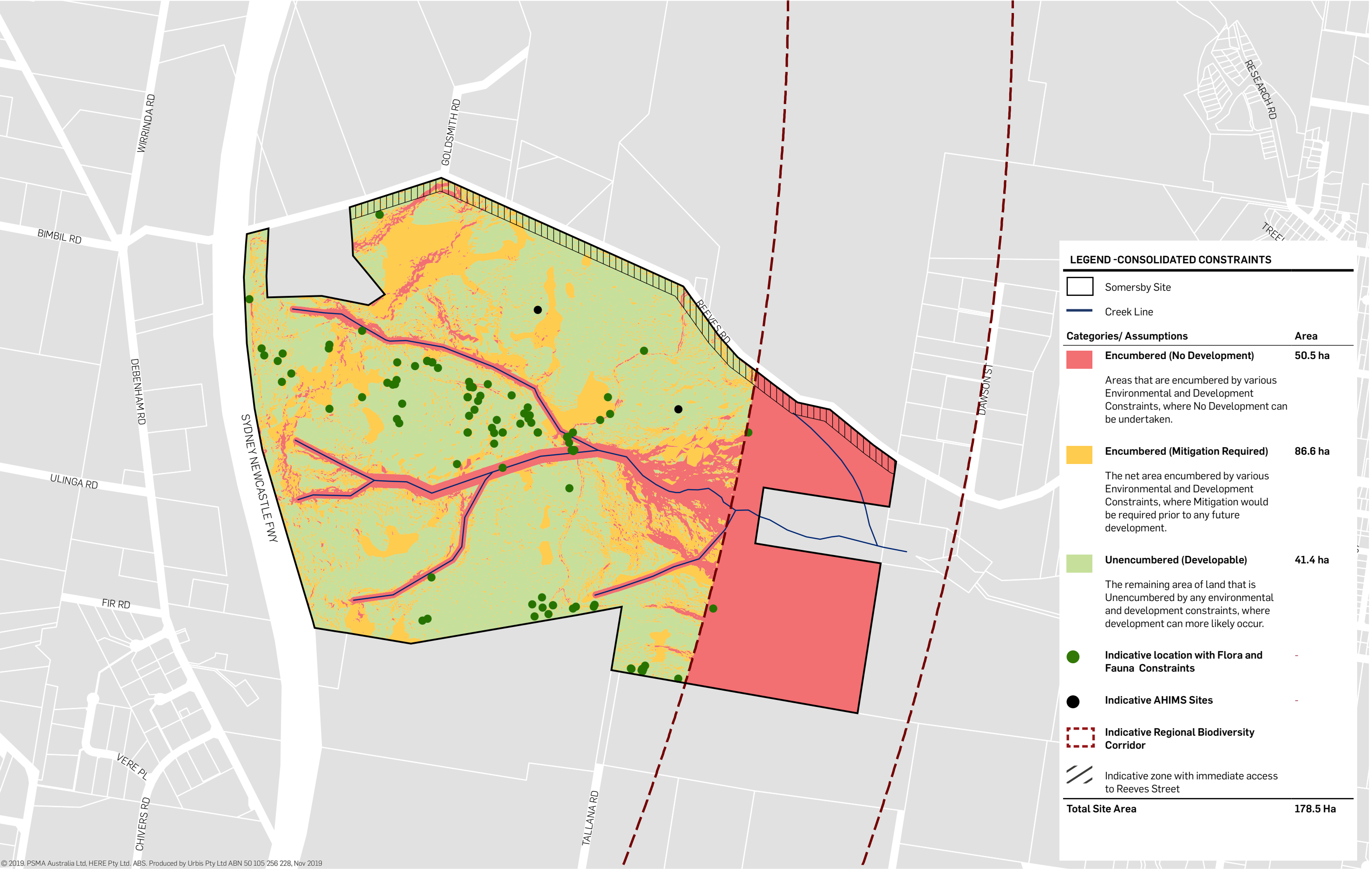
ENVIRONMENTAL CONSTRAINTS MAPPING - SLOPE



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LEGEND - CONSOLIDATED CONSTRAINTS		
	Somersby Site	
	Creek Line	
Categories/ Assumptions		Area
	Encumbered (No Development)	50.5 ha
Areas that are encumbered by various Environmental and Development Constraints, where No Development can be undertaken.		
	Encumbered (Mitigation Required)	86.6 ha
The net area encumbered by various Environmental and Development Constraints, where Mitigation would be required prior to any future development.		
	Unencumbered (Developable)	41.4 ha
The remaining area of land that is Unencumbered by any environmental and development constraints, where development can more likely occur.		
	Indicative location with Flora and Fauna Constraints	-
	Indicative AHIMS Sites	-
	Indicative Regional Biodiversity Corridor	
	Indicative zone with immediate access to Reeves Street	
Total Site Area		178.5 Ha



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INDICATIVE DEVELOPMENT FOOTPRINT IDENTIFICATION

The following figure illustrates the proposed Indicative Development Footprint at Reeves Street, Somersby.

The indicative development footprint for large lot residential is identified to the north of the site along Reeves Street with the following considerations:

- Immediate road access to Reeves Street
- Avoidance of indicative Regional Biodiversity Corridor identified in the Central Coast Regional Plan within the eastern portion of the site;
- Avoidance of encumbered land and flora and fauna constraints predominantly located to the central and southern part of the site
- Provides adequate depth to accommodate an average of 2ha lot size (approx. 80x250m) that includes an approx. 1ha vegetated buffer to the rear of the private lots.

In addition to the consolidated constraints map, the following constraints analysis has been undertaken to identify the indicative developable area within the development footprint:

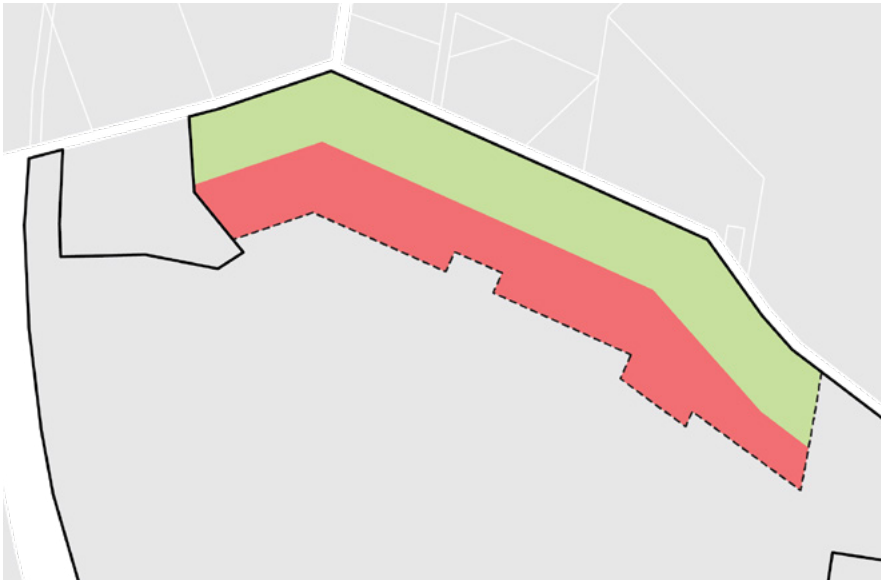
- Proposed vegetated buffer to the rear of the lot.
- Existing mature trees to be retained; and
- Bushfire zone assessment.

The following pages illustrates the analysis above.

LEGEND - INDICATIVE DEVELOPMENT FOOTPRINT IDENTIFICATION

- Somersby Site Boundary (178.5 ha)
- Indicative Development Footprint (30.8 ha)
- Indicative Vegetated Buffer Zone
- Encumbered (No Development)
- Encumbered (Mitigation Required)
- Unencumbered (Developable)
- Indicative location with Flora and Fauna Constraints
- Indicative AHIMS Sites
- Indicative Regional Biodiversity Corridor
- Indicative zone with immediate access to Reeves Street

CONSTRAINTS ANALYSIS WITHIN THE INDICATIVE DEVELOPMENT FOOTPRINT



PROPOSED VEGETATED BUFFER

LEGEND - BUSHFIRE ASSESSMENT - MINIMUM APZ DISTANCE

Somersby Site

Indicative Development Footprint

Categories/ Assumptions

Proposed vegetated buffer to the rear of the lots

Area suitable for building footprint

The indicative developement footprint area is approximately 30.8ha. Of this, an approx. 14.3ha area of land has been identified as a buffer zone not anticipated to be developed.

The incorporation of a significant buffer zone is intended to provide a dual purpose. It allows for flexibility for the future siting of dwellings within the development footprint to reduce impacts on areas of ecological or archaeological sensitivity. The buffer zone will also serve an environmental management function, providing for infiltration of stormwater runoff.



EXISTING MATURE TREES TO BE RETAINED

LEGEND - EXISTING MATURE TREES CONSTRAINTS

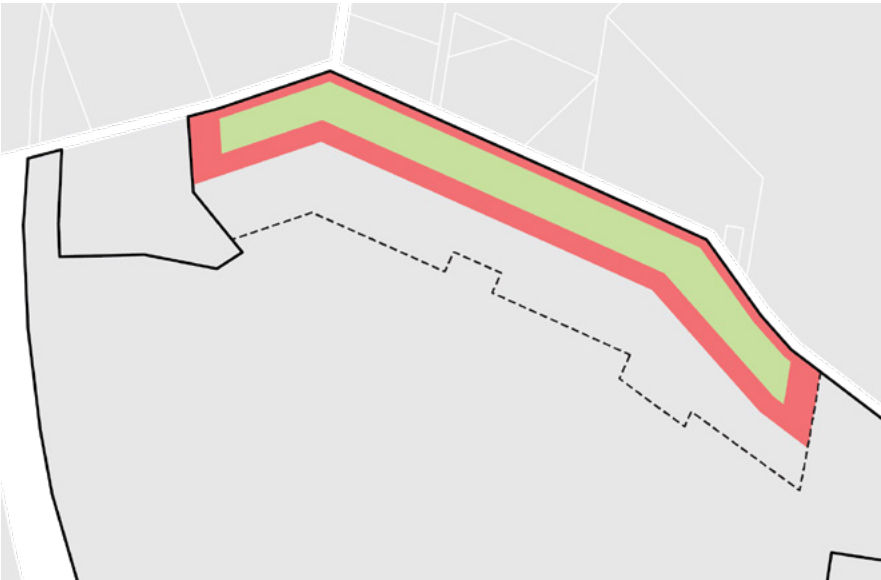
Somersby Site

Indicative Development Footprint

Categories/ Assumptions

Existing mature trees to be retained within the indicative development footprint - Assumed 16m diameter tree canopy/ protection zone

A preliminary survey has been undertaken to identify 34 existing mature trees within the development footprint. An approx. 16m diameter tree canopy / protection zone has been assumed to be excluded from allowable area for dwelling footprint. Further study is required to determine the appropriate protection zone for each of these trees.



INDICATIVE BUSHFIRE ZONE ASSESSMENT - MINIMUM APZ DISTANCE

LEGEND - BUSHFIRE ASSESSMENT - MINIMUM APZ DISTANCE

Somersby Site

Indicative Development Footprint

Categories/ Assumptions

Minimum APZ from disturbance footprint - Not suitable for building footprint

Area suitable for building footprint

The Preliminary Bushfire Assessment prepared by Umwelt identifies the following minimum distances for Asset Protection Zones (APZ) from the disturbance footprint for following directions.

DIRECTION	MINIMUM APZ DISTANCE
North	18m
South	37m
East	57m
West	57m

INDICATIVE STRUCTURE PLAN AND SUBDIVISION PLAN

The following section illustrates the indicative concept plan based on the consolidated constraints mapping undertaken with the following maps:

- Indicative Structure Plan; and
- Indicative Subdivision Plan.

The indicative structure plan and subdivision plan undertaken the following assumptions:

- An average of 2ha lot size (average 80x250m dimension) with approx. 1ha vegetated buffer to the rear of the private lots;
- An approx. 1ha of the proposed subdivision lots along Reeves Street to be cleared from existing vegetation that forms the disturbance footprint area. The removal of existing plant communities is subject to biodiversity assessment study;
- Larger lot size applies to constrained lots i.e. mature trees and APZ.
- Excludes Aboriginal Heritage items within the private lots with approx. 20m distance between heritage items and private lot boundary;
- Avoidance of existing mature trees located within the development footprint with assumed 16m diameter mature tree canopy/ protection zone; and
- Provision of minimum APZ distanced to the proposed dwelling footprints.
- Building setbacks as identifies in Draft Central Coast Development Control Plan 2018;
- An indicative 20mx20m/ 400 sqm building footprint applied to demonstrates the indicative developable area is able to accommodate a dwelling.

DEVELOPMENT CONTROL

The Draft Central Coast Development Control Plan 2018 (Draft CCDCP 2018) identifies the following development control for Large Lot Residential

ASPECT		MINIMUM SETBACK
Front boundary (primary frontage) for dwellings and all ancillary development (including outbuildings)	(ii) lots with a site area greater than 4000m ²	20m
Rear boundary setbacks	for dwellings and ancillary development	10m
Side Boundary setback	(ii) for dwellings and ancillary development (excluding outbuildings) on lots with a site area greater than 4000m ²	10m



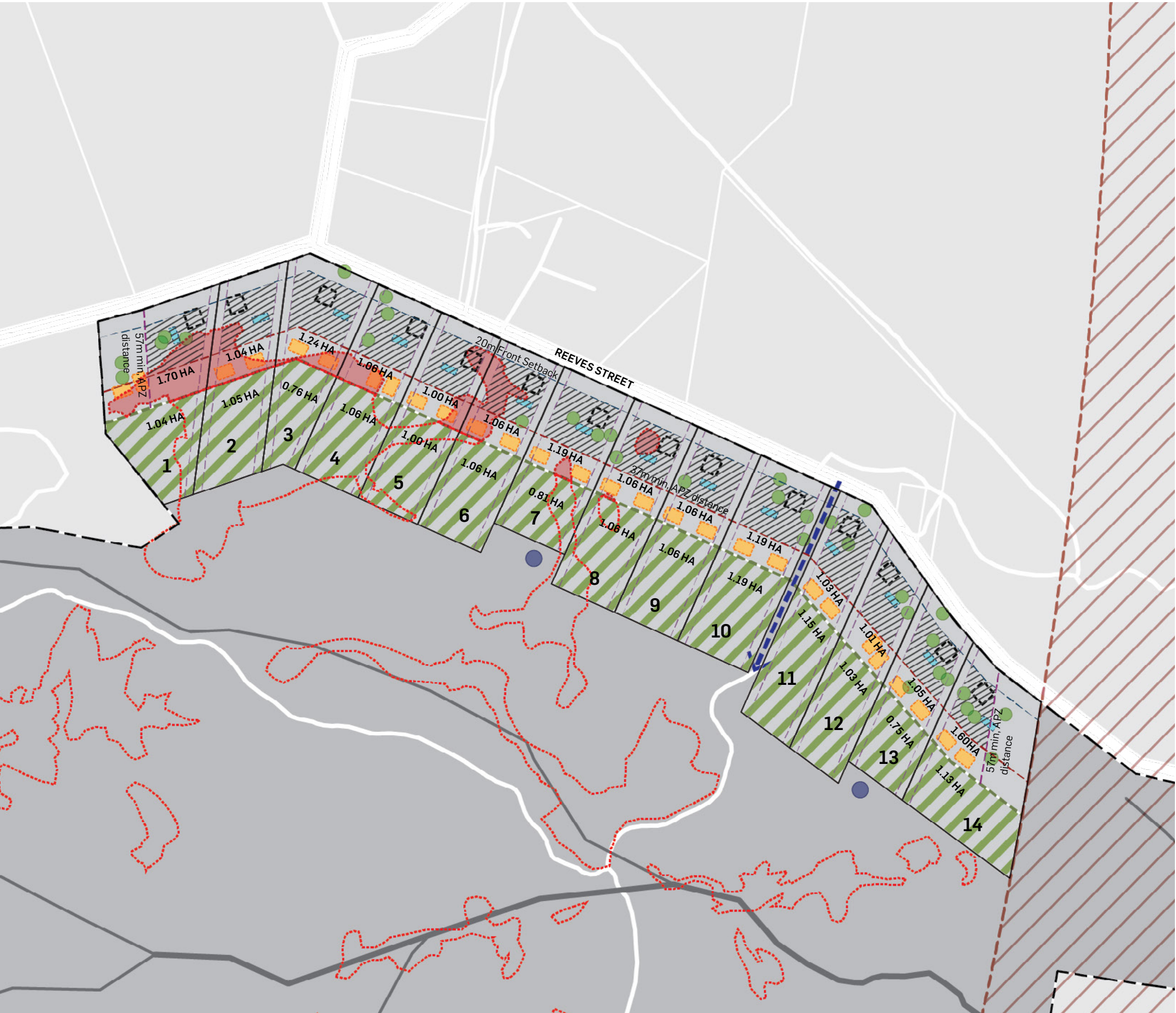
LEGEND - INDICATIVE STRUCTURE PLAN

- Somersby Site Boundary (178.5 ha)
- Proposed Environmental Management Zone (30.8 ha)
- Proposed Environmental Conservation Zone (148.2ha)
- Proposed Vegetated Buffer Zone
- Aboriginal Heritage Items
- Existing Mature Trees to be Retained - average 16m diameter mature tree canopy
- Indicative Regional Biodiversity Corridor
- Existing Water Way
- Existing Trail Within Site
- Proposed Trail Realignment

INDICATIVE YIELD

Site Area	178.5 ha
Indicative Residential Area	30.8 ha
Indicative Environmental Zone Area	147.7ha
Average lot size	2ha
Indicative Lot Yield	14 lots





LEGEND - INDICATIVE SUBDIVISION AND BUILDING ENVELOPE PLAN

- Somersby Site Boundary
- Proposed Subdivision
- Proposed Environmental Conservation Zone
- Proposed Vegetated Buffer Zone
- Aboriginal Heritage Items
- Existing Mature Trees to be Retained - Assumed 16m Tree Canopy/ Protection Zone
- Indicative Regional Biodiversity Corridor
- Existing Creek
- Existing Trail
- Proposed Trail Realignment (12m ROW)
- 37m minimum APZ Distance - South Direction
- 57m minimum APZ distance - East and West Directions
- 20m Front Setback - DCP Setback
- 10m Side Setback -DCP Setback
- Allowable Area for Dwelling
- Indicative Dwelling Footprint (Approx. 20mx20m/ 400 sqm)
- Indicative On-Site Waste Water Treatment System (Approx. 324 sqm each)
- Indicative Pool Location - Minimum 40m Distance from On-site WWTP
- Coastal Upland Swamp (EEC)
- Coastal Upland Swamp (EEC) within The Development Footprint - Approx. 1.66ha

AREA SCHEDULE

LOT NO	LOT SIZE (HA)	DEV. AREA (HA)	VEGETATED BUFFER (HA)	ALLOWABLE AREA FOR DW. (HA)*
1	2.74	1.70	1.04	0.41
2	2.09	1.04	1.05	0.40
3	2.00	1.24	0.76	0.55
4	2.12	1.06	1.06	0.40
5	2.00	1.00	1.00	0.41
6	2.12	1.06	1.06	0.42
7	2.00	1.19	0.81	0.46
8	2.12	1.06	1.06	0.43
9	2.12	1.06	1.06	0.43
10	2.38	1.19	1.19	0.47
11	2.18	1.03	1.15	0.41
12	2.04	1.01	1.03	0.36
13	1.80	1.05	0.75	0.36
14	2.73	1.60	1.13	0.27
TOTAL	30.44	16.29	14.15	5.78

*Allowable Area for Dwelling excludes building setback, Asset Protection Zone (APZ) and existing 16m diameter mature trees canopy/ protection zone.



DARKINJUNG LOCAL ABORIGINAL LAND COUNCIL - SOMERSBY PLANNING PROPOSAL
INDICATIVE SUBDIVISION AND DWELLING ENVELOPE PLAN - EEC OVERLAY



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