Preliminary Site Investigation
Proposed Rezoning Planning Proposal

Location:

Lot 261 DP 1262316 & Lot 11 DP 807867
Rankin Drive Bangalow

Prepared for:

Instant Steel Pty Ltd

Report No:

HMC2022.1062.01

June 2022

HMC environmental consulting pty ltd

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RE: Lot 261 DP 1262316 & Lot 11 DP 807867, Rankin Drive Bangalow NSW.

HMC Environmental Consulting Pty Ltd is pleased to present our report for a Preliminary Site Investigation for the abovementioned site.

We trust this report meets with your requirements. If you require further information, please contact HMC Environmental Consulting directly on the numbers provided.

Yours sincerely

Mark Tunks
(B. App. Sc. Env. Hlth)

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EXECUTIVE SUMMARY

Background

A proposed rezoning of existing vacant land located at Lot 261 DP 1262316 & Lot 11 DP 807867, Rankin Drive, Bangalow NSW (site). The applicant is proposing to rezone part of the land from RU2 Rural Landscape to R2 and R3 Residential for the purposes of a future residential land use. It is noted that part of the total land is already zoned as R2 Residential. To address the requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP 2021),* a Preliminary Site Investigation was required to assess potential site contamination from current and former land use.

HMC Environmental Consulting (HMC) was engaged by the proponent Max Campbell (Instant Steel Pty Ltd) to undertake the required investigation.

A Preliminary Site Investigation (PSI) including a desktop assessment of available information, and a detailed site inspection was completed.

Objective of the Investigation

The objectives of the Preliminary Site Investigation are to:

1. Assess the current and former land use on the site for potentially contaminating activities.
2. Based on potentially contaminating activities associated with the current and former land use, assess the suitability of the site for the proposed land use.

Scope Of Works

The scope of work undertaken during the investigation included the following:

- A desktop assessment of current and former land use on the site including search of available records.
- A detailed site inspection.
- Preparation of a Preliminary Site Investigation report including:
  - review of available land use history information, and results of the site inspection.
  - assessment of potentially contaminating activities, potential contaminants of concern (PCoC) and areas of concern (AoC).
  - assessment of suitability of site for proposed land use;
  - conclusions and recommendations including suitability of the site for the proposed development and need for further investigation and remediation.

Conclusions/Recommendations

The Preliminary Site Investigation conclusions are based on the information described in this report and appendices and should be read in conjunction with the complete report, including Section 9 Limitations.

Proposed land rezoning and subdivision is to be located on an existing vacant land on Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW. A review of available information, and a detailed site inspection did not record any potentially contaminating activities on the proposed residential subdivision site.

Based on the information presented, Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW, as shown in Appendix 3 of this report, is considered suitable for the proposed residential land use in relation to potential site contamination associated with the current and former land use.

Based on the information presented, no further investigation or remediation is required in relation to potential site contamination for Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW, as shown in Appendix 3 of this report.

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Abbreviations/acronyms

ACM	Asbestos containing material
ANZECC	Australian and New Zealand Environment and Conservation Council
AOPC	Area of potential concern
ARMCANZ	Agricultural and Resource Management Council of Australia and New Zealand
AS	Australian Standard
ASC NEPM	National Environment Protection (Assessment of Site Contamination) Measure 1999 (amended 2013)
Client	Instant Steel Pty Ltd
CLM Act	*Contaminated Land Management Act 1997*
CSM	Conceptual site model
DQO	Data quality objective
DSI	Detailed Site Investigation
EIL	Ecological Investigation Level
EPA	Environment Protection Authority
HIL	Health Investigation Level
HMC	HMC Environmental Consulting
Investigation Area	Proposed Rezoning Area
mBGL	Metres below ground level
OEH	[NSW] Office of Environment and Heritage
PCoC	Potential Contaminants of Concern
PSI	Preliminary Site Investigation
Site	Lot 261 DP 1262316 & Lot 11 DP 807867, Rankin Drive, Bangalow NSW

1 INTRODUCTION

1.2 Background

A proposed rezoning of existing vacant land located at Lot 261 DP 1262316 & Lot 11 DP 807867, Rankin Drive, Bangalow NSW (site). The applicant is proposing to rezone part of the land from RU2 Rural Landscape to R2 and R3 Residential for the purposes of a future residential land use. It is noted that part of the total land is already zoned as R2 Residential. To address the requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP 2021),* a Preliminary Site Investigation was required to assess potential site contamination from current and former land use.

HMC Environmental Consulting (HMC) was engaged by the proponent Max Campbell (Instant Steel Pty Ltd) to undertake the required investigation.

A Preliminary Site Investigation (PSI) including a desktop assessment of available information, and a detailed site inspection was completed.

1.3 Project Description

The current proposal is for the rezoning of existing vacant land. The property that is to be rezoned has an area of approximately 4.1 hectares. At this stage, a preliminary concept lot layout plan has been provided that indicates a future subdivision including 19 R2 residential lots, ranging from 765m^2 (Lot 4) to 2925m^2 (Lot 14), and 2 R3 residential lots, which are 3935m^2 (Lot 12) and 6450m^2 (lot 21).

The site would be serviced by a new roadway and pedestrian/cycling paths, as well as reticulated water, sewerage, and power/communications. Bangalow is located in the upper reaches of the Wilsons River Catchment, with a proposed water sensitive urban design in place for the proposed lots in order to reach a high level of sustainability and effectively comply with stormwater requirements. Both lots will be connected to the Bangalow Reticulated Sewage System.

1.4 Objective of the Investigation

The objectives of the Preliminary Site Investigation are to:

1. Assess the current and former land use on the site for potentially contaminating activities.
2. Based on potentially contaminating activities associated with the current and former land use, assess the suitability of the site for the proposed land use.

1.5 Scope Of Works

The scope of work undertaken during the investigation included the following:

- A desktop assessment of current and former land use on the site including search of available records.
- A detailed site inspection.
- Preparation of a Preliminary Site Investigation report including:
    - review of available land use history information, and results of the site inspection.
    - assessment of potentially contaminating activities, potential contaminants of concern (PCoC) and areas of concern (AoC).
    - assessment of suitability of site for proposed land use;
    - conclusions and recommendations including suitability of the site for the proposed development and need for further investigation and remediation.

2 SITE INFORMATION

2.1 Site Identification

Table 1 - Site Identification Summary

Street Address		Rankin Drive, Bangalow NSW
Allotment size		4.1 ha
Allotment Description		Lot 11 DP 807867 & Lot 261 DP 1262316.
Local Government		Byron Shire
Parish		Byron
County		Rous
Geographical Coordinates (MGA Zone 56)		Easting: 555039.91 m E Northing: 6805924.75 m S (Approximate centre of site).
Existing Zoning		RU2 – Rural Landscape R2 – Low Density Residential
Proposed Zoning		R2 – Low Density Residential R3 – Medium Density Residential
Land use - Existing		Vacant Rural Land
Land use - Proposed		3.1 ha – Low density residential 0.9 ha – medium density residential
Site Services		Power, Water, Sewer
Surrounding land uses	**Local Area**	Located in the northern region of Bungalow, surrounded by agricultural, and residential land uses.
	North	Hinterland Way, agricultural (macadamia plantation), uncleared bushland (native or regrowth), Rural Residential.
	East	Agricultural (macadamia plantation), uncleared bushland (native or regrowth).
	South	Residential, Rankin Drive, Vacant Land, Bangalow Showground.
	West	Residential, Vacant Land.
Closest Sensitive Environment		Un-named stream located on the lower slopes of the existing Lots 11 DP807867 & Lot 261 DP 1262316. Stormwater from the site would be directed towards the un-named stream eventually discharge into the Byron Creek approx. 200m south-east

Table 2 – Site Characteristics

Topography	High to mid slopes of a ridgeline with moderate sloping Eastern aspect Approximately 47-100m AHD elevation across the subject site (ELVIS - https://elevation.fsdf.org.au/)
Regional Geology (Hashimoto et al 2008)	**Bedrock geology** Tertiary volcanic (Tv): basalt, rhyolite, trachytes, gabbro and syenite **Alluvial Plain System** Quaternary Valley Fill (Qav): silt, clay, fluvial sand and gravel; found throughout un-named stream location.
Soil Landscape (Morand, 1996)	**Bangalow (bg) landscape (Expected)** Krasnozems 100- >200cm Low rolling hills on Lismore Basalts within the Alstonville Plateau.
Australian Soil Classification https://www.environment.nsw.gov.au/eSpade2Webapp	**Ferrosols (FE)** Soils with B2 horizons which are high in free iron oxide, and which lack strong texture contrast between A and B horizons These soils are almost entirely formed on either basic or ultrabasic igneous rocks, their metamorphic equivalents, or alluvium derived

	therefrom. Although these soils do not occupy large areas in Australia, they are widely recognised and often intensively used because of their favourable physical properties.
Regional Hydrogeology	Groundwater vulnerability is not mapped for the site. The site is located on the elevated slopes of a ridgeline. Groundwater may be >5m depth. Groundwater flow would be expected to follow the topography and flow generally east/southeast towards the Byron Creek, <100m southeast.
Groundwater Database Search	The online NSW Office of Water groundwater mapping (http://allwaterdata.water.nsw.gov.au/water.stm) shows no registered groundwater bores within 500m of the site. The closest groundwater bore lies approximately 1.2km south of the subject site.

3 SITE HISTORY

3.1 Previous Contaminated Site Investigations

In 2007 a contamination assessment entitled *Preliminary Investigation of Potential Site Contamination – SEPP 55 Assessment Bangalow Settlement Strategy Areas 1, 2 & 3 Rankin Drive/Granuialle Crescent* was performed by Balanced Systems Planning Consultants accompanying a preliminary rezoning application to Byron Shire Council. This report provides detailed historical land use history in conjunction with aerial photographs of the subject site. This report concluded that the subject site and surrounding land areas were used for dairy and beef cattle grazing. No evidence of pasture or cropping was located within the subject site's immediate surrounds.

In 2010 a following contamination assessment was preformed entitled *Preliminary Site Contamination Report, Proposed Subdivision, Lot 101 DP 1155344 (Areas 2 & 3), Rankin Drive, Bangalow* by Tim Fitzroy & Associates accompanying a Subdivision Application for residential use submitted to council. This report focused within the extent of Lot 261 DP 1262316 (formerly part Lot 107 DP 1225545). A total of 48 soil samples were analysed from within the proposed residential area, all samples revealed contaminate levels well below the ANZECC and NEPC guidelines except for elevated lead concentrations south of the existing railway bridge. This location is not within the subject site investigation and is therefore not considered relevant to the proposed rezoning and subdivision.

3.2 Ownership

The property is currently owned by Instant Steel Pty Ltd. A review of the title information via the online Land and Property Information portal on 4 December 2019 provides the following information:

Table 3 – Property Ownership

Folio Description	Date of Folio	Search Date	Ownership Details
11/807867	28/6/2014	4/12/2019	Instant Steel Pty Ltd

3.3 Aerial Photograph Interpretation

A summary of the reviewed historic aerial photography is shown in table 4.

Table 4 – Historic Aerial Photography Summary

Year	Source	Comments	Areas of Potential Concern Yes/No
1947 - 2007	Department of Lands & Google Earth	Addressed by Balanced Systems Planning Consultants (2007) & Tim Fitzroy & Associates (2010). The site does not appear to be used for cultivation. No disturbances of the site noted apart from vehicle tracks and possible fencing.	NO
2009	Google Earth	Land heavily vegetated, surrounding residential development.	NO

		Similar to 2009. Lot 261 cleared of mature vegetation.	
		Subject site largely cleared of mature vegetation; stockpiles of wood visible. Increase in surrounding residential development.	
2019 - Present		Land heavily vegetated, surrounding residential development.	NO

Table 5 - Statutory Searches

Search	Comment
NSW EPA Contaminated Land Public Record http://www.epa.nsw.gov.au/prclmapp/searchregister.aspx	No records (orders, notices) for the site were discovered
Australian Department of Defence Unexploded Ordinance Contaminated Sites http://www.defence.gov.au/uxo/where_is_uxo/UXOSearch.asp?State=NSW	No UXO sites are located within the vicinity of the subject site.
Cattle dip site locator http://www.dpi.nsw.gov.au/agriculture/livestock/health/specific/cattle/ticks/cattle-dip-site-locator	The nearest mapped cattle dip site, Bangalow Saleyards (demolished), is located ~500m south of the subject site.

3.4 Historic Parish Maps & Topographic Maps

A summary of the available historic parish and topographic mapping information is shown in table 6.

Table 6 - Historic Parish and Topographic Map Summary

Search	Comment
Historic parish and village maps 1906, 1913, 1925, 1940, and 1960 http://images.maps.nsw.gov.au/pixel.htm	Maps 1906-1960 do not record land use. The lot appears to have been part of a much larger portion (section 35) until 1960, the block was then subdivided creating section 340. Current lot layouts are again reduced in size due to subdivisions.
Topographic maps • *Central Mapping Authority of NSW (1984) 9640-4-S Byron Bay Topographic Map*	Land use not recorded; no structures visible. Railway line can be seen to the southeast of the subject site.
• *NSW Land & Property Information (2002) 1:25000 9640-4-S Byron Bay Topographic Map*	Land use shown as Open forest: 50-80% crown cover located on the low lying and south eastern area of the subject site. A perennial stream is visible running in a southern direction through low lying areas of the subject site to Byron Creek. Surrounding lots to the west contain structures, however this in not located within the subject site.
• *NSW Land & Property Information (2016) 1:25000 9640-4-S Byron Bay GeoPDF Topographic Map*	Similar to 2002, increase in surrounding structures located to the west of the subject site.

3.5 Interview

A phone interview was conducted with current owner (Max Campbell) on the 10th December 2019. The following information was recorded from the interview:

- Lot 11 was purchased on the 5th June 2014
- Lot 261 (formerly part Lot 107) was formed when land owned by Max Campbell and his son-in-law were amalgamated in 2008
- Former Lot 107 has been subdivided into two lots; Lot 261, owned by Instant Steel Pty Ltd (Max Campbell) and Lot 262
- No farm dumps, fuel storage or cattle dips are located on the subject site to his knowledge

4 SITE INSPECTION

A site inspection was undertaken by Taylah Richards of HMC on Wednesday 27th November 2019. The site inspection shows the existing lot is generally cleared of native vegetation. Stockpiles of removed Camphor sp. were spread across the lower margins of the subject site. The site is bounded to the north by the Hinterland Highway and to the east by old railway lines. An un-named stream runs through lots 11 & lot 261 which flows southeast into Byron Creek. The site extends east and west and generally has a northern aspect. The site slopes steeply from the upper regions near Rankin Drive to the east towards Byron Creek.

4.1 Summary of Site Conditions

Table 7 provides a summary of observations during the site inspection.

4.2 Site photographs

See Appendix 10

4.3 Possible Contaminant Sources and Potential Off-site Effects

A detailed desktop assessment, including a review of historic aerial photography from 1947 to present, has not revealed any intensive land use on the property. There is no evidence of intensive land use in the historic aerials or topographic mapping, and therefore it is unlikely that any significant agrichemical use has occurred.

No potential off-site effects recorded.

4.4 Site layout

The details of the site inspections are shown in table 7.

5 POTENTIAL AREAS OF ENVIRONMENTAL CONCERN

Table 7 - Site Features Indicating Potential Contamination

Features of Contamination	Comments
Disturbed, discoloured, or stained soil	Evidence of disturbed soil due to clearing of vegetation. No discoloured or stained soil noted
Disturbed or distressed vegetation	Vegetation, mainly camphor species removed from site with stockpiles of camphor logs present.
Surface water quality	Elevated, undulating site. Surface water present, un-named stream, flowing southeast towards Byron Creek. The quality of surface water was not tested. A visual inspection of the stream was carried out during site inspection, no algal growth was observed.
Agrichemical Storage/Use	None recorded during site inspection
Other chemical/fuel storage	None recorded.
Waste storage	None recorded.
Asbestos Waste or Use in Structures	Structures on site visual survey did not record any asbestos containing material
Fill from unapproved source	None recorded.
Other	Nil

6 CONCEPTUAL SITE MODEL

POTENTIAL SOURCE	PATHWAY	EXPOSURE ROUTE	RECEPTOR	PATHWAY COMPLETE
Historic Land Use	Surface water runoff	Chemical/sediment entering local water ways	Ecological receptors	NO No areas of concern identified. Historic photography has not identified any intensive agricultural activities since 1947.
	Exposed surface soil	Dermal contact to exposed soil during earthworks, flat building occupation and recreational use	Site worker, Occupier, Visitor	
	Atmospheric dispersion	Inhalation of soil exposed during earthworks and in exposed bare soil areas		
	Leaching to groundwater	Groundwater movement off-site to beneficial users or ecological receptors	Beneficial users/Ecological receptor	

7 DISCUSSION

The review of available information and the site inspection did not indicate potentially contaminating activities have occurred on the site

The site appears to have been used for intermittent cattle grazing, no evidence of cropping was found. The subject site is located within the Bangalow village and bordered by residential properties to the west and the Hinterland Highway to the north. An old railway line dissects the subject site towards the eastern boundary.

No structures were found to be located on the subject site from before 1947.

No potentially contaminating activities have been identified associated with the subject site.

8 CONCLUSIONS AND RECOMMENDATIONS

The Preliminary Site Investigation conclusions are based on the information described in this report and appendices and should be read in conjunction with the complete report, including Section 9 Limitations.

Proposed land rezoning and subdivision is to be located on an existing vacant land on Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW. A review of available information, and a detailed site inspection did not record any potentially contaminating activities on the proposed residential subdivision site.

Based on the information presented, Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW, as shown in Appendix 3 of this report, is considered suitable for the proposed residential land use in relation to potential site contamination associated with the current and former land use.

Based on the information presented, no further investigation or remediation is required in relation to potential site contamination for Lot 11 DP 807867 & Lot 261 DP 1262316, Rankin Drive, Bangalow, NSW, as shown in Appendix 3 of this report.

9 LIMITATIONS

Any conclusions presented in this report are relevant to the site condition at the time of inspection and legislation enacted as at date of this report. Actions or changes to the site after time of inspection or in the future will void this report as will changes in relevant legislation.

The findings of this report are based on the objectives and scope of work outlined in Section 1. HMC Environmental has performed the services in a manner consistent with the normal level of care and expertise exercised by members of the environmental assessment profession. No warranties or guarantees expressed or implied, are given. This report does not comment on any regulatory issues arising from the findings, for which a legal opinion should be sought. This report relates only to the objectives and scope of work stated and does not relate to any other works undertaken for the client. The report and conclusions are based on the information obtained at the time of the assessment.

The site history and associated uses, areas of use, and potential contaminants were determined based on the activities described in the scope of work. Additional site information held by the client, regulatory authorities or in the public domain, which was not provided to HMC Environmental or was not sourced by HMC Environmental under the scope of work, may identify additional uses, areas of use and/or potential contaminants. The information sources referenced have been used to determine the site history.

Whilst HMC Environmental has used reasonable care to avoid reliance on data and information that is inaccurate and unsuitable, HMC Environmental is not able to verify the accuracy or completeness of all information and data made available. Further chemicals or categories of chemicals may exist at the sites, which were not identified in the site history, and which may not be expected at the site. The absence of any identified hazardous or toxic materials on the subject land should not be interpreted as a warranty or guarantee that such materials do not exist on the site. If additional certainty is required, additional site history or desktop studies, or environmental sampling and analysis should be commissioned.

The results of this assessment are based upon site inspections and fieldwork conducted by HMC Environmental personnel and information provided by the client. All conclusions regarding the property area are the professional opinions of the HMC Environmental personnel involved with the project, subject to the qualifications made above. HMC Environmental assume no responsibility or liability for errors in any data obtained from regulatory agencies, information from sources outside of HMC Environmental, or developments resulting from situations outside the scope of this project.

10 SIGNATURE

This report has been prepared by Mark Tunks of HMC Environmental Consulting, a suitably qualified environmental consultant, in accordance with the NSW EPA (2020) *Consultants reporting on contaminated land – Contaminated land guidelines*. Note that HMC Environmental Consulting holds current Professional Indemnity Insurance to 4th August 2022.

……

24 June 2022
Completion Date

Mark Tunks
Principal

11 REFERENCES

Australian and New Zealand Guidelines for the Assessment and Management of Contaminated Sites (ANZECC guidelines) published by the Australian and New Zealand Environment and Conservation Council/National Health and Medical Research Council, January 1992

EPA 1995, *Contaminated Sites: Sampling Design Guidelines,* Environment Protection Authority, Sydney

NEPC, 2013. National Environment Protection (Assessment of Site Contamination) Measure 1999 Schedule B (1) Guideline on the Investigation Levels for Soil and Groundwater, National Environment Protection Council Service Corporation, as amended 16 May 2013

OEH 2011, *Guidelines for Consultants Reporting on Contaminated Sites,* Office of Environment and Heritage, Sydney; available at www.epa.nsw.gov.au/clm/guidelines.htm

Hashimoto T.R & Troedson A.l. 2008 *Tweed Heads 1:100 000 and 1:25 000, Coastal Quaternary Geology Map Series*. Geological Survey of New South Wales, Maitland

Morand, D.T., Soil Landscapes of the Murwillumbah-Tweed Heads 1:100 000 Sheet, 1996

12 GLOSSARY

Added contaminant limit (ACL) is the added concentration of a contaminant above which further appropriate investigation and evaluation of the impact on ecological values will be required. ACL values are generated in the process of deriving ecological investigation levels (EILs).

Ambient background concentration (ABC) of a contaminant is the soil concentration in a specified locality that is the sum of the naturally occurring background and the contaminant levels that have been introduced from diffuse or non-point sources by general anthropogenic activity not attributable to industrial, commercial or agricultural activities.

An **area of ecological significance** is one where the planning provisions or land use designation is for the primary intention of conserving and protecting the natural environment. This would include national parks, state parks, and wilderness areas and designated conservation areas.

Bioavailability is a generic term defined as the fraction of a contaminant that is absorbed into the body following dermal contact, ingestion or inhalation.

Bonded asbestos-cement-material (bonded ACM) comprises bonded asbestos containing material which is in sound condition (although possibly broken or fragmented), and is restricted to material that cannot pass a 7 mm x 7 mm sieve. This sieve size is selected as it approximates the thickness of common asbestos cement sheeting and for fragments to be smaller than this would imply a high degree of damage and potential for fibre release.

Conceptual site model (CSM) is a description of a site including the environmental setting, geological, hydrogeological and soil characteristics together with the nature and distribution of contaminants. Potentially exposed populations and exposure pathways are identified. Presentation is usually graphical or tabular with accompanying explanatory text.

Contamination means the condition of land or water where any chemical substance or waste has been added as a direct or indirect result of human activity at above background level and represents, or potentially represents, an adverse health or environmental impact.

Ecological investigation levels (EILs) are the concentrations of contaminants above which further appropriate investigation and evaluation will be required. EILs depend on specific soil physicochemical properties and land use scenarios and generally apply to the top 2 m of soil. EILs may also be referred to as soil quality guidelines in Schedules B5b and B5c.

Health investigation levels (HILs) are the concentrations of a contaminant above which further appropriate investigation and evaluation will be required. HILs are generic to all soil types and generally apply to the top 3 m of soil.

Health risk assessment (HRA) is the process of estimating the potential impact of a chemical, biological or physical agent on a specified human population system under a specific set of conditions.

Investigation levels and **screening levels** are the concentrations of a contaminant above which further appropriate investigation and evaluation will be required. Investigation and screening levels provide the basis of Tier 1 risk assessment.

Multiple-lines-of-evidence approach is the process for evaluating and integrating information from different sources of data and uses best professional judgement to assess the consistency and plausibility of the conclusions which can be drawn.

Risk assessment is the process of estimating the potential impact of a chemical, physical, microbiological or psychosocial hazard on a specified human population or ecological system under a specific set of conditions and for a certain timeframe.

Risk management is a decision-making process involving consideration of political, social, economic and technical factors with relevant risk assessment information relating to a hazard to determine an appropriate course of action.

Screening is the process of comparison of site data to screening criteria to obtain a rapid assessment of contaminants of potential concern.

Tier 1 assessment is a risk-based analysis comparing site data with investigation and screening levels for various land uses to determine the need for further assessment or development of an appropriate management strategy.

13 APPENDICES

Appendix 1 Location Map

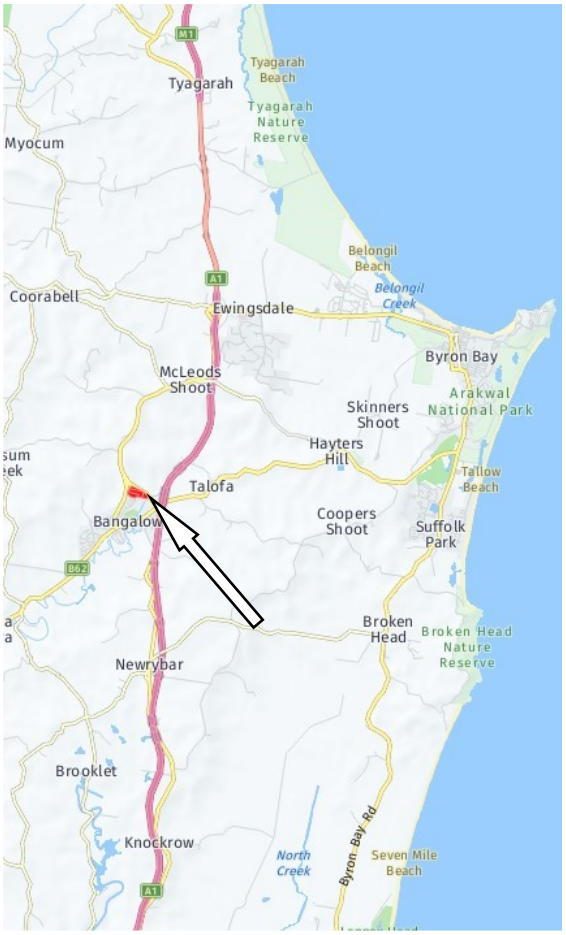


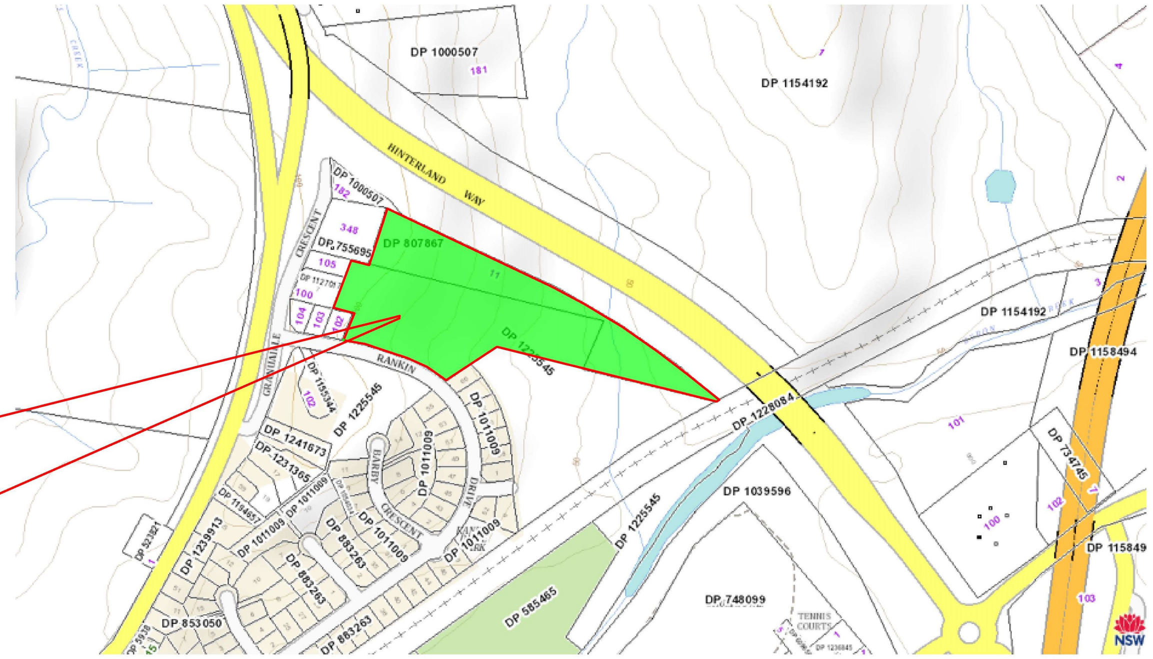
Figure 1 - Surrounding Area - Arrow pointing to investigation area within Bangalow, NSW (Source: Nearmap, 2022)

Appendix 2 Property Boundaries

Figure 2 – Subject Site (Source: Nearmap, 2022)

Appendix 3 Site Plans

SEE FOLLOWING PAGES



Site Locality Plan

Rev	Date	Amendment
A	Aug20	Client Review Amendments
B	June 2022	Updated Lot / DP Description, Revised Site Boundary
C		
D		
E		
F		
G		

North Point

Scale at A3: 0 10 20 40 60

Date: June 2022 Datum: AHD Survey: Lidar

SDS Civil Enterprises
A.B.N. 56 656 467 255
461 Hinterland Way, Knockrow NSW
m 0438 725 414 e peterw@sdscivil.com.au

Client
Instant Steel Pty Ltd

Project
Land Rezoning Submission
Lot 261 DP1262316 &
Lot 11 DP807867
Rankin Drive, Bangalow

Drawing Title
Site Location Details & Contours

Drawing No
1910 - RZ1

Revision
B

Drawing Issue Status / Purpose
Planning Application

North Point

Scale at A3: 0 7.5 15 30 45

Date: June 2022 Datum: AHD Survey: Lidar & Canty's

SDS Civil Enterprises

A.B.N. 56 656 467 255

461 Hinterland Way, Knockrow NSW

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Proposed Zone Map

Project Lands

Lot 261 DP1262316 &
Lot 11 DP807867

Rankin Drive, Bangalow

Drawing No 1910 - RZ-202

Revision D

LEGEND

- Existing R2 - RESIDENTIAL ZONE on Lot 261 DP 1262316
- Proposed R2 - RESIDENTIAL ZONE
- Proposed R3 - MEDIUM DENSITY ZONE

182 DP1000507

348 DP755695

105 DP1225545

100 DP1127017

104 DP1225545

103 DP1225545

102 DP1225545

11 DP807867 (1.682ha) R2

261 DP1262316 (2.332ha) R2

R3

R3

102 DP1155344

Part 262 DP1262316

73 DP1011009

72 DP1011009

74 DP1011009

71 DP1011009

75 DP1011009

Part 262 DP1262316

Hinterland Way

SATINASH CRESCENT

RANKIN DRIVE

GRANUAILLE ROAD

SATINASH CRESCENT

RANKIN DRIVE

BARRY CRESCENT

CORLIS CRESCENT

Rail Corridor

20.00 67.85 196.77 21.25 8.0 62.32 82.19 61.30 3.53 157.67 68.01 38.50 35.95 69.68 67.10 129.30 23.50 32.31 60.01 18.38

LEGEND

Revegetation Management Areas
(Refer to Peter Parker Environmental Consultants for Details)

Trees Nominated For Removal

Example of 15m x 12m Dwelling Envelopes on Constrained Lots

80.00 Contours (10m Interval)

Lot 21 Proposed R3 Medium Density Zoned Lots (Lot 12 & 21)

Existing Residential Zoned Lands (R2)

Drawing notes
1. The steep nature of the site will require the installation of some retaining walls associated with the creation of the new road. Such walls will typically be located upon and within future lots (ie not road reserve). Adjustment to lot boundaries to accomodate retaining wall design will be required.
3. Details contained within this drawing are not to be relied upon for detailed design purposes and boundaries are subject to adjustment.
4. The location of service easements for general infrastructure servicing have not been determined.
5. Any areas shown are subject to change once final survey boundaries are defined.

North Point

Scale at A3: 0 7.5 15 30 45

Date: June 2022 Datum: AHD Survey: Lidar & Canty's

SDS Civil Enterprises
A.B.N. 56 656 467 255
461 Hinterland Way, Knockrow NSW
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Indicative Subdivision Layout (With Lot Areas)

Project Lands

Lot 261 DP1262316 &
Lot 11 DP807867

Rankin Drive, Bangalow

Drawing No 1910 - RZ-300 (Areas) Revision G

Rev	Date	Amendment
A	Aug 2020	General Revisions
B	Aug 2020	Fire Truck Access / Hose Length / Buffer Dims Removed
C	Oct 2020	Bushfire Buffers Updated / Bdrys Lot 1 & 2
D	Oct 2020	Strata Lot Bdrys Amended & Lot 10 / General Drg Presentation
E	Nov 2020	Bushfire Buffer and Truck Details Removed
F	June 2022	Access Road Moved South, Rous Watermain Relocated
G	June 2022	Lot 12 and 21 R3 Medium Density & Satinash Crescent

Appendix 4 Geology and Soil Landscape

Figure 3 - Geology Map (Source dipnsw.gov.au)

Figure 4 - Soil Landscape (Bangalow Map - http://www.environment.nsw.gov.au/eSpadeWebApp/)

Appendix 5 Cattle Dip Sites

Figure 5-Cattle Dip Sites (Google Earth)

Appendix 6 Licensed Groundwater Bores

Figure 6 – Groundwater Bore Locations located >500m from site (Source: http://allwaterdata.water.nsw.gov.au/water.stm)

Appendix 7 Historic Aerial Photography

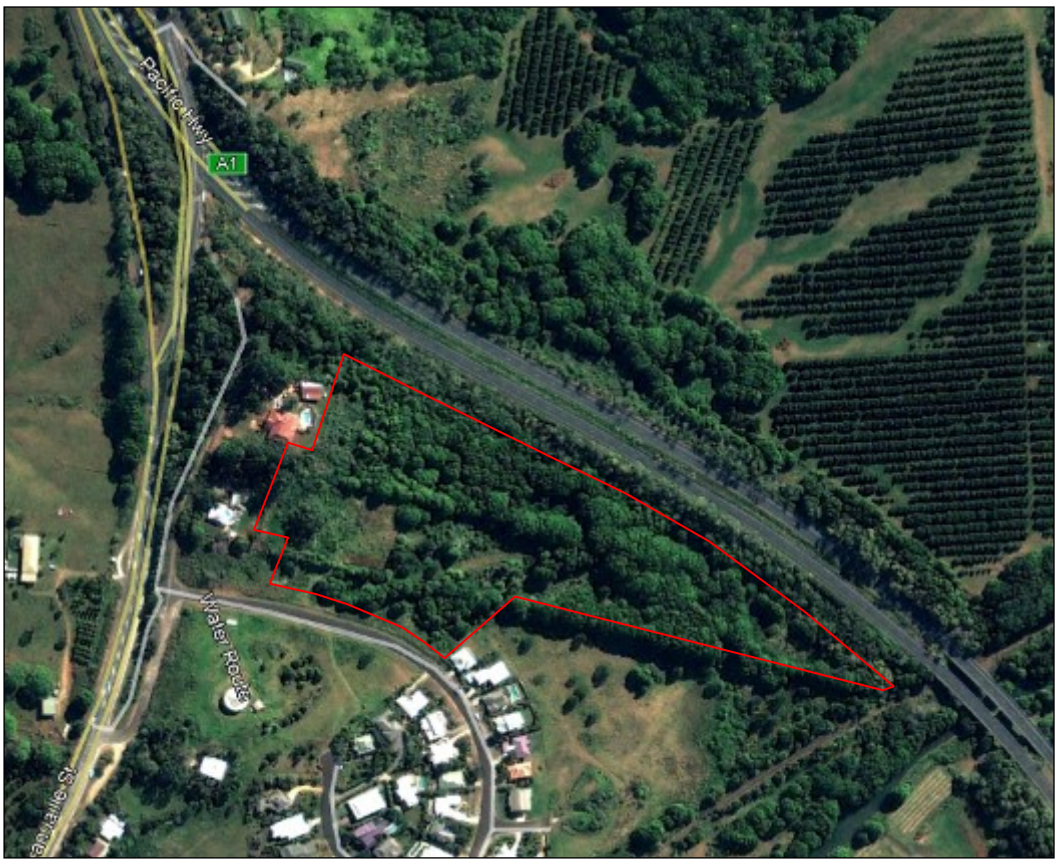

Figure 6 – 2009 (Aerial Extract)

Figure 7 - 2014 (Aerial Extract)

Figure 8 – 2015 (Aerial Extract)

Figure 9 – 2019 (Aerial Extract)

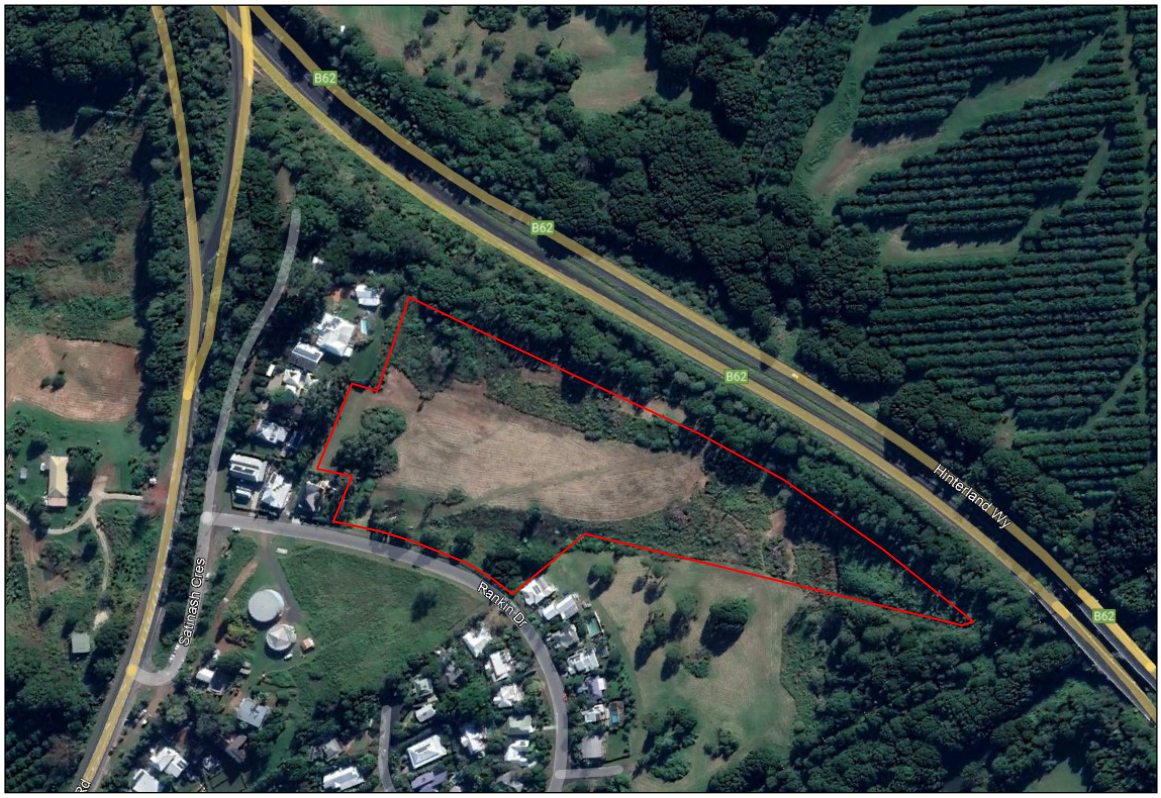

Figure 10 – 2022 (Aerial Extract)

Appendix 8 Historic Parish Maps

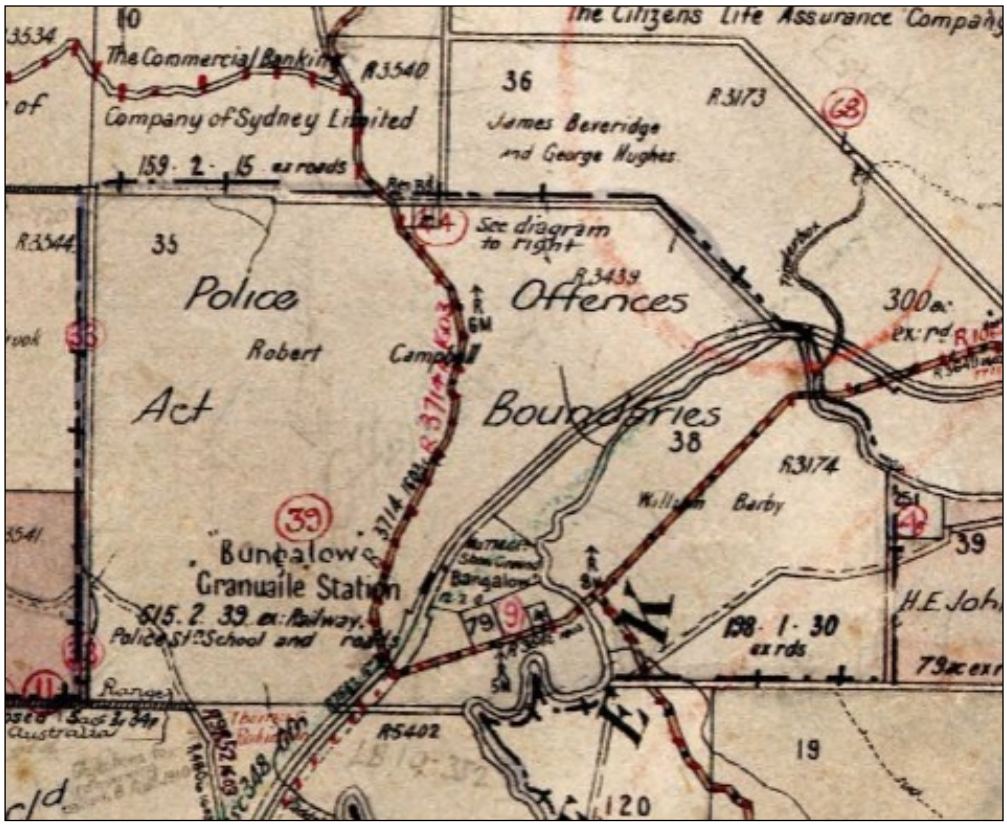

Figure 11 – 1906 Parish Map Extract (http://hlrv.nswlrs.com.au/pixel.htm**)**

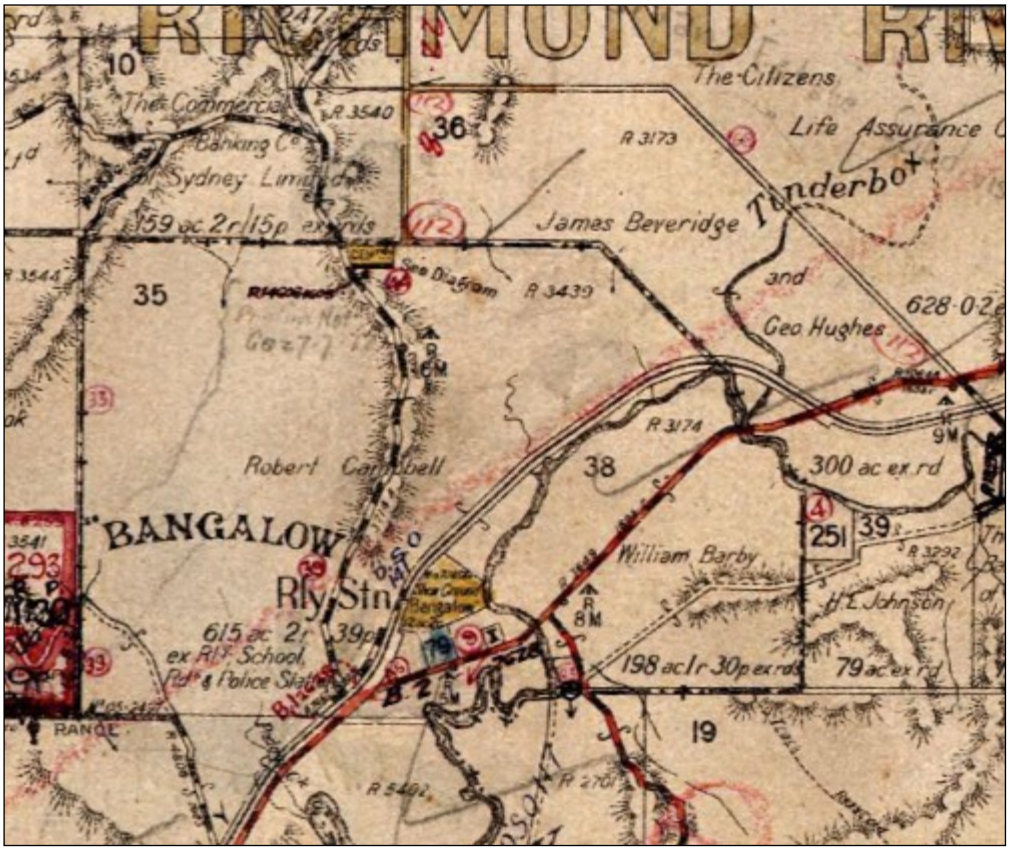

Figure 12 - 1913 Parish Map Extract (http://hlrv.nswlrs.com.au/pixel.htm**)**

Figure 13 – 1925 Parish Map Extract (http://hlrv.nswlrs.com.au/pixel.htm**)**

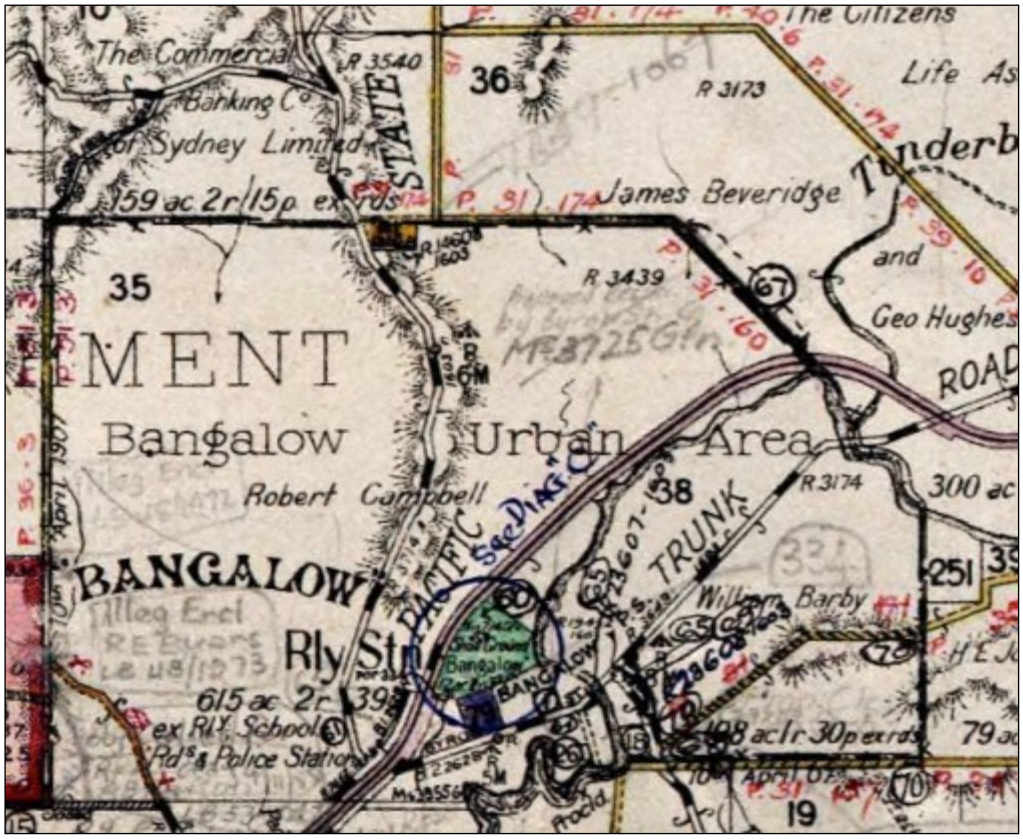

Figure 14 - 1940 Parish Map Extract (http://hlrv.nswlrs.com.au/pixel.htm**)**

Appendix 9 Historic Topographical Maps

Figure 15 – Byron Bay (1984) Topographical Map Extract

Figure 16 – Byron Bay (2002) Topographical Map Extract

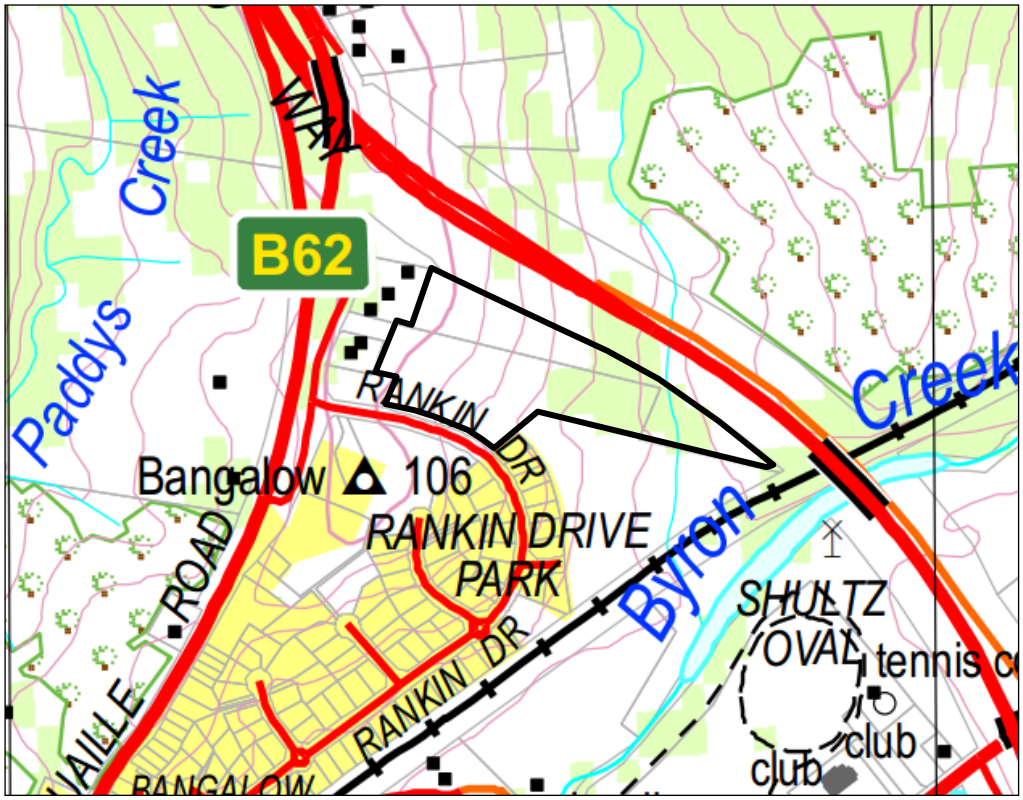

Figure 17 – Byron Bay (2016) Topographical Map Extract

Appendix 10 Zone Map

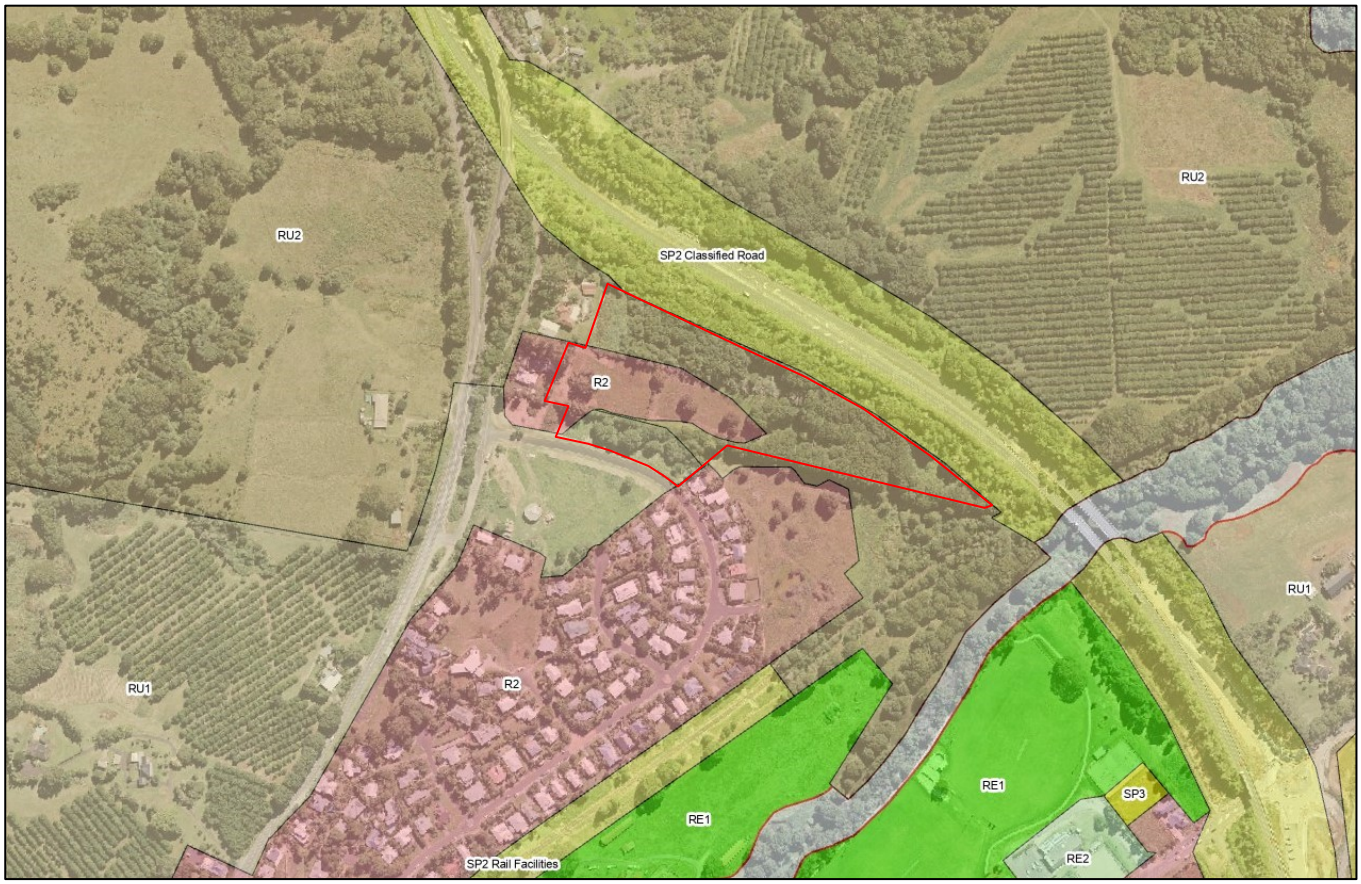

Figure 18 – NSW Legislation Zone Plan

(Source: http://www.legislation.nsw.gov.au/maintop/view/inforce/epi+177+2014+cd+0+N)

Appendix 11 Site Photos

Photo 1– View east and downslope over subject site.

Photo 2 – View south-east and downslope across subject site.

Photo 3 - View west and upslope across subject site.

Photo 4 – View south-east showing stockpile of camphor laurel tree logs.

Photo 5 – View south-west showing un-named stream.

Photo 6 – View west showing un-named stream and subject site.