

Our Ref: 16002 BDAR Waiver – Trinity Point, Morisset Park 17-12-2021 Via: email

Date: 17 December 2021

Attn: Bryan Garland Development Director Johnson Property Group

Dear Bryan

RE: BDAR WAIVER – TRINITY POINT, MORISSET PARK NSW

MJD Environmental was engaged by Johnson Property Group to prepare a BDAR waiver for a State Significant Development tourism, hospitality and residential proposal at Lots 101 & 102 / DP1256630 and Part Lot 32 DP1117408, 81-85 Trinity Point Rd, Morisset Park, NSW, hereafter referred to as the 'site'. Refer to **Attachment 1**.

In order to satisfy Biodiversity Development Assessment (BDAR) waiver request information requirements, the results of the ecological appraisal have been presented below and compiled as per "Table 2: Impacts of the proposed development on biodiversity values" of *Fact Sheet Biodiversity development assessment report waiver determinations for SSD and SSI applications* (DPE 2018) – refer to **Table 3**.

<u>Admin</u>	
Proponent	Johnson Property Group
LGA	Lake Macquarie Council
Project ID	SSD-27028161
Person(s) completing Table 2	MJD Environmental (Aust) Pty Ltd: Chris Spraggon (B.Sc. (Hons)); Matt Doherty (BLMC, BAM Assessor BAAS17044)
Site details	
Site Location	Lots 101, 102 / DP1256630 & Part Lot 32 DP1117408, 81-85 Trinity Point Rd, Morisset Park, NSW

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Description of Existing Development

Currently the southern part of Lots 101 and 102 is fully cleared with the exception of a number of trees on the high point known as Bluff Point. Currently the central part of Lots 101 and 102 is fully cleared with the exception of a small number of scattered trees for which clearing has prior approval. The northern part of the site has carparks, restaurant, sales centre and infrastructure for accessing the marina. The site benefits from an existing Concept Approval and individual approved Development Applications that authorise works including vegetation clearing and include works within Lot 32 (public foreshore reserve).

Lot 32 is owned by Lake Macquarie City Council and managed under an adopted Plan of Management (POM) (Attachment 3). Parts of Lot 32 includes native vegetation and sits within 'natural area' management zones where existing vegetation is to be protected and enhanced and where various sensitive Aboriginal features exist close to the waters edge. Select areas of Lot 32 identified as park for future embellishment. Two sections of park relevant to the SSD include:

- a 3930m² area of foreshore towards the north end of the site (labelled management area (B) in Council's POM), which currently includes constructed pathways and connections to the on water marina, and approved works being pathway extensions before returning back into Lot 102 and dedicated stormwater drainage discharge point (within an existing easement for that purpose). Future embellishment of this park by or on behalf of Council is anticipated by the Plan of Management.
- a 883m² area of land at Bluff Point adjoining Lot 102 (labelled part management area (D) in Councils POM). Future embellishment of this park by or on behalf of Council is anticipated by the Plan of Management, and the concept approval and other documents identify it as an area that will form part of public embellishment amongst the trees for walking, pausing, passive recreation and heritage interpretation.

Works outside the park category lands and in Lot 32 have been limited in approval to vegetation management actions to support the natural areas, and two lightweight viewing platforms with no vegetation removal within existing easements for that purpose.

The Part 4 development consents have each legally and physically commenced. A description of the site approvals is presented in greater detail below in the BDAR waiver.

Proposed development

The proposed development is for a mixed-use tourist, hospitality and residential outcome with a capital investment value of more than \$720m. Uses outlined in the scoping report include a 500 seat function centre, two 398 seat restaurant (plus provision for an additional 200 seats outdoors), 220 hotel rooms/suites and 218 residential apartments. A key element of the proposed development is its design philosophy and approach with six buildings capped by hill shaped angled green roofs, with the incorporation of sustainable measures to be carbon neutral ready.

The hotel component of the proposed development triggers State Significant Development under Clause 13(2)(b) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) given that it is located within a sensitive coastal location, and the CIV for this component exceeds the \$10 million CIV threshold. The related residential and hospitality components also form part of the State Significant Development. A concept development application for the whole of site concept is being pursued and SEARs have been issued.

Refer to **Attachment 1** for Proposed Site Plan (subject to ongoing refinement) and information on the concept approved footprint to assist reviewing the supplied information.



The proposed concept is being further documented and resolved for the concept DA and EIS and in response to the SEARs requirements, community engagement and design evolution which directly require integration with Council's Plan of Management and details of works on Council land. The design evolution will include changes to scale of certain uses and spatial site planning.

Of relevance to this letter, the proponent has advised that as it relates to Lot 32 (public foreshore reserve) and the development interface to that land and its ecological assets, it is their absolute intention that the concept DA as it evolves and is refined will:

- be consistent with Council's Plan of Management for Lot 32;
- incorporate the same approved approach to siting of pedestrian pathways and location of transition of that path back into the development site to avoid and protect existing foreshore reserve vegetation (which was subject to arborist review) and sensitive areas, as agreed in the other Concept Approval and its related development consents;
- incorporate the same approved approach to incorporating vegetation management over parts of Lot 32 and as per the approved Vegetation Management Plan, as agreed in the other Concept Approval and its related development consents; and
- incorporate the same approved approach to stormwater management and landscaping strategies as they interface to Lot 32 and its ecological assets, by utilising approved site discharge points (in existing easements), not concentrate stormwater flows elsewhere along Lot 32 and careful selection of landscape species at the immediate interface to Lot 32 natural areas.

It would be reasonable for those intentions to be conditional to any BDAR waiver if granted. Given the intention to transfer and integrate these components into the new Concept SSD DA, additional information is provided below relating to those approvals, to assist background context and what has development consent to be disturbed, and to support our rationale that in the circumstances of the site and proposed SSD, a BDAR waiver is supported.

Existing Approvals

Concept Approval:

A Concept Approval over the site (MP 06_0309) provides for development of the site for a 188 berth marina, a helipad (on water and attached to marina), a 300 seat function centre, 340 seat restaurant/dining, 157 residential apartments and 158 tourist accommodations (65 room hotel and balance as serviced apartments), and associated works including pedestrian path, access and parking, stormwater management, earthworks and landscaping. The Concept Approval extends over Lots 101 and 102 and also Lot 32, the public reserve. **Attachment 5** incudes the approved Concept Plan summary figure. As it relates to Lot 32, the concept approval identified:

- public pathways constructed in parts of reserve (and then transitioning back in the development site to follow topography and protect foreshore vegetation and separation to Aboriginal sites);
- specific stormwater management strategies (within Lots 101 and 102 and to collect and discharge stormwater at approved location through Lot 32 (into existing easements) and not provide concentrated flows otherwise to protected foreshore vegetation);
- opportunities for light weight sensitive viewing platforms (with no vegetation loss and in existing easements);
- vegetation management (for protection and enhancement and also to assist control public access away from vegetation management areas and sensitive Aboriginal features observed on the waters edge).

The concept approval also includes landscaping strategy that includes no use of exotic species within 20m of the natural areas of the foreshore reserve.

Refer to **Attachment 10** showing approximate boundaries of approvals over the Trinity Point site to assist in appreciation of site context.



Development Consents arising from Concept Approval:

Table 1 provides a summary of the Concept Approval components, and existing development consents granted over the site arising from the Concept Approval. Those encompass the construction and operation of a 94 berth marina (DA 1503/2014), tourism and hospitality buildings (including hotel accommodation, restaurant and function centre) (DA1731/2014), 4 x accommodation buildings (DA496/2015), inclusive of access, pathways, stormwater management, utility and landscaping and vegetation management and helipad (DA 1176/2014). Development consent is yet to be sought for two components of the Concept Approval, being the final stage of marina (EIS currently under preparation and lodgement likely by early 2022) and the final four accommodation buildings at southern end of the site (and associated works). Copies of approved plans related to each of the consents are also attached for further background information.

Table 1 Approval Overview

Component	Concept Approval (MP06_0309)	Component	Development Consent Status / Attachment ref	Status	Relationship to SSD
Marina	188 berths in	Stage 1 94 berths	Development consent granted (DA 1503/2014) [Attachment 7]	Operational	Independent
	stages	Stage 2 94 berths	Requires development consent, consistent with concept approval	EIS under separate preparation- Construction 2022/23	Independent
Helipad	Helipad	Helipad	Development Consent granted (DA 1176/2014)	To be constructed concurrently to stage 2 marina	Independent
Hospitality	Function Centre (300 seats)	Function Centre (300 seats)	Development Consent granted (DA 1731/2014) [Attachment 8]	Commenced but not progressed	On hold*
	Restaurants/Café (340 seats)	Restaurants/Café (340 seats)	Development Consent granted (DA 1731/2014) [Attachment 8]	Commenced but not progressed	On hold*
Tourist	158 tourist	65 room hotel	Development Consent granted (DA 1731/2014) [Attachment 8]	Commenced but not progressed	On hold*
accommodation	accommodations	93 serviced apartments (plus dual keys) Buildings A, B & F	Development Consent granted (DA 496/2015) [Attachment 9]	Commenced but not progressed	On hold*
Residential	157 residential	27 residential apartments (Buildings A, B & C)	Development Consent granted (DA 496/2015) [Attachment 9]	Commenced but not progressed	On hold*
accommodation	apartments	Up to 130 residential apartments	Requires development consent consistent with concept approval	Not progressed to DA	On hold*

All Part 4 development consents have each legally and physically commenced other than the helipad.

* It is anticipated that development consents for these components will be surrendered as a requirement of SSD approval, prior to construction of SSD.

As required by the Concept Plan, an approved Vegetation Management Plan (VMP) is related to the approvals operating over the site (Refer to **Attachment 3**). The VMP provides for the improvement and conservation of the remnant lakeside vegetation contained within the Council foreshore reserve being Lot 32 DP 1117408. To be clear the VMP does not represent an offset, set aside or environmental conservation outcome for which the existing approval relies upon with regard to biodiversity, however, was offered and required under the concept approval. As outlined above, it is intended to be uplifted into the new SSD project



to provide the same level of vegetation management for improvement and conservation of the remnant lakeside vegetation. In addition to the VMP, Council has developed and adopted a Foreshore Plan of Management (provided as **Attachment 3**).

Other Development Consents independent of Concept Approval:

In addition to above, the site benefits from approval to operate a temporary restaurant (DA 1494/2018). This sits within the footprint of the otherwise approved development and has limited relevant to the BDAR waiver.

Ecological appraisal

The scope of this appraisal is to investigate ecological matters for consideration with regard to the SSD proposal outlined above. This ecological appraisal aims to identify matters potentially applicable to the site under the Biodiversity Conservation Act 2016 (BC Act). The following ecological advice was informed by desktop research and previous site inspections to confirm the site and its ecological characteristics. Additional ecological data relevant to the site was informed by the approved Vegetation Management Plan (RPS 2016, Refer to **Attachment 2**) and Council's Plan of Management (**Attachment 3**).

The investigation identified the following ecological matters for consideration:

- The site is broadly cleared, with the exotic open pasture regularly managed and maintained. Areas of bare soil persist where previous building removal took place.
- The limited extant native vegetation within the new proposed construction footprint has existing approval to be removed specifically as follows:
 - Small cluster of trees are approved to be removed under a temporary carpark to support the tourist and hospitality initial consent (LMCC DA 1731/2014) and separately also under the accommodation consent (LMCC DA 496/2015). Note these trees are located below Building C in Attachment 4. The development has legally commenced, and approved tree clearing can be acted upon.
 - A single isolated *Melaleuca bracteata* (Black Tea-tree) tree, shown on Attachment 4 next to the label 'Lot 31', while not having any existing approval coverage for physical works, was anticipated as being removed to accommodate the ultimate concept approval (extract from MP 06/0309/ MOD 5 shown on Attachment 5). This tree would be removed as a result of the new proposal for which this BDAR waiver is being prepared for. This tree is also noted as tree A on Attachment 6.
- Eight (8) Vegetation Communities exist adjacent to the development site (within Lot 32) along the lakefront, including Threatened Ecological Communities, however these areas are covered by an approved Vegetation Management Plan for the ongoing improvement and conservation of these communities, and no increased indirect impact from the development is anticipated. The VMP applies only to the Council Foreshore land that is identified as part of the site but only for the purposes of undertaking approved vegetation management works or for installing approved stormwater infrastructure (in existing easements) or provision of approved public footpath works (without any vegetation clearing).
- Based on review of arboricultural assessment (Attachment 6), the
 - proposal footprint encroaches on the Tree Protection Zone of two (2) *Ficus rubiginosa* (Port Jackson Fig) in Fair to Average structural condition and health, and upon the Structural Root Zone of one of same. These trees (number 153 and 155) may be removed to prevent risk of failure. For the purposes of this BDAR waiver, they are considered to be removed.
 - will remove two (2) *Mangifera indica* cv. (Mango Tree) in poor health, outside of the construction footprint of the new proposal.
- The understorey of the vegetation occurring within the Lot boundary (excluding the public reserve lot as described above) is well-managed, with the canopy comprising a mixture of non-indigenous, native and exotic species. Therefore, no native vegetation community association has been assigned.
- The site contains primarily regularly managed exotic open pasture, existing concrete/sealed carparks, buildings, and walkways. No areas of connecting vegetation occur. Connectivity exists outside of the



site, linking Bardens Bay in the north to Lake Macquarie State Conservation Area in the west via the lakeside reserve. The proposal will not impact connectivity.

- The site does not contain habitat important for the lifecycle of threatened flora and fauna species. It is
 anticipated that only foraging activity is expected for a few highly mobile species, with no breeding activity
 expected for such threatened species.
- A review of BioNet for the immediate locality produced the following records (ref: BioNet snip below):

Table 2 Local BioNet Records

Species	Common Name	Sighting Date
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	1/11/2001
Saccolaimus flaviventris	Yellow-bellied Sheathtail-bat	28/2/2017-3/3/2017
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	28/2/2017-3/3/2017
Ninox strenua	Powerful Owl	16/11/2014
Miniopterus australis	Little Bent-winged Bat	28/2/2017-3/3/2017
Scoteanax rueppellii	Greater Broad-nosed Bat	23/2/2010-26/2/2010
Miniopterus orianae oceanensis	Large Bent-winged Bat	1/8/2003-31/8/2003
Micronomus norfolkensis	Eastern Coastal Free-tailed Bat	1/8/2003-31/8/2003
Tetratheca juncea	Black-eyed Susan	31/7/2001-31/5/2002
Tetratheca juncea	Black-eyed Susan	31/7/2001-31/5/2002
Petaurus norfolcensis	Squirrel Glider	3/3/2010
Petaurus norfolcensis	Squirrel Glider	17/5/2016
Petaurus norfolcensis	Squirrel Glider	17/5/2016
Petaurus norfolcensis	Squirrel Glider	6/6/2019
Petaurus norfolcensis	Squirrel Glider	11/6/2018
Petaurus norfolcensis	Squirrel Glider	16/5/2016





Table 3 Impacts of the proposed development	t on biodiversity values
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Biodiversity value	Meaning	Relevant	Explain and document potential impacts including additional impacts prescribed under the BC Regulation
			 Vegetation on the site (other than Lot 32) is limited and primarily exotic pasture. The patch of trees which exists in the central portion of the footprint on Lot 102 has existing approval to be removed for development (refer to existing approvals detail and Attachment 1). Pasture on Lot 101 and Lot 102 has existing approval for disturbance and/or removal (refer to existing approvals).
Vegetation abundance – 1.4(b) BC Regulation	Occurrence and abundance of vegetation at a particular site	N/A	 Two individuals of <i>Ficus rubiginosa</i> (Ref Attachment 6 Tree 153 and 155) to the south of the site may be removed due to encroachment of TPZ and SRZ, from a vegetation patch with no midstorey and managed ground stratum. All other vegetation within the southern corner of the Lot boundary is to be retained. Two <i>Mangifera indica</i> cv. (Mango tree) are proposed to be removed.
			 A single isolated Melaleuca bracteata (Black Teatree), while not having any existing approval coverage, was anticipated as being removed to accommodate the entire tourism proposal concept (shown on Attachment 5).
Vegetation integrity 1.5(2)(a) BC Act	Degree to which the composition, structure and function of vegetation at a particular site and the surrounding landscape has been altered from a near natural state.	N/A	The vegetation on the site (other than Lot 32) has been highly modified, with the site previously hosting other landuses. A large area of the site comprises former building footprints, and most of the remainder is cleared and managed exotic pasture. No native vegetation communities exist on the site. The patch of trees in the southern corner (documented in Attachment 6) represents tree plantings associated with the former landuse, comprises very limited species diversity and is well-managed in the understorey, and includes native and non-native planted vegetation. Save the removal of a single isolated <i>Melaleuca bracteata</i> (Black Tea-tree) two Mango Trees and potential removal of two individual <i>Ficus rubiginosa</i> , all trees shall be retained.
Habitat suitability 1.5(2)(b) BC Act	Degree to which the habitat needs of threatened species are present at a particular site	N/A	 No threatened fauna, flora or ecological communities or habitat for same were identified on the site. No karst, caves, reviews, cliffs or other geological features of significance, rocks or derelict structures exist on the subject site. Potential seasonal forage exists in the two <i>Ficus</i> <i>rubiginosa</i> that may be removed for birds or Grey-Headed Flying Fox, however no nests or roost is recorded on the site and superior habitat exists to the west in a large area of State Conservation Area land.
			 A historic record for <i>Micronomus norfolkensis</i> (Eastern Coastal Free-tailed Bat) from 2001 was recorded in Lot 102. This record is taken from the original ecological surveys completed over the site and informing the site approvals. Foraging opportunities will be maintained for this species



Biodiversity value	Meaning	Relevant	Explain and document potential impacts including additional impacts prescribed under the BC Regulation
			 along the foreshore reserve and tree removal will not remove roosting or breeding hollows. Regarding the other threatened species recorded on BioNet in the immediate locality, required habitat denning, roosting, breeding features for these species are absent from the site. As discussed above the site does provide foraging opportunities as part of a wider home range for highly mobile species that will be active in the locality.
Threatened species abundance 1.4(a) BC Regulation	Occurrence and abundance of threatened species or threatened ecological communities, or their habitat, at a particular site	N/A	 No threatened fauna, flora or ecological communities or habitat for same were identified on the site (Lots 101 and 102). The proposed development will not have any measurable impact on threatened species abundance. Post-development, traffic in the site will be low-speed due to pedestrian activity, reducing risk of vehicle strikes with any fauna. Man-made structures will be demolished however no derelict buildings exist on the site, and no non-native vegetation or water bodies exist within the site. Regarding the other threatened species recorded on BioNet in the immediate locality, required habitat denning, roosting, breeding features for these species are absent from the site. As discussed above the site does provide foraging opportunities as part of a wider home range for highly mobile species that will be active in the locality.
Habitat connectivity 1.4(c) BC Regulation	Degree to which a particular site connects different areas of habitat of threatened species to facilitate the movement of those species across their range	N/A	The site (Lot 101 and Lot 102) does not contribute a connecting corridor (across site) with any surrounding vegetation. Adjacent vegetation (Lot 32) is being almost entirely retained as described in the appraisal and background approval information above. Vegetation throughout the Council waterfront reserve connects Bardens Bay in the north to Lake Macquarie State Conservation Area in the west.
Threatened species movement 1.4(d) BC Regulation	Degree to which a particular site contributes to the movement of threatened species to maintain their lifecycle	N/A	The proposal does not propose the removal of habitat which would otherwise constitute a passageway for threatened fauna to move throughout its range. The proposal is isolated from significant areas of vegetation by residential development, roads and infrastructure. Existing habitat in the immediate surrounding of the site is limited in extent and connectivity to highly mobile species that can utilise the foreshore reserve (Lot 32). With due regard to the existing approval arrangements over the site, the proposal will not alter their ability to move through the landscape and thereby impeded in the maintenance of their lifecycle.



Biodiversity value	Meaning	Relevant	Explain and document potential impacts including additional impacts prescribed under the BC Regulation
Flight path integrity 1.4(e) BC Regulation	Degree to which the flight paths of protected animals over a particular site are free from interference	N/A	The proposal will not interfere with the flight path of protected fauna, as while the structures are multi-level they are not mirrored or otherwise obscured, and hill shaped buildings based on Architects design philosophy. The proposal does not seek to construct wind turbines or similar or related structures which would interfere with a flight path of a threatened or migratory species.
Water sustainability 1.4(f) BC Regulation	Degree to which water quality, water bodies and hydrological processes sustain threatened species and threatened ecological communities at a particular site.	N/A	 The proposal is not associated with the modification or removal of natural or artificial watercourses, waterbodies or other hydrological processes. The existing approvals (ref Attachment 8 & 9) require that all water is captured and treated on site. The consents do not provide authority to place stormwater treatment infrastructure into the foreshore reserve (Lot 32). A single stormwater discharge point through the foreshore reserve and into Lake Macquarie has been approved and is shown on Attachment 4 as Easement D [situated between Building A and the Restaurant & Function Centre].

The proposed development may impact two native trees (*Ficus rubiginosa*) and will impact two exotic Mango Trees along with an isolated *Melaleuca bracteata* (Black Tea-tree) individual. No potential fauna habitat or significant habitat features were observed. Impacts to threatened species and/or habitat, or threatened ecological communities are unlikely to occur. The proposed development is not considered to impact habitat connectivity within the site or surrounding area. As the proposal does not seek to expand significantly beyond the existing approved development boundary, no indirect impacts are expected to occur to flora and fauna off site. Therefore, it is considered the application of a biodiversity assessment waiver as required under the SEARs issued for the site is appropriate for the current proposal.

We trust this is sufficient for your purposes, however, should you require any further information or given the complexity around previous approvals, a meeting to provide clarification, please do not hesitate to contact the writer.

Yours sincerely

Matt Doherty Director MJD Environmental

Encl: Attachment 1 - Early Concept Site Plan (Scoping only) Attachment 2 - Vegetation Management Plan (RPS 2015) Attachment 3 - Council Foreshore Plan of Management Attachment 4 - Trinity Point tourist & hospitality consent (LMCC DA 1731/2014) and accommodation consent (LMCC DA 496/2015) LMCC Stamped Plan Attachment 5 - Trinity Point Extract from approved Concept Plan Footprint (MP 06/0309/ MOD 5) Attachment 6 - Bluff Point Arborist Tree Assessment (Terras 2021) Attachment 7 - Stamped Plan LMCC DA 1503/2014 Attachment 8 - Stamped Plan LMCC DA 1731/2014 Attachment 9 - Stamped Plan LMCC DA 496/2015 Attachment 10 - Approval's plan



Attachment 1 - Early Concept Site Plan (Scoping only)





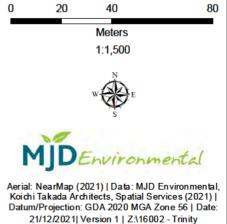
TRINITY POINT ATTACHMENT 1: SITE PLAN (APPROVED)

Legend

- Trees to be Removed (Assessed by BDAR Waiver)
- Previous Concept Approval (MP 06_0309 as modified)
- Approved Tree Removal Area (Authorised outside BDAR Waiver and SSD)

Cadastral Boundaries

Note: Ongoing revision to the concept is occurring as part of the design investigation process which will vary site planning within Lots 101 and 102. No change to approved works in Lot 32 will occur.



21/12/2021| Version 1 | Z.\16002 - Trinity Point\16002 - Trinity Point_20210914.mxd | This plan should not be relied upon for critical design dimensions.





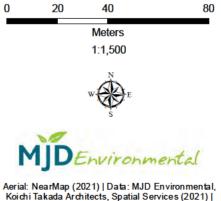
TRINITY POINT ATTACHMENT 1: SITE PLAN (SSD PROPOSED) - (EARLY CONCEPT)

Legend

- Trees to be Removed (Assessed by BDAR Waiver)
- Proposed SSD (27028161)
- Approved Tree Removal Area (Authorised outside BDAR Waiver and SSD)

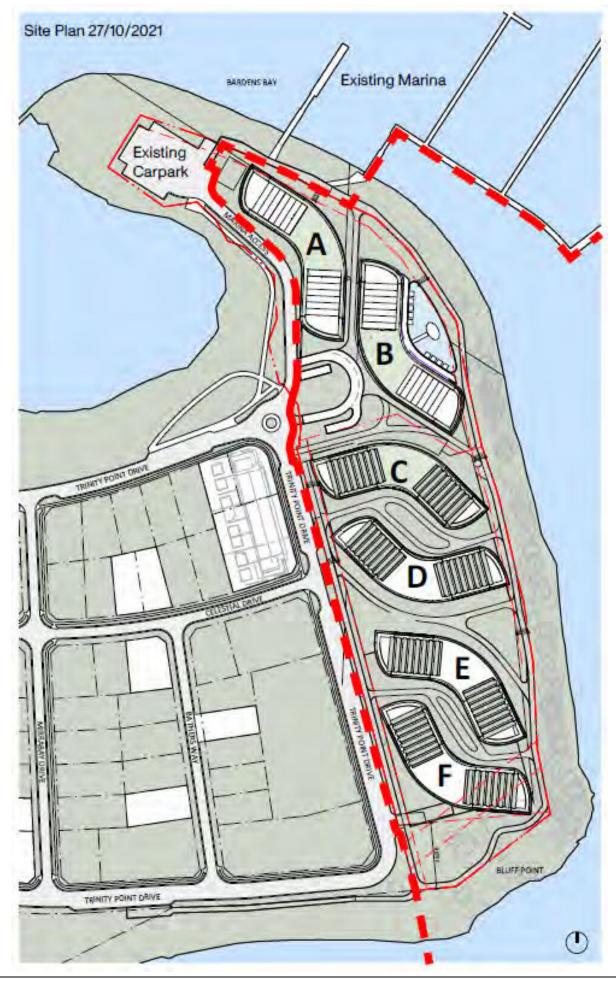
Cadastral Boundaries

Note: Ongoing revision to the concept is occurring as part of the design investigation process which will vary site planning within Lots 101 and 102. No change to approved works in Lot 32 will occur.



Koichi Takada Architects, Spatial Services (2021) | Datum/Projection: GDA 2020 MGA Zone 56 | Date: 21/12/2021| Version 1 | Z:\16002 - Trinity Point\16002 - Trinity Point_20210914.mxd | This plan should not be relied upon for critical design dimensions.





16002 BDAR Waiver - Trinity Point, Morisset Park







Attachment 2 - Vegetation Management Plan (RPS 2015)

trinity point

Vegetation Management Plan Proposed Marina and Mixed Use Development on 71 Trinity Point Road, Morisset Park

February 2016



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Document Status

Version	Purpose of Document	Orig	Review	Review Date
Draft	Client Review	LV	MD	25-8-2014
Final	Client Review	LV	MD	11-9-2014
Final	Submission	LV	MD	12-9-2014
Final (V2)	Submission with Eastern VMA update	LV	MD	25-03-2015
Final (V3)	Final Submission after client comments	LV	MD	27-03-2015
Final (V4)	Final Submission with mapping amendment	MD	MD	30-03-2015
Final (V5)	Amendments to Eastern ∀MA per LMCC meeting	MD	MD	26-10-2015
Draft (V6)	Whole of site VMP per MOD5 C9a	MD	MD	15-01-2016
Final (V7)	Whole of site VMP per MOD5 C9a	LV	AB	10-02-2016

Approval for Issue

Name	Signature	Date
Arne Bishop	Dig	11-02-2016

Terms & Abbreviations

Abbreviation	Description
DPI Water	NSW Department of Primary Industries - Water
EEC	Endangered Ecological Community
EP&A Act 1979	NSW Environmental Planning and Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
HSO	Harper Somers O'Sullivan
LGA	Local Government Act
LMCC	Lake Macquarie City Council
MU	Map Unit
NPWS	NSW National Parks and Wildlife Services
NSW Fisheries	NSW Department of Industry & Investment - Fisheries
NV Act	Native Vegetation Act 2003
NW Act	Noxious Weeds Act 1993
OEH	NSW Office of Environment and Heritage
RPS	RPS Australia East Pty Ltd
SEPP	State Environmental Planning Policy
SOFF	Swamp Oak Floodplain Forest
TSC Act	NSW Threatened Species Conservation Act 1995
VMA	Vegetation Management Area
VMP	Vegetation Management Plan
WM Act	Water Management Act 2000
WoNS	Weed of National Significance



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I.0 Introduction

RPS has been engaged by Johnson Property Group (JPG) to prepare a Vegetation Management Plan (VMP) in Council foreshore reserve land known as part Lot 32 and Lot 34 DP 1117408, associated with the proposed Marina and Mixed Use Development at 71 Trinity Point Drive (Lot 31 DP 1117408), Morisset Park and in the waters of Bardens Bay, Lake Macquarie hereafter referred to as the 'site' (**Figure 1**). Initial versions of the VMP have been submitted to LMCC with Development Applications relating to the proposal, with a version applying to a Northern VMA area approved as part of Stage 1 marina (DA1503/2014). This VMP has been updated to apply to the whole of site in response to Condition 9A of MOD 5 for MP06_0309. As such this VMP supersedes the previous versions, but as it relates to DA 1503/2014, does not reduce the vegetation management commitments.

The site is located on the Morisset Peninsula within the Lake Macquarie Local Government Area. The primary development site (Lot 31) is largely devoid of native vegetation and does not require vegetation management (with cultural tree plantings at Bluff Point forming part of future site landscape maintenance). The foreshore reserve is currently identified by LMCC as 'Park' (Lot 34) and 'Natural Area' (Lot 32) and currently contains mangrove, saltmarsh and Casuarina open forest (primarily in the western and northern part of the foreshore, and returning partly around the eastern area of the foreshore) followed by disturbed remnant Red Gum Rough-barked Apple Forest. The VMP applies to that part of Lot 32 which directly adjoins and interacts with the concept approval site (i.e. excludes those parts which directly adjoin the separate Trinity Point residential estate which is subject to separate approvals). Formerly the site was used as the St. John of God Training Centre and contained training centre buildings, associated facilities, open space, pasture and vacant lands. The training centre buildings and facilities have since been demolished.

I.I Description of Proposal

The concept approval encompasses the construction and operation of a staged 188 berth marina, tourism and hospitality buildings (including hotel accommodation, restaurant and function centre) and 8 accommodation buildings on a basement podium, inclusive of access, pathways, stormwater management, utility and landscaping and vegetation management. The concept approved development is progressing in stages, with each stage subject to a specific development application and approval. Similarly, it is intended for the Vegetation Management Plan to also be staged to reflect the development staging. Stage 1 Marina (94 berth marina) has been approved (DA 1503/2014).

The overall concept approval site plan (indicative outcome) and Concept Landscape Plan(s) are contained in **Appendix 1**.

In addition to vegetation management actions, the concept approval and development approvals and proposals also facilitates use of parts of the Council foreshore land including but not limited to marina infrastructure, shared pathways, viewing platforms, stormwater, landscaping and heritage interpretation.

I.2 Aims and Objectives

The aim of this VMP is to ensure that important vegetation attributes of the site are properly protected, managed, maintained and enhanced, commensurate with impact management by the proposed development.

More specifically, the objectives of the VMP are to:

- Assess the vegetation management issues relating to the site;
- Preserve, protect and restore native vegetation that is reasonably representative of the natural ecotone;



- Identify potential threats to existing vegetation during construction and describe mitigation strategies to address these threats;
- Specify appropriate measures for the regeneration of any remnant bushland and mangrove/saltmarsh areas;
- Identify the appropriate timing of works including site preparation, planting, weed management and also providing a schedule of works;
- Identify any long term financial commitments to any proposed conservation measures, including any mechanisms to be implemented to achieve this and costings;
- Identify and assign responsibilities for ongoing management actions over a minimum 2 year period; and
- Ensure that the project is planned, designed and implemented by informed capable contractors in order to avoid harm to the quality, stability and natural functions of remnant bushland and mangrove/saltmarsh areas.

for critical design dimensions. Confirmation of critical positions should be obtained from RPS Newcastle.

135

Raymond Terrace

Legend Site Boundary

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Newcastle Edgeworth

Warners Bay **Bolton Point Mount Hutton** Toronto Valentine

oranbong Silverwater **Bonnells Bay**

Wyee Point

Blue Haven

Canton Beach

CHARTING CORP, Earthstar Geographics LLC Earthstar Geographics SIO Earthstar Geographics

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TITLE: FIGURE 1: SITE LOCATION

LOCATION: TRINITY POINT

DATUM: PROJECTION: MGA ZONE 56

DATUM

DATE: PURPOSE: 25/03/2015

VMP

I:\JOBS\122k\122773 Trinity Point\ LAYDUT REF: 10 - Drafting\MapInfo Workspaces\ Eco VERSION (PLAN BY): JS (A A4)

CLIENT: JOHNSON PROPOERTY GROUP OB REF: 122773

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RPS



1.3 Roles and Responsibilities

This VMP will be implemented and managed by the Site Manager with the assistance of staff and qualified contractors.

It is the responsibility of the Site Manager to audit and review this VMP.

I.4 Definitions

A number of terms used throughout this report require defining as to eliminate any discrepancies as to the recommended management requirements.

Term	Definition
Vegetation Management Area (VMA)	Vegetation on site that is proposed to be managed under this VMP.
Local Provence	Refers to seed collected from natural populations growing in the same vegetation community and position in the landscape within a reasonable (closest possible) distance of the area being restored.
Native ∨egetation	Native vegetation includes all the vegetation that is indigenous to Australia, covering individuals as well as communities that existed prior to European Settlement.
Rehabilitation	Any attempt to restore elements of structure or function to an ecological system without necessarily attempting complete restoration to any specific prior condition.
 Regeneration 	Describes the restoration of natural ecosystems through the natural cyclic processes of renewal and self maintenance of species and their populations.
 Restoration 	Re-establish exactly the original native plant community.
 Revegetation 	Replanting of native vegetation.
Site	The area subject to the proposed development and surrounding non developed areas
Weed	Non native plant species that have moved into areas of native vegetation.

1.5 Relationship to Other Approvals and Legislation

I.5.I Legislation

Key environmental legislation generally relating to this VMP includes the following:

- NSW Threatened Species Conservation Act 1995 (TSC Act)
- Commonwealth Environment Protection and Biodiversity Conservation Act 1997 (EPBC Act)
- Noxious Weeds Act 1993 (NW Act)
- Water Management Act 2000 (WM Act)
- NSW Native Vegetation Act 2003 (NV Act)

I.5.2 Approvals

A VMP was initially proposed as a statement of commitment to inform the Concept Approval (MP06-0309) under the *EP&A Act 1979* and has been conditioned accordingly and updated as Condition C9A of MOD 5. The condition requires compliance with the latest version of the NSW Department of Primary Industries (DPI) - Water 'Guidelines for Vegetation Management Plans on Waterfront Land (2012). Further, LMCC have separate guidelines for the preparation of a VMP adopted by council at June 2013 along with a Streambank Planting Guide (Lake Macquarie Catchment Management Committee 2005). Whilst the Council guidelines have been referenced, where there is an inconsistency, the concept approval referenced state agency guidelines have been applied. The following table provides a guiding brief comment next to each condition component (a-f).

Co	ndition	Comment
Aw	A Vegetation Management – Whole of Site Plan /hole of site Vegetation Management Plan (VMP) shall plication for a tourist, hospitality, or accommodation bui	
a)	prepared by a suitably qualified person;	VMP prepared by RPS and suitably qualified personnel. Refer to Appendix 2.
b)	be kept consistent with and updated in response the Council's <i>Plan of Management for Community</i> <i>Land 2011</i> , as amended or replaced time to time;	This VMP identifies two areas of the site as 'deferred management areas', given they have been identified by LMCC as draft 'park' categories (not 'natural areas') under a site specific Plan of Management currently under preparation by LMCC. This VMP will be updated following adoption of a site specific Plan of Management by LMCC for the two Foreshore Park Areas situated in the public reserve adjacent to the site.
c)	be consistent with the Vegetation Management Plan Proposed Marina and Mixed Use Development on 71 Trinity Point Road, Morisset Park, prepared by RPS and dated September 2014;	This VMP is consistent with the approved RPS (September 2014) version (which related only to a Northern VMA) and has been presented as an expanded version to cover the whole of site. It includes minor changes to the extent of the Northern VMA area (expanded around the north-eastern tip of the site through to draft proposed 'park' area), and additional infill planting to establish a native cover from the edge of approval shared pathways to the lake edge where relevant.
d)	comply with the requirement of the <i>Guidelines for</i> <i>Vegetation Management Plans on Waterfront Land</i> <i>(2012)</i> , as amended or replaced from time to time;	MOD 5 Condition 9A stipulates the VMP shall be submitted and approved by Council with the first DA submitted following MOD 5 approval. The condition also requires the VMP to comply with the DPI Water Guidelines for Vegetation Management Plans on Waterfront Land (2012)The VMP has been prepared in accordance with DPI Water Guidelines for Vegetation Management Plans on Waterfront Land (2012) with due consideration of the LMCC VMP Guideline.
e)	consistent with the recommendations for the management of Aboriginal and historic archaeological items outline in the <i>Trinity Point</i> <i>Marina Mixed Use Development Morisset</i> <i>Peninsula, NSW Archaeological Assessment</i> prepared by Insite Heritage Pty Ltd and dated 30 October 2008, as amended or replaced from time to time; and	This VMP provides due consideration of the Cultural Heritage Significance on site. Rehabilitation works within the South-east VMA foreshore will be undertaken in a manner sensitive to the site and with report recommendations.
f)	be consistent with principle 4, 8 and 9 of the Revised UDG.	This VMP is consistent with and will contribute to the achievement of revised UDG Principles 4,8 and 9.
	The Proponent must implement the requirement of the approved VMP for all future development applications.	Implementation of the VMP will be staged, with implementation of specific Vegetation Management Areas to relate to the immediately adjoining development stage.

Boat Lift

The Concept Approval sought compensation, via revegetation, for removal a 0.05ha vegetated area to accommodate a boat lift facility. The area contains an EEC listed under the TSC Act, being Swamp-oak Floodplain Forest (SOFF). Subsequently a 75W modification under the Part 3A approval has been approved (Mod 2) to remove the boat lift facility from the Concept Approval. As such the 0.05 ha area of SOFF will not

be removed under the revised approval and therefore does not require compensation via revegetation. This is consistent with approved VMP (Northern VMA) under DA 1503/2014, Stage 1 Marina.

Approved Footpath

A publicly accessible pathway will be established on the western site area under approved DA 1503/2014. The shared pathway location has been established to primarily avoid all direct and indirect potential impacts to the Coastal Saltmarsh and secondly, to avoid native vegetation wherever possible. Furthermore the shared pathway will be comprised of both an on grade element (concrete or similar) and raised element (timber boardwalk or similar) in areas of close proximity or within extant native vegetation. The footpath will be 2.5m in width and during construction a further works corridor of up to 1m may be required.

Within the public reserve the design will result in a minor encroachment into the *Casuarina glauca* Open Forest with the remaining area comprising Open Pasture as defined in the previous ecological report (RPS HSO 2008). Total areas of encroachment are presented in **Table 1** below.

	Public Reserve		Total Area (m ²)	
Vegetation Type	Footpath (2.5m)	Construction corridor (1m)	Approx	
Casuarina glauca Open Forest	25.89m ²	20.28m ²	46.17m ²	
Open Pasture	220.3m ²	162.7m ²	383m ²	

Table 1 Footpath encroachment areas

An equivalent area will be revegetated within cleared areas adjacent to existing stands of SOFF within the Northern site area and managed under the terms of this VMP.

This is consistent with approved VMP (Northern VMA) under DA 1503/2014, Stage 1 Marina.

Proposed Tree Removal

- There is limited tree removal proposed within the public reserve arising from the development proposals. To date that is limited to 'removal' of 2 *Casuarina glauca* (referred to as Trees 11 and 12 in the Arborist report (Terras Rev b 27/07/2015) informing LMCC DA/1731/2014), one of which is dead and the other lying in the lake bed. As requested by LMCC, it is proposed to replant 2 *Casuarina glauca* in the Northern VMA to compensate.
- The Concept Approval identifies the removal of three mature Red Gums from the development site as indicated on the Terras Landscape Plan dated March 2015 and Squillace Site Plan dated March 2014 informing LMCC DA/496/2015. As requested by LMCC, it is proposed to replant 3 *Eucalyptus tereticornis* in the Eastern VMA to compensate.



2.0 Ecological Context of the Site

A review of the previous ecological reporting was undertaken to determine the key factors for consideration in preparation of this VMP, including:

- Harper Somers O'Sullivan (2008) Terrestrial Ecological Assessment for Concept Plan Approval for Proposed Marina and Mixed use Development at Trinity Point, NSW.
- Recent surveys undertaken by RPS (August 2014).

2.1.1 Harper Somers O'Sullivan 2008

FLORA

A total of 144 flora species were identified during the survey period within the assessment subject site and study area (refer to **Figure 1-2** in HSO 2008). Eight vegetation communities were found within the assessment study area. The majority of the subject site was cleared comprising an exotic open pasture while the remaining vegetation communities mapped were remnant or planted vegetation. The eight vegetation communities included:

- Avicennia marina Open Forest
- Casuarina glauca Open Forest EEC (Swamp Oak Floodplain Forest)
- Eucalyptus tereticornis/Angophora floribunda Open Forest EEC (River-flat Eucalypt Forest on Coastal Floodplains)
- Juncus kraussii Saltmarsh EEC (Coastal Saltmarsh)
- Sarcocornia quinqueflora Saltmarsh EEC (Coastal Saltmarsh)
- Sporobolus virginicus/ Sarcocornia quinqueflora Saltmarsh EEC (Coastal Saltmarsh)
- Planted non-indigenous trees and shrubs
- Open Pasture

FAUNA

The only terrestrial mammals recorded within the assessment study area during the site inspection, consisted of introduced pest species including rabbits (*Oryctolagus cuniculus*) and dogs (*Canis familiaris*).

Microchirpoteran species recorded during surveys included:

- Chocolate Wattled Bat (Chalinolobus morio);
- Large-footed Myotis (Myotis macropus);
- Long-eared Bat (Nyctophilus sp.);
- Eastern Forest Bat (Vespadelus pumilis);
- Eastern Freetail bat (Mormopterus norfolkensis); and
- Little Forest Bat (Vespadelus vulturnus).

Of these species, two are listed as Vulnerable under the NSW TSC Act 1995, namely the Eastern Freetail Bat (*Mormopterus norfolkensis*) and the Large-footed Myotis (*Myotis macropus*).



2.1.2 **RPS** 2014

Flora surveys were undertaken in August 2014 to ground truth the vegetation community delineation present on site via a differential GPS of all vegetation community boundaries. The following vegetation communities were found to be present on site:

- Avicennia marina Open Forest;
- Casuarina glauca Open Forest EEC (Swamp Oak Floodplain Forest);
- Casuarina glauca Open Forest (no understorey);
- Casuarina glauca Open Forest Saltmarsh Understorey;
- Dense Lantana camara patch;
- Eucalyptus tereticornis, Angophora floribunda Open Forest (no understorey);
- Juncus kraussii Saltmarsh EEC (Coastal Saltmarsh)
- Juvenile Casuarina glauca patch;
- Sarcocornia quinqueflora Saltmarsh EEC (Coastal Saltmarsh); and
- Sporobolus virginicus/ Sarcocornia quinqueflora Saltmarsh EEC (Coastal Saltmarsh).

Figure 2 displays the revised vegetation mapping for the site northern and north-eastern site area coupled with the previous mapping.

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for critical design dimensions.
Confirmation of critical positions
should be obtained from RPS Newcastle.

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2.1.2.2 Overall Biodiversity Value

The majority of the site is cleared due to previous activities carried out on site, with native vegetation occurring around the site's edges (see Plate 1).

As described by HSO (2008) fauna habitat within the site was found to be limited to remnant trees and riparian vegetation. Winter flowering tree species recorded within the subject site include Forest Red Gum (*Eucalyptus tereticornis*), which may provide foraging resources for nectivorous bird and mammal species. Additionally, figs (*Ficus* sp.) located within the southern portion of the subject site are likely to provide some foraging habitat for frugivorous species such as the Grey-headed Flying Fox (*Pteropus poliocephalus*).

No hollow-bearing trees were recorded within the subject site or the study area during previous surveys. The HSO 2001 survey previously identified hollow-bearing trees, and these trees occurred outside the subject site and study area. During the recent site inspection, three mature Forest Red Gums (*E. tereticornis*) that would represent foraging habitat for a number of fauna species were recorded within the central portion of the Concept approval footprint. A further two Forest Red Gums (*E. tereticornis*) occur on the eastern foreshore and will be retained as part of the Marina Stage 1 approval.

The site consists largely of predominantly exotic grassland with scattered trees that offered little shelter for small mammals and reptiles. Some of the foreshore areas of Lake Macquarie contain shelter for small mammals and reptiles in the form of fallen timber, rocks or leaf litter. The absence of understorey species across most of the subject site would deter many fauna species.



Plate 1 Cleared areas and scattered trees across the site

2.1.2.3 Habitat Connectivity

The site is situated on the tip of the Morisset peninsula and as such terrestrial connectivity exists only to the west from the site. However, the site is largely cleared, so current connectivity is limited. Riparian vegetation with disturbed remnant understorey along the northern boundary of the site does provide some connectivity to vegetation to the west. Some tentative connectivity does remain between remnant canopy within the site and vegetation to the west; however, approved residential development at Morisset Park further limits the functionality of this tenuous link.

This tenuous link will remain in its current form post development, with enhanced connectivity occurring as a result of proposed landscaping on site that will improve the current state of the vegetation. The northern area



around the unnamed bay is mapped as a 'corridor narrowed to less than 200 metres in width' under the Lake Macquarie Native Vegetation and Corridors Mapping (2011b). Thus, this action supports the Lake Macquarie Native Vegetation and Corridors Mapping (2011b) and contributes to the movement and viability of flora and fauna in the Lake Macquarie Local Government Area.

3.0 Management Actions

3.1 Vegetation Management Areas

The site has been divided into three VMA's and two deferred future park areas subject to a Plan of Management under preparation by LMCC. Refer to **Figure 3** depicting the VMA and deferred areas.

Northern VMA

The Northern VMA is 6508m² (approx) in area and includes an approved footpath with construction corridor landscaping and drainage. This area is primarily classified as 'Natural Area' by LMCC and will be rehabilitated with assisted revegetation of pasture areas, restoration of remnant vegetation and maintenance into the future, as defined within this VMP. The extent of rehabilitation will encompass weed management, site preparation, and infill planting to establish a native ground cover across the VMA, which over time will increase ecosystem resilience and reduce maintenance load. As discussed in section 1.5.2 an area of Casuarina Open Forest will be restored within the Northern VMA to offset the vegetation removal in order to establish a pathway and raised boardwalk traversing this area (Figure 3). Furthermore, replanting of two *Casuarina glauca* referred to as Trees 11 and 12 in the Arborist report (Terras Rev b 27/07/2015) informing LMCC DA/1731/2014 will occur in this VMA. The small area of VMA existing between (south) the pathway/ boardwalk and development interface (Road and access way) currently existing as pasture shall be managed as a landscaped edge with native species and mulching.

Note the area of the Northern VMA has been expanded around the north-eastern foreshore tip of the land to extend through to the proposed edge of the 'Natural Area' classification proposed by LMCC under draft PoM under their preparation.

The Northern VMA works and maintenance will be implemented as part of approved DA 1503/2014.

Eastern VMA

The Eastern VMA is 2992m² (approx) in area including easements for viewing platforms. This area is classified 'Natural Area' by LMCC and will be restored with assisted revegetation and maintenance into the future. The extent of natural restoration will encompass weed management and establishment of mass planting to achieve native groundcover. With the altered land management, natural recruitment of the canopy species *Eucalyptus tereticornis* (Red Gum) is expected to occur to maintain canopy cover into the future as existing mature trees senesce and ultimately fail or die. In accordance with section 1.5.2, three *Eucalyptus tereticornis* will be replanted in the Eastern VMA to compensate for the removal of three mature Red Gums as indicated on the Terras Landscape Plan dated March 2015 and Squillace Site Plan dated March 2014 informing LMCC DA/496/2015. Mass planting of suitable groundcover species will be established for 2 metres around the viewing platforms to control access and manage potential for erosion arising from unsolicited access around the viewing platform edges.

Refer to Appendix 1 for plans showing a Landscape concept, which includes the Eastern VMA.

The Eastern VMA works and maintenance will be implemented as part of DA 496/2015 once approved.

South-eastern VMA

The South-eastern VMA is 3296m² (approx) in area including easements for viewing platforms (noting that viewing platform not currently proposed in southern most easement. This area is classified 'Natural Area' by LMCC and will be restored with assisted revegetation and maintenance into the future. The South-eastern VMA has been divided into three zones as follows:



Zone 1 $(1030m^2)$ – Area extending southward from the Eastern VMA to the change in topography associated with the southern bluff.

Zone 2 $(1183m^2)$ – Area extending above the southern bluff escarpment to the full extent of the Southeastern VMA.

Zone 3 $(1083m^2)$ – The southern bluff escarpment and rock shelf including foreshore area below.

The extent of natural restoration in each zone will encompass the following:

Zone 1 – Weed management and mass planting to achieve native groundcover. With the altered land management, natural recruitment of the canopy species *Eucalyptus tereticornis* (Red Gum) is expected to occur to maintain canopy cover into the future as existing mature trees senesce and ultimately fail or die.

Zone 2 – A greater emphasis on natural rehabilitation will occur in this area. Physical works where required will encompass weed management, mulching and lower density ground cover revegetation. With the altered land management, natural recruitment of canopy species is expected to occur to maintain canopy cover into the future as existing mature trees senesce and ultimately fail or die. The species selection in this area will have a greater focus on shrub and clumping species (e.g. *Lomandra longifolia*).

Zone 3 – Given this area is escarpment and rock shelf area, physical works will be limited to weed management only. There is no revegetation proposed.

The VMA also contains an area of Cultural Heritage Significance, being a registered and exposed Aboriginal midden site that requires protection and management into the future. In response to Archaeological Assessment (Insite 2008) coupled with MOD 5 approval, restoration around this area will be achieved in a sensitive manner to limit the likelihood of disturbance with due reference to the site Cultural Heritage Management Plan (CHMP). All contractors will be made aware of the midden site and appropriate controls will be established via a works plan or similar method statement for the immediately surrounding area. This may include protective measures to the exposed midden area (such as stabilising top by geofabric) if agreed by the registered Aboriginal parties, as well as specific weed removal or planting techniques. Refer to Appendix 1 for plans showing a Landscape concept.

The South-Eastern VMA works and maintenance will be implemented as part of future DA for the remaining part of the site, and in conjunction with development works on that adjoining part of the development site including at Bluff Point.



Deferred Areas

There are two deferred areas as follows:

- Area 1 (approx 3934m²) generally adjacent to the Marina, Hotel and Restaurant
- Area 2 (approx 884m²) on the bluff at the south-eastern corner of Lot 31

These areas have been identified by LMCC as part of a draft site specific Plan of Management that is under preparation as suitable as park and will be managed for public recreation consistent with its land use zoning. On this basis, any future vegetation management in these areas is intended to be limited to landscaping only to embellish the Parkland, as opposed to an ecological natural area as intended appropriately elsewhere around the foreshore. This VMP will be updated following adoption of a Plan of Management by LMCC for the Foreshore Park Areas and in accordance with Condition 9A(b).

Indicative pathway, refer relevant DA/CC for final details

Indicative edge of VMA, refer relevant DA/CC for final details



N

metres Scale: 1:2,000

TITLE: FIGURE 3 - VEGETATION MANAGEMENT AREAS

LOCATION: TRINTIY POINT DATUM:

100

MGA PROJECTION: GDA 94 ZONE 56

DATE: 11-02-2016 PURPOSE: VMP

LAYOUT REF: 122773/drafting/.../wor VERSION (PLAN BY):MD, NW (E-A4)

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nent for way is prohibited.

3.2 Weed Management

Weed removal shall target any species likely to significantly invade retained bushland, prevent natural regeneration, or impede native seedling growth. During the initial primary weed control phase, priority shall be given to significant infestations of species listed as Weeds of National Significance (WoNS) and Noxious Weeds. Weed removal techniques should be appropriate to the weed type, growth form, ecology, and to the existing VMA conditions. Wherever possible, weed removal should be carried out prior to annual seed set.

It is not possible to remove a weed from a site on a single occasion, as many weeds have a persistent seedbank that can remain viable for long periods of time. Seeds will germinate rapidly after the parent plant has been removed due to increases in light and habitat availability. Therefore, a secondary consolidation phase of weed control will be undertaken which will involve control of minor infestations and revisiting the primary control phase sites for follow-up weeding, as cleared areas containing even moderately disturbed soil are highly conducive to weed invasion. This is likely to consist of spraying with herbicide (in areas not in the vicinity of a water body) or removal by hand, as any weeds present will be small and easily eradicated. At the completion of this stage, there should be minimal weeds remaining. To ensure this remains the case, preventative measures and an ongoing maintenance phase control program will be undertaken.

Minimising or active control of the spread of weeds as part of an integrated strategy will ameliorate the movement of weeds within the VMAs and surrounds. Those weeds that bypass these strategies or naturally disperse into the VMAs will be controlled as part of the maintenance phase.

3.2.1 Weed Infestations

Although there were few weed infestations throughout the VMAs, some areas contain weed thickets that require more attention than other areas. The following species have been identified as occurring within site and are targeted for removal if they occur within the VMAs:

- Lantana camara (Lantana);
- Cinnamomum camphora (Camphor Laurel);
- Verbena bonariensis (Purple Top);
- Rubus fruticosus (Blackberry);
- Cynodon dactylon (Common Couch);
- Pennisetum clandestinum (Kikuyu);
- Ligustrum lucidum (Broad-leaved Privet);
- Ageratina adenophora (Crofton Weed) (C4); and
- Ligustrum sinense (Small-leaved Privet).

3.2.2 Weeds of National Significance

Weeds of National Significance (WoNS) are the highest priority species targeted for sustained nationally coordinated action under the Australian Weeds Strategy. This strategy provides for national management to eradicate WoNS species from parts of the country where Australia's productive capacity & natural ecosystems are affected.

Each WoNS has a strategic plan that outlines strategies and an action required to control the weed, and identifies those responsible for each action. Individual landowners and managers are ultimately responsible for managing WoNS species. State and territory governments are responsible for overall legislation and administration.



WoNS identified on site include:

- Lantana camara (Lantana); and
- Rubus fruticosus (Blackberry).

3.2.3 Listed Noxious Weeds

The NSW Department of Industry & Investment under the *Noxious Weeds Act 1993* (NW Act) lists Noxious Weed declarations for all Local Government Areas. Similarly to WoNS, these weeds must be identified for the locality and considered under the weed management activities carried out within the VMAs.

3.2.3.1 Weed control classes

The following weed control classes may be applied to a plant by a weed control order:

- (1) Class 1 State Prohibited Weeds.
- (2) Class 2 Regionally Prohibited Weeds.
- (3) Class 3 Regionally Controlled Weeds.
- (4) Class 4 Locally Controlled Weeds.
- (5) Class 5 Restricted Plants.

The characteristics of each class are as follows:

- (a) Class 1 noxious weeds are plants that pose a potentially serious threat to primary production or the environment and are not present in the State or are present only to a limited extent.
- (b) Class 2 noxious weeds are plants that pose a potentially serious threat to primary production or the environment of a region to which the order applies and are not present in the region or are present only to a limited extent.
- (c) Class 3 noxious weeds are plants that pose a serious threat to primary production or the environment of an area to which the order applies, are not widely distributed in the area and are likely to spread in the area or to another area.
- (d) Class 4 noxious weeds are plants that pose a threat to primary production, the environment or human health, are widely distributed in an area to which the order applies and are likely to spread in the area or to another area.
- (e) Class 5 noxious weeds are plants that are likely, by their sale or the sale of their seeds or movement within the State or an area of the State, to spread in the State or outside the State.

Noxious weed declarations for Lake Macquarie City Council identified on site include:

- Ageratina adenophora (Crofton Weed) (C4)
- Lantana camara (Lantana) (C5)
- Rubus fruticosus (Blackberry) (C4)

Source: <u>http://www.dpi.nsw.gov.au/agriculture/pests-weeds/weeds/noxweed/noxious-app-application?sq_content_src=%2BdXJsPWh0dHAIM0EIMkYIMkZ3ZWVkcy5kcGkubnN3Lmdvdi5hdSUyRndlZWRzUHVibGljJTJGQ291b_mNpbCUyRkRldGFpbHMIMkY2NiZhbGw9MQ%3D%3D</u>

3.2.4 Weed Control Methods

Weed control requires an integrated approach and a single method of treatment should not be relied upon. Bush regeneration principles (Bradley 2006) designed for use in bushland settings, in combination with designated plantings should be employed. The systematic removal of weeds will allow native plants to establish themselves naturally (Buchanan 1989) in designated regeneration areas (non revegetation areas). Furthermore, the retained vegetation will be managed as part of a long-term maintenance program (5 years).

The Bradley Method of bush regeneration employs four basic principles:

- (1) Work outwards from good bush areas towards areas of weed;
- (2) Make minimal disturbance to the environment;
- (3) Weed control will involve primary, consolidation and long term maintenance; and
- (4) Do not over-clear; where possible let native plant regeneration dictate the rate of weed removal.

Manual removal of herbaceous weeds, regrowth and seedlings is preferred where possible, with minimal disturbance to soil stability and existing native species, and where relevant minimal disturbance to nearby protected known Aboriginal sites (such as the midden). In instances where warranted and at the discretion of the contractor, mechanised methods can be implemented to compliment hand augmented methods. Ecologically sensitive areas where weeds are removed manually should be stabilised or planted by the end of each working day. Removal work will be undertaken outside the seeding period of weeds, especially those weeds that produce large quantities of seed. If any work is undertaken within flowering periods, seed will be collected, bagged and disposed of off-site, ensuring that no seed remains.

Table 5 outlines recommended weed management actions and approximate project timing.

3.2.5 Use of Herbicides

Chemical removal is only considered appropriate for larger weeds and areas of large infestation or in areas containing few natives. In regards to larger woody weed species and infestations, felling and digging up the roots can be dangerous, expensive, time consuming and could potentially increase erosion. Where practical the application of herbicides should only be carried out by qualified personnel and the use of chemicals should be kept to a minimum. Care should also be taken when implementing chemical spraying techniques near waterways and environmentally sensitive areas.

The use of more environmentally-friendly herbicides such as "Roundup Biactive[®]" or similar should be used when working within or adjacent to riparian areas such as the mangroves and saltmarsh areas. Herbicides should not be applied immediately prior to rain occurring. This reduces the effectiveness of the herbicide and poses the risk that the herbicide could be transported by runoff into local waterways.

An advantage of herbicide use is the shorter time it takes to spray weeds as compared to physically removing them, particularly for large infestations of weeds.

The use of herbicides should be considered when:

- There are small areas of dense weeds with few or no native plants to protect;
- There are large areas of weeds; and
- The weeds are growing too rapidly for physical removal.

It is important to plan herbicide control of target species according to a weeding calendar that recognises the weed's life form and seasonality (i.e. flowering, fruiting and seed set).

The success of each treatment must be evaluated by the operator after a set period of time and re-applied (if necessary) according to the labelled effectiveness for each herbicide. The herbicide of choice for bush regeneration work is a bioactive type Glyphosate.

Herbicide application shall be limited to the following techniques. Always remember to read the product label and any relevant permit before using any herbicide.



- Cut-stump and poison (cut and dab);
- Stem injection;
- Stem-scrape or frilling and poison;
- Basal bark painting; and
- Selective spot-spraying.

3.3 Revegetation

Revegetation will occur within the VMAs in accordance with Section 3.1 to assist in overall rehabilitation. The reliance on revegetation as part of the restoration process will be at the discretion of the contractor as guided by this VMP and detailed landscape concepts to be prepared for future CC's under the staged DA approach to be adopted on site.

3.3.1 Plant Stock

Naturally occurring remnant vegetation, preferably from the site or local area, is the best source of seed and/or vegetative material for revegetation. Generally these plants will have evolved to suit local environmental conditions and have a desirably broad genetic base.

Ecologically and genetically, local seed complements other flora and fauna in the area, and poses the least potential threat of genetic contamination (Mortlock 1998). At worst, seed or tubestock material should ideally be sourced from the Lake Macquarie LGA or the Lower Hunter if local provenance stock cannot be sourced. Using locally derived species will also aid in the preservation of local vegetation communities. If sourcing seed from remnant vegetation is not possible, a local nursery that grow native tube-stock and advanced plants suitable for the Lake Macquarie area should be consulted.

3.3.2 Planting Selection

Re-planting will be undertaken by a suitably experienced contractor who will be able to assess the site and develop a site specific approach. Where possible planting should occur in the cooler months (April to September) or prior to spring to allow for plants to become acclimatised to the site before drier conditions occur over summer. Densities of plants should vary based on their growth form (and as consistent with the relevant VMA) and approximate planting densities are included in **Table 2**. In this manner the planting densities will achieve a stems per hectare outcome. It's important to state that **Table 2** provides species selection and densities for the contractor where revegetation is to be undertaken, however revegetation is one facet of an integrated rehabilitation approach (refer to Section 1.4 Definitions).

Note the plant selection below has been taken from the EEC determinations for Swamp Oak Floodplain Forest and River-flat Eucalypt Forest on Coastal Floodplains. All canopy species are anticipated to be available locally, however a representation of groundcover species will be sourced locally to emulate the EEC species list based on availability.

Table 2 Recommended Species for planting					
Scientific Name	Common name	Planting density	Casuarina glauca open Forest	Eucalyptus tereticornis/Angophora floribunda Open Forest	
Northern VMA					
Canopy species					
Casuarina glauca	Swamp Oak	1 tree/80m ²	х		
Eucalyptus tereticornis	Forest Redgum		х		
Understorey					
Glochidion ferdinandi	Cheese Tree	_	x		
Melaleuca sieberi	Sieber's Paperbark	1 tree/80m ²	x		
Groundcovers					
Centella asiatica	-		x		
Dianella caerulaea var. producta	Blue Flax Lilly		x		
Juncus kraussii	Sea Rush	2 individuals /			
Lomandra longifolia	Mat Rush	1m ²	х		
Selliera radicans	-		x		
Sporobolus virginicus	Saltwater Couch		x		
Eastern VMA					
Groundcovers					
Pandorea pandorana	Wonga Wonga Vine	1 individuals / 1m ²		x	
Clematis glycinoides		Im		x	
Doodia aspera	Prickly Rasp Fern			x	
Juncus krausii	Sea Rush			x	
Lomandra multiflora subsp. multiflora	Many-flowered Mat-rush	4 individuals / 1m ²		x	
Lomandra filiformis	Wattle Mat-rush			x	
Lomandra longifolia	Spiny Mat-rush			x	
Adiantum aethiopicum	Common Maidenhair Fern			x	
Bursaria spinosa	Native Blackthorn			х	
Clematis aristata	Traveller's Joy			x	
Cymbopogon refractus	Barbed Wire Grass			x	
Dianella caerulea var producta	Blue Flax-lily			x	
Dichondra repens	Kidney Weed	8 individuals /		х	
Eragrostis leptostachya	Paddock Lovegrass	1m ²		x	
Glycine clandestina	Twining Glycine			х	
Glycine tabacina	Pea Glycine			x	
Hardenbergia violacea	Native Sarsaparilla			x	
Imperata cylindrica var. major	Blady Grass			x	
Microlaena stipoides var.	Weeping Grass			x	

RPS

Scientific Name	Common name	Planting density	<i>Casuarina glauca</i> open Forest	Eucalyptus tereticornis/Angophora floribunda Open Forest
stipoides				
Selliera radicans,				x
Sporobolus virginicus	Salt Couch Grass			x
Themeda australis	Kangaroo Grass			x
Trema aspera				X
Veronica plebeia	Trailing Speedwell			x
Viola hederacea	Ivy-leaved Violet			x
South-eastern VMA				
ZONE 1				
Groundcovers				
Pandorea pandorana	Wonga Wonga Vine	1 individuals / 1m ²		x
Clematis glycinoides		1m		x
Doodia aspera	Prickly Rasp Fern			x
Juncus krausii	Sea Rush			x
Lomandra multiflora subsp. multiflora	Many-flowered Mat-rush	4 individuals / 1m ²		x
Lomandra filiformis	Wattle Mat-rush			x
Lomandra longifolia	Spiny Mat-rush			X
Adiantum aethiopicum	Common Maidenhair Fern			x
Bursaria spinosa	Native Blackthorn			X
Clematis aristata	Traveller's Joy			x
Cymbopogon refractus	Barbed Wire Grass			x
Dianella caerulea var producta	Blue Flax-lily			X
Dichondra repens	Kidney Weed			x
Eragrostis leptostachya	Paddock Lovegrass			x
Glycine clandestina	Twining Glycine			x
Glycine tabacina	Pea Glycine	8 individuals / 1m ²		X
Hardenbergia violacea	Native Sarsaparilla			x
Imperata cylindrica var. major	Blady Grass			x
Microlaena stipoides var. stipoides	Weeping Grass			X
Selliera radicans,				x
Sporobolus virginicus	Salt Couch Grass			X
Themeda australis	Kangaroo Grass			x
Trema aspera				x
Veronica plebeia	Trailing Speedwell			x

RPS

Scientific Name	Common name	Planting density	<i>Casuarina glauca</i> open Forest	Eucalyptus tereticornis/Angophora floribunda Open Forest
Viola hederacea	Ivy-leaved Violet			x
ZONE 2				
Groundcovers				
Pandorea pandorana	Wonga Wonga Vine	1 individuals / 1m ²		x
Clematis glycinoides		Im		х
Doodia aspera	Prickly Rasp Fern			x
Juncus krausii	Sea Rush			х
Lomandra multiflora subsp. multiflora	Many-flowered Mat-rush	2 individuals / 1m ²		x
Lomandra filiformis	Wattle Mat-rush			x
Lomandra longifolia	Spiny Mat-rush			х
Adiantum aethiopicum	Common Maidenhair Fern			x
Bursaria spinosa	Native Blackthorn			х
Clematis aristata	Traveller's Joy			x
Cymbopogon refractus	Barbed Wire Grass			x
Dianella caerulea var producta	Blue Flax-lily			х
Dichondra repens	Kidney Weed			х
Eragrostis leptostachya	Paddock Lovegrass			x
Glycine clandestina	Twining Glycine			x
Glycine tabacina	Pea Glycine	4 individuals /		x
Hardenbergia violacea	Native Sarsaparilla	1m ²		x
Imperata cylindrica var. major	Blady Grass			x
Microlaena stipoides var. stipoides	Weeping Grass			x
Selliera radicans,				x
Sporobolus virginicus	Salt Couch Grass			x
Themeda australis	Kangaroo Grass			х
Trema aspera				x
Veronica plebeia	Trailing Speedwell			X
Viola hederacea	Ivy-leaved Violet			х

3.3.3 Establishment

The most important factors for plant establishment are:

- The surrounding soil is moist at the time of planting; Mulch is one of several methods that are a safe and effective way of ameliorating soil conditions. It helps control soil water loss, soil temperature fluctuations and weed invasion (Buchanan 1989). Note broadscale mulching is not suggested in this instance across the VMAs, however may be appropriate at the revegetation site or areas of mass planting;
- Sufficient rain occurs and / or watering is provided in the following months; and
- The plants are free of weed competition. Weeds around planted vegetation shall be controlled during regular associated maintenance works.

3.3.4 Fertilisers

The use of fertilisers is an option within the VMAs to assist revegetation. Care should be taken to prevent runoff containing fertilisers from entering native regeneration (naturally germinated), rehabilitation (planted) areas and riparian/aquatic zones. Given that locally occurring native species will be planted, the use of fertiliser during planting works is optional. Pellet forms of fertiliser with low levels of Phosphorus are preferable for use within native rehabilitation (planting) areas if fertilising is deemed necessary by the Contractor.

3.4 Mulching

Mulching is optional throughout the VMAs as it enhances survival rates of replanted plants whilst offering stabilisation of soils and suppression of weeds. Mulching will be undertaken using weed free leaf and woodchip mulch at the discretion of the regeneration contractor following site civil works and establishment / preparation.

All mulch shall be free of contaminants such as seeds and propagules of weeds. Avoid the use of pine mulch as the acidity level is not suitable for the native vegetation being used. Mulch will be established to a minimum depth of 75mm prior to planting. Mulch has been shown to increase the survival rate of plants in soils with poor water holding ability (including the sandy soil that occurs on the site) however mulching will limit the likelihood of natural regeneration. Where possible mulch should be sourced from local landscape centres.

Care must be taken with mulch application to ensure that there is no impact to or cover over areas of Coastal Salt-marsh.

Table 5 outlines recommended mulching actions and approximate project timing.

3.5 Tree Guards and Fencing

Fencing during the construction phase for the Northern VMA will be in accordance the Royal Haskoning engineering plans (refer to 8A0319-Civ-DA-007 September 2014) whilst the fencing for the Eastern VMA will be in accordance with engineering plans by ADWJ (refer to 37429(3)-CENG-010(A)), or most current version of engineering plans at the time of construction that relates to each VMA. Fencing for the South-eastern VMA will be in accordance with the approved plans prepared at the time of Development Application and/or as revised for Construction Certificate.

In all parts of the site, tree protection measures for existing trees shall be implemented in accordance with Australian Standards 4970-2009 'Protection Of Trees On Development Sites' before the commencement of site works, including driveways and services, filling and excavation as required by the contractor.

Table 5 outlines recommended fencing actions and approximate project timing.

3.6 Erosion Control and Stabilisation Works

All removal and rehabilitation works for the Northern VMA will be undertaken in accordance with the Erosion and Sediment Control Plan included within the overall engineering package (refer to 8A0319-Civ-DA-007 Royal Haskoning September 2014) or most current version of engineering plans at the time of construction. Erosion and sedimentation works for the Eastern VMA will be in accordance with the ADWJ Erosion and Sediment Control Plan (refer to 37429(3)-CENG-010(A)) or most current version of engineering plans at the time of construction. Erosion and sedimentation works for the South-eastern VMA will be in accordance with the approved plans prepared at the time of Development Application and/or as revised for Construction Certificate. Sensitive areas will be fenced off and rehabilitation undertaken on a progressive basis so as to reduce sediment mobilisation by enabling vegetated areas to stabilise soils and trap sediment from runoff. Strategically placed sediment traps and water diversion structures should also be used to minimise sediment and storm water runoff into the VMAs and further erosion particularly in close proximity to the Lakes edge.

Care should be taken when removing weeds and all bare soils should be covered as required, to aid in weed control and soil stability. It is essential that natural and biodegradable fibres are used. This will assist in retention of the existing soil structure and lessen the likelihood of water and bank erosion. The matting will require planting of locally occurring species for long term bank stability.

3.7 Site Accessibility

Access to the site will remain from Trinity Point Road and Henry Road, however an internal road network will be included as part of the development proposal. Unauthorised vehicle access will be discouraged through the use of no entry signs and temporary fencing during construction periods.

Pedestrian access to the site is not prohibited in many areas and the amenity of the site arguably attracts pedestrians and dog walkers which could be problematic for sensitive areas within the VMAs. It is envisaged that temporary fencing will be erected to resolve unauthorised pedestrian access onto the site during construction works (refer to 8A0319-Civ-DA-007 Royal Haskoning September 2014 and ADWJ (37429(3)-CENG-010(A)) and/or as updated for areas adjacent to all VMAs. Following construction, educational signage highlighting the Northern VMA along the boardwalk, as well as the rehabilitation actions being undertaken may be considered for establishment at multiple locations at the direction of the contractor in consultation with the proponent.

4.0 Maintenance

4.1 Description of Tasks

4.1.1 Removal of Debris

The site does not currently contain a lot of existing rubbish or debris. Any observed rubbish and debris during construction is to be removed from the restoration sites prior to the commencement of vegetation management actions to protect workers and prepare the site for rehabilitation works. Ongoing rubbish removal will be undertaken throughout each management action for the duration of the monitoring period.

4.1.2 Consolidation and Weed Removal

The site will require several visits to remove weeds that are regenerating and/or have grown in response to the disturbance and are competing with regenerating native plants. A system of weed removal must be undertaken to remove weed seedlings and regrowth.

These visits are essential; otherwise the weeds will dominate and out-compete the regenerating / replanted natives.

Given the nature of the site and the development proposal, all weeds removed as part of rehabilitation works should be discarded from the site to avoid regrowth or contamination into immediately adjacent water ways. A designated disposal area should be determined by the contractor before commencing rehabilitation works.

4.1.3 Plant Replacement

In areas where plants have been completely removed (i.e. as a result of vandalism or accidental damage) or where rehabilitation has failed within the VMA, been damaged or is suffering from pests and/or disease, replanting should be undertaken in appropriate mild seasonal conditions.

Plants lost or damaged should be replaced to maintain a minimum of 80% survival rate of the original planted stock and recommended plant densities. Initial and careful consideration of the health of tube stock prior to its purchase should negate stock losses. Where weeds are removed, plantings should be undertaken at the Vegetation Management Contractor's (or other qualified persons) discretion. Plants should be replaced at the size originally specified and in accordance with all planting methods as previously described.

4.1.4 Irrigation

Watering of seedlings should be continued as required until all plants are established. Weather and site conditions will determine the frequency of watering for plants over the maintenance period to ensure they do not perish. Moisture levels and plant health should be monitored weekly during drier periods.

Watering should be undertaken early morning or late afternoon to avoid the hottest part of the day and minimise water loss.

4.1.5 Pests and Diseases

All plants must be monitored for pests and disease during the establishment period and then annually for the relevant maintenance period, in accordance with the monitoring program. Plants significantly affected by pests or disease must be removed, disposed of offsite and replaced. Particular vigilance must be used to detect Myrtle Rust and the effects of fluoride emissions on any myrtaceae species that are susceptible to this fungus.



To ensure a thorough approach to pest and disease management, this management plan must be coordinated with any other pest and disease controls that may be taking place in the local landscape.

5.0 Monitoring and Reporting

Qualified Vegetation Management Consultants are to carry out a program of regular monitoring and inspection work required for the VMP. The Consultant will be responsible for ensuring the measures outlined in this VMP are implemented and that performance criteria are satisfied.

A monitoring report on the progress of the VMP implementation will be prepared annually and submitted to the Developer and Council Ecologist within three months of each annual period. A final report shall also be prepared by the contractor and submitted to the Developer and Council Ecologist upon completion of the relevant maintenance period being 5 years for the Northern VMA and 2 years for the Eastern and South-eastern VMAs. The monitoring reports will:

- Report on the progress of the monitoring activities; and
- Discuss any problems encountered in implementing the VMP.

Maintenance activities within the areas to be rehabilitated will include:

- Estimates of weed cover / abundance present in the replanting and weed management areas;
- Erosion presence, type and condition;
- Presence and amount of rubbish;
- Depth and condition of mulch; and
- Recommendations regarding timing and responsibility for corrective measures and/or vegetation management.

Photo Monitoring

Specific photo locations to monitor areas of rehabilitation within the VMAs will be selected by the contractor. The progressive photo monitoring will provide an indication of the success or failure of any areas of rehabilitation conducted in accordance with this VMP. They will enable contractors to adjust rehabilitation works accordingly to enhance the quality of retained vegetation further and provide required information for ongoing monitoring reports.

Monitoring points should be marked with steel star-pickets to ensure consistent replication of monitoring. Details on the direction the photo was taken, date, and height to camera should be recorded to allow for adequate comparisons between monitoring events. Photo monitoring can be conducted by rehabilitation contractors annually prior to the submission of the annual report, for the relevant maintenance period.

5.1 Approximate Costing

Based on the recommended management actions to occur within the VMAs outlined in this VMP, preliminary costing has been calculated as displayed in **Table 3**. This costing is subject to refinement based on contractor pricing based on detailed landscape documentation to be prepared for relevant CC's

VMA	Table 3 Workings Costing Works Involved	Costing
	 Weed management works Remove all cuttings from site and transfer to waste management facility. 	\$25,000 + GST
Northern VMA (6508m ²) Note that revegetation where required will be infill only, thus 30% of total	 Supply/install plant species as per vegetation community and VMP specifications » 1 canopy tree / 80m² » 1 shrub/ sub canopy tree/ 80m² » 2 ground cover / 1m² Nil allowance for site preparation 	\$17,000 + GST
area applied for approx costing.	Ongoing Maintenance	\$500 + GST /month (up to 60 months)
	 Supply/install organic leaf mulch if required 	\$3.50/m ² + GST
	 Compensatory planting of 2 x Casuarina glauca tubes 	\$10 + GST
	 Woody and herbaceous weed management works Native Rehabilitation Area » 1 to 8 ground cover / 1m² (average of 6 / m² applied for calculation) 	\$20,000 + GST \$49,800 + GST
Eastern VMA (2992m ²)	 Compensatory planting of 3 x Eucalyptus tereticornis tubes 	\$15 + GST
	 Supply/install organic leaf mulch if required 	\$3.50/m ² + GST
	Ongoing Maintenance	\$700 + GST/month (up to 24 months)
South-eastern	 Woody and herbaceous weed management works for entire VMA 	\$35,000 + GST
VMA (3296m ²)	 Ongoing maintenance for entire VMA 	\$600 + GST/month (up to 24 months)
South-eastern VMA – Zone 1 (1030m ²)	 Native Rehabilitation Area » 1 to 8 ground cover / 1m² (average of 6 / m² applied for calculation) 	\$17,200 + GST
(1030m ²)	 Supply/install organic leaf mulch if required 	\$3.50/m ² + GST

Table 3 Workings Costing

VMA	Works Involved	Costing
South-eastern VMA – Zone 2 (1183m ²)	 Native Rehabilitation Area » 1 to 4 ground cover / 1m² (average of 4 / m² applied for calculation) 	\$13,200 + GST
(110511)	 Supply/install organic leaf mulch if required 	\$4,140 + GST (at \$3.50/m ² + GST)
	 Supply/install organic leaf mulch if required 	\$3.50/m ² + GST
South-eastern VMA – Zone 3 (1083m ²)	Woody and herbaceous weed management worksOngoing maintenance	Covered under allowance for entire VMA

Note any ongoing maintenance works to be undertaken by the operator, past the lifespan of this VMP, will be subject to separate arrangements with the landowner.

Table 4 Proposed Actions and Monitoring Timetable

Action*	Responsibility	Performance Criteria	Timing	Corrective Actions
Site Preparation				
OH&S Hazard & risk assessment for vegetation management crews. Prepare Safe Work Method Statement. Conduct internal safety and environmental induction.	Vegetation Management Contractor	Safe Work Method Statement (or equivalent) submitted and approved	Prior to implementation of ∨MP	
Primary Control Phase Weed Co	ontrol all VMAs			
Removal of woody weeds, particularly noxious weeds from the VMA, particularly Lantana and Blackberry	Vegetation Management Contractor	Weed cover of large infestations to be reduced by 95% within 2 years of commencement of weed control program Targeted program implemented during first 2 years to allow for weed regrowth from seedbank and ongoing control in years 3-5 for Northern VMA.	During periods of active growth At least twice a year until performance targets are met during maintenance period	Continue Control Phase weed control
Removal of non-woody weeds within the rehabilitation areas, particularly <i>Pennisetum</i> <i>clandestinum</i> , from the VMA	Vegetation Management Contractor	Weed cover of large infestations to be reduced by 95% reduced within 2 years of commencement of weed control program	During periods of active growth At least twice a year until performance targets are met during maintenance period	Continue Control Phase weed control
Removal of canopy species (non endemic) e.g. Camphor Laurel trees from the VMA	Vegetation Management Contractor	Weed cover of large infestations to be reduced by 95%reduced within 2 years of commencement of weed control program. Less cover of mature or flowering/fruiting plants remain within 2 years of commencement of weed control program	During periods of active growth At least twice a year until performance targets are met during maintenance period	Continue Control Phase weed control
Secondary Consolidation Phase	e Weed Control all VMAs			
Consolidation of woody weed control for the VMA, particularly Lantana and Blackberry	Vegetation Management Contractor	Weed cover, weed regrowth, and mature or flowering/fruiting plants maintained at or below Primary Control Phase levels.	After the completion of primary control phase. During periods of active growth At least twice a year until performance targets are met during maintenance period	Revert back to primary control phase

Action*	Responsibility	Performance Criteria	Timing	Corrective Actions
Consolidation of non-woody weed control, particularly <i>Pennisetum clandestinum</i> , from the VMA rehabilitation areas.	Vegetation Management Contractor	Weed cover to be maintained at or below the Primary Control Phase levels.	After the completion of primary control phase. During periods of active growth At least twice a year until performance targets are met during maintenance period	Revert back to primary control phase
Maintenance Phase Weed Cont	rol for all VMAs			
Removal of woody weeds from the VMA, particularly Lantana and Blackberry	Vegetation Management Contractor	Maintain Secondary Control Phase levels.	Every 10 weeks (maximum), once secondary phase has been met, then every 6 months for maintenance period.	Revert to secondary control phase targets and frequency of control
Removal of non-woody weeds, particularly <i>Pennisetum</i> <i>clandestinum</i> , from the VMA from the rehabilitation areas	Vegetation Management Contractor	Maintain Secondary Control Phase levels.	Every 10 weeks (maximum), once secondary phase has been met, then every 6 months for maintenance period.	Revert to secondary control phase targets and frequency of control
Removal of canopy species (non endemic) from the VMA	Vegetation Management Contractor	Maintain Secondary Control Phase levels.	Every 10 weeks (maximum), once secondary phase has been met, then every 6 months for maintenance period.	Revert to secondary control phase targets and frequency of control
Removal of rubbish Vegetation Management Contractor		Ensure all rubbish/litter is removed from within all VMA	Removal to occur during all other management action periods	Make time to ensure removal of rubbish occurs at the next site visit
Revegetation for VMA				
		Tubestock comprise locally indigenous species wherever possible	Following site preparation and/or secondary weeding in cooler months (late Spring, Winter and early Autumn) where possible.	Revegetation works in following year to compensate for what was not completed in the preceding year.
Revegetation of SOFF within the Northern VMA	Vegetation Management Contractor	Revegetated areas composition, structure, and size trending towards baseline values of reference sites	Ongoing to end of VMA maintenance period of 5 years.	Additional planting and maintenance to occur to ensure that revegetation trends towards reference site values
		Survival of at least 80% of tubestock plantings	Within 1 year of plantings	Watering, mulching to occur as required or tree guards to



Action*	Responsibility	Performance Criteria	Timing	Corrective Actions
				be installed where appropriate Replacement of the plants lost at a suitable time of year.
		Tubestock comprise locally indigenous species wherever possible	Following site preparation and/or secondary weeding in cooler months (late Spring, Winter and early Autumn) where possible.	Revegetation works in following year to compensate for what was not completed in the preceding year.
Rehabilitation within the Eastern and South Eastern VMA – Zones 1 and 2	Vegetation Management Contractor	Revegetated areas composition, structure, and size trending towards baseline values of reference sites	Ongoing to end of VMA maintenance period of 2 years	Additional planting and maintenance to occur to ensure that revegetation trends towards reference site values
		Survival of at least 80% of tubestock plantings	Within 1 year of plantings	Watering, mulching to occur as required or tree guards to be installed where appropriate Replacement of the plants lost at a suitable time of year.
Tree Protection Measures for N	orthern, Eastern and Sou	th-eastern VMA Rehabilitation Areas		•
Apply protective fencing or tree shielding to existing trees as required within relevant VMA at Contractors discretion	Vegetation Management Contractor	Applied in accordance with Australian Standards 4970-2009 'Protection Of Trees On Development Sites' as required	Prior to the commencement of relevant site works	
Mulching in VMAs [#]		·	·	·
Apply weed free, vegetative mulch to areas with little to no regenerating vegetation at a minimum depth of 75mm. At discretion of contractor.	Vegetation Management Contractor	Mulch applied correctly. Jute weed mat squares used where appropriate.	Following topsoil application and primary and secondary weeding	

Action*	Responsibility	Performance Criteria	Timing	Corrective Actions	
Monitoring and Reporting Nort	hern VMA				
Regular inspections of replanting areas to check levels of weed regrowth	Vegetation Management Contractor	Levels of weed regrowth reported to Vegetation Management Consultant	Maximum of every three months, for first twelve months from date of final planting and then annually for the 5 years VMP implementation.		
Site inspections to ensure compliance with VMP and to record progress of works. Feedback and contingency plans as required.	Vegetation Management Consultant	Inspection checklist completed and included in monitoring reports	Following primary planting and then twice per year for twelve months and then annually for the 5 years VMP implementation.	Ensure preparation for annual report is being undertaken.	
Prepare and submit Monitoring Report on implementation of VMP	Vegetation Management Consultant	Monitoring reports completed & submitted	Following primary planting and then annually for the 5 years VMP implementation.		
Monitoring and Reporting East	ern and South Eastern VM	ЛА			
Regular inspections of replanting areas to check levels of weed regrowth	Vegetation Management Contractor	Levels of weed regrowth reported to Vegetation Management Consultant	Maximum of every three months, for first twelve months from date of final planting and then annually for the 2 years VMP implementation.		
Site inspections to ensure compliance with VMP and to record progress of works. Feedback and contingency plans as required.	Vegetation Management Consultant	Inspection checklist completed and included in monitoring reports	Following primary planting and then twice per year for twelve months and then annually for the 2 years VMP implementation.	Ensure preparation for annual report is being undertaken.	
Prepare and submit Monitoring Report on implementation of VMP	Vegetation Management Consultant	Monitoring reports completed & submitted	Following primary planting and then annually for the 2 years VMP implementation.		

* Actions do not apply to Deferred Areas 1 and 2.

[#] Excluding South-eastern VMA – Zone 3.

6.0 Conclusion

The aim of the VMP is to provide a strategy for the staged preservation, protection and restoration of vegetation in the nominated VMAs on site. The objective is to achieve a net increase in canopy cover, and ground species for the native vegetation communities, with a focus on increasing the amount and quality of vegetation within the EECs. This will involve weed removal, planting of native flora species and encouraging native species to regenerate.

Ongoing monitoring of the Vegetation Management Areas is required to establish the successes and potential failures of the required management actions, and thus allows for any remediation measures to be addressed accordingly to achieve the targeted outcomes.

The implementation of the management actions will result in the protection, enhancement and maintenance of the native plant communities present within the site, ultimately contributing to the ecological values of the overall surrounding vegetation communities.

7.0 Bibliography

Auld, B. A. and Medd, R.W. (1992) Weeds- An illustrated guide to the weeds of Australia. Inkata Press.

- Bell, S. and Driscoll, C. (2013) Vegetation Mapping of Lake Macquarie LGA: Stages 1-3, 5. Lake Macquarie City Council.
- Bradley, J. (1971) *Bush Regeneration: The Practical Way to Eliminate Exotic Plants from Natural Reserves.* Sydney, New South Wales: The Mosman Parklands and Ashton Park Association.
- Bradley, J. (2006) *Bringing back the Bush: the Bradley Method of Bush Regeneration*. Reed New Holland. *Sydney.*
- Buchanan, R.A. (1989) Bush Regeneration Recovering Australian Landscapes. TAFE NSW.
- Cropper, S. (1993) Management of Endangered Plants. CSIRO Publications, East Melbourne, Victoria.
- Ensbey, R. (2005) Noxious and Environmental Weed Control Handbook.
- Harden, G. (ed) (2000) Flora of New South Wales, Volume 1. Revised edition. New South Wales University Press, NSW.
- Harden, G. (ed) (2002) Flora of New South Wales, Volume 2. Revised edition. New South Wales University Press, NSW.
- Harden, G. (ed) (1992) Flora of New South Wales, Volume 3. New South Wales University Press, NSW.
- Harden, G. (ed) (1993) Flora of New South Wales, Volume 4. New South Wales University Press, NSW.
- HSO (2001) Flora and Fauna Assessment for proposed rezoning of various lots off Henry Street, Morisset Park, August 2001, Kendall Grange Property Pty Ltd.
- HSO (2008) Terrestrial Ecological Assessment for Concept Plan Approval for Proposed Marina and Mixed Use Development at Trinity Point, NSW. Harper Somers O'Sullivan, Hamilton.
- Lake Macquarie Catchment Management Committee (2005) *Lake Macquarie Streambank and Foreshore Planting Guide*. Lake Macquarie City Council, Lake Macquarie.
- Lake Macquarie City Council (2011a) Vegetation Management Plan Guidelines. Lake Macquarie City Council.
- Lake Macquarie City Council (2011b) Lake Macquarie Native Vegetation and Corridors: Version 1. Accessed online from: <u>http://www.lakemac.com.au/downloads/native_veg_corridor_map_2012.pdf</u>
- Lamp, C. and Collett, F. (2004) Field Guide to the weeds of Australia. Inkata Press, Melbourne.
- Mortlock, W. (1998) Florabank Guide 5: Seed Collection from Woody Plants for Local Revegetation.
- NSW Office of Water (2012) *Guidelines for Vegetation Management Plans on Waterfront Land*. Department of Primary Industries, Office of Water.



Richardson, F.J., Richardson, R.S. and Shepherd, R.C.H. (2006) Weeds of the South-east – An Identification Guide for Australia. RG and FJ Richardson, PO Box 42, Meredith VIC 3333.

Robinson, L. (1997) Field Guide to the Native Plants of Sydney, 3rd Edition. Kangaroo Press, Sydney.



Appendix I Site Plans

INDICATIVE OUTCOME

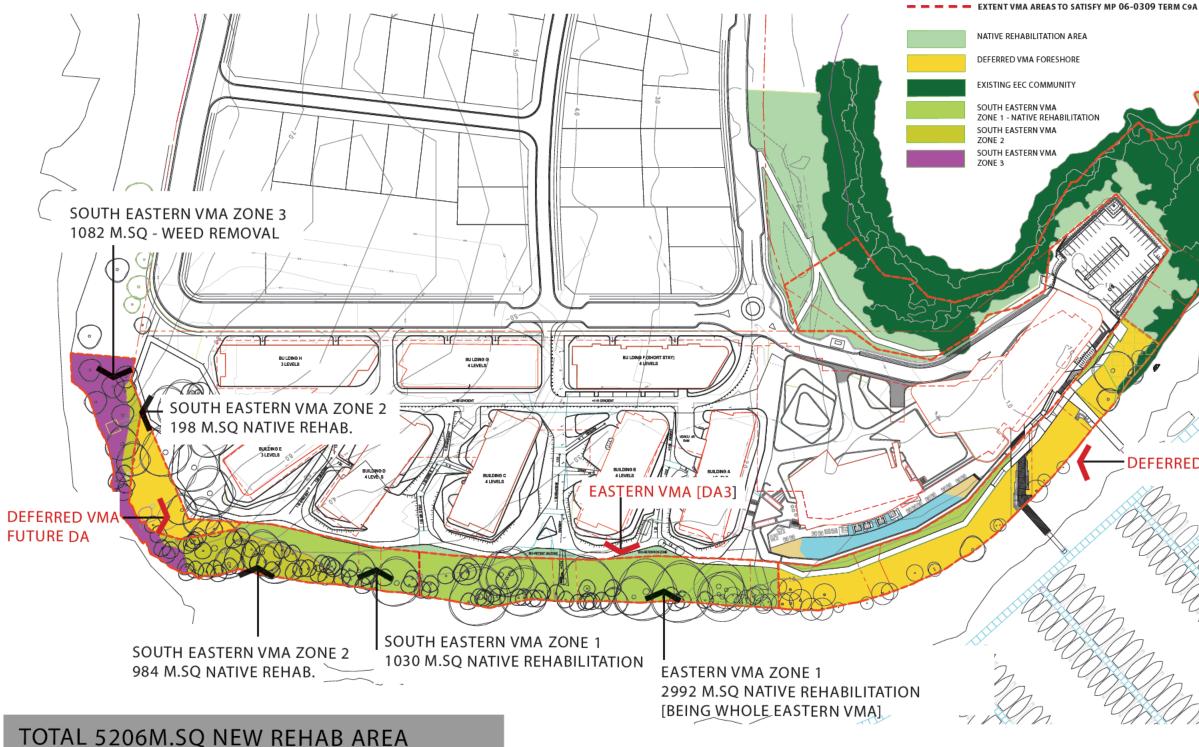
 \square

PROPOSED CONCEPT PLAN





trinity point FORESHORE LANDSCAPE TREATMENT - VMA AREAS



Eastern + South Eastern VMA's

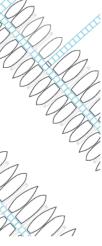
[excludes zone 3 - weed management only] Existing turfgrass removed and overplanted rehabilitated us-

ing endemic species.



- NORTHERN VMA [DA1]

DEFERRED VMA [DA2]



site details: Trinity Point

client: Johnson Property Group date: Oct 2015 job number: 10367.5 scale:

revision:



trinity point 2 FORESHORE LANDSCAPE TREATMENT - VMA AREAS

PROPOSED MASS PLANTING OF NATIVE GRASSES TO PROVIDE BUFFER AND FORCE PEOPLE TO USE PATHWAY

ENDEMIC PLANTING SPECIES - The species schedule listed as suitable planting has been identified by the Ecologist as naturally occuring on the site and also selected from the species list referenced by the Ecologist: River Flat Eucalypt Forest on Coastal Floodplains - NSW Office of Environment & Heritage. Species selections shall also reference Lake Macquarie - Streambank and Foreshore Planting Guide. DETAILED WORK METHODS TO UNDERTAKE WEED REMOVAL AND PLANTNG AS PER VMP



Eucalyptus tereticornis regrowth retained for local provenance and overplanted if required. Kikuyu grass removal. Overplanting with endemic grasses and groundcovers based on list and as per sheet 1.



Adiantum aethiopicum Bursaria spinosa Clematis aristata Clematis glycinoides Cymbopogon refractus Dianella caerulea var producta Dichondra repens Doodia aspera Eragrostis leptostachya Glycine clandestina Glycine tabacina Hardenbergia violacea Imperata cylindrica var. major Juncus krausii, Lomandra filiformis Lomandra longifolia Lomandra multiflora subsp. multiflora Microlaena stipoides var. stipoides Pandorea pandorana Selliera radicans, Sporobolus virginicus, Themeda australis Trema aspera Veronica plebeia Viola hederacea

> site details: Trinity Point

client: Johnson Property Group date: Oct 2015 job number: 10367.5 scale:

revision:





Appendix 2

Staff Qualifications



LAUREN VANDERWYK

Ecologist Newcastle, NSW Bachelor of Science, University of Newcastle

AREAS OF EXPERTISE:

During the six years Lauren has been working as an Ecologist, she has gained a broad range of ecological field experience and experience in Ecological Assessment and management reporting in accordance with relevant State and Commonwealth government legislative frameworks. In addition, Lauren has developed numerous Bushfire Threat Assessments and Bushfire Attack Level certificates informed by field surveys and desktop assessments in accordance with Planning for Bushfire Purposes (2006). Her experience within the consulting industry has primarily included a wide range of flora and fauna assessment disciplines as required by a wide range of public and private clients including Centennial Coal, Santos and NSW Roads and Maritime Services. Lauren's knowledge of the Central Coast, Hunter, Greater Lithgow and Liverpool Plains regions has expanded extensively since the commencement of her career.

SELECTED PROJECT EXPERIENCE:

Environment

- Flora and fauna identification and habitat assessment
- Targeted threatened flora and fauna surveys
- Delineation and mapping of vegetation communities
- Endangered Ecological Community (EEC) assessment
- Conducting Field Surveys for Flora, Fauna and Habitat Identification
- Report Preparation including Fauna & Flora Assessments
- Ecological Monitoring and Reporting
- Bushfire Threat Assessment & Management reporting
- Understanding of environmental and bushfire legislation

Ecology

- Northern Beaches Hospital Connectivity and Network Enhancements Project (SMEC) –
 Preparation of a flora and fauna memorandum for two sites proposed to be developed for the Project. Project
 tasks included preliminary desktop assessment, interpretation of legislative requirements, targeted field surveys,
 and assessment of fauna habitat quality and value to threatened species.
- Bulga Mine Annual Fauna Monitoring Lauren has been involved in an annual monitoring program that spans two operations and involves seasonal bird surveys, habitat assessments and the full spectrum of fauna monitoring methodologies targeting threatened species as well as comprising an overall species list, and providing technical input and annual report writing
- Angus Place Longwalls 900 and 910 Flora and Fauna Monitoring (Centennial Coal Angus Place) –
 Pre and postmining baseline surveys were undertaken by Lauren including flora and fauna species diversity
 surveys, vegetation condition assessments and nest box erection. Monitoring of multiple sites provides a
 comparable data set to display any notable changes as a result of longwall mining within this mining lease area.
 Swamp vegetation monitoring was a separate component of this project which required a memorandum to



- CONTINUED -

comment on overall swamp health and potential impacts as a result of surrounding mining activities. This project is ongoing.

Pacific Highway Upgrade-Oxley Highway to Kempsey (NSW Roads and Maritime Services)

Implementation of the Microchiropteran Bat Management Plan prepared for the 37km upgrade of the Pacific Highway between the Oxley Highway and Kempsey on the NSW Mid-north coast. For this project Lauren was involved in the installation of 158 bat roost boxes and the provision of GIS data to inform future monitoring activities.

- Neubeck Open Cut Coal Mine (Centennial Coal) Flora and fauna field surveys over a three year period and the production of the Flora and Fauna Assessment as part of an overiding Environmental Impact Statement were undertaken for the proposed Neubeck open cut coal mine
- Airly Coal Mine Flora and Fauna Surveys (Centennial Coal) A range of flora and fauna surveys were undertaken to inform both the Airly Baseline Survey Report and the Airly Flora and Fauna Report
- Lidsdale Siding Biodiversity Management Plan (Centennial Ivanhoe) Ecological assessments primarliy undertaken for Lidsdale Siding Flora and Fauna Report informed the production of the Lidsdale Siding Biodiversity Management Plan, both of which Lauren was involved in. The BMP outlined areas of ecological importance and ecological issues on site with associated management actions
- Coal Seam Gas Exploration (Santos)- On site supervisor for coal seam gas exploration and clearing activities in the Gunnedah region. Lauren ensured that all contractors and staff on site complied with the Review of Environmental Factors with environmental protection a priority during clearing on site

PREVIOUS EXPERIENCE:

(2011)

Environmental Scientist - Ecobiological Primary roles included bush regeneration and the identification of a wide range of native and non-native plant species for rehabilitation of various sites throughout the Hunter and Central Coast regions. Some ecological surveys and Ecological Assessment reporting was carried out during Lauren's time with Ecobiological

Trainee Ecologist - Pygmy Possum Ecological Consulting (2008-2010)Undertaking ecological field surveys was the primary role at Pygmy Possum Ecological Consulting. Fauna surveys were carried out across the Central Coast, Lake Macquarie and into the Hunter region. Basic reporting and data entry were undertaken throughout Lauren's time with Pygmy Possum Ecological Consulting

VOLUNTEER EXPERIENCE:

- Bush regeneration at Trig Shepards Hill, Bar Beach with Newcastle Landcare (2013);
- Regent Honeyeater habitat restoration in the Capertee region with Birdlife Australia (2012);
- Amphibian (Litoria citropa) acoustic research in the Watagan Mountains, NSW with Carl Gerhardt (2012);
- Biodiversity research for independent researchers and Australian Geographic in East Kimberley (2011);
- Amphibian (Litoria subglandulosa and Mixophyes balbus) research at the New England Tablelands with Marion Anstis, Simon Clulow and Carl Gerhardt (two separate occasions 2010);
- Bandicoot Research in Manly with the Australian Wildlife Conservancy (2010);
- Microbat dietary surveys and tracking at Empire Bay with Leroy Gonsalves (2010);
- Green and Golden Bell frog research at the Sydney Olympic Park (2010);
- Bush-stone Curlew surveys at Empire Bay on the Central Coast undertaking call play back methods (2010).
- Bush regeneration at Wamberal Lagoon Nature Reserve with National Parks and Wildlife Services primarily restoring Littoral Rainforest (EEC) (2007-2010); and



- CONTINUED -

• Fauna research including pit trapping, Elliot trapping, triangulation (for amphibians) and spotlighting for the Watagans fauna database (2007).

MEMBERSHIPS & ACHIEVEMENTS:

- NSW Driver's Licence (Class C)
- OH&S Induction Training (White Card)
- 4WD course
- ChemCert II certification
- Landscape Function Analysis Training
- Member of the Ecological Society of Australia (ESA)
- Member of Birdlife Australia
- Member of the Australian Mammal Society (AMS)

CONFERENCES:

- Australasian Raptor Conference, Adelaide SA (Attendee) 2013
- National Koala Conference, Port Macquarie NSW (Attendee) 2013
- Society for Conservation Biology Conference Oceania, Darwin NT (Attendee) 2012

RPS

Curriculum Vitae

MATTHEW DOHERTY

Technical Director (Ecology)

Bachelor of Landscape Management and Conservation (Land & Water Conservation Major), University of Western Sydney, 2000

Bushland Regeneration Certificate II, Western Sydney Institute of TAFE, 1999

AREAS OF EXPERTISE:

Matt has over 13 years experience years experience in the environmental industry with key skills in project management, survey design, GIS and client relations. Matt's background in local government, state government and private consultancy gives him a high level of appreciation of the environmental and consultancy sector, thus allowing him to take a pragmatic approach to providing balanced outcomes against the legislative and policy framework whilst meeting the aims and objectives of clients and determining authorities.

In his position as Technical Director (Ecology), Matt manages the environment department with extensive input on land development, energy and resources projects. Additionally Matt provides advices and assessment relating to bushfire within NSW. He has experience in conducting comprehensive ecological surveys and preparing associated reporting and advices across a broad range of environs throughout New South Wales, with the majority of projects located in the greater Hunter, Central Coast, Blue Mountains, New England, Mid-West including Gunnedah/ Narrabri and Forster / Great Lakes regions. Matt has also undertaken environmental projects in Queensland, South Australia, ACT and Victoria.

SELECTED PROJECT EXPERIENCE:

- **Transgrid** Ecological survey, targeted threatened species surveys and reporting for establishment of new powerline easements and/or powerline maintenance across the Lower Hunter and Lake Macquarie region.
- Glendale Interchange Project Management, site investigations and ecological constraints and opportunities reporting for a proposed interchange on behlaf of Lake Macquarie City Council.
- Water & Sewer Mains Environmental field surveys and prepartion of REF documentaiton to inform
 applications for the constrution of water and sewer pipelines requried to service urban expansion and land
 development projects.
- Surat Gas Pipeline Project Manager and field team leader for the terrestrial fuana survey, impact assessment and reporting component of a proposed 630km gas pipeline alignment between Dalby(east Surat Gas Basin) in southern Queensland to Gladston on the Central Queensland Coast.
- EPIC Energy QSN3 Gas Pipeline Project Manager for the flora, fauna and habitat survey along with subsequent impact assessment and reporting for an expansion of easement width along the 935km pipeline alignment. The alignment traversed three bioregions from Roma in Queensland to Moomba in South Australia.
- Queensland Hunter Gas Pipeline Ecologial input, reporting, GIS analysis and mapping for input to the NSW route alignment (630km) and final revised impact assessment.
- Hunter Gas Pipeline Input into the environmental management plan for implimentation across the pipeline alignment.
- Santos Ecological Project Manager for consultancy works to Santos within the Gunnedah Basin covering gas explorarion and anciliary activities. Works include field survey, preparation of advices, impact assessments, EPBC referrals, preparation and implimentation of well lease rehabilitation plans, liaison and negotiations with regulators and agencies.
- **Centennial Coal** Project Management, ecological survey, advices and imapct assessment reporting to inform Coal Options study including washery expansion, waste implacement and rail siding upgrade.

- CONTINUED -

- Xstrata Bulga Coal (surface and underground operations) Ecological Project Management for due diligence surveys, annual monitoring surveys and prearation of advices and reporting.
- Cockatoo Coal Project Manager for ecological due diligence works for coal exploration relating to a start up coal mine in the NSW Bylong Valley.
- **Donaldson Coal Mine** Preparation of GIS database and mapping to support mine community engagement initiaitives. These works also involved presentations to the Donaldson Trust.
- Karuah Quarries Project Management, field surveys and annual ecological monitoring.
- Wild Quarries Project Management and reporting of ecological field survey and impact assessment for start up hard rock quarry in the Upper Hunter.

PREVIOUS EXPERIENCE:

Ecologist – Andrews Neil Pty Ltd

Duties included: preparation of Fee Proposals for Ecological Services; General and Targeted Flora and Fauna Surveys including Flora and Fauna Identification; Desktop Studies and Literature Searches; Interpretation and Application of Legislation; report preparation including Threatened Species Assessments, Vegetation Management Plans (Riparian Restoration/ Rehabilitation, Bush Regeneration), Weed Management Strategies, Habitat Management Strategies and Tree Assessments; GIS/ Spatial Analysis and Database Management; Liaison with Client, Stakeholder Groups, State and Local Governing Bodies; Site Supervision of Ecological Conditions; Anabat II Call Analysis; Tree Climbing for installation, maintenance and monitoring of nest boxes.

Project Officer / Horticultural Services - Gosford City Council

Environmental Officer, Dept of Land & Water Concernation Neurostle

Undertook review of noxious weed management; performed vegetation surveys on GCC landfills to identify the presence of noxious weeds; quantify the extent of infestation of each noxious weed species and map the affected areas; developed a management plan for the control of NW species identified in the survey in accordance with relevant legislation. Maintained Japanese Gardens along with City Wide Gardens and Streetscapes.

Linvironmental Onicer - Dept of Land & Water Conservation, Newcastle	1777
Project Officer - Maitland City Council	07/1999 - 12/1999
Project Officer – Brisbane Waters & Gosford Lagoons Catchment Management Committee	03/1998 - 05/1998

MEMBERSHIPS & ACHIEVEMENTS:

- NSW Animal Ethics Research Authority
- NPWS Scientific Investigation Licence (SL100536)
- Senior First Aid
- 4x4 Operation and Handling
- Fire Protection Association Australia (FPAA)
- OH&S Induction Training (White Card)
- Spikeless Tree Climbing Techniques, Total Height Safety
- Landscape Function Analysis Training
- Snake Awarness and Handling Training

2004 - 2005

2003 – 2004

1000



Attachment 3 - Council Foreshore Plan of Management

Trinity Point Foreshore Reserve

Plan of Management



Part of the proposed Baths and Bluff Point Park Area

Prepared for Lake Macquarie City Council by ADW Johnson Pty Ltd

Adopted by Council on 22 August 2016

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1.0 INTRODUCTION

1.1 Introduction

This Plan of Management (PoM) applies to the foreshore at Trinity Point located in the suburb of Morisset Park in the local government area of Lake Macquarie. A total area of approximately 3.95 ha of public reserve is covered under this Plan. Refer to **Figure 1**. The reserve incorporates some 1.6 km of the foreshore of Lake Macquarie.

Trinity Point is located on the south-western shore of Lake Macquarie at Morisset Park. The site is bounded by Lake Macquarie and land approved for urban and tourist development. A marina has been approved and will be constructed on the lake adjoining the reserve.

Lake Macquarie City Council, has identified a need for a Plan of Management that facilitates ongoing public use and management of the reserve.

Currently the reserve is covered by Councils generic Plan of Management, however, the special location, features and proximity to the adjoining tourist facilities warrants a specific plan of management.

1.2 Purpose and Scope of Plan

The Trinity Point Reserve has been acquired by Lake Macquarie City Council for public use. The site has a range of values including biodiversity conservation, heritage, recreation, public infrastructure provision and access to the proposed marina.

A Plan of Management (PoM) is required to ensure the values of land are protected, that the use of the reserve meets a range of community needs and that appropriate management actions are identified and implemented. The existing generic PoM does not make adequate provision for the circumstances of the reserve or its known cultural values.

The reserve will be adjoined by tourist and urban development and Lake Macquarie.

This PoM has been prepared consistent with requirements of the NSW Local Government Act 1993. The Act requires that all community land be subject to a PoM. The Act also requires the management objectives specified for community land be included in the PoM.

The purpose of this PoM is to:

• Provide a PoM for Trinity Point Reserve based on the land categories and management objectives as specified by the NSW Local Government Act;

- Provide a PoM based on the values and circumstances of the reserve that allows for sound ongoing management of the land; and
- Provide a draft PoM that allows for informed public submissions and management recommendations to Lake Macquarie City Council.





A PoM must identify:

- The category of the land (as provided for by the local Government Act 1993);
- The objectives and performance targets of the plan with respect to land;
- The means by which these strategies will be achieved; and
- The methods which will be used to assess whether the strategies are being achieved.

A PoM that applies to just one area of community land, as this one does, must also include a description of:

- The condition of the land, and any buildings or other improvements on the land, as at the date of the adoption of the Plan of Management;
- The use of the land and any such buildings and improvement as at that date;
- The purposes for which the land, and any such buildings or improvements, will be permitted to be used;
- The purposes for which any further development of the land will be permitted, whether under lease or Licence or otherwise; and
- The scale and intensity of any such use or development.

1.3 Land included in Plan of Management

The various land parcels that make up the Reserve are shown in Table 1 below.

Table 1 – Existing Land Title, Tenure and Zonings

Legal Descriptor	Approx. Area ha	Owner	Control and Management	LEP 2014 Zoning	Current Category
Lot 32 DP 1117408	3.46 ha	IWCC	IMCC	RE1 Public Recreation	Contains sewer easements and easement for access to proposed Marina Categorised as natural Area, foreshore, bushland, wetland and escarpment
Lot 34 DP 1117408	0.0808 ha	LMCC	LMCC	SP3 Tourist	Categorised as Park
Lot 105 DP 1090979	0.2245 ha	LMCC	LMCC	RE1 Public Recreation	Categorised as Natural Area, foreshore and wetland
Lot 409 DP 339690	0.1806 ha	LMCC	LMCC	R2 General Residential	Contains sewer easement Categorised as Natural Area, bushland

Zoning and Easements

The zoning of the land is as indicated in **Table 1** above and **Figure 2**. The primary use as provided for by the zonings is public recreation.

There are easements over the reserve as shown in Figure 1.

There are two sets of easements over Lot 32. One set of easements is in favour of Lot 31 DP 117408 and provides for access to the proposed marina and structures. These easements were created before Council acquired the Reserve.

The other set of easements is for Hunter Water Corporation which covers a sewer pump station and an associated rising main on Reserve land adjoining Bardens Bay.

1.4 Structure of the Document

The document is in five sections.

Section 1: Introduction and Scope

Section 2: Site Description including Consultation

A description of the site characteristics including the regional and local context, the main features of the land, and land zoning concluding with categorization of the land in accordance with the LGA 1993.

Section 3: Basis for Management

The legislative and planning context of the land, details of consultation and discussion of the main management issues.

Section 4: Management Strategy

Sets out the management units and objectives for the site and the allowable activities and use for each category.

Section 5: Action Plan

Specified for each management unit are performance targets, the means for achieving targets, responsible parties, performance evaluation criteria and implementation priorities.



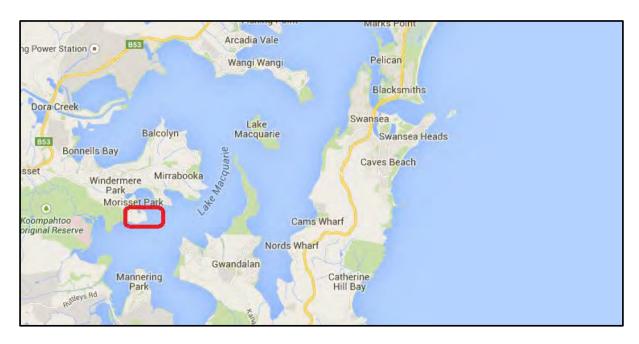


2.0 DESCRIPTION OF THE RESERVE

The land is mostly vacant with only minor works except for a sewer pump station and a rising main. There is some native vegetation remaining along the shoreline but large areas were cleared to support previous uses of the site. The reserve is as shown in **Figure 1**.

2.1 Geographical Context

Trinity Point is located on Lake Macquarie which is in the Hunter Region of NSW some 120 km north of Sydney and 40 km south of Newcastle.



The lake is an estuarine system and connects to the sea via the Swansea Channel.

Figure 3: Location on Lake Macquarie.

Trinity Point is located in the southern half of Lake Macquarie in the suburb of Morisset Park.

2.2 Planning Context

The Reserve is located within the Lake Macquarie local government area and is owned and managed by Lake Macquarie City Council.

Council's management responsibilities for the Reserve are mostly framed by the NSW Local Government Act 1993 (LGA) and the Environmental Planning and Assessment Act 1979 (EPA Act).

The LGA provides the management framework and processes for the land while the EPA and related planning instruments and policies control the use and development of the land.

Plans of Management for public land must be prepared in accordance with the statutory requirements of the LGA Act.

Uses and management of reserves must comply with all applicable planning controls under the EPA Act such as Lake Macquarie Local Environmental Plan 2014.

2.3 Land Details

The Trinity Point Reserve covers some 3.95 ha of the foreshore of Lake Macquarie. The reserve is linear being some 1600 metres in length with a width varying from 20 m to 50 m.

The reserve is partly cleared and partly vegetated. Access to the foreshore is restricted by topography and vegetation. Public use of the foreshore has been limited as the reserve was previously in private ownership.

2.3.1 Topography

The topography varies from low lying, poorly drained land, including saltmarsh, to low but vertical, cliffs.

Some areas are readily accessible by foot but other areas are sufficiently rugged or vegetated to prevent direct access from adjoining land and prevent passage along the foreshore.

There are two readily accessible areas of the foreshore due to the modified vegetation and gentler gradients. One is in the northeast corner close to the proposed marina. The other accessible area is on the southern shore adjoining the former baths.

2.3.2 Ecological Values

The reserve has large cleared and grassed areas adjoining foreshore vegetation.

The remaining native vegetation in the reserve consists of a number of Endangered Ecological Communities. There are also areas of protected mangroves and saltmarsh as shown in **Figure 4**.

The areas of non-indigenous vegetation are generally well drained areas of modest slope which have been maintained for recreation by previous occupants of the site.

All of the remaining native vegetation has statutory protection.



Figure 4: Vegetation & Archaeological Plan.



Image 1: Narrow strip of foreshore vegetation and adjoining grassland area along the eastern shore.



Figure 5: Extract of LMCC Native Vegetation and Corridors Map.

Council has identified a vegetation corridor along the foreshore and partially cleared remnant native vegetation on other areas of the reserve as shown in **Figure 5**.

2.3.3 Drainage / Hydrology

The reserve provides for overland flow and drainage from adjoining land and public roads to the lake. The drainage from the land supports wetland vegetation.

2.3.4 Cultural Values

Insite Heritage prepared a Cultural Heritage Management Plan (CHMP) in 2014 for the adjoining Trinity Point Development which included assessment of the Reserve area.

The CHMP identifies registered Aboriginal sites and specifies management requirements for the sites. There is an established potential for further items of Aboriginal heritage to be uncovered by any future works in the reserve.

There are also sites of European heritage in the reserve; the CHMP also details management requirements for these sites. See **Figure 4** for the location of cultural sites.

The CHMP may be viewed at Council Speers Point and Morisset Libraries.



Image 2: Bushland west of the proposed Baths & Bluff Point Park on the foreshore.



Image 3: Natural shell deposits on the southern shore of Trinity Point.

2.3.5 Adjoining Land Uses

The reserve immediately adjoins the lake and the approved marina and a disused baths structure in poor condition. In the lake adjoining the reserve are substantial areas of seagrass.

On the landward side of the reserve is mostly cleared vacant land. There are approvals and applications over this land for tourist, marina and urban development.

Adjoining the reserve will be public roads, residential, tourist development and the marina. Easements in favour of the development are in place to allow access and servicing of the Marina across the reserve.

2.3.6 Significant Natural Features

Significant natural features are defined by the LGA as follows.

36C Community land containing significant natural features

- (1) This section applies to community land that is the subject of a resolution by the council that declares that the land, being the site of:
- (a) a known natural, geological, geomorphological, scenic or other feature that is considered by the council to warrant protection or special management considerations, or
- (b) a wildlife corridor, is land to which this section applies.

Councils Native Vegetation and Corridors map identifies the land in the reserve as a wildlife corridor, refer to **Figure 5**. Significant natural areas must be categorised as natural areas and managed accordingly.

2.4 Condition of the Land

A description of the condition of the land and facilities on it is a requirement of site specific PoM. The condition of the land is described in the preceding sections.

The reserve is largely undeveloped with few improvements. There are areas of vegetation. Cleared areas have been maintained as grass land.

There is a sewer pump station and a sewer rising main located on reserve land adjoining Bardens Bay. A number of drainage works have been approved over the land. European cultural features on the site include the Sundial Gardens located on a bluff (Bluff Point) overlooking the lake to the south, landscape plantings and "The Grotto".

There is a formed access track and set of old concrete steps leading to the foreshore adjoining the baths area.

The foreshore contains registered sites of Aboriginal heritage.

2.5 Categorisation of the Land

The public reserve land included in this PoM is currently categorised as natural area (foreshore, escarpment and bushland) and a very small area of park (corresponding with Lot 34) under LMCC Plan of Management for Community Land 2011. On adoption of this site specific PoM by Council, the generic POM will cease to apply.

Statutory criteria for categorisation of land are provided in the Local Government (General) Regulation 2005. More than one category can be applied to land. Land can be categorised as an area of cultural significance as well as a natural area or park. Land categorised as a natural area must adopt all appropriate subcategories e.g. a natural area can be both bushland and foreshore.

The draft categories were subject to separate public exhibition prior to finalisation of the draft PoM.

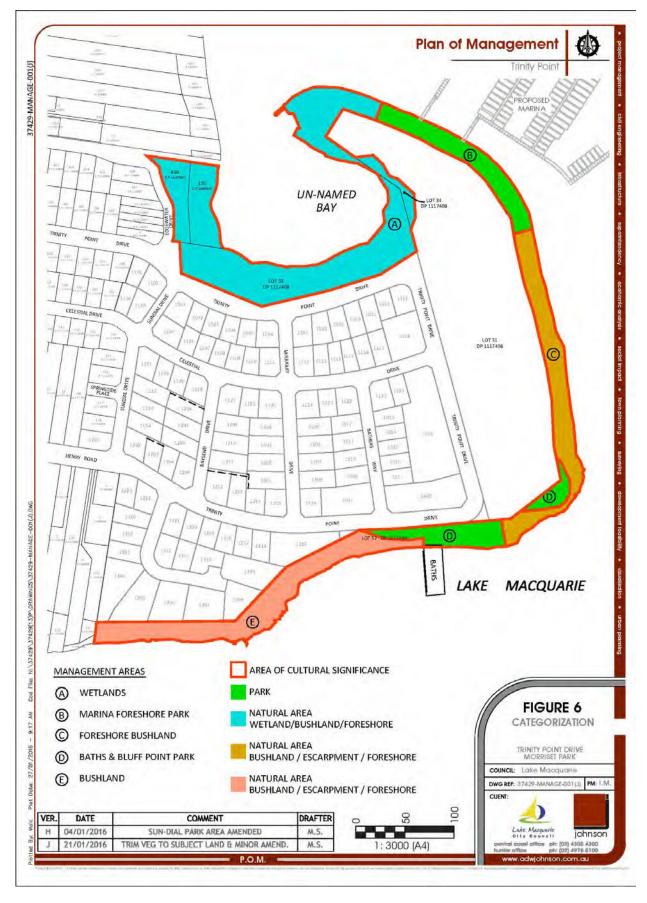
In accordance with the statutory provisions of the LG Act, 1993, it is proposed that the Trinity Point Reserve land be categorised as:

Area of Cultural Significance - the whole of the reserve to address both Aboriginal and European cultural values;

Park - to provide areas for recreation and improvements; and

Natural Area - including the sub categories of foreshore, bushland, wetland and escarpment - to address the natural features of the land.

The categories applied to the reserve are shown in **Figure 6**.





3.0 THE BASIS FOR MANAGEMENT

Council acquired the reserve due to the value to the community of retaining lake foreshores in public ownership.

The role of the PoM is to provide for detailed management of the reserve consistent with broader community values, relevant legislation and policy. This broader context for the PoM is described in this section.

3.1 Community Values

Based on the site attributes the values listed below have been reflected in the longer term management strategies for the reserve (see **Section 4**).

Table 2: Values

Recreational Value	The Reserve has the potential to provide a range of recreation opportunities and encourage healthy, active lifestyles for residents of Morisset Park while also promoting tourism. Council has zoned the reserve for public recreation.			
Ecological Value	gical Value The reserve supports vegetation remnants of state and regional significance and adjoins extensive areas of seagrass within the Lake.			
Cultural Heritage Value	The reserve contains sites of both Aboriginal and non-Aboriginal heritage.			
Social Value	The reserve has the potential to contribute to the community by providing opportunities for recreation, social interaction and community based activity.			
Educational Value	The reserve has the potential to provide for interpretation of natural and heritage values.			
Linkage value	The reserve provides a link with other public foreshore areas around the Lake.			
Visual and aesthetic value	l adioining development. Existing vegetation contributes to			

3.2 Lifestyle 2030 Strategy

The Lifestyle 2030 Strategy provides a long-term strategy for the City and has been incorporated into the Lake Macquarie Local Environmental Plan, 2014.

The vision for the City, held by Council and the community, is that it is a place:

- where the environment is protected and enhanced;
- where the scenic, ecological, recreational, and commercial values and opportunities of the Lake and coastline are promoted and protected;

- with a prosperous economy and a supportive attitude to balanced economic growth, managed in a way to enhance quality of life and satisfy the employment and environmental aims of the community;
- that recognizes, encourages, develops its diverse cultural life and talents, protects, and promotes its heritage.;
- that encourages community spirit, promotes a fulfilling lifestyle, enhances health and social well-being, encourages lifestyle choices, and has opportunities to encourage participation in sport and recreation;
- that promotes equal access to all services and facilities and enables all citizens to contribute to and participate in the City's economic and social development; and
- that promotes affordable housing.

3.3 Legislative Requirements

The management of public land under the ownership of a Council is subject to statutory controls.

The most significant statutory control is the *Local Government Act*, 1993 (as amended) (LG Act, 1993) as the act and the associated regulation (Local Government (General) Regulation 2005). This legislation provides the key framework for the management of land owned by a Council. The Act incorporates legislative requirements, identifies land categories, promotes community participation and active involvement in the decision-making process and maintains process transparency.

The Draft Trinity Point Reserve Plan of Management once adopted supersedes all other Plans of Management covering the land identified in this plan, including the Lake Macquarie City Council Plan of Management for Community Land (2011).

3.3.1 Planning Framework

This PoM is to be used in conjunction with relevant statutory planning requirements and Council policies as well as procedures that govern the management of Community Land.

These policies must be considered in both the planning and management process.

State Environmental Planning Policy Infrastructure No 19 Bushland in Urban Areas

The reserve is mostly zoned RE1 Public Recreation. The RE1 zone objectives make provision for use of the land as public open space. This SEPP contains management objectives for urban bushland zoned for public open space use and makes provision for PoMs to become development control plans for the land. In making such a plan of management Council is required to:

(a) identify the bushland to which the plan applies,

- (b) describe and analyse the bushland taking into consideration the matters listed in clause 2 (2) (a)–(n), and (provided below)
- (c) specify measures to be taken:
 - (i) to implement the specific aims of this Policy,
 - (ii) to enable recreational use of the bushland,
 - (iii) to reduce hazard from bushfire,
 - (iv) to prevent degradation of bushland, including degradation through alteration of drainage patterns, rubbish dumping, infestation with weeds and exotic plants or the intrusion of vehicles, and
 - (v) to restore and regenerate degraded areas of bushland.

The clause 2(2) matters referred to above are:

- (a) to protect the remnants of plant communities which were once characteristic of land now within an urban area,
- (b) to retain bushland in parcels of a size and configuration which will enable the existing plant and animal communities to survive in the long term,
- (c) to protect rare and endangered flora and fauna species,
- (d) to protect habitats for native flora and fauna,
- (e) to protect wildlife corridors and vegetation links with other nearby bushland,
- (f) to protect bushland as a natural stabiliser of the soil surface,
- (g) to protect bushland for its scenic values, and to retain the unique visual identity of the landscape,
- (h) to protect significant geological features,
- (i) to protect existing landforms, such as natural drainage lines, watercourses and foreshores,
- (j) to protect archaeological relics,
- (k) to protect the recreational potential of bushland,
- (I) to protect the educational potential of bushland,

- (m) to maintain bushland in locations which are readily accessible to the community, and
- (n) to promote the management of bushland in a manner which protects and enhances the quality of the bushland and facilitates public enjoyment of the bushland compatible with its conservation.

The objectives promote the management of bushland for a range of community purposes but generally bushland areas to compatible passive recreation.

State Environmental Planning Policy (Infrastructure) 2007, (ISEPP)

ISEPP, Division 12, makes provision for a range of works and development to be permitted without consent on public reserves as follows:

Development for any of the following purposes may be carried out by or on behalf of a council without consent on a public reserve under the control of or vested in the council:

- (a) roads, cycle ways, single storey car parks, ticketing facilities and viewing platforms,
- (b) outdoor recreational facilities, including playing fields, but not including grandstands,
- (c) information facilities such as visitors' centres and information boards,
- (d) lighting, if light spill and artificial sky glow is minimised in accordance with AS/NZS 1158: 2007, Lighting for Roads and Public Spaces,
- (e) landscaping, including irrigation schemes (whether they use recycled or other water),
- (f) amenity facilities,
- (g) maintenance depots,
- (h) environmental management works.

Under Division 25, the SEPP provides for Waterway or Foreshore management activities to be undertaken by or on behalf of Council.

The SEPP also provides for a range of minor recreational structures such as walking tracks and barbeques to be exempt development (no statutory approval or environmental assessment required) provided they are of minimal environmental impact. Under the SEPP works must be assessed for environmental impact before approval by Council.

State Environmental Planning Policy No. 71 Coastal Protection

The whole of the reserve is within the NSW Coastal Zone.

This Policy aims:

- (a) to protect and manage the natural, cultural, recreational and economic attributes of the New South Wales coast, and
- (b) to protect and improve existing public access to and along coastal foreshores to the extent that this is compatible with the natural attributes of the coastal foreshore, and
- (c) to ensure that new opportunities for public access to and along coastal foreshores are identified and realised to the extent that this is compatible with the natural attributes of the coastal foreshore, and
- (d) to protect and preserve Aboriginal cultural heritage, and Aboriginal places, values, customs, beliefs and traditional knowledge, and
- (e) to ensure that the visual amenity of the coast is protected, and
- (f) to protect and preserve beach environments and beach amenity, and
- (g) to protect and preserve native coastal vegetation, and
- (h) to protect and preserve the marine environment of New South Wales, and
- (i) to protect and preserve rock platforms, and
- (j) to manage the coastal zone in accordance with the principles of ecologically sustainable development (within the meaning of section 6 (2) of the <u>Protection of</u> <u>the Environment Administration Act 1991</u>), and
- (k) to ensure that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area, and
- (I) to encourage a strategic approach to coastal management.

The matters listed under SEPP 71 must be assessed before approval of any works in the reserve by Council.

Lake Macquarie Local Environmental Plan 2014,

The land covered by this plan is mostly zoned RE1 Public Recreation (See Figure 2).

The zone objectives for the area covered by the RE1 Public Recreation Zone are to:

- To enable land to be used for public open space or recreational purposes;
- To provide a range of recreational settings and activities and compatible land uses;
- To protect and enhance the natural environment for recreational purposes; and
- To facilitate the preservation of the environmental qualities of land.

Permitted with the consent of Council by the RE1 zone are:

Amusement centres; Animal boarding or training establishments; Boat sheds; Camping grounds; Car parks; Caravan parks; Cemeteries; Charter and tourism boating facilities; Child care centres; Community facilities; Crematoria; Educational establishments; Emergency services facilities; Entertainment facilities; Environmental facilities; Environmental protection works; Flood mitigation works; Function centres; Information and education facilities; Kiosks; Marinas; Markets; Places of public worship; Recreation areas; Recreation facilities (indoor); Recreation facilities (outdoor); Registered clubs; Respite day care centres; Restaurants or cafes; Roads; Signage; Water recreation structures; Wharf or boating facilities.

While a substantial range of uses is permitted in the zone, this PoM identifies a reduced range of uses seen as suitable for the reserve (refer to **Appendices 1 to 5**).

Some 808 m² of the reserve, being Lot 34 DP 117408 is subject to a SP 3 Tourist zoning. Lot 409 DP 339690 is zoned R2 General Residential. The objectives of these two zones are of minimal relevance for the management of public land. As the land is public reserve ISEPP allows works consistent with a PoM for the land.

Statutory Development Approvals

There are development approvals for adjoining land that have implications for the reserve. A Concept Plan Approval for tourist and urban development and a marina provides for development related outcomes within the reserve. Within easements over the reserve the approval allows services and access to the proposed marina and landscaping including viewing platforms. The approvals also require vegetation management plans to be prepared and implemented over the reserve area.

The Concept Plan Approval also makes provision for protection of public access across the reserve. Approval conditions particularly relevant to management of the reserve are the requirement for a public walkway between the Tourist development and the foreshore and requirements under management plans for the protection of foreshore vegetation and the cultural values of the reserve. A residential subdivision also adjoins the reserve and include public infrastructure and drainage work relevant to management of the reserve.

Summary of Legislative Requirements

There is an extensive statutory compliance framework for the site and significant controls over permissible uses on, and public management of, the reserve land.

These statutory controls and management requirements must be applied to the land via the PoM in addition to the management objectives specified in the LGA (refer to Section 4).

Some works for the reserve are already approved via a Concept Plan and residential subdivision and subsequent development applications for the marina and tourist development and will be the responsibility of the adjoining land owners.

Provision for vegetation management in parts of the reserve including preparation of a vegetation management plan required by the approvals for the adjoining development.

3.4 Stake Holders and Consultation

There has been significant public consultation arising from development proposals for adjoining land that has included issues relating to the reserve.

Public consultation conducted by Council has taken place in relation to the proposed categories with the category boundaries having been adjusted as a result.

There were no objections to the suitability of the proposed categories during the consultation phase. Category boundaries were adjusted in response to submissions.

3.5 Existing Use and Facilities

The reserve currently supports a low level of public use mainly due to the former private ownership of the land, a lack of public facilities and a lack of physical accessibility.

No buildings or constructed recreation facilities exist on the reserve. The remnants of a baths structure is located in Lake Macquarie (on Crown land) on the southern foreshore of the reserve but is outside the reserve. The baths rely on access from the reserve.

The reserve hosts significant areas of vegetation but this is largely unmanaged.

Utility service infrastructure located in the reserve includes a sewerage pumping station, and a rising main. Easements are in place over these items of essential infrastructure.

Easements over the reserve will provide for future access and future service provision to the proposed marina and other adjoining development.

3.6 Management Issues

A number of existing management issues have been identified for the reserve through community consultation and from flora and fauna and heritage studies (see below). This Plan of Management considers the issues and proposes management responses to facilitate the long-term management of the reserve.

Issues include:

- General lack of public facilities that would promote community use and manage impacts;
- Potential bushfire hazard, although this is unlikely to be significant;
- Need for public access to the foreshore including the need for facilities and ongoing maintenance;
- The inaccessibility of parts of the reserve and breaks in pedestrian connectivity;
- Limited public resources for improvement, management and maintenance works;
- Need to provide pedestrian access where practicable;
- The presence and protection of cultural heritage sites and the potential for buried relics;
- The need to manage a range of ecological values for the reserve and the adjoining lake;
- The linear nature of the reserve;
- Integration with adjoining development; and
- Integration of management for the range of community values inherent in the reserve lands.

These issues are reflected in the specific objectives in **Section 4** and the action items in **Section 5.0**.

3.7 Opportunities

The reserve can provide opportunity for recreation, conservation and interpretation of natural and cultural heritage values.

The reserve will have adjoining urban and tourist uses. The reserve can both benefit from and complement these adjoining uses. The adjoining uses will need to respect the values of the reserve and may contribute to enhancement and management of the reserve.

Areas most suitable for public recreation are those that have already been mostly cleared, with reasonable access, suitable topography and relationships to adjoining landuse. The other areas of the reserve are more suitable for conservation via bushland and foreshore protection whilst providing for controlled access.

4.0 MANAGEMENT STRATEGY

The aim of management and planning of the Reserve is to provide benefits and opportunities for the local community while protecting existing values.

The management strategies are aimed at providing the community with recreation areas and facilities, essential infrastructure and at providing a basis for the ongoing management of the reserve for vegetation, scenic and heritage conservation purposes.

There are compulsory management objectives to be applied through PoM. These objectives are listed in **Section 4.1**.

4.1 Statutory Management Objectives

Core objectives for the management of community land are provided in the local government act these objectives are as follows.

4.1.1 Area of Cultural Significance

Core objectives for management of community land categorised as an area of cultural significance:

- (1) The core objectives for management of community land categorised as an area of cultural significance are to retain and enhance the cultural significance of the area (namely its Aboriginal, aesthetic, archaeological, historical, technical or research or social significance) for past, present or future generations by the active use of conservation methods.
- (2) Those conservation methods may include any or all of the following methods:
 - (a) the continuous protective care and maintenance of the physical material of the land or of the context and setting of the area of cultural significance,
 - (b) the restoration of the land, that is, the returning of the existing physical material of the land to a known earlier state by removing accretions or by reassembling existing components without the introduction of new material,

- (c) the reconstruction of the land, that is, the returning of the land as nearly as possible to a known earlier state,
- (d) the adaptive reuse of the land, that is, the enhancement or reinforcement of the cultural significance of the land by the introduction of sympathetic alterations or additions to allow compatible uses (that is, uses that involve no changes to the cultural significance of the physical material of the area, or uses that involve changes that are substantially reversible or changes that require a minimum impact),
- (e) the preservation of the land, that is, the maintenance of the physical material of the land in its existing state and the retardation of deterioration of the land.
- (3) A reference in subsection (2) to land includes a reference to any buildings erected on the land.

4.1.2 Park

The core objectives for management of community land categorised as a park are:

- (a) to encourage, promote and facilitate recreational, cultural, social and educational pastimes and activities, and
- (b) to provide for passive recreational activities or pastimes and for the casual playing of games, and
- (c) to improve the land in such a way as to promote and facilitate its use to achieve the other core objectives for its management.

4.1.3 Natural Area

The core objectives for management of community land categorised as a natural area are:

- (a) to conserve biodiversity and maintain ecosystem function in respect of the land, or the feature or habitat in respect of which the land is categorised as a natural area, and
- (b) to maintain the land, or that feature or habitat, in its natural state and setting, and
- (c) to provide for the restoration and regeneration of the land, and
- (d) to provide for community use of and access to the land in such a manner as will minimise and mitigate any disturbance caused by human intrusion, and
- (e) to assist in and facilitate the implementation of any provisions restricting the use and management of the land that are set out in a recovery plan or threat abatement plan

prepared under the <u>Threatened Species Conservation Act 1995</u> or the <u>Fisheries</u> <u>Management Act 1994</u>.

4.1.3.1 Natural Area Foreshore

The legislated core objectives for foreshore category land are:

- (a) to maintain the foreshore as a transition area between the aquatic and the terrestrial environment, and to protect and enhance all functions associated with the foreshore's role as a transition area, and
- (b) to facilitate the ecologically sustainable use of the foreshore, and to mitigate impact on the foreshore by community use.

4.1.3.2 Natural Area Bushland

The core objectives for management of community land categorised as bushland are:

- (a) to ensure the ongoing ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, the flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land, and
- (b) to protect the aesthetic, heritage, recreational, educational and scientific values of the land, and
- (c) to promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbance caused by human intrusion, and
- (d) to restore degraded bushland, and
- (e) to protect existing landforms such as natural drainage lines, watercourses and foreshores, and
- (f) to retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term, and
- (g) to protect bushland as a natural stabiliser of the soil surface.

4.1.3.3 Natural Area Wetland

The core objectives for management of community land categorised as wetland are:

- (a) to protect the biodiversity and ecological values of wetlands, with particular reference to their hydrological environment (including water quality and water flow), and to the flora, fauna and habitat values of the wetlands, and
- (b) to restore and regenerate degraded wetlands, and
- (c) to facilitate community education in relation to wetlands, and the community use of wetlands, without compromising the ecological values of wetlands.

4.1.3.4 Natural Area Escarpment

The core objectives for management of community land categorised as an escarpment are:

- (a) to protect any important geological, geomorphological or scenic features of the escarpment, and
- (b) to facilitate safe community use and enjoyment of the escarpment.

4.2 Management Units

The reserve has been broken up into management units to accommodate appropriate levels of recreational use consistent with the allocated categories and statutory management objectives. Recreational areas and facilities should be concentrated in park category areas. Natural areas should be managed primarily for conservation values while allowing complementary public access. The whole of the reserve should be managed for cultural values.

The various management units that comprise the reserve will each require specific management actions that reflect the attributes and circumstances of each unit. The management units are shown in **Figure 6** and **Figures 7** to **11**.

4.2.1 Management Unit - Area of Cultural Significance

The whole of the reserve should be managed for cultural significance in accordance with the CHMP (**Appendix 6**) and the core objectives for areas of cultural significance (refer to **Section 4.1.1**).

Additional Management Objectives for the Area of Cultural Significance

- Management of the reserve is to comply with requirements of the CHMP.
- Management of park areas will need to balance cultural and recreational values.

Scale and Intensity of Use

As determined for management units A to E and as consistent with protection of cultural values.

Permitted Development

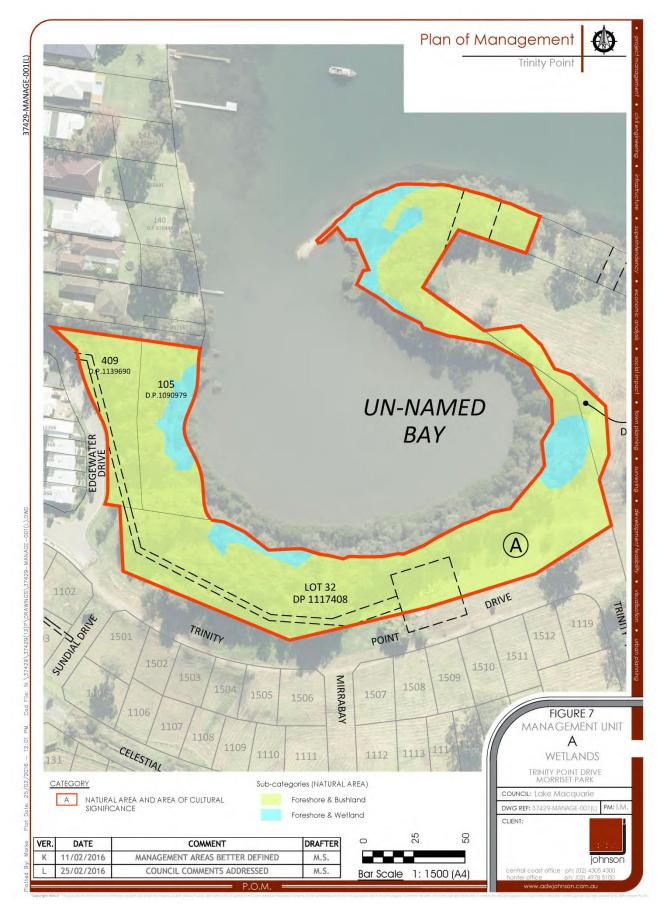
Works permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying development Codes where consistent with the statutory management objectives as applicable for management units A to E.

4.2.2 Management Unit A - Wetlands

This management unit area supports a range of wetland vegetation types including mangroves and saltmarsh. This area also is the natural destination for overland flow drainage from the adjoining catchment. The management unit is shown in **Figure 7**.









Statutory Management Objectives

Natural Area - foreshore, wetland, bushland and Area of Cultural Significance.

Additional Management Objectives for Unit A

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Controlled public access;
- Access to vegetated areas limited to protect mangroves and saltmarsh; and
- Vegetation Management consistent with maintaining and improving conservation values.

Scale and Intensity of Use

Provision for public recreation limited to footpaths, viewing areas, or boardwalks and related signage for direction and interpretation.

Such maintenance activity as required to manage essential sewerage and drainage services.

Permitted Development

Works as per **Appendices 1 to 5** and as permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying development Codes but only where consistent with the management objectives for the unit.

Licenced Activities

As per Appendix 4.

4.2.3 Management Unit B - Marina Foreshore Park

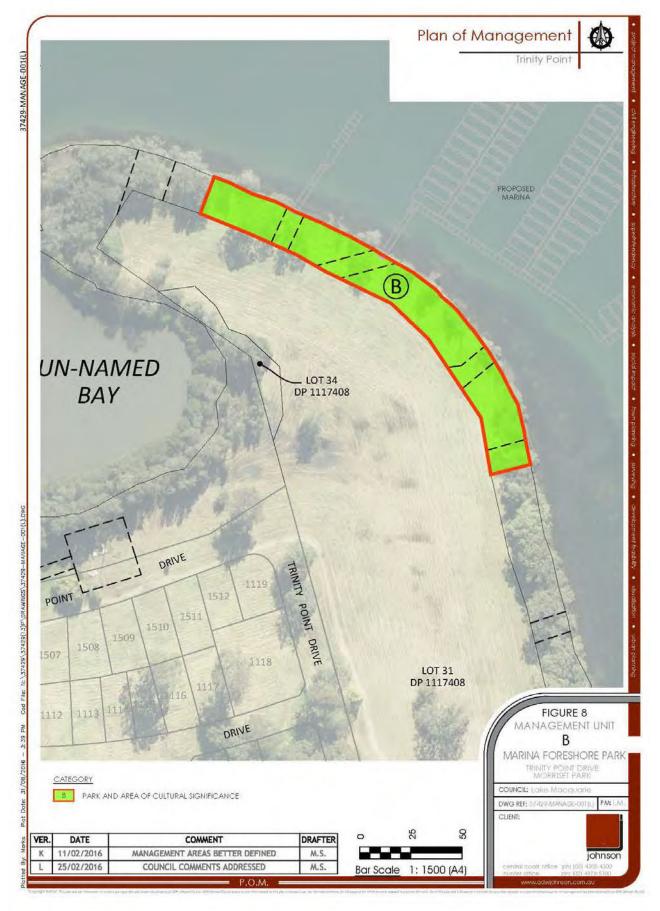
This unit can provide a local opportunity for community recreation including in association with the marina and the facilities provided by the adjoining tourist development. The area is not big enough to support extensive community facilities.

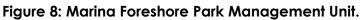


The management unit is as shown in Figure 8.

Image 5: Part of the area identified for Marina Foreshore Park.

The remaining foreshore vegetation is an Endangered Ecological Community.





Statutory Management Objectives

Park and Area of Cultural Significance.

Additional Management Objectives for Management Unit B

- Facilitate recreational use in association with the adjoining marina and tourism developments; and
- Provide marina access consistent with established easements.

Scale and Intensity of Use

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Private Infrastructure use within easements;
- Drainage works;
- Low scale and low intensity recreational uses and facilities generally;
- More intense use (e.g. events) on an occasional basis;
- Vegetation Management where consistent with maintaining the area for recreational use and protection of native vegetation; and
- Foreshore works and enhancement to manage public use.

Permitted Development

Works permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying Development Codes where consistent with the statutory management objectives for the management unit and as determined by **Appendices 1 to 5**.

Licenced Activities

As per **Appendix 4**.

4.2.4 Management Unit C - Foreshore Bushland

This unit supports a very narrow strip of foreshore trees and is mostly cleared. Foreshore access is limited by both vegetation and topography. Passive recreation could be enhanced by integration and sharing of facilities with adjoining development.

A public walkway is proposed in and along the western boundary of this unit. The walkway will be provided under a condition of approval for the adjoining tourist development.

This unit contains a number of significant Aboriginal sites and "The Grotto". All are located at the southern end of the unit but are largely inaccessible because of the topography of Bluff Point.

The management unit is as shown in Figure 9.



Image 6: The Foreshore Bushland management unit looking north towards the Marina Foreshore Park Unit.

Statutory Management Objectives

Natural Area - foreshore, escarpment, bushland and Area of Cultural Significance.





Additional Management Objectives for Management Unit C

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Controlled public assess; and
- Manage for a mix of passive recreation and vegetation conservation.

Scale and Intensity of Use

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Low scale and low intensity passive recreational uses and facilities generally; and
- Vegetation Management consistent with maintaining and improving conservation values.

Permitted Development

Works in accordance with **Appendices 1 to 5** and where permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying development Codes and where consistent with the statutory management objectives for the management unit.

Licenced Activities

As per Appendix 4.

4.2.5 Management Unit D – Baths and Bluff Point Park

This area was used for recreation by former residents of the site. The area has good lake access with a baths structure established in the lake and on the boundary of the Reserve. This area will have direct public access from the adjoining Trinity Point Drive. The southerly aspect provides favourable recreational conditions in warmer summer weather.

A number of cultural sites can be reached from within this management unit which may require specific protection / management measures due to increased recreational pressure. The Norfolk pines planted in this area are also of recognised cultural significance.

The Sundial Garden is located on the bluff at the eastern end of the park management unit. This location also provides extensive views of the lake and distant shores.

The origin of the Grotto is not known. It may relate to occupation of the site by Bert Bailey a noted Australian thespian or it may relate to later occupation by the Little Sisters of Mary. Either potential origin is of local historical significance. Remaining vegetation on the site includes an Endangered Ecological Community.

Establishment of some community recreation facilities is appropriate. Facilities should be provided consistent with low to moderate levels of local recreational use.

The baths adjoining the management area may be restored. If so, access across the reserve may be required for use, construction and maintenance.



Figure 10: Baths Park and Bluff Point Management Unit.

Provision will need to be made to accommodate drainage from the adjoining road. Drainage should be located so as to avoid discharge near the baths and minimise any interference with recreation and cultural values.

The management unit is as shown in Figure 10.

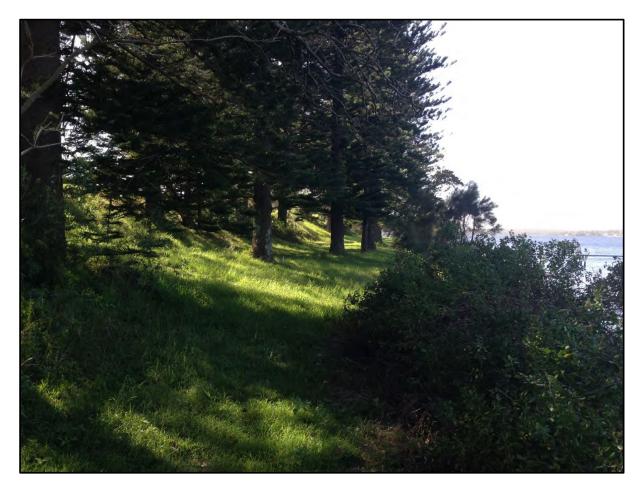


Image 7: The Baths Park area looking east and along the row of Norfolk Pines.

Additional Management Objectives for Management Unit D.

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Provide for access as necessary for management and use of the baths area;
- Provision of facilities to support low to moderate intensity recreational use; and
- Vegetation Management where consistent with maintaining recreational use and protection of native vegetation.

Scale and Intensity of Use

• Management in accordance with the Cultural Heritage Management Plan for the site;

- Low scale and low to moderate intensity recreational uses and facilities generally;
- Such maintenance activity as required to manage essential sewerage and drainage services.
- Foreshore works to manage and promote public use and access; and
- Protect cultural sites.

Permitted Development

Works in accordance with **Appendices 1 to 5** and as permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying Development Codes where consistent with the statutory management objectives for the management unit.

Licenced Activities

As per **Appendix 4**.

4.2.6 Management Unit E - Bushland

There is no ready public access to or along this management unit mostly due to topography. There is no public access link to the west outside the reserve.

The land falls steeply to the waters edge with little opportunity for access to, or along, the foreshore. Back from the foreshore the vegetation is mainly open bushland.

There are potential safety public hazards associated with escarpment areas.

There are recorded Aboriginal sites at the eastern end of this management unit.

The management unit is as shown in Figure 11.



Image 8: Bushland in the western bushland management unit.





Statutory Management Objectives

Natural Area - foreshore, escarpment, bushland and Area of Cultural Significance.

Additional Management Objectives for Management Unit E

- Management in accordance with the Cultural Heritage Management Plan;
- Provide only limited public access opportunities; and
- Manage primarily for vegetation conservation.

Scale and Intensity of Use

- Management in accordance with the Cultural Heritage Management Plan for the site;
- Low scale passive recreational use only;
- No public facilities other than paths / tracks; and
- Vegetation Management consistent with maintaining and improving bushland conservation values.

Permitted Development

Works in accordance with **Appendices 1 to 5** and as permitted under LMCC LEP 2014, ISEPP and SEPP Exempt and Complying Development Codes where consistent with the statutory management objectives for the management unit.

Licenced Activities

As per Appendix 4.

5.0 ACTION PLAN

There are five management units within the reserve, each to their own specific management objectives plus the relevant statutory management objectives.

The management objectives are addressed in the previous section and are summarised in the table below.

Some aspects of reserve management have been allocated to the developer of the adjoining land via concept approval by the NSW Government. This will allow provision of public facilities and have the adjoining development bear some of the initial costs of improvement and management of the reserve.

Table 1 - Applicable Objectives for Each Management Unit of the Reserve

Management Unit	A	В	с	D	E
Site Specific objectives	\checkmark	~	\checkmark	~	~
Area of Cultural Significance	~	~	~	~	\checkmark
Natural area	✓		✓		✓
Foreshore	✓		✓		✓
Wetland	✓				
Bushland			✓		✓
Escarpment			✓		\checkmark
Park		✓		✓	

The ongoing implementation and assessment of management for the reserve is prescribed in the following action plans. The action plans are organised by management unit.

5.1 Management Unit A Wetlands

PERFORMANCE TARGET	MEANS OF ACHIEVEMENT	RESPONSIBILITY	MANNER OF ASSESSMENT	PRIORITY
Manage in accordance with	Apply objectives to approval of all works	LMCC	Regular inspection	High
applicable statutory and site specific / objectives	Limit public uses	LMCC	Apply POM requirements	High
Management in accordance with the Cultural Heritage Management Plan for the site	No works approved or undertaken without adequate assessment of heritage requirement	LMCC	Compliance with CHMP	High
Public access and recreation capacity and provision of recreation infrastructure minimised	Provide for reasonable public access	LMCC	Regularly review capacity of public infrastructure	High
Access to vegetated areas limited to protect mangroves and saltmarsh	Limit access other than by paths and boardwalks	LMCC	Regular inspection of vegetation	High
Manage vegetation	Implement vegetation management plan	LMCC / licencee/ lessee	Compliance with vegetation management plan	High
All land zoned for	Rezone Lot 34 DP 117408 from SP3 Tourist to RE1 Public Recreation	LMCC	Gazettal of rezoning	Medium
Public Recreation	Rezone Lot 469 DP 339690 from R2 Tourist Residential to RE1 Public Recreation	LMCC	Gazettal of rezoning	Medium

5.2 Management Unit B Marina Foreshore Park

PERFORMANCE TARGET	MEANS OF ACHIEVEMENT	RESPONSIBILITY	MANNER OF ASSESSMENT	PRIORITY
Manage in accordance with applicable statutory objectives	Apply objectives to approval of all works	LMCC	Regular inspection Apply POM requirements	High
Management in accordance with the Cultural Heritage Management Plan for the site.	No works approved or undertaken without adequate assessment of heritage requirement	LMCC	Compliance with CHMP	High
Support public use	Provide access Provide and maintain adequate recreational facilities including pathways	LMCC / licencee / lessee	Monitor levels of use and reserve condition	High
Facilitate recreational use	Provide adequate recreational facilities	LMCC / licencee/ lessee	Regular review of recreational capacity and adequacy of maintenance	High
recreational use	Maintain and manage foreshore to support public use and access	LMCC / licencee / lessee	Regular inspection	High
Maintainparkvegetationandimplement VMP	Maintain park vegetation	LMCC / licencee /lessee	Regular inspection and maintenance	Medium

5.3 Management Unit C Foreshore Bushland

PERFORMANCE TARGET	MEANS OF ACHIEVEME NT	RESPONSIBILITY	MANNER OF ASSESSMENT	PRIORITY
Manage in accordance with	Apply objectives to approval of all works	LMCC	Regular inspection	High
applicable statutory and site specific objectives	Limit public uses	LMCC	Apply POM requirements	High
Management in accordance with the Cultural Heritage Management Plan for the site	No works approved or undertaken without adequate assessment of heritage	LMCC	Compliance with CHMP	High
Manage for a mix of public access and vegetation conservation	Limit recreational facilities to pathways and viewing platforms	LMCC	Regular review of recreational capacity and adequacy of maintenance	High
Manage vegetation	Implement vegetation management plan	LMCC / licencee / lessee	Compliance with vegetation management plan	High
Ensure structures and activities within established easements are consistent with the scope of the easement	Adequate assessment of proposed activities and works	LMCC / licencee / lessee	Compliance with provisions of easement	High
Ensure public safety	Fencing and signage to manage public access to escarpment	LMCC	Works funded and undertaken	High

5.4 Management Unit D Baths and Bluff Point Park

PERFORMANCE TARGET	MEANS OF ACHIEVEMENT	RESPONSIBILITY	MANNER OF ASSESSMENT	PRIORITY
Manage in accordance with applicable statutory objectives	Apply objectives to approval of all works	LMCC	Regular inspection Apply POM requirements	High
Management in accordance with the Cultural Heritage Management Plan for the site	No works approved or undertaken without adequate assessment of heritage requirement	LMCC	Compliance with CHMP	High
Support public use	Provide access Provide and maintain adequate recreational facilities including pathways	LMCC / licencee / lessee	Monitor levels of use and reserve condition	High
Maintain foreshore	Maintain and manage foreshore to support public use and access	LMCC / licencee / lessee	Regular inspection	High
Manage vegetation and implement VMP	Maintain park vegetation	LMCC / licencee / lessee	Regular inspection and maintenance	Medium

5.5 Management Unit E Bushland

PERFORMANCE TARGET	MEANS OF ACHIEVEMENT	RESPONSIBILITY	MANNER OF ASSESSMENT	PRIORITY
Manage in accordance with applicable statutory	Apply objectives to approval of all works requirements	LMCC	Regular inspection	High
and site specific objectives	Limit public uses	LMCC	Apply POM requirements	High
Protection of Aboriginal heritage	No works approved or undertaken without adequate assessment of heritage	LMCC	Application of relevant policy and controls	High
Limit public access opportunities	Provide only low level facilities such as tracks	LMCC	Regular review of recreational capacity and adequacy of maintenance	Mod
Manage primarily for vegetation conservation	Implement vegetation management plan	LMCC	Regular inspection	High
Manage public safety	Fencing and other safety work to restrict public access to escarpment	LMCC	Work funded and undertaken	High

Appendix 1	Facilities that may be A	Approved under this Plan
------------	--------------------------	--------------------------

Facilities that may be approved on community land	Nb	Nwe	Ne	Nf	ACS	P
Amenity Buildings	✓	✓		✓	✓	✓
Cycle Paths/shared pathways	✓	✓	✓	✓	✓	✓
Drainage Structures (e.g. water quality and stormwater management devices)	>	~	~	~	~	~
Fencing, Bollards, Gates	✓	✓	✓	✓	✓	✓
Interpretation features	✓	✓	✓	✓	✓	✓
Landscaping/vegetation management	✓	✓	✓	✓	✓	✓
Entrance features, water features					✓	✓
Exercise stations	✓	✓	✓	✓	✓	✓
Pathways, trails, boardwalks, bridges, steps and handrails, viewing platforms, lookouts	~	~	~	~	~	~
Picnic and barbecue facilities, seats, tables, shade structures, garbage and recycling bins, lighting, drinking fountains	*			~	~	~
Playgrounds					✓	✓
Public art, graffiti art, murals	~	✓	✓	✓	✓	✓
Signage (interpretive, security, traffic, park name, prohibition, advertising, temporary)	>	~	~	~	~	~
Stormwater Pipelines (if licensed)	✓	✓	✓	✓	✓	✓
Temporary site sheds and compounds for storage of equipment and plant relating to the construction or maintenance of infrastructure on or near the site. Site to be restored upon removal.					*	~
Utility mains, plant and other ancillary activities, including easements	*	~	~	~	~	~
Water quality control ponds, silt traps and drainage structures	~	~	~	~	~	~
Waterway or foreshore management activities and structures	~	~	~	~	~	~

** Codes – Nb (bushland), Nwe (wetland), Ne (escarpment), Nf (foreshore), ACS (area of Cultural Significance), P (park)

Appendix 2 Activities under this Plan that do not Require Approval

Activities that do not require approval on community land	Nb	Nwe	Ne	Nf	ACS	P
Activities arranged under the auspice of bodies appointed by Council to manage community facilities	~			~	~	~
Barbecues within constructed barbecue structures	✓	✓		✓	✓	✓
Bush walking, research/study/education, sight- seeing	~	~	~	~	~	~
Casual games (e.g. a small group kicking a ball or practising batting/bowling) provided the activity is not contrary to a sign				~	~	~
Children's play	✓	✓	✓	✓	✓	✓
Cycling or rollerblading (on designated cycle paths)	~	~	~	~	~	~
Dogs - walking a dog on a leash, unless prohibited by a sign	~	~	~	~	~	~
Fire hazard reduction works by an authorised body, or by Council	~	~	~	~	~	~
Helicopter landing by emergency services	✓	✓	✓	✓	✓	✓
Kite flying	✓	✓	✓	✓	✓	✓
Removal of vegetation at boundaries with adjoining land to satisfy Council endorsed APZ requirements	~	~	~	~	~	~
Skateboarding/roller blading on designated Council facilities, or on hard courts, provided not contrary to a sign				~	~	~
Picnics by small groups – site not booked	✓	✓	✓	✓	✓	✓

** Codes – Nb (bushland), Nwe (wetland), Ne (escarpment), Nf (foreshore), ACS (area of Cultural Significance), P (park)

Appendix 3 Activities under this Plan that Require Council Approval

Activities that may be approved on community land	Nb	Nwe	Ne	Nf	ACS	Р
Ceremonies	✓	✓	✓	✓	~	✓
Commercial classes				✓	✓	✓
Commercial photograph/filming	✓	✓	✓	✓	✓	✓
Concerts, movie screenings				✓	✓	✓
Private group activities on a booked site (e.g. family reunion, parties)				~	~	*
Professional fireworks displays (subject to D.L.I and Dangerous goods permits)	~		~	~	~	*

** Codes – Nb (bushland), Nwe (wetland), Ne (escarpment), Nf (foreshore), ACS (area of Cultural Significance), P (park)

Note: where a box is blank the activity is prohibited in these areas.

Appendix 4 Authorised Purposes under this Plan for Leases and Licences

Leases and licences that may be approved on community land	Nb	Nwe	Nf	Ne	P	ACS
Memorial, heritage item	✓	✓	✓	✓	✓	✓
Park and foreshore maintenance and management	~	~	~	~	~	~
Vegetation management	✓	✓	✓	✓	✓	✓
Construction and maintenance of authorised facilities	~	~	~	~	~	~
Commercial play/leisure equipment operations					✓	✓
Maintain memorial, heritage item	✓	✓	✓	✓	✓	~
Stormwater pipelines	✓	✓	✓	✓	✓	✓

** Codes – Nb (bushland), Nwe (wetland), Nf (foreshore), Ne (escarpment), P (Park), ACS (area of Cultural Significance)

Appendix 5 Activities that are Prohibited under this Plan

Activities prohibited on community land	Nb	Nwe	Ne	Nf	ACS	Р
Amateur fireworks displays	✓	✓	✓	✓	✓	✓
Any activity that may be considered by an authorised Council officer to be dangerous to other users, or that would compromise the core objectives for the land category	~	~	~	~	~	~
Any activity undertaken contrary to a notice on the land	~	~	~	~	~	~
Asset protection Zone creation for any proposed development on adjoining land	~	~	~	~	~	~
Fires, unless specifically approved by Council	~	~	~	~	~	~
Golf and practice golf	✓	✓	✓	✓	✓	✓
Helicopter landings not authorised in Appendix 2	~	~	~	~	~	~
Placing fill on the land, unless specifically approved by Council (usually will require development consent)	~	~	~	~	~	~
Sale of motor vehicles	✓	✓	✓	✓	✓	✓
Vehicle use (except for maintenance management, emergencies or in association with an activity permitted under this plan)	~	~	~	~	~	~

** Codes – Nb (bushland), Nwe (wetland), Ne (escarpment), Nf (foreshore), ACS (area of Cultural Significance), P (Park)

Appendix 6 Cultural Heritage Management Plan



Trinity Point Marina and Mixed Use Development Cultural Heritage Management Plan

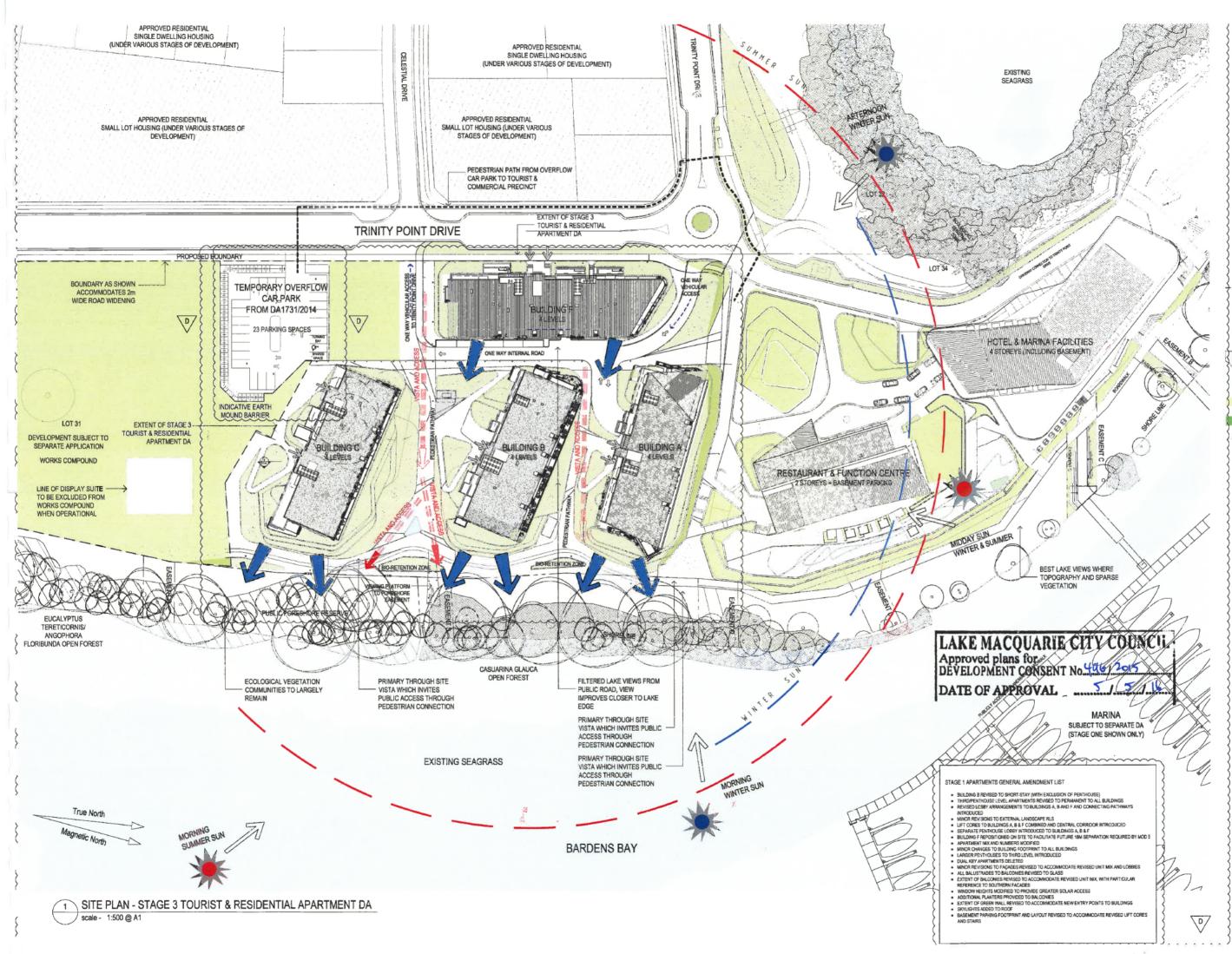
Prepared for Johnson Property Group

May 2015





Attachment 4 - Attachment 4 - Trinity Point tourist & hospitality consent (LMCC DA 1731/2014) and accommodation consent (LMCC DA 496/2015) LMCC Stamped Plan



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STATUS

DEVELOPMENT APPLICATION

Do not scale drawing Verify all dimensions on site. Report any discrepancies in documentation to arcii This drawing is for the purpose of council approval and as such, is not suitable for construction



CHENT

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squillace.com.au

PROJECT TRINITY POINT

LAKE MACQUARIE





JOB NO JPG1402 1:500 @ A1 DEC 2013 1:1000 @ A3

DRAWING TITLE TOURIST & RESIDENTIAL PRECINCT OVERALL SITE PLAN & SITE ANALYSIS

VS

CRAWN BY AA





Attachment 5 - Trinity Point Extract from approved Concept Plan Footprint (MP 06/0309/MOD 5)







Attachment 6 - Bluff Point Arborist Tree Assessment (Terras 2021)

APPENDIX A – SUMMARY TREE ASSESSMENT TABLE

							TREE AS	SESSMEN	T SUMMA	RY				
No	IMAGE No	BOTANICAL NAME	COMMON NAME	AGE CLASS	HEIGHT [M]	DBH ¹ [M]	TPZ [M]	DAB ² [M]	SRZ [M]	ULE	TREE AZ	STRUCT	HEALTH	
151		Ficus rubiginosa	Port Jackson Fig	М	15	0.92 ¹	11.04	1.3	3.69	1B	A2	F	Av	old tree with twisted Potential for Limb we Required. Three Co-don Longer Active or of Co
152		Ficus rubiginosa	Port Jackson Fig		10	0.8	9.6	0.9	3.17	1B	A2	Av	Av	OLD TREE WITH SOME MIN AND MID-CANOPY. IMPRO
153		Ficus rubiginosa	Port Jackson Fig	М	15	1.35	15 ³	1.35	3.75	1B	A2	Av	F	OLD TREE WITH SOME MIN AND MID-CANOPY. IMPRO MINOR MECHANICAL DAM
155		Ficus rubiginosa	Port Jackson Fig	М	22	1.32 ¹	15³	1.6	4.03	1B	A2	F	Av	OLD TREE WITH SOME MIN AND MID-CANOPY. IMPP CONNECTION/NO RISK OF MINOR, PAST DECAY – NO GROWTH CRACKS AND NO
156		Phoenix canariensis	Canary Island Palm	М	10	-	3	-	N/A	1A	A1	Av	Av	REMOVAL OF DEAD PALM
157		Phoenix sp.	Palm	М	13	-	3	-	N/A	2A	A2	Av	Av	GENERALLY HEALTHY SPE ESTIMATED 15% REDUCTIO MONITORED.
158		Ficus rubiginosa	Port Jackson Fig	М	14	1.12	13.44	1.2	3.57	1B	A2	F	Av	OLD FIG WITH UPRIGHT C. INACTIVE. SOME MINOR S BRANCH MID-CANOPY TH/ CURRENTLY PRESENTS AS /
159		Araucaria heterophylla	Norfolk Is Pine	М	26	1.15	13.8	1.47	3.89	1B	A2	Av	Av	Significant tree on sit Specimen. Dieback to ol Trunk occurring betw Bark detected for a fui
A		Melaleuca bracteata	Black Tea-tree	М	12	0.57 ¹	6.84	0.7	2.85	2A	A2	F	Av	CO-DOMINANT TRUNK WI CANOPY. PAST DECAY NO SAPLING GROWING IN BRA
В		Mangifera indica	Mango	OM	3.5	0.18	2.16	0.23	1.79	4B	Z4	F	Р	TREES SUFFERING FROM E
С		Mangifera indica	Mango	OM	4	0.32	3.84	0.32	2.05	4B	Z4	F	Р	CONDITIONS. BOTH TREES

1. MULTI TRUNKED TREES HAVE AN AVERAGE MEASUREMENT CALCULATED IN ACCORDANCE WITH AS 4970. 2. DAB = DIAMETER ABOVE BUTTRESS USED WHEN CALCULATING SRZ 3. MAXIMUM RADIUS

				LEGEN	٧D		
AGE CLASS	Y	YOUNG SAPLING/HAS NOT REACHED 15T ADULT FORM	SM	SEMI-MATURE DBH < 300mm/APPROACHING FULL HEIGHT	M	MATURE DBH BET. 300 -700/APPROACH. MAX HT & SPREAD	OM
STRUCTURE	Р	POOR NUMEROUS STRUCTURAL FAULTS/HIGH RISK OF SEVERE FAILURE	F	FAIR STRUCTURAL FAULTS PRESENT /MODERATE RISK OF SEVERE FAILURE	Av	AVERAGE SOME MINOR FAULTS /MODERATE RISK FOR MAJOR FAILURE	Ex
HEALTH	Р	POOR SIG. SIGNS OF LOST VIGOUR EG DIEBACK, REDUCED CANOPY	F	FAIR SIGNS OF REDUCED VIGOUR EG LEAF UNDER STRESS, STUNTING	Av	AVERAGE LOCALISED PATCHES OF LOST VIGOUR/NOT WIDESPREAD	Ex
RETENTION		TREES TO BE RETAINED		TREES	S TO BE RE	MOVED	



TERRAS REF: 103675-TAR-001-A-TRINITY

COMMENTS

STED FORM RESULTING IN SOME OVERLAPPING AND RUBBING BRANCHES. THIS HAS THE 8 WEAKENING DUE TO REDUCED THICKNESS AND THEREFORE PERIODIC MONITORING IS -DOMINANT TRUNKS WITH PREVIOUS ONES REMOVED. SOME EVIDENCE OF PAST DECAY/NO F CONCERN. IMPROVED CANOPY DENSITY SINCE LAST INSPECTION.

MINOR STEM DECAY THAT IS NOW INACTIVE. SOME MINOR STORM DAMAGE TO THE UPPER PROVED CANOPY DENSITY SINCE LAST INSPECTION.

MINOR STEM DECAY THAT IS NOW INACTIVE. SOME MINOR STORM DAMAGE TO THE UPPER MPROVED CANOPY DENSITY SINCE LAST INSPECTION. SOME EXPOSED SURFACE ROOTS WITH DAMAGE PRESENT.

e Minor Stem Decay that is now inactive. Some Minor Storm Damage to the Upper Improved Canopy Density Since Last Inspection. Co-dominat Trunk with Good & OF Failure. Previous Removal of Low First order Branches with Evidence of - Now Inactive. Longitudinal Cracks Noted Along Major Branches Assumed to be - Noted Construction. NOT OF CONCERN

ALM FRONDS NOTED FROM LOWER CANOPY. GOOD, HEALTHY SPECIMEN.

PECIMEN ALTHOUGH SOME DAMAGE NOTED AT THE BASE OF THE TRUNK WITH AN ICTION TO THICKNESS. NOT CONSIDERED TO BE SIGNIFICANT AT THIS STAGE BUT SHOULD BE

HT CANOPY DUE TO PREVIOUS LIMB REMOVAL. SOME MINOR BRANCH DECAY THAT IS NOW DR STORM DAMAGE TO THE UPPER AND MID-CANOPY. POSSIBLE TORSIONAL CRACKING TO THAT MAY REQUIRE REMOVAL DUE TO RESULTANT WEAKENING OF THE BRANCH ALTHOUGH AS A LOW HAZARD DUE TO LOW LEVEL OF USE.

SITE. CO-DOMINANT LEADER OCCURRING AT THE 18M-20M LEVEL. GENERALLY HEALTHY O UTER BRANCHES NOTED. AN OLD LARGE WOUND NOTED ON THE NORTHERN SIDE OF THE ETWEEN 0.6M AND 1M AGL. GOOD CALLUS BUT SOME UPWARDS DELAMINATION OF THE EURTHER 0.4M

WITH GOOD CONNECTION AND UPRIGHT TRUNKS WITH MODERATLEY DENSE TO THE UPPER NOTED WHERE FIRST ORDER BRANCH HAS BEEN LOST NOW INACTIVE. STRANGLER FIG BRANCH FORK THAT SHOULD BE REMOVED IF THE TREE IS TO BE RETAINED.

M EXPOSED LOCATION WITH EVIDENCE OF SALT/WIND PRUNING. THE SIZE AND AGE OF THE ST THAT THEY WERE INCORRECTLY SITED AND HAVE STRUGGLED UNDER THE PREVAILING SITE RES ARE IN DECLINE AND ARE SUITABLE FOR REMOVAL.

OVER-MATURE/SENESCENT LGE DBH, LGE BRANCH FAILURES/STRUCT FAULTS EXCELLENT SOME MINOR FAULTS/LOW-MOD RISK OF MINOR FAILURES EXCELLENT NO EVIDENCE OF STRESS/SIGNS OF NEW GROWTH/WIDESPREAD THREATENED TREE

TPZ / SRZ | L101 Trinity Point Marina Commercial Residential







JOB NUMBER: PHASE: DWG No: REV: 10367.5 DA L101

DRAWN: DATE: SCALE: DS / PW 26-08-2021 1:250@A3

Johnson Property Group TERRAS ARBOR CULTURAL DOCUMENTv2021.vwx20/5/15

Trinity Point Road

CLIENT:

SITE:

Trinity Point Marina **Commercial Residential**

PROJECT:

REV DATE COMMENTS

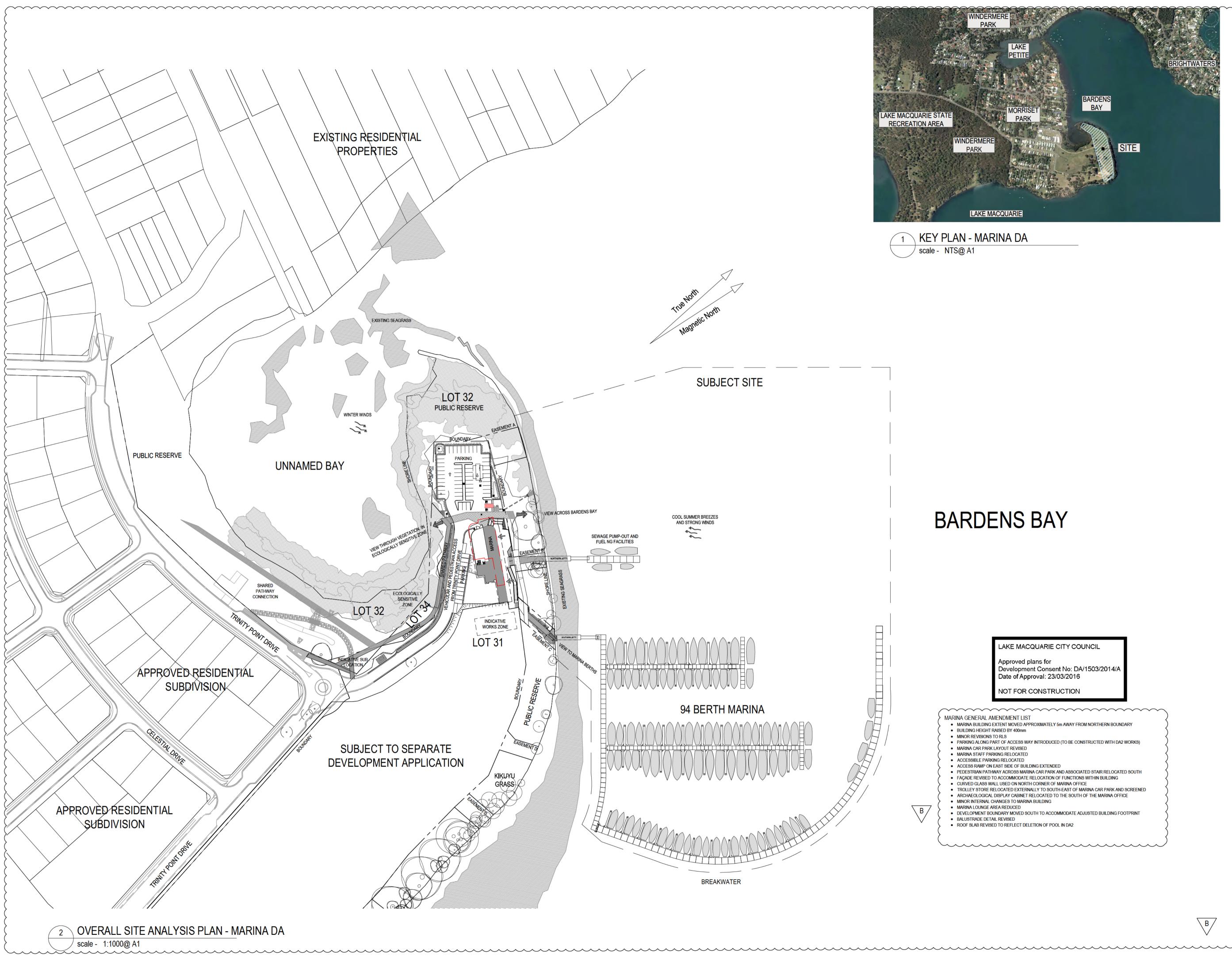
are (DAR) measurements were taken and used to calculate the ones (TPZ) and Structural Root Zones (SRZ) of each accordance with AS 4970 Protection of Traces

LEGEND 01 SURVEYED TREE ID TREE PROTECTION ZONE (TPZ) STRUCTURAL ROOT ZONE (SRZ)

SITE BOUNDARY



Attachment 7 - Stamped Plan LMCC DA 1503/2014





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S A US **SECTION 96**

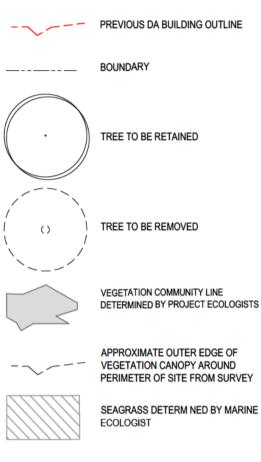
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LEGEND

1:2000 @ A3



A 02 09 14 DA ISSUE

B 18 02 16 SEC ION 96 ISSUE ISS DATE PURPOSE OF ISSUE

CLIEN

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PROJ CT

TRINITY POINT MARINA

LAKE MACQUARIE





JOB NO JPG1402 1:1000 @ A1 JUN 2014

DAT

DRAW NG T T MARINA OVERALL SITE ANALYSIS PLAN

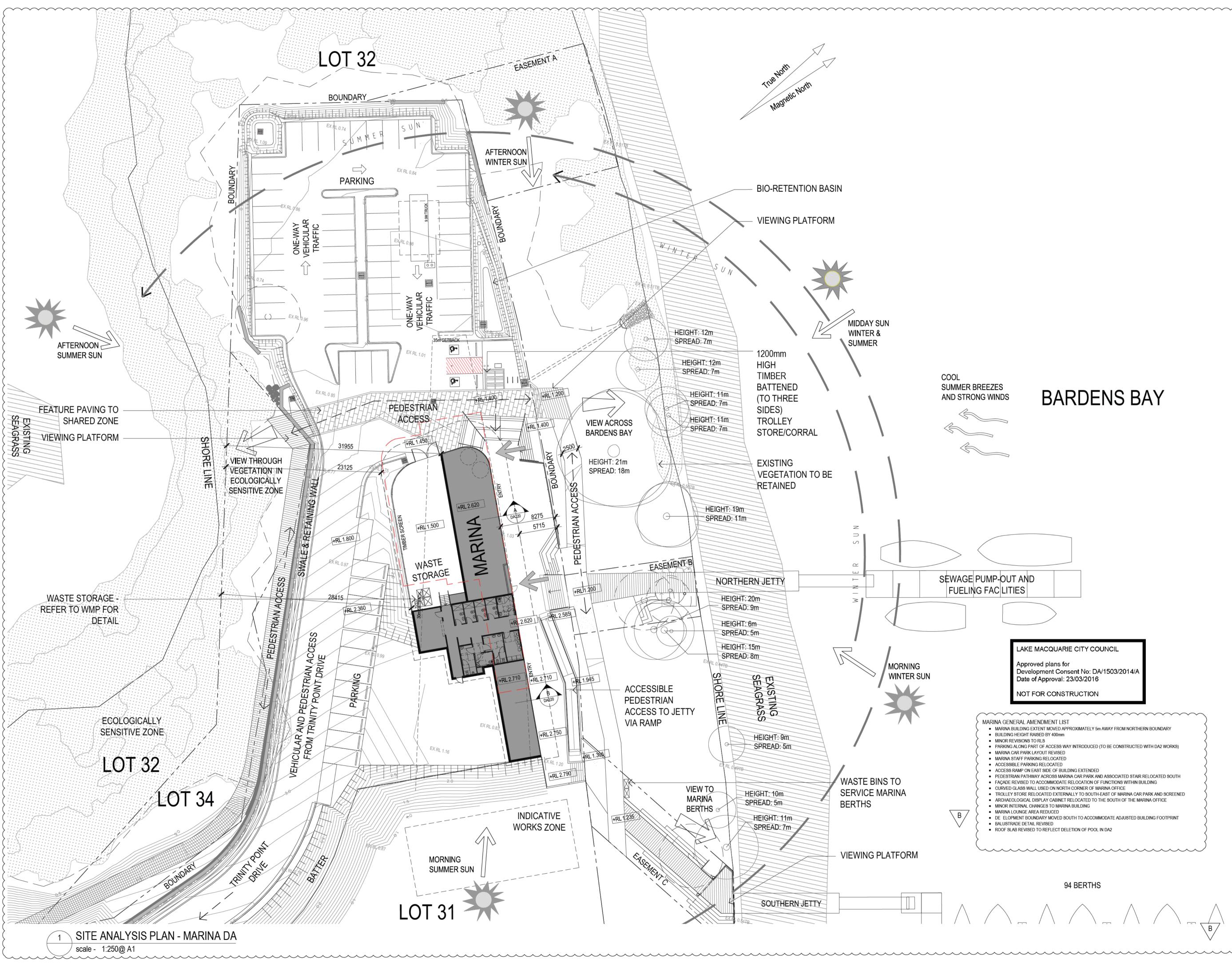
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S A US **SECTION 96**

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NO ES

1:500 @ A

A1: 0 2.5 5 1:250 @ A1

LEGEND

PREVIOUS DA BUILDING OUTLINE

BOUNDARY



TREE TO BE RETAINED

TREE TO BE REMOVED

VEGETATION COMMUNITY LINE DETERMINED BY PROJECT ECOLOGISTS

APPROXIMATE OUTER EDGE OF VEGETATION CANOPY AROUND PERIMETER OF SITE FROM SURVEY

SEAGRASS DETERM NED BY MARINE ECOLOGIST

B 18 02 16 SEC ION 96 ISSUE A 02 09 14 DA ISSUE ISS DATE PURPOSE OF ISSUE

CLIEN

JOHNSON PROPERTY GROUP



ARCHITECTS INTERIOR DESIGNERS

SYDNEY 2 verpoo ane ast Sydney NSW 2010 Ph: +61 2 8354 1300 ax: +61 2 8354 1311 ABN: 24 132 554 753

MELBOURNE

Su te 6001 eve 6 M d Town P aza 246 Bourke Street Me bourne V C 3000 Ph: +61 3 9639 3777 ax: +61 3 9639 3666 ABN: 34 137 620 538

NOMINATED ARCHITECT Vince Squi ace Reg No 6468 (NSW) 17219 (V C) 3677 (Q D)

squillace.com.au

PROJ CT

TRINITY POINT MARINA

LAKE MACQUARIE

DRAW NG NO DA053



SCA JPG1402 1:250 @ A1 JUN 2014

DAT

DRAW NG T T MARINA SITE ANALYSIS PLAN

VS

DRAWN BY ΒN

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JOB NO



Attachment 8 - Stamped Plan LMCC DA 1731/2014









DRAWING LIST

AREA & PARKING SCHEDULE

DA001	LOCATION PLAN & PHOTOMONTAGE	TOTAL SITE AREA	3.66 ha
DA101	OVERALL SITE PLAN AND SITE ANALYSIS	DA 2 SITE AREA	1.342 ha
DA106	SITE ANALYSIS - GROUND FLOOR PLAN		
DA121	BASEMENT PLAN	DA 1 TOTAL GFA:	295 SQ.M
DA130	GROUND FLOOR PLAN		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
DA140	FIRST FLOOR PLAN	DA 1 & 2 TOTAL GFA:	6 732 SQ.M
DA150	SECOND FLOOR PLAN	RESTAURANT / FUNCTION CENTRE	1 556 SQ.M
DA160	THIRD FLOOR PLAN	HOTEL (INCLUDING MARINA)	5 176 SQ.M
DA170	ROOF PLAN	RETAIL + SALES	64 SQ.M
DA200	HOTEL ELEVATIONS	DAY SPA	324 SQ.M
DA210	FUNCTION CENTRE/RESTAURANT ELEVATIONS	BUSINESS CENTRE	94 SQ.M
DA250	SECTIONS	funning	
DA251	SECTIONS		0.8·1 \B.
DA300	GFA DIAGRAMS	TOTAL PROPOSED FSR FOR SITE	\vee
DA301	SHADOW DIAGRAMS		0.01:1
DA800	PHOTOMONTAGE	DA 2 TOURIST & HOSPITALITY PRECINCT	0.183:1
DA801	PHOTOMONTAGE		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
		TOTAL CAR SPACES PROVIDED	
		BASEMENT CAR SPACES PROVIDED	144 CAR SPACES
		ON-GRADE CAR SPACES PROVIDED	78 SPACES
		TOTAL DISABLED SPACES PROVIDED	11 SPACES
		BICYCLE PARKS PROVIDED	6 RACKS / 12 SPACES
		MOTORCYCLE PARKS PROVIDED	11 SPACES
	 BUILDING OVERHANG OVER ACCESSWAY REDUCED IN EXTENT COLUMN TO NORTHERN END OF ACCESSWAY DELETED PARKING ALONG PART OF ACCESS WAY INTRODUCED MARINA CAR PARK LAYOUT REVISED PEDESTRIAN PATHWAY ACROSS MARINA CAR PARK AND ASSOCIATED STAIR RELOCATED SOUTH BASEMENT PARKING FOOTPRINT AND LAYOUT REVISED BASEMENT CAR PARKING DIRECTLY BELOW HOTEL DELETED LOADING DOCK MOVED EAST PORTE COCHERE INTRODUCED WITH PARKING TO ENTRY FORECOURT HOTEL ENTRY/LOBBY RELOCATED TO SOUTH-WEST END OF BUILDING POOL SHAPE AND LOCATION EXPANDED FAÇADE REVISED TO ACCOMMODATE RELOCATION OF FUNCTIONS WITHIN BUILDING LIFT AND STAIR ADDED TO BASEMENT CAR PARK TO PROVIDE ACCESS TO THE HOTEL 5m SETBACK FROM EASTERN BOUNDARY AT SOUTH-EASTERN END OF BUILDING ADOPTED AS PER MOD S TROLLEY STORE RELOCATED EXTERNALLY TO SOUTH-EAST OF MARINA CAR PARK AND SCREENED ARCHAEOLOGICAL DISPLAY CABINET RELOCATED TO THE SOUTH OF THE MARINA OFFICE ADDITIONAL OPERATOR INTERNAL REQUIREMENTS (BAR/RESTAURANT, BUSINESS LOUNGE) INTRODUCED INTERNAL POOL REMOVED AND ASSOCIATED VOID DELETED VOID TO HOTEL RELOCATED WITH INTERNAL RECONFIGURATIONS FAÇADE REVISED TO ACCOMMODATE RELOCATION OF FUNCTIONS WITHIN BUILDING PLANTERS ADDED TO HOTEL SUIT BALCONIES GREEN WALL INTRODUCED TO SOUTH FACADE 	 BASEMENT PARKING FOOTPRINT AND LAYOUT REVISED LIFT AND STAIR ADDED TO BASEMENT CAR PARK TO PROVIDE ACCESS 	VEST OF BALCONY ECT TO HOTEL PORTE COCHERE
VB/~			~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
	AREA BASED ON PRINCIPLES OF FIGURE 37 O	DA2	

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NOTES

LEGEND - OPEN SPACE PLAN

DA 2 OPEN SPACE AREA AREA = 6 695 m²

LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/1731/2014 Date of Approval: 5/05/2016

B 29.01.16 REISSUE FOR DA A 21.10.14 ISSUE FOR DA ISS DATE PURPOSE OF ISSUE

CLIENT

JOHNSON PROPERTY GROUP



ARCHITECTS INTERIOR DESIGNERS

_____ SYDNEY

2 Liverpool Lane, East Sydney NSW 2010 Ph: +61 2 8354 1300 | Fax: +61 2 8354 1311 ABN: 24 132 554 753

MELBOURNE

Suite 6001 , Level 6 , Mid Town Plaza 246 Bourke Street, Melbourne VIC 3000 Ph: +61 3 9639 3777 | Fax: +61 3 9639 3666 ABN: 34 137 620 538

NOMINATED ARCHITECT Vince Squillace Reg No. 6468 (NSW), 17219 (VIC), 3677 (QLD)

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PROJECT

TRINITY POINT

LAKE MACQUARIE





JOB NO. SCALE JPG1402 NTS @ A1 DEC 2013

DATE

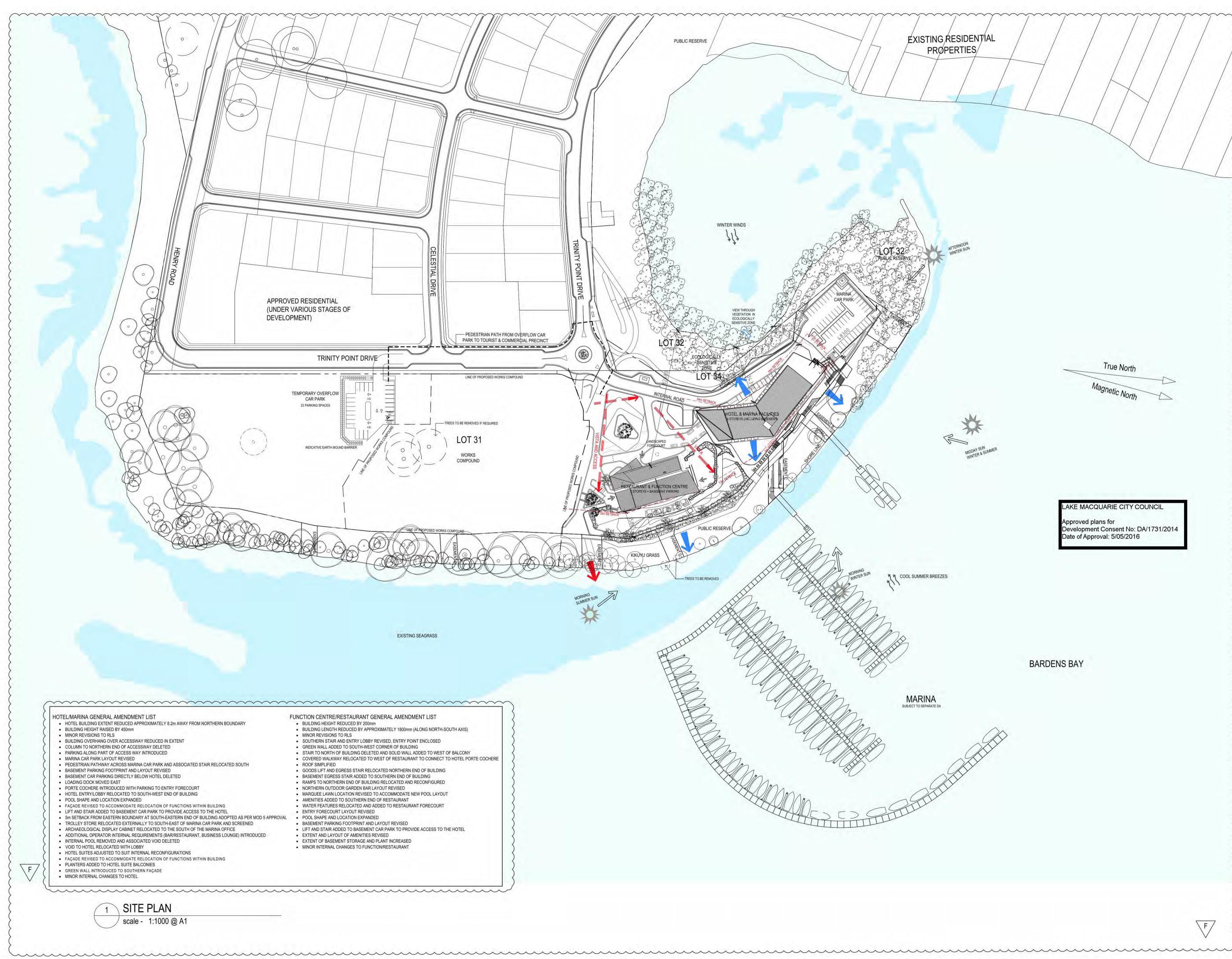
DRAWING TITLE **TOURIST & HOSPITALITY PRECINCT** LOCATION PLAN & PHOTOMONTAGE

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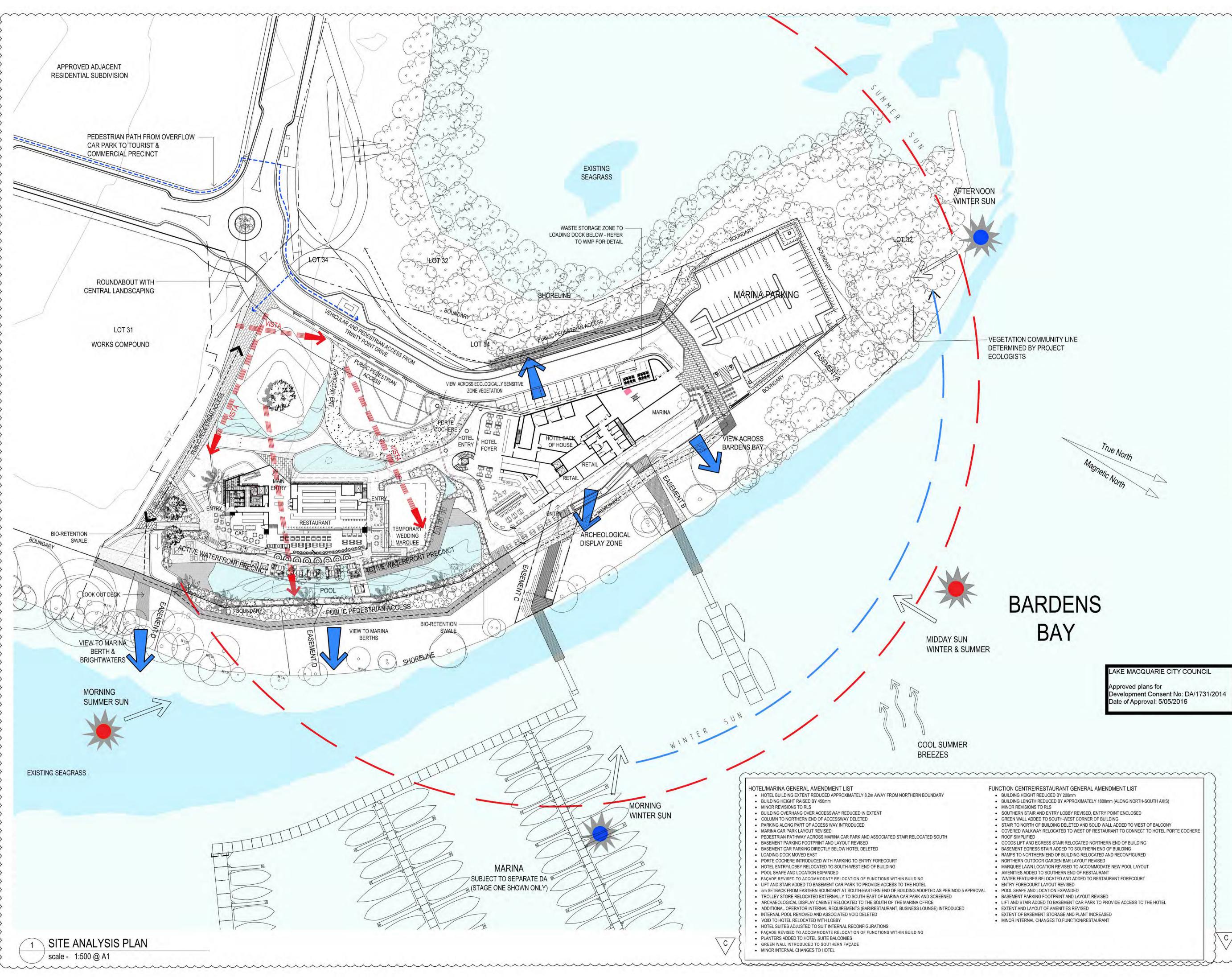


True North Magnetic North LAKE MACQUARIE CITY COUNCIL	
Approved plans for Development Consent No: DA/1731/2014 Date of Approval: 5/05/2016	
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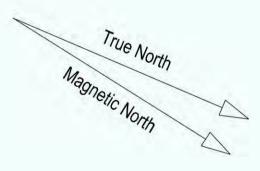
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Pty Ltd, Australi	a. Member Australian
	Institute of Architects
APPLI Do not scale dra Report any discr This drawing is f	LOPMENT CATION wing. Verify all dimensions on site. epancies in documentation to architect. or the purpose of council approval ot suitable for construction.
NOTES	
A3: A1: 0 10	1:2000 @ A3 1:1000 @ A1 50
	VIL DRAWINGS FOR CIVIL WATER DETAILS
	NDSCAPE DRAWINGS APING DETAILS
REFER TO SU LOCATIONS I	RVEY PLAN FOR TREE DETAILS LEGEND
	BOUNDARY
\bigcirc	TREE TO BE RETAINED
(\circ)	TREE TO BE REMOVED
\Box	VEGETATION COMMUNITY LINE DETERMINED BY PROJECT ECOLOGISTS
	SEAGRASS DETERMINED BY MARINE ECOLOGIST
	LINE OF BUILDING FOOTPRINTS AS PER DA SUBMISSION
 F 29.01.16 E 02.10.15 D 27.07.15 C 22.07.15 B 28.10.14 A 21.10.14 ISS DATE 	DA REISSUE DA REISSUE ISSUED FOR INFORMATION UPDATED TEMP. CARPARK
	N PROPERTY GROUP
SYDNEY 2 Liverpool Lan	CTS CDESIGNERS e, East Sydney NSW 2010 1300 Fax: +61 2 8354 1311
ABN: 24 132 55 MELBOURNE Suite 6001 , Lev 246 Bourke Stru Ph: +61 3 9639	94 753 vel 6 , Mid Town Plaza eet, Melbourne VIC 3000 9 3777 Fax: +61 3 9639 3666
ABN: 34 137 62 NOMINATED AR Vince Squillace 17219 (VIC), 363	CHITECT Reg No. 6468 (NSW),
squillace.com	n.au
PROJECT TRINITY F LAKE MACQU	
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	1:1000 @ A1 DEC 2013 1:2000 @ A3 E HOSPITALITY PRECINCT ITE PLAN AND SITE ANALYS

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-VEGETATION COMMUNITY LINE



BARDENS BAY

LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/1731/2014 Date of Approval: 5/05/2016

FUNCTION CENTRE/RESTAURANT GENERAL AMENDMENT LIST BUILDING HEIGHT REDUCED BY 200mm BUILDING LENGTH REDUCED BY APPROXIMATELY 1800mm (ALONG NORTH-SOUTH AXIS) SOUTHERN STAIR AND ENTRY LOBBY REVISED, ENTRY POINT ENCLOSED GREEN WALL ADDED TO SOUTH-WEST CORNER OF BUILDING STAIR TO NORTH OF BUILDING DELETED AND SOLID WALL ADDED TO WEST OF BALCONY COVERED WALKWAY RELOCATED TO WEST OF RESTAURANT TO CONNECT TO HOTEL PORTE COCHERE GOODS LIFT AND EGRESS STAIR RELOCATED NORTHERN END OF BUILDING
BASEMENT EGRESS STAIR ADDED TO SOUTHERN END OF BUILDING RAMPS TO NORTHERN END OF BUILDING RELOCATED AND RECONFIGURED NORTHERN OUTDOOR GARDEN BAR LAYOUT REVISED MARQUEE LAWN LOCATION REVISED TO ACCOMMODATE NEW POOL LAYOUT AMENITIES ADDED TO SOUTHERN END OF RESTAURANT WATER FEATURES RELOCATED AND ADDED TO RESTAURANT FORECOURT ENTRY FORECOURT LAYOUT REVISED POOL SHAPE AND LOCATION EXPANDED BASEMENT PARKING FOOTPRINT AND LAYOUT REVISED • LIFT AND STAIR ADDED TO BASEMENT CAR PARK TO PROVIDE ACCESS TO THE HOTEL EXTENT AND LAYOUT OF AMENITIES REVISED EXTENT OF BASEMENT STORAGE AND PLANT INCREASED MINOR INTERNAL CHANGES TO FUNCTION/RESTAURANT \C,

© This work is copyright. Apart from any use permitted under the copyright act 1968, no part may be reproduced by any process, nor may any other exclusive right be exercised, without the permission of Squillace Architects Pty Ltd, Australia. STATUS DEVELOPMENT APPLICATION Do not scale drawing. Verify all dimensions on site. Report any discrepancies in documentation to architect. This drawing is for the purpose of council approval and as such, is not suitable for construction. NOTES A3: A1: 0 2.5 1:250 @ A REFER TO CIVIL DRAWINGS FOR CIVIL AND STORMWATER DETAILS REFER TO LANDSCAPE DRAWINGS FOR LANDSCAPING DETAILS REFER TO SURVEY FOR TREE LOCATIONS AND DETAILED DRAWINGS OF VEGETAION LEGEND TREE TO BE RETAINED TREE TO BE REMOVED VEGETATION COMMUNITY LINE DETERMINED BY PROJECT ECOLOGISTS PEDESTRIAN PATH FROM OVERFLOW CARPARK TO TOURIST & COMMERCIAL PRECINCT EX RL 1.17 EXISTING SPOT LEVELS +RL ----PROPOSED SPOT LEVELS EXISTING SEA GRASS LINE OF BUILDING FOOTPRINTS AS PER DA SUBMISSION C 29.01.16 DA REISSUE B 22.07.15 ISSUED FOR INFORMATION A 21.10.14 ISSUE FOR DA ISS DATE PURPOSE OF ISSUE CLIENT JOHNSON PROPERTY GROUP SQUII ARCHITECTS INTERIOR DESIGNERS ____ SYDNEY 2 Liverpool Lane, East Sydney NSW 2010 Ph: +61 2 8354 1300 | Fax: +61 2 8354 1311 ABN: 24 132 554 753 MELBOURNE Suite 6001 , Level 6 , Mid Town Plaza 246 Bourke Street, Melbourne VIC 3000 Ph: +61 3 9639 3777 | Fax: +61 3 9639 3666 ABN: 34 137 620 538 NOMINATED ARCHITECT Vince Squillace Reg No. 6468 (NSW), 17219 (VIC), 3677 (QLD) squillace.com.au PROJECT TRINITY POINT LAKE MACQUARIE _____ DRAWING NO. ISSUE DA106





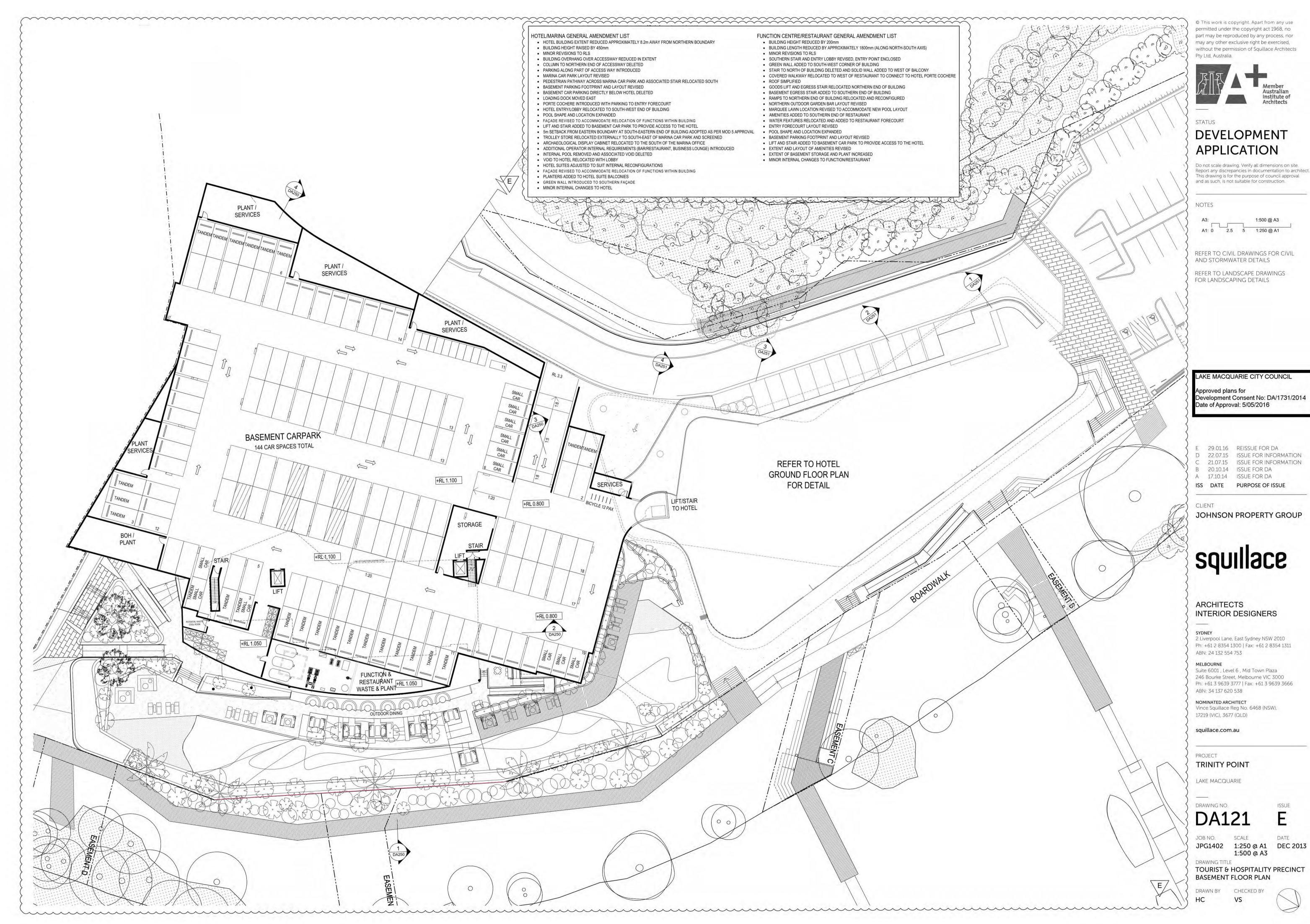
1:1000 @ A3 DRAWING TITLE

TOURIST & HOSPITALITY PRECINCT SITE ANALYSIS PLAN AT GROUND FLOC

DRAWN BY CHECKED BY MC VS



JOB NO.

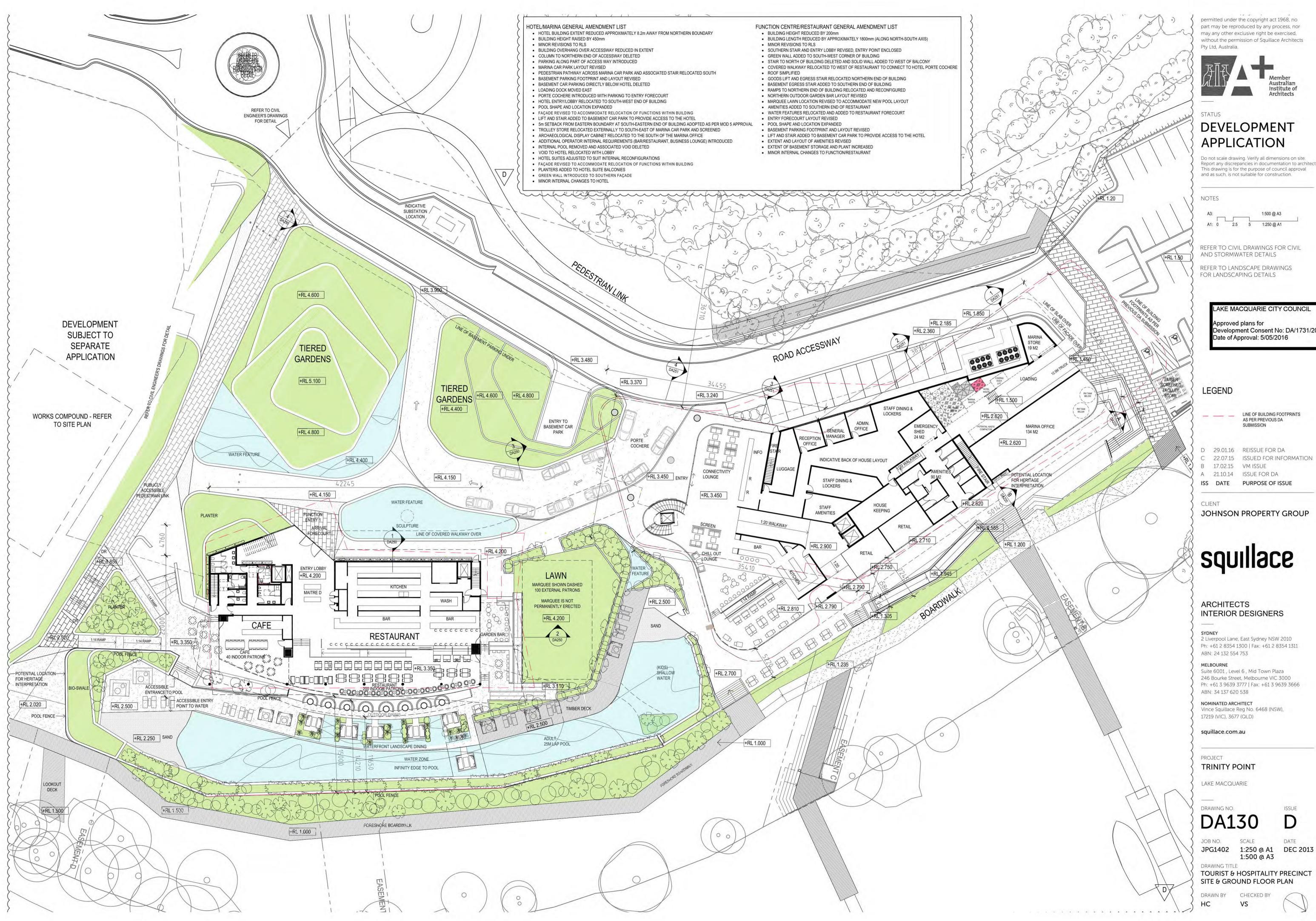


Report any discrepancies in documentation to architect.

Development Consent No: DA/1731/2014

ISS	DATE	PURPOSE OF ISSUE
А	17.10.14	ISSUE FOR DA
В	20.10.14	ISSUE FOR DA
С	21.07.15	ISSUE FOR INFORMATION
D	22.07.15	ISSUE FOR INFORMATION
E	29.01.16	REISSUE FOR DA

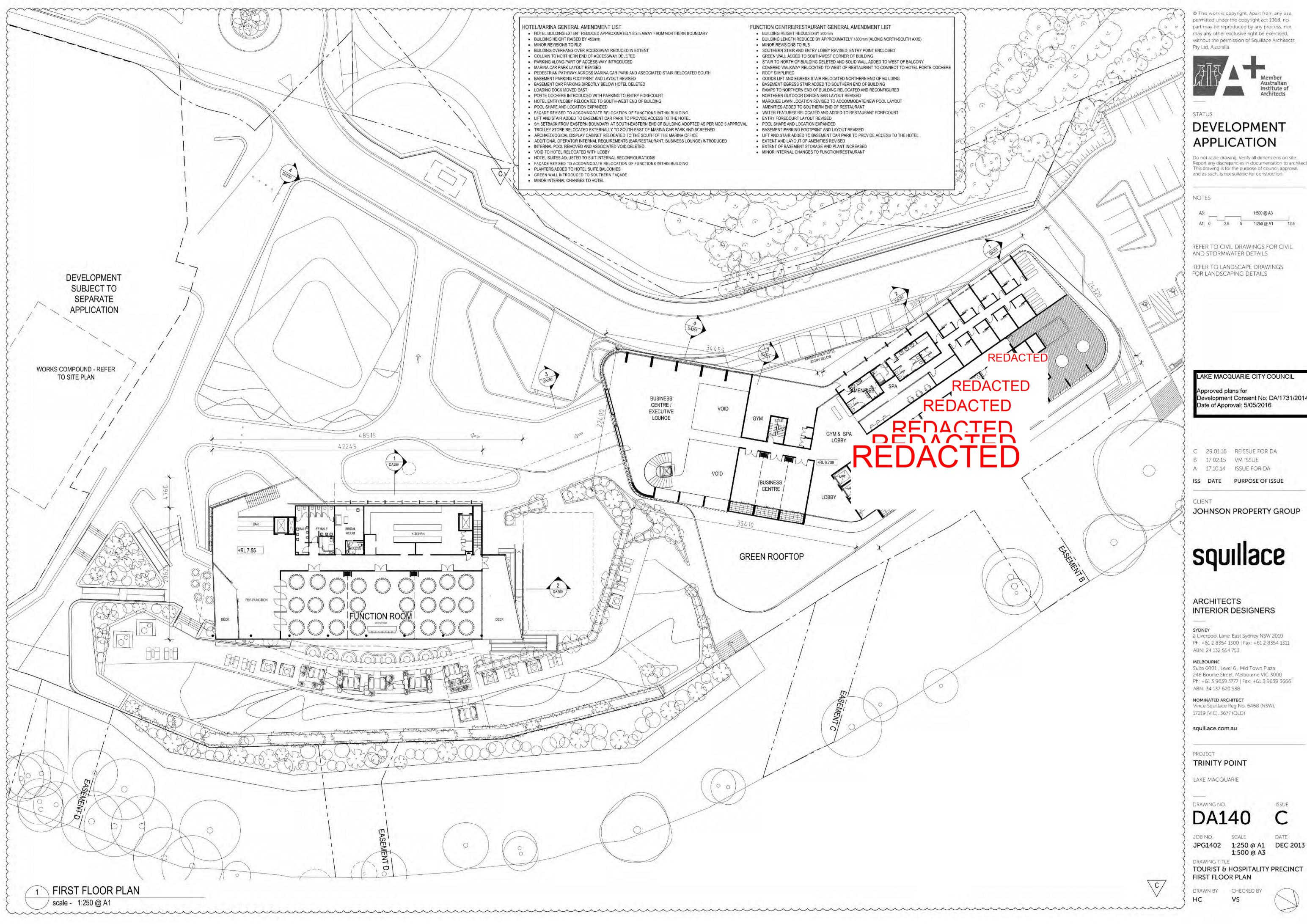
TOURIST & HOSPITALITY PRECINCT



Report any discrepancies in documentation to architect.

Development Consent No: DA/1731/2014

ISS	DATE	PURPOSE OF ISSUE	
A	21.10.14	ISSUE FOR DA	
В	17.02.15	VM ISSUE	
С	22.07.15	ISSUED FOR INFORMATION	
D	29.01.10	REISSUE FOR DA	

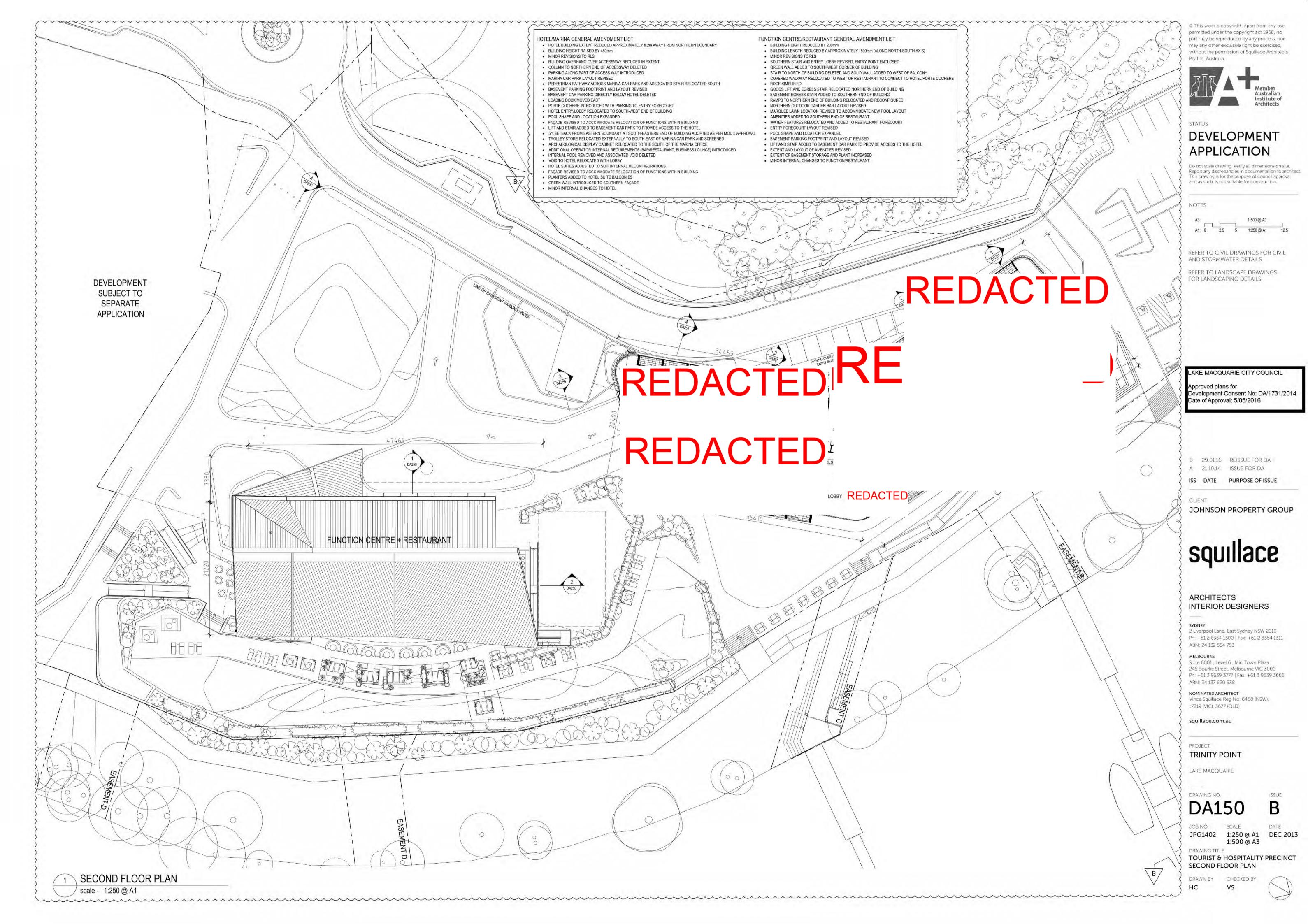


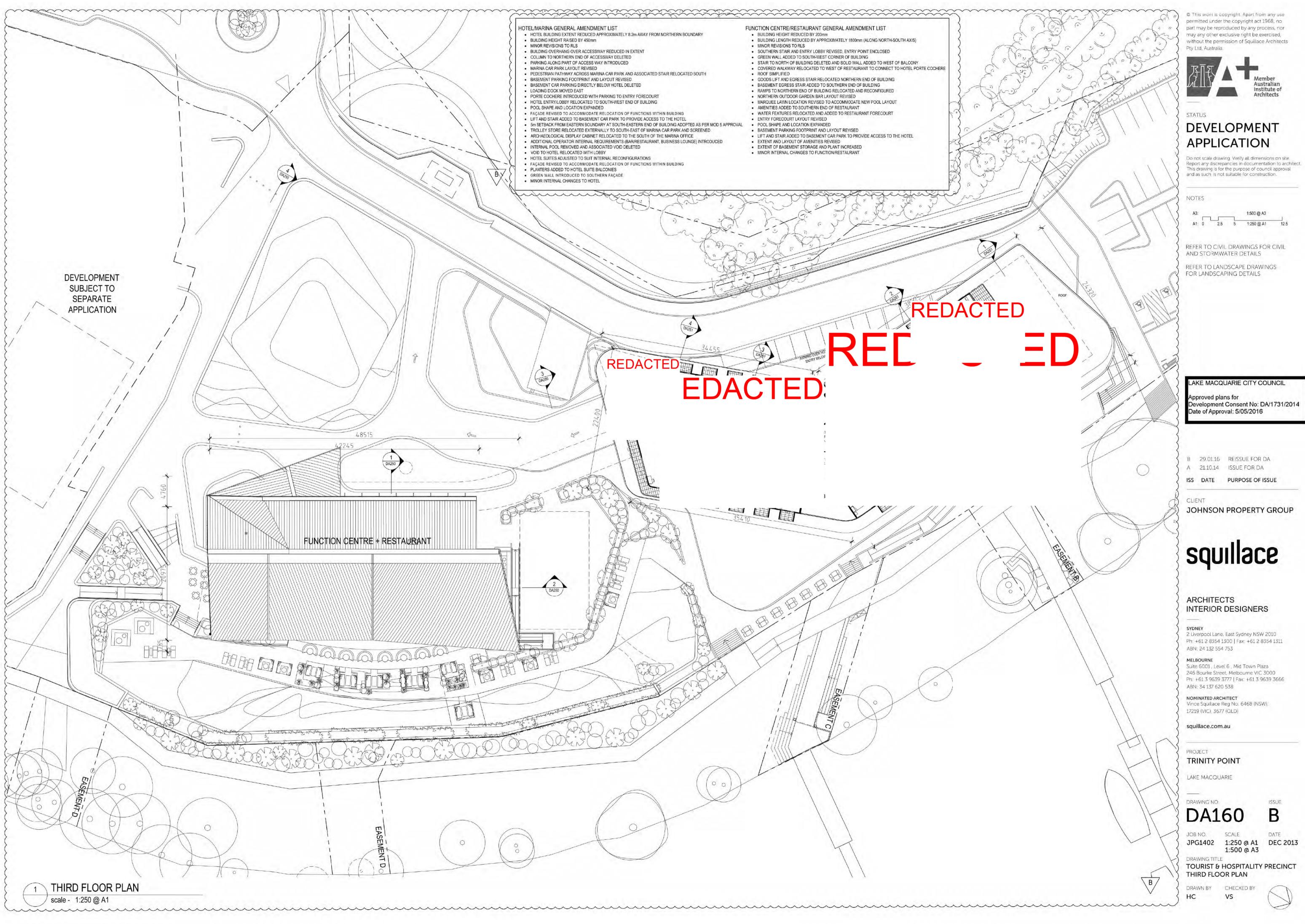
Report any discrepancies in documentation to architect. This drawing is for the purpose of council approval

Development Consent No: DA/1731/2014

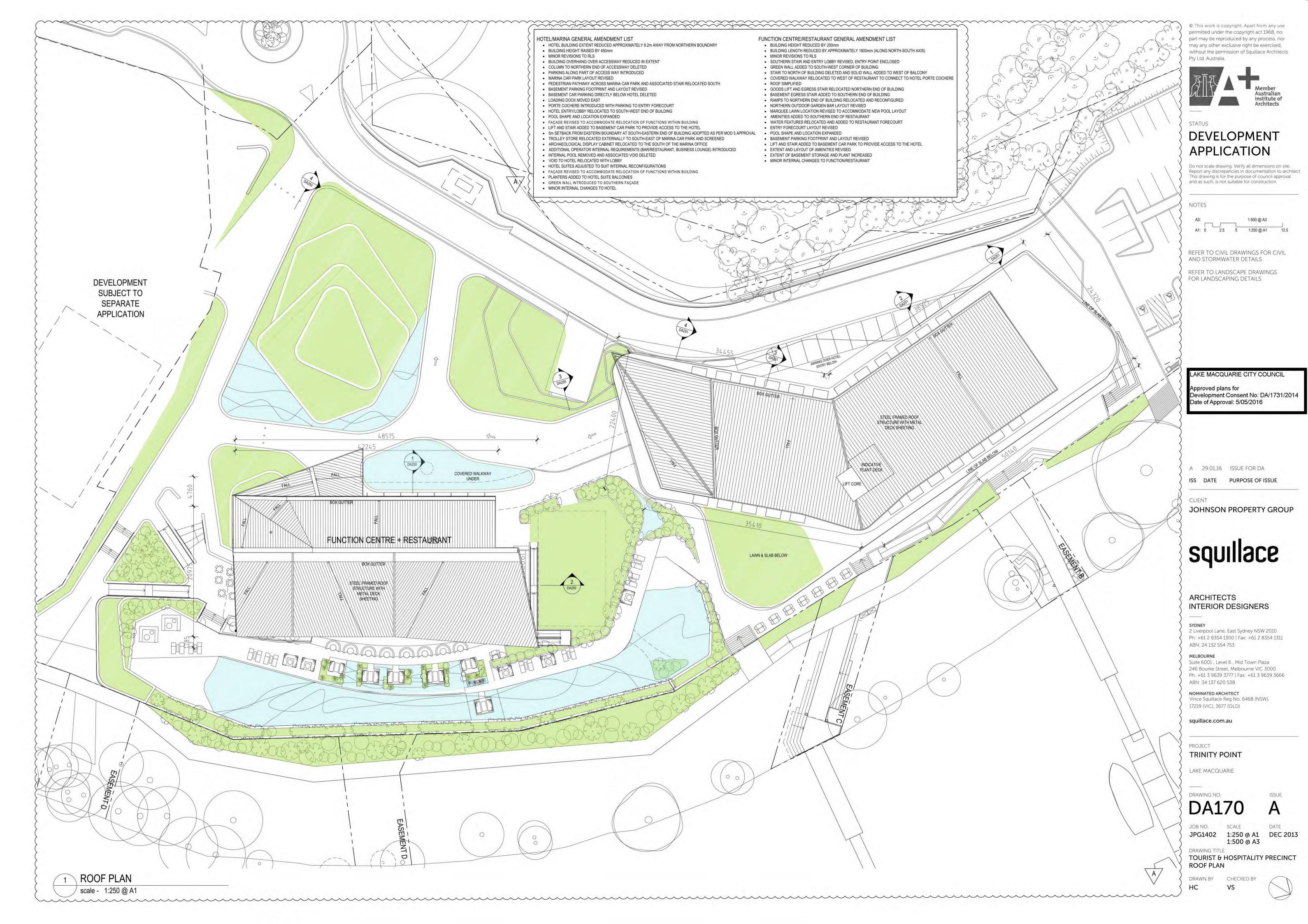
ISS	DATE	PURPOSE OF ISSUE
A	17.10.14	ISSUE FOR DA
В	17.02.15	VM ISSUE
С	29.01.16	REISSUE FOR DA

TOURIST & HOSPITALITY PRECINCT

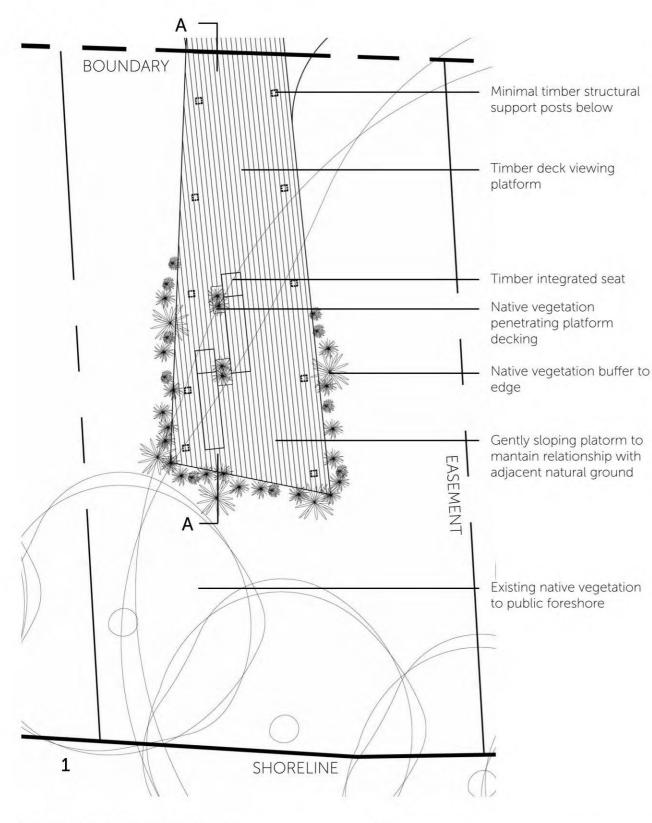




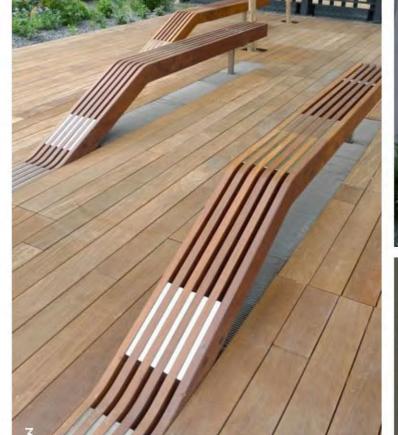
ISS	DATE	PURPOSE OF ISSUE
A	21.10.14	ISSUE FOR DA
В	29.01.16	REISSUE FOR DA



- Viewing Platform Plan NTS 1
- 2 Precedent Image - Native vegetation buffer to edge of platform
- 3 Precedent image - Timber seating integrated to decking
- 4 Precedent Image - Native vegetation penetrating viewing platform at discreet locations
- 5 Precedent Image - Seating forms part of decking
- 6 Viewing Platform Section A-A - NTS









VIEWING PLATFORMS Trinity Point Lake Macquarie 71 Trinity Point Road, Morriset NSW 2264

LAKE MACQUARIE CITY COUNCIL

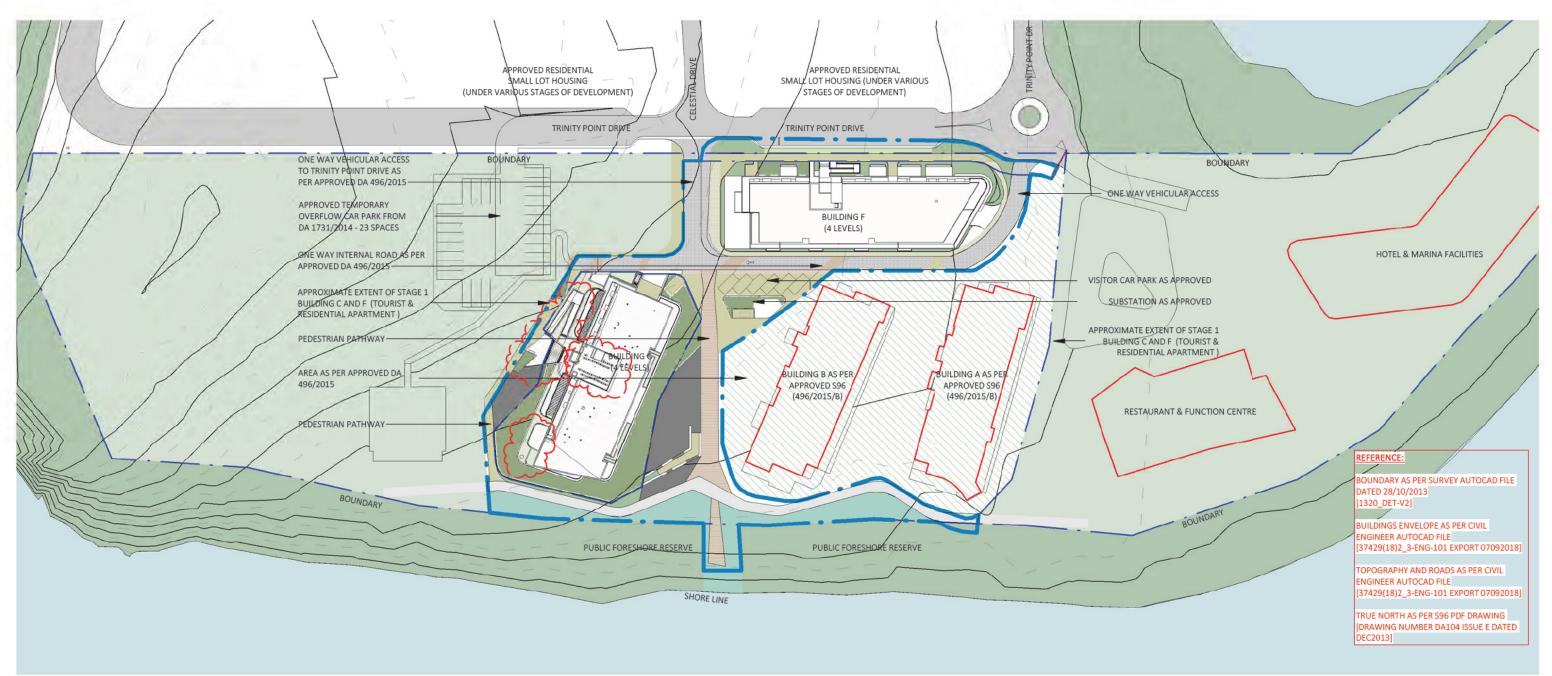
Approved plans for Development Consent No: DA/1731/2014 Date of Approval: 5/05/2016

6

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Attachment 9 - Stamped Plan LMCC DA 496/2015



LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/496/2015/E Date of Approval: 08/11/2019

NOT FOR CONSTRUCTION

Dickson Rothschild D.R. Design (NSW) Pty. Ltd. 65-69 Kent St, Millers Point, Sydney, NSW 2000 ABN: 35 134 237 540

Phone: +61 2 8540 8720 ndickson@dicksonrothschild.com.au www.dicksonrothschild.com.au Nominated Architect: Robert Nigel Dickson Registration No: 5364

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REV	DESCRIPTION	DATE	ISSUED	CHECKED
J	ISSUE FOR REVIEW	29/10/2018	RD	VT
K	ISSUE FOR REVIEW	30/10/2018	RD	VT
L	ISSUE FOR COUNCIL	02/11/2018	DH	VT
Μ	ISSUE FOR REVIEW	05/11/2018	RD	VT
Ν	ISSUE FOR INFORMATION	06/11/2018	RD	VT
Р	ISSUE FOR INFORMATION	07/11/2018	RD	VT
Q	ISSUE FOR INFORMATION	07/11/2018	RD	VT
R	ISSUE FOR COUNCIL	08/11/2018	DH	VT
S	ISSUE FOR \$4 55	04/09/2019	OP	FC

REV S:

CHANGES TO BUILDING C ROOF PLANT, PLANTERS AND FRONT ENTRY

Trinity Point

CHENT

Trinity Point, Morisset Park, Lake Macquarie NSW

Johnson Property Group

PROJEC 18-SCALE

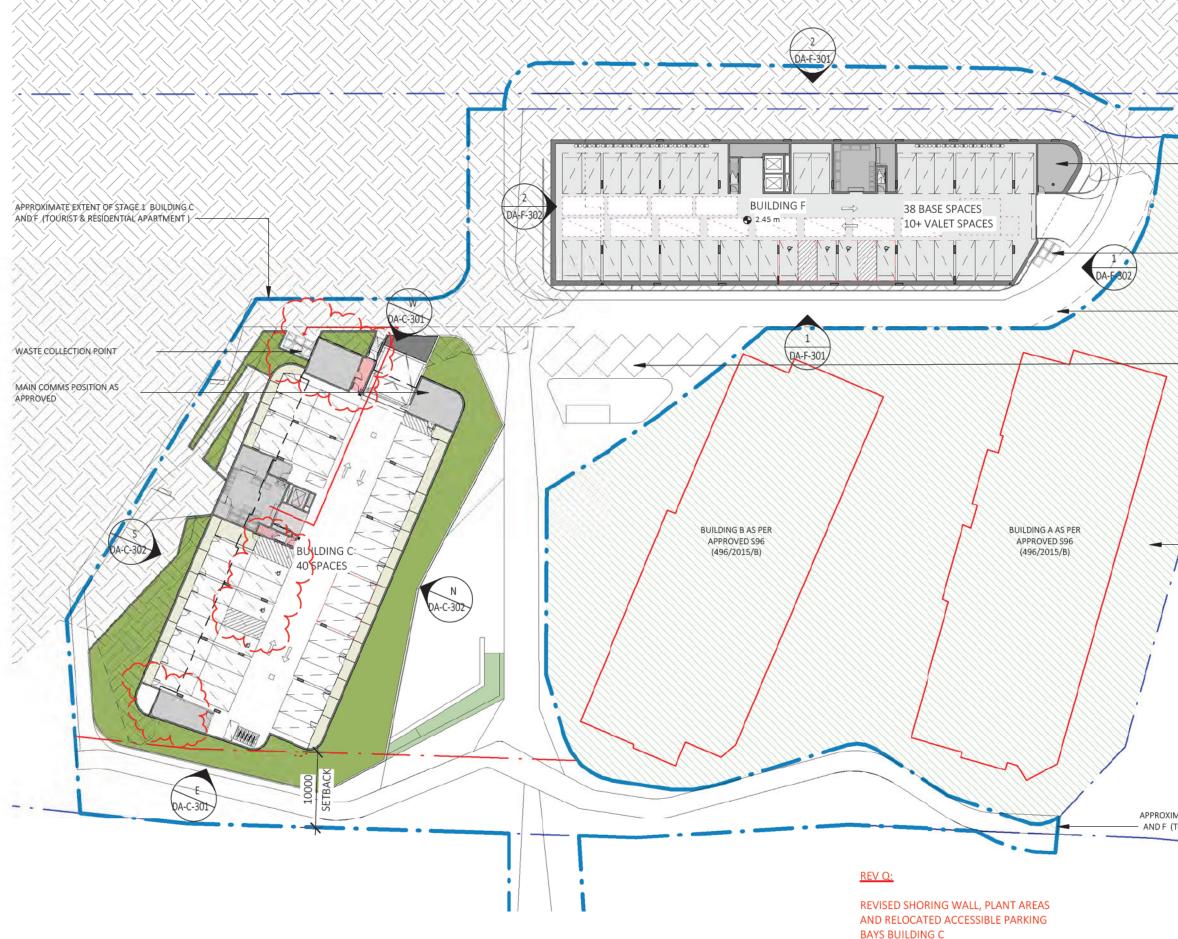
Section 4.55 lodgement

DRAWING SITE PLAN

project no. 18-065	DRAWING NO. DA-0-111	REVISION	REVISION DATE 04/09/2019
scale @ a3 1 : 1000		drawn RD	authorised ND
0			



D09466072



Dickson Rothschild D.R. Design (NSW) Pty. Ltd. 65-69 Kent St, Millers Point, Sydney, NSW 2000 ABN: 35 134 237 540

Phone: +61 2 8540 8720 ndickson@dicksonrothschild.com.au www.dicksonrothschild.com.au Nominated Architect: Robert Nigel Dickson Registration No: 5364

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н	ISSUE FOR REVIEW	30/10/2018	RD	VT
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Μ	ISSUE FOR INFORMATION	07/11/2018	RD	VT
N	ISSUE FOR COUNCIL	08/11/2018	DH	VT
Р	ISSUE FOR \$4 55	04/09/2019	OP	FC
Q	ISSUE FOR \$4 55	09/09/2019	OP	FC

Trinity Point

Trinity Point, Morisset Park, Lake Macquarie NSW

CHEN

Johnson Property Group

proje 18-SCAL 1:

Section 4.55 lodgement

BASIX REQUIREMENTS

3. Commitments for Residential flat buildings - Building C

(a) Dwellings

(i) Water:

(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below as private landscaping for that dwelling. (This area of indigenous vegetation is to be contained within the "Area of gard and lawn" for the dwelling specified in the "Description of Project" table).

(e) The applicant must not install a private swimming pool or spa for the dwelling with a volume exceeding that specified for it in the table below

(g) The pool or spa must be located as specified in the table.

(h) The applicant must install for the dwelling each alternative water supply system with the specified size listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding specified (excluding)). any area which supplies any other alternative water supply system) and to divert overflow as specified. Each system must be connected as specified.

(ii) Energy

(b) The applicant must install each hot water system specified for the dwelling in the table below so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling then the applicant must connect that central system to the dwelling so that the dwelling's hot water is supp ied by that central system.

(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.

(iii) Thermal Comfort

(d) The applicant must show on the plans accompanying the development application for the proposed development all matters which the Thermal Confort Protocol requires to be shown on those plans. Those plans must bear stamp of endorsement from the Accredited Assessor to certify that this is the

(g) Where there is an in-slab heating or cooling system the applicant m (aa) Install insulation with an R-value of not less than 1.0 around the ve edges of the perimeter of the slab; or

(bb) On a suspended floor install insulation with an R-value of not less than 1.0 underneath the slab and around the vertical edges of the perimeter of the slab

(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.

(b) Common areas and central systems/facilities

(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) spec field in the "Central systems" column of the table below, in each case the system must be sized be configured and be connected as specified in the table.

(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.

(ii) Energy

(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case the system or fixture must be of the type and meet the spec fications listed for it in the table.

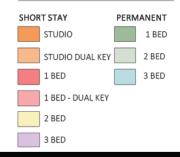
6. Commitments for common areas and central systems/facilities for the development (non-building specific)

(i) Wate

(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) spec field in the "Central systems" column of the table below. In each case the system must be sized be configured and be connected as specified in the table.

(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.

LEGEND



APPROXIMATE EXTENT OF STAGE 1 BUILDING C AND F (TOURIST & RESIDENTIAL APARTMENT

LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/496/2015/E Date of Approval: 08/11/2019

NOT FOR CONSTRUCTION

BASEMENT SITE PLAN

JECT NO.	DRAWING NO.	REVISION	REVISION DATE
3-065	DA-0-210	Q	09/09/2019
.E @ A3		DRAWN	AUTHORISED
: 500		RD	ND



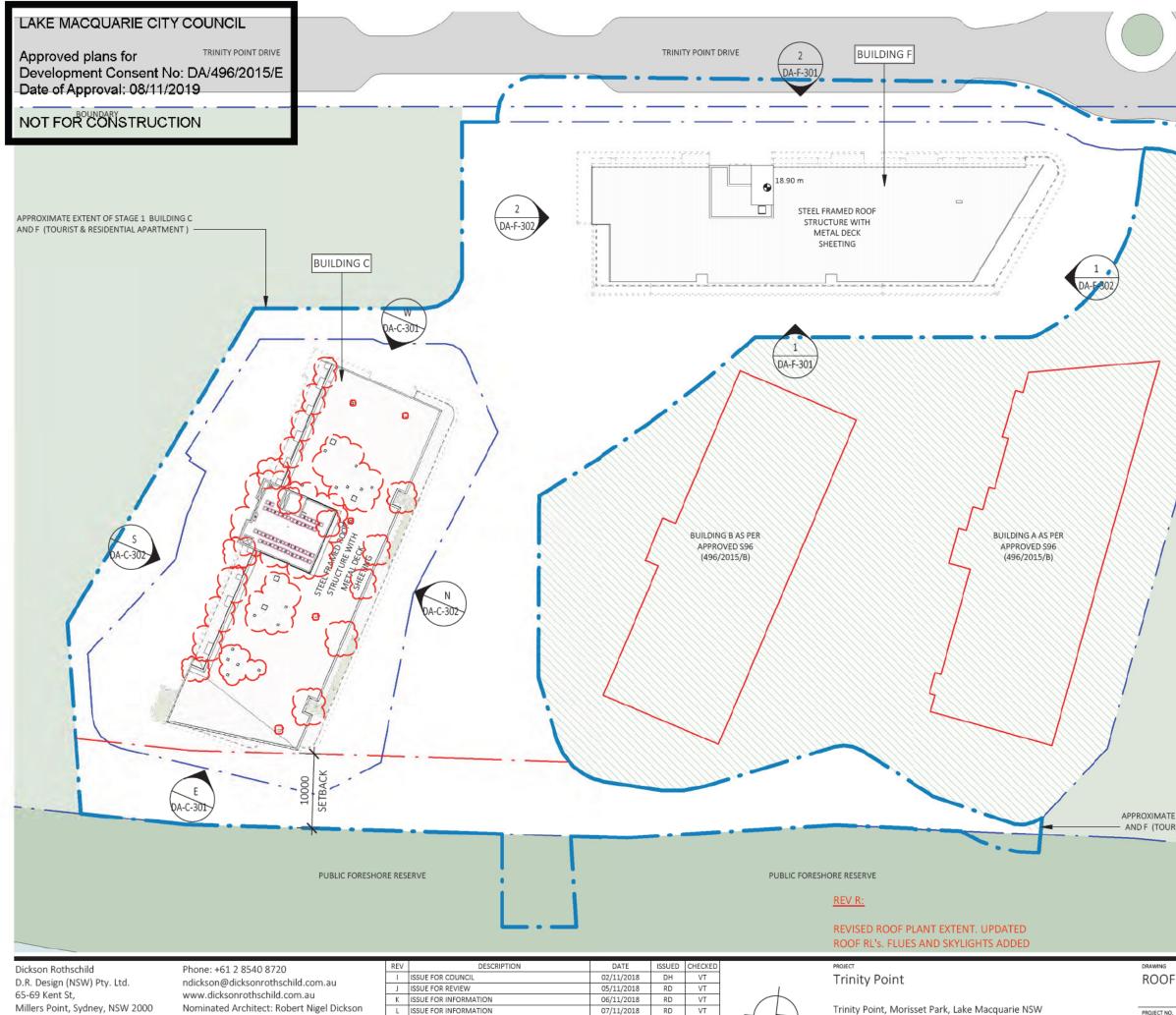
E HYDRANT PUMP ROOM POSITION AS APPROVED

WASTE COLLECTION POINT AS APPROVED

LINE OF INTERNAL ROAD ABOVE

VISITOR CAR SPACES ABOVE

AREA AS PER APPROVED DA 496/2015



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Registration No: 5364

ABN: 35 134 237 540

REV	DESCRIPTION	DATE	ISSUED	CHECKED
- 1	ISSUE FOR COUNCIL	02/11/2018	DH	VT
J	ISSUE FOR REVIEW	05/11/2018	RD	VT
K	ISSUE FOR INFORMATION	06/11/2018	RD	VT
L	ISSUE FOR INFORMATION	07/11/2018	RD	VT
М	ISSUE FOR INFORMATION	07/11/2018	RD	VT
Ν	ISSUE FOR COUNCIL	08/11/2018	DH	VT
Р	ISSUE FOR COUNCIL	12/02/2019	RD	FC
Q	ISSUE FOR \$4 55	04/09/2019	OP	FC
R	ISSUE FOR \$4 55	09/09/2019	OP	FC

CHENT

Johnson Property Group

PROJEC SCALE

Section 4.55 lodgement

BASIX REQUIREMENTS

3. Commitments for Residential flat buildings - Building C

(a) Dwelling

(i) Water:

(b) The applicant must plant indigenous or low water use species of vegetation throughout the area of land specified for the dwelling in the "Indigenous species" column of the table below as private landscaping for that dwelling. (This area of Indigenous vegetation is to be contained within the "Area of gard and lawn" for the dwelling specified in the "Description of Project" table).

(e) The applicant must not install a private swimming pool or spa for the dwelling with a volume exceeding that specified for it in the table below

(g) The pool or spa must be located as specified in the table.

(h) The applicant must install for the dwelling each alternative water supply system with the specified size listed for that dwelling in the table below. Each system must be configured to collect run-off from the areas specified (excluding any area which supplies any other alternative water supply system) and to divert overflow as specified. Each system must be connected as specified.

(ii) Energy

(b) The applicant must install each hot water system specified for the dwelling in the table below so that the dwelling's hot water is supplied by that system. If the table specifies a central hot water system for the dwelling then the applicant must connect that central system to the dwelling so that the dwelling's hot water is supp ied by that central system.

(f) This commitment applies to each room or area of the dwelling which is referred to in a heading to the "Natural lighting" column of the table below (but only to the extent specified for that room or area). The applicant must ensure that each such room or area is fitted with a window and/or skylight.

(iii) Thermal Comfort

(d) The applicant must show on the plans accompanying the development application for the proposed development all matters which the Thermal Comfort Protocol requires to be shown on those plans. Those plans must bear a stamp of endorsement from the Accredited Assessor to certify that this is the

(g) Where there is an in-slab heating or cooling system the applicant must: (aa) install insulation with an R-value of not less than 1.0 around the vertical edges of the perimeter of the slab; or (bb) On a suspended floor install insulation with an R-value of not less than 1.0

underneath the slab and around the vertical edges of the perimeter of the slab

(h) The applicant must construct the floors and walls of the development in accordance with the specifications listed in the table below.

(b) Common areas and central systems/facilities

(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) specified in the "Central systems" column of the table below, in each case the system must be sized be configured and be connected as specified in the table.

(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.

(ii) Energy

(c) The applicant must install the systems and fixtures specified in the "Central energy systems" column of the table below. In each case the system or fixture must be of the type and meet the spec fications listed for it in the table.

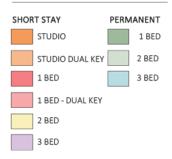
6. Commitments for common areas and central systems/facilities for the development (non-building specific)

(i) Wate

(b) The applicant must install (or ensure that the development is serviced by) the alternative water supply system(s) spec field in the "Central systems" column of the table below. In each case the system must be sized be configured and be connected as specified in the table.

(c) A swimming pool or spa listed in the table must not have a volume (in kLs) greater than that specified for the pool or spa in the table.

LEGEND

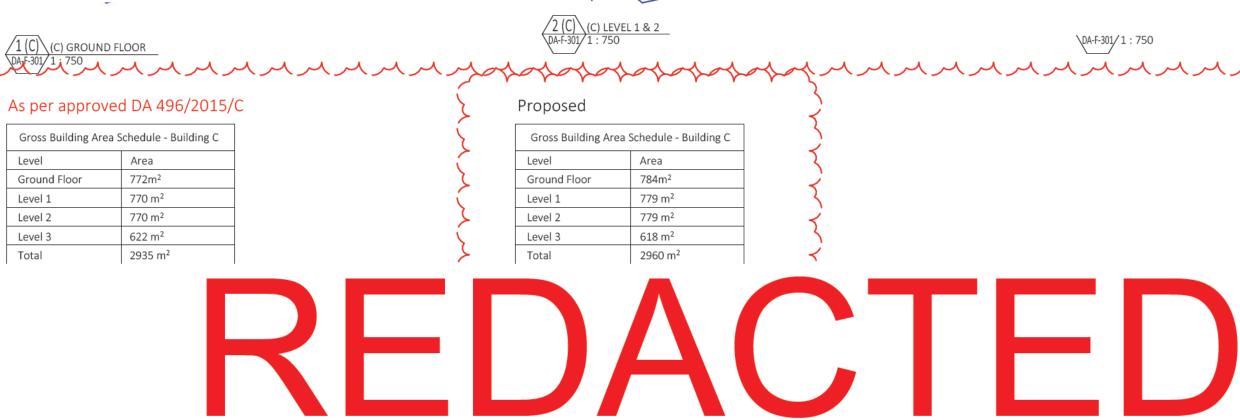


APPROXIMATE EXTENT OF STAGE 1 BUILDING C AND F (TOURIST & RESIDENTIAL APARTMENT)

project no. 18-065	drawing no. DA-0-215	REVISION	revision date 09/09/2019
scale @ a3		drawn	authorised
1 : 500		RD	ND



REDACTED REDACTED RE



As per approved DA 496/2015/C

Gross Building Area Schedule - Building F		
Level Area		
Ground Floor	924 m ²	
Level 1	924 m ²	
Level 2	924 m ²	
Level 3	678 m ²	
Total 3450 m ²		

LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/496/2015/E Date of Approval: 08/11/2019

NOT FOR CONSTRUCTION

Dickson Rothschild D.R. Design (NSW) Pty. Ltd. 65-69 Kent St, Millers Point, Sydney, NSW 2000 ABN: 35 134 237 540 Phone: +61 2 8540 8720 ndickson@dicksonrothschild.com.au www.dicksonrothschild.com.au Nominated Architect: Robert Nigel Dickson Registration No: 5364

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DESCRIPTION DATE ISSUED CHECKED REV G ISSUE FOR REVIEW 30/10/2018 RD VT H ISSUE FOR REVIEW VT 05/11/2018 RD I ISSUE FOR INFORMATION RD VT 06/11/2018 J ISSUE FOR INFORMATION VT 07/11/2018 RD K ISSUE FOR INFORMATION RD 07/11/2018 VT L ISSUE FOR COUNCIL 08/11/2018 DH VT M ISSUE FOR COUNCIL DISCUSSION 07/02/2019 AY FC N ISSUE FOR COUNCIL 12/02/2019 RD P ISSUE FOR \$4.55 04/09/2019 OP

PROJECT Trinity Point

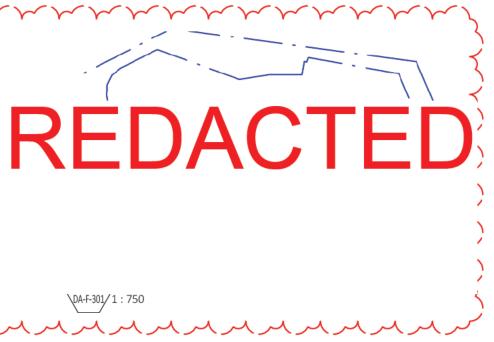
Trinity Point, Morisset Park, Lake Macquarie NSW

CLIENT

Johnson Property Group

PROJEC 18-SCALE 1:7

Section 4.55 lodgement



REV P:

GFA UPDATED DUE TO INTERNAL LAYOUT CHANGES BUILDING C ONLY

REFERENCE:

Figures from approved DA 496/2015 taken from JPG1402 _DA300 - Area Schedule (Gross Building) by Squillace

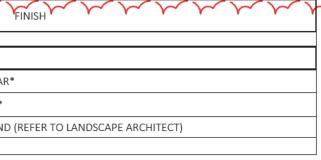
GFA DIAGRAMS

CT NO.	DRAWING NO.	REVISION	REVISION DATE
-065	DA-0-901	Р	04/09/2019
@ A3		DRAWN	AUTHORISED
750		DH	ND



REFERENCE		element			
WALLS					
1	W-01	WALL EXTERIOR	PRE-FABRICATED LIGHTWEIGHT WITH ACRYLIC RENDER	ACRYLIC RENDER: DULUX WHISPER WHITE OR SIMILAR*	
2	W-01	WALL EXTERIOR	RENDERED FINISH WALL	ACRYLIC RENDER "DULUX - TEAHOUSE" OR SIMILAR*	
3	W-03 W-04	WALL EXTERIOR WALL EXTERIOR	STONE CLADDING FYTOGREEN WALL	ECO OUTDOOR "COOLUM" IN RANDOM ASHLAR BOND (REFER TO LANDSCAPE ARCHITECT) POLARMOSS BY FYTOGREEN	
WINDOWS	VV-04	WALLENTERIOR	FITOGREEN WALL	FOLARIVIOSS BI FITIOGREEN	
5	WD-01	WINDOW AND DOOR FRAME	ALUMINIUM FRAMED GLAZING	POWDER COAT: DULUX SATIN BLACK OR SIMILAR	
ROOF FEATURES					
6	R-01	ROOF SHEETING	COLORBOND ULTRA-STEEL- STANDING SEAM PROFILE: "MAXLINE 340	OR SIMILAR COLORBOND BASALT OR SIMILAR	
BALCONY					
7	BAL-01	BALUSTRADE	FRAMELESS GLASS	SATIN; STAINLESS STEEL TOP RAIL & PROPRIETARY BOOT	
8	PS-02	SLIDING PROVACY SCREEN	TIMBER LOOK ALUMINIUM WITH ALUMINIUM FRAME*	A) COVET WEEBU MAHOGANY OR SIMILAR* B) COVET RIIGARU OKU OR SIMILAR* C) COVET KURI MASAME OR	
9	PS-01	ALUMINIUM VERTICAL LOUVRES	TIMBER LOOK ALUMINIUM	SIMILAR* D) COVET BIERA OKU OR SIMILAR*	
AWNING	05.01				
	SF-01	ROOF AND AWNING SOFFIT	TIMBER-LOOK ALUMINIUM SLATS	COVET: WEBU MAHOGANI, BRUSHED FINISH	
MISCELLANEOUS					
11	TAC-01 HN-01	TACTILE GROUND SURFACE HOUSE NUMBER	STAINLESS STEEL OR SIMILAR SATINLESS STEEL	SATIN OR SIMILAR BRUSHED	
12	LTB 01	LETTERBOXES	ALUMINIUM	BRUSHED; NATURAL ANODISED	
~	1001				
7 13		8 Image: Constraint of the second	Y COUNCIL		
		Approved plane for			
		Approved plans for Development Consent N	lo: DA/496/2015/E	<u>REV L:</u>	
		Date of Approval: 08/11/2		W-04 FYTOGREEN WALL	
				ADDITIONAL AWNING AN MISCELLANEOUS	D
		NOT FOR CONSTRUC	HUN		
Dickson Rothschild D.R. Design (NSW) P 65-69 Kent St, Millers Point, Sydney ABN: 35 134 237 54	Pty. Ltd. ndi ww ey, NSW 2000 Nor	one: +61 2 8540 8720 ckson@dicksonrothschild.com.au w.dicksonrothschild.com.au minated Architect: Robert Nigel Dickson gistration No: 5364	REV DESCRIPTION DATE ISSUE OR CHECKED E ISSUE FOR REVIEW 30/10/2018 RD VT F ISSUE FOR REVIEW 05/11/2018 RD VT G ISSUE FOR INFORMATION 06/11/2018 RD VT H ISSUE FOR INFORMATION 07/11/2018 RD VT I ISSUE FOR INFORMATION 07/11/2018 RD VT	PROJECT Trinity Point Trinity Point, Morisset Park, Lake Macquarie NSW CLIENT	
		ty Ltd copyright and may not be reproduced without on site before commencing work Resolve all	J ISSUE FOR COUNCIL 08/11/2018 DH VT K ISSUE FOR COUNCIL 12/02/2019 RD FC	Johnson Property Group Scale @ A3 DRAWN AUTHORISED	
discrepancies with the Arc	chitect before proceeding Figu	red dimensions to be taken in preference to scaled andards and other Codes as applicable, together with	L ISSUE FOR \$4 55 04/09/2019 OP FC	1:2 TO SCALE DH/RD ND	
other Authorities' requiren			M ISSUE FOR \$4 55 09/09/2019 OP FC	Section 4.55 lodgement	

REV	DESCRIPTION	DATE	ISSUED	CHECKED
E	ISSUE FOR REVIEW	30/10/2018	RD	VT
F	ISSUE FOR REVIEW	05/11/2018	RD	VT
G	ISSUE FOR INFORMATION	06/11/2018	RD	VT
Н	ISSUE FOR INFORMATION	07/11/2018	RD	VT
1	ISSUE FOR INFORMATION	07/11/2018	RD	VT
J	ISSUE FOR COUNCIL	08/11/2018	DH	VT
Κ	ISSUE FOR COUNCIL	12/02/2019	RD	FC
L	ISSUE FOR \$4 55	04/09/2019	OP	FC
М	ISSUE FOR \$4 55	09/09/2019	OP	FC



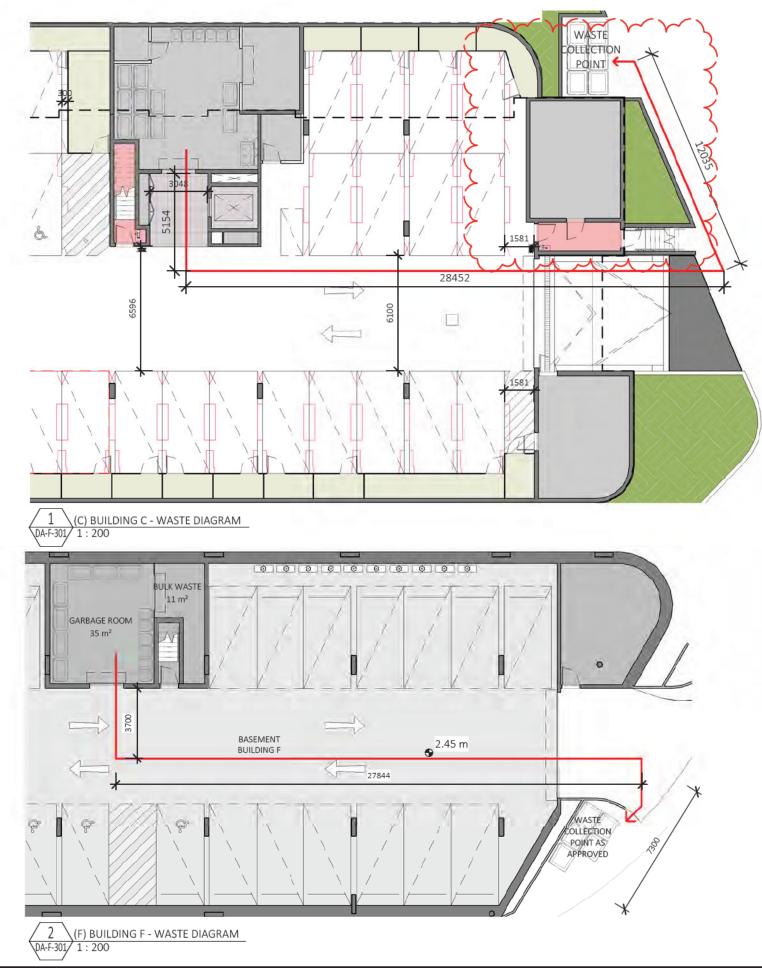




LAKE MACQUARIE CITY COUNCIL

Approved plans for Development Consent No: DA/496/2015/E Date of Approval: 08/11/2019

NOT FOR CONSTRUCTION



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Phone: +61 2 8540 8720 ndickson@dicksonrothschild.com.au www.dicksonrothschild.com.au Nominated Architect: Robert Nigel Dickson Registration No: 5364

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REV	DESCRIPTION	DATE	ISSUED	CHECKED
Α	ISSUE FOR REVIEW	05/11/2018	RD	VT
В	ISSUE FOR INFORMATION	06/11/2018	RD	VT
С	ISSUE FOR INFORMATION	07/11/2018	RD	VT
D	ISSUE FOR INFORMATION	07/11/2018	RD	VT
Е	ISSUE FOR COUNCIL	08/11/2018	DH	VT
F	ISSUE FOR \$4 55	04/09/2019	OP	FC

PROJECT **Trinity Point**

Trinity Point, Morisset Park, Lake Macquarie NSW CLIENT

Johnson Property Group

Section 4.55 lodgement

REV F: **BUILDING C:** PLANT AREAS REVISED CONDENSER UNITS REMOVED NO CHANGE TO WASTE TRANSFER

WASTE DIAGRAM

project no.	drawing no.	revision	revision date 04/09/2019
18-065	DA-0-951	F	
scale @ a3		drawn	authorised
1:200		RD	ND
0			





Attachment 10 - Approval's plan



TRINITY POINT ATTACHMENT 10: EXISTING APPROVALS

Legend

Previous Concept Approval (MP 06_0309 as modified)

DA1503/2014

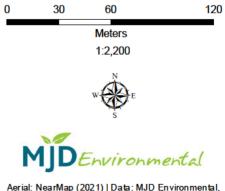
DA1731/2014

DA496/2015

Concept Approved Stage 2 Marina

Concept Approved for Buildings

Cadastral Boundaries



Aerial: NearMap (2021) | Data: MJD Environmental, Koichi Takada Architects, Spatial Services (2021) | Datum/Projection: GDA 2020 MGA Zone 56 | Date: 22/12/2021| Version 1 | Z\16002 - Trinity Point\16002 - Trinity Point_20210914.mxd | This plan should not be relied upon for critical design dimensions.

Department of Planning and Environment



Mr Bryan Garland Chief Development Officer Johnson Property Group P.O. Box 288 MORISSET NSW 2264 Our ref: SF21/114495 Your ref: 16002 BDAR Waiver

22 March 2022

Dear Mr Garland,

Subject: Request to waive requirement to prepare a Biodiversity Development Assessment Report

I refer to correspondence prepared by MJD Environmental, dated 13 September 2021, seeking to waive the requirement to prepare a biodiversity development assessment report (BDAR) for a State significant development application for the Trinity Point Mixed Use Development (SSD-27028161).

Description of proposed development

A mixed use tourist, hospitality and residential development comprising six buildings.

Under section 7.9(2) of the Biodiversity Conservation Act 2016 (NSW) (BC Act):

"Any such application is to be accompanied by a biodiversity development assessment report unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on the biodiversity values".

This letter is to confirm that the Secretary of the Department of Planning and Environment has determined that the proposed development as described above is not likely to have any significant impact on biodiversity values and that a BDAR is, therefore, not required to accompany any application for development consent for the proposed development.

As Delegate of the Secretary, I have determined that the proposed development is not likely to have any significant impacts on biodiversity values (see determination attached, dated 22 March 2022). Evidence that the Delegate of the Secretary within the Environment, Energy and Science Division (Director, Hunter Central Coast Branch) has made the determination is also attached (dated 1 March 2022).

If there are any amendments to the proposed development so that it is no longer as described in Schedule 1 of the determination, you will need to a lodge a new request for a BDAR waiver determination, or a BDAR may need to be prepared.

Should you have any further enquiries, please contact Emma Butcher, Planning and Assessment, at the Department on (02) 8289 6607.

Yours sincerely,

Keiran Thomas Director Regional Assessments

As delegate of the Secretary

Determination template – BDAR not required

Determination under clause 7.9(2) of the Biodiversity Conservation Act 2016

I, Joe Thompson, Director of the Hunter Central Coast Branch, of the Department of Planning, Industry and Environment, under clause 7.9(2) of the *Biodiversity Conservation Act 2016*, determine that the proposed development is not likely to have any significant impact on biodiversity values and therefore a Biodiversity Development Assessment Report (BDAR) **is not required**.

Proposed development means the development as described in Schedule 1. If the proposed development changes so that it is no longer consistent with this description, a further request to waive the requirement for a BDAR must be lodged or a BDAR prepared.

If you do not lodge the development application related to this determination for the proposed development within 2 years of the issue date of this determination, you must either prepare a BDAR or lodge a new request to have the BDAR requirement waived.

Jos Mony

1/3/2022

Date

JOE THOMPSON Director, Hunter Central Coast Branch Biodiversity and Conservation Division

Version 22 March 2019

SCHEDULE 1 – Description of the proposed development

Johnson Property Group, the proponent of State Significant Development (SSD-27028161) under the *Environmental Planning and Assessment Act 1979* are proposing a mixed use development (tourism, hospitality and residential) at Trinity Point Marina, located at 81-85 Trinity Point Road, Morisset Park, NSW. The proposed development is within the Lake Macquarie local government area. The site is legally described as Lots 101 & 102 in DP1256630 and Part Lot 32 in DP1117408 (as schematically shown on Figure 1).

The proposed development is for a mixed-use tourist, hospitality and residential outcome with a capital investment value of more than \$720m. Uses outlined in the scoping report include a 500 seat function centre, two 398 seat restaurants (plus provision for an additional 200 seats outdoors), 220 hotel rooms/suites and 218 residential apartments. A key element of the proposed development is its design philosophy and approach with six buildings capped by hill shaped angled green roofs, with the incorporation of sustainable measures to be carbon neutral ready.

The hotel component of the proposed development meet the definition of State Significant Development under Clause 13(2)(b) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) as it is located within a sensitive coastal location, and the capital investment value for this component exceeds the \$10 million threshold. The related residential and hospitality components also form part of the State Significant Development application. A concept development application for the whole of site concept is being pursued and SEARs have been issued.

The BDAR Waiver application was originally lodged with the Department of Planning and Environment (DPE) on 14 September 2021. However, Biodiversity Conservation Division (BCD) requested further information on existing approvals, given it was difficult to determine what areas of the site where subject to current approved development consents that permitted clearing of vegetation, and whether the current proposal impacted areas of coastal vegetation on the eastern part of the site (which is subject to a Management Plan administered by Lake Macquarie City Council). MJD Environmental (proponent's environmental consultants), on 22 December 2021, provided an updated BDAR Waiver application which detailed the status of all development consents and followed this up with a meeting with BCD on 21 February 2022. BCD is now satisfied that the current SSD application will only remove a small number of planted trees and does not impact the foreshore coastal vegetation covered by the management plan.

Figure 1 below shows an aerial photograph of the site for the mixed use development at 81-85 Trinity Point Road, Morisset Park, NSW.



Figure 1 Aerial Photograph of the development site for the proposed Trinity Point mixed-use development – SSD-27028161 (81-85 Trinity Point Road, Morisset Park, NSW)

Determination under section 7.9(2) of the Biodiversity Conservation Act 2016

I, Keiran Thomas, Director, Regional Assessments, Planning and Assessment, of the Department of Planning and Environment, under section 7.9(2) of the *Biodiversity Conservation Act 2016*, determine that the proposed development is not likely to have any significant impact on biodiversity values and, therefore, a Biodiversity Development Assessment Report is not required.

Proposed development means the mixed use tourist, hospitality and residential development comprising six buildings and as detailed in the request for SEARs dated 27 August 2021. If the proposed development changes so that it is no longer consistent with this description, a further waiver request is required.

If you do not lodge the development application related to this determination for the proposed development within two years of the issue date of this determination, you must either, prepare a BDAR or, lodge a new request to have the BDAR requirement waived.

KR

22/03/2022

Date

Director Regional Assessments Planning and Assessment Department of Planning and Environment (as delegate of the Secretary)