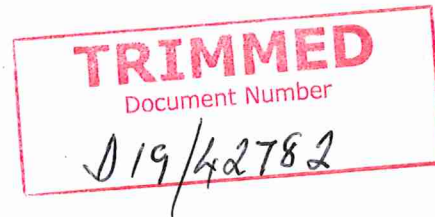




4 December 2019

Ref: C91599

Sean Nicholas  
Taylor Robinson Chaney Broderick  
Level 4, 22 Delhi Street  
West Perth WA 6872



**RE: Proposed redevelopment of Cottesloe Surf Life Saving Club, Marine Parade, Cottesloe WA**

Dear Sean,

With reference to our discussion regarding the proposed redevelopment of the Cottesloe Surf Life Saving Club (CSLSC) and its potential impact on one (1) *Araucaria heterophylla* (Norfolk Island Pine), a site visit was undertaken on 14 September 2019.

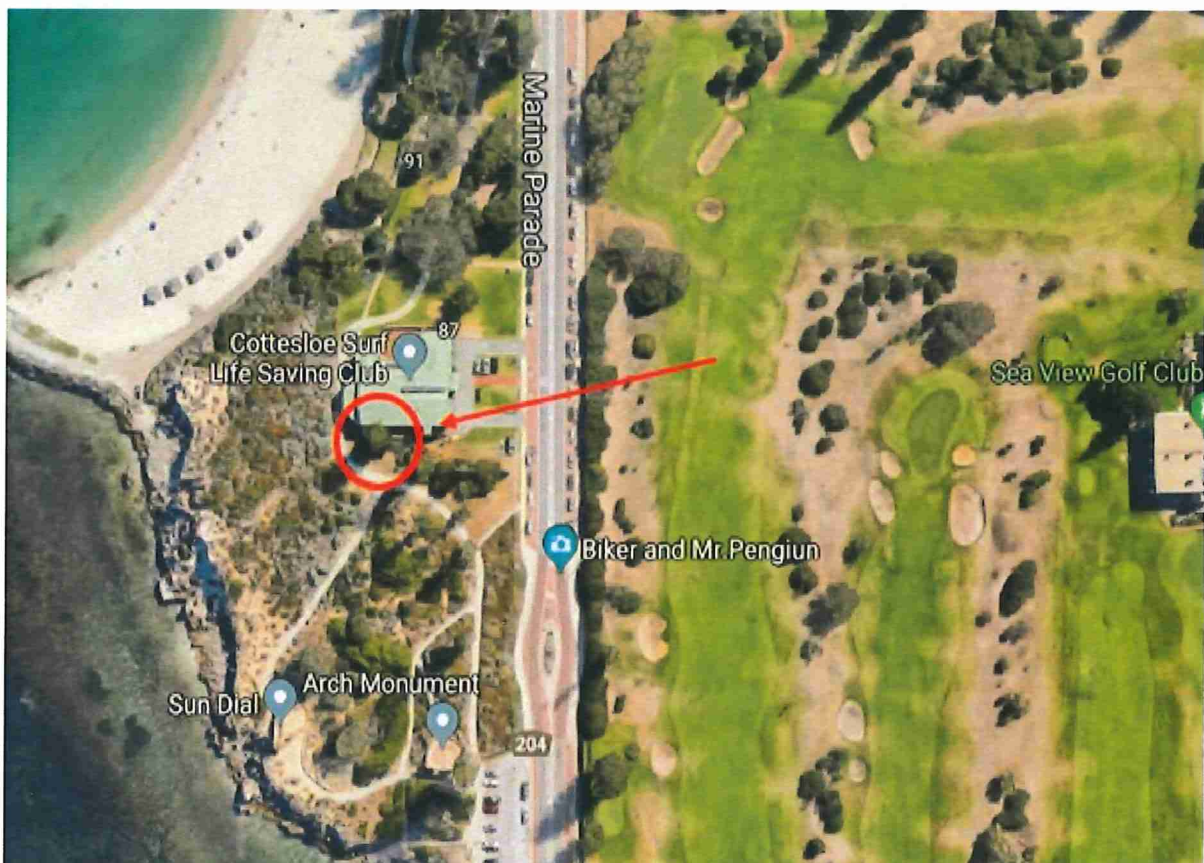


Figure 1. Aerial location of subject tree (circled in red). (Google Maps, November 2019).

The tree was located to the south of the existing (CSLSC) building (see Figure 1 and 2) and presented with good structure and fair health (*ground-based observations only*).

Measurements were taken in order to determine indicative Tree Protection Zone (TPZ) and Structural Root Zone (SRZ) calculations.



Figure 2. Location of subject tree (circled in red). (N. Arnold, September 2019).

The Tree Protection Zone (TPZ) is the principal means of protecting trees during construction and/or excavation works. The TPZ is a combination of the root area and crown area requiring protection. It is an area isolated from disturbance so that the tree remains viable and in incorporates the structural root zone (SRZ).

The SRZ is nominally circular, with the trunk at its centre, and is expressed by its radius in metres. An indicative SRZ radius can be determined from the trunk diameter measured immediately above the root buttress using the following formula;  $SRZ \text{ radius} = (D \times 50)^{0.42} \times 0.64$ . The woody root growth and soil cohesion in this area are necessary to hold the tree upright.

Potential encroachments into a TPZ are assessed as follows (as specified in Australian Standard AS 4970–2009: *Protection of Trees on Development Sites*):

**Minor encroachment** – If the proposed encroachment is less than 10% of the area of the TPZ and is outside the SRZ (see Clause 3.3.5 of AS 4970–2009: *Protection of Trees on Development Sites*), detailed root investigations should not be required. The area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ. Variations must be made by the project arborist considering relevant factors listed in Clause 3.3.4 of AS 4970–2009: *Protection of Trees on Development Sites*.

**Major encroachment** – If the proposed encroachment is greater than 10% of the TPZ or inside the SRZ, a consulting arborist must demonstrate that the tree(s) would remain viable. If the consulting arborist determines the tree to be retainable, the area lost to this encroachment should be compensated for elsewhere and contiguous with the TPZ.

Measurements for the subject tree indicate the following (radial) protection areas:

- TPZ = 9.6m
- SRZ = 3.3m

Plans supplied (Proposed Ground Floor Plan – Taylor Robinson Chaney Broderick, April 2019) indicate potential (estimated) encroachments of 38% (TPZ) and 22% of the tree's SRZ which can be considered major. In addition, excavation into the SRZ may potentially have an impact on tree stability.

In the context of these proposed levels of encroachment, and where it is found that the subject tree holds no documented additional significance (e.g. heritage and or commemorative value), tree removal is recommended in order to facilitate the proposed development.

Mitigation planting in the form of one (minimum) tree capable of comparable dimensions and form is to be included in the sites landscape plan. It is suggested that species selection consider local themes and species palette (as documented in the Town of Cottesloe Street Tree Master Plan, accessed October 2019).

The Cottesloe SLSC DA Landscape Plan (see Figure 3) proposes the planting of one (1) *Araucaria heterophylla*\* (Norfolk Island Pine) and approximately seven (7) *Melaleuca lanceolata*\* (Moonah) which would be considered sufficient mitigation planting to compensate for the removal of the subject tree.

\* Both species have a proven track record in coastal locations. *Araucaria* sp. will mature to a comparable stature, fit with the local authority planting themes and should be relatively easy to source.

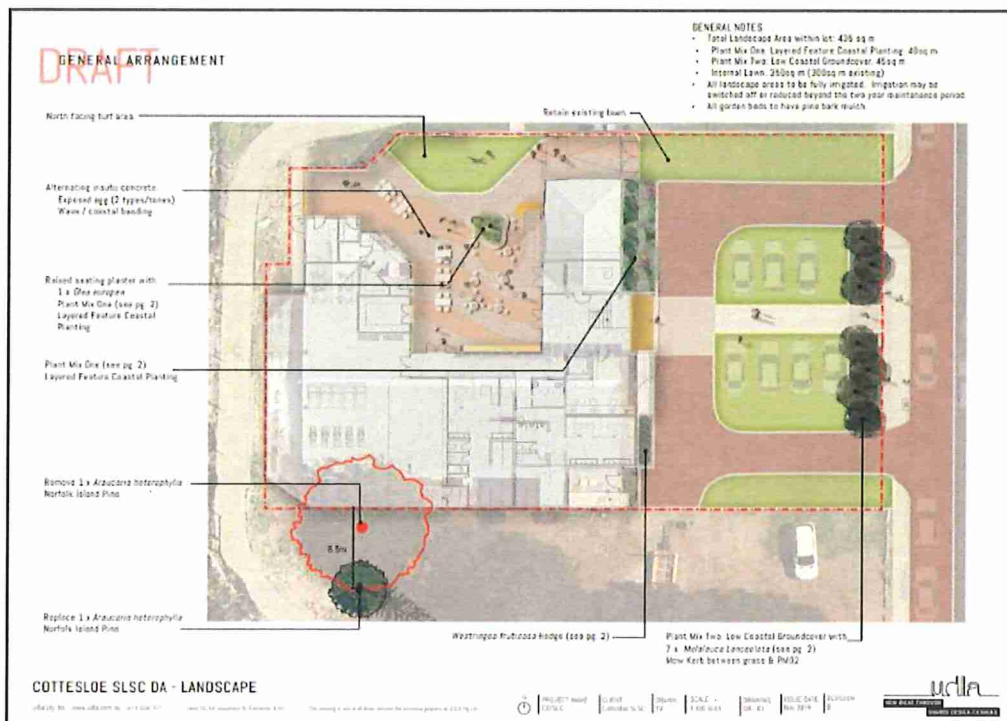


Figure 3. Excerpt from Cottesloe SLSC DA Landscape Plan. (UDLA, December 2019).

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The proposed location of the *Araucaria heterophylla* mitigation planting (see Figure 3) makes provision for setbacks of approximately 6m from proposed building, and 4m from the pedestrian (access) pathway to account for future structural root expansion.

In summary, the proposed extent of TPZ/SRZ encroachment would be considered major and could potentially impact not only tree health but also tree stability, reducing tree viability (post works). In the context of (subject) tree species and significance in the landscape, tree removal is recommended to facilitate works with appropriately sourced mitigation planting (as outlined in Figure 3).

Yours sincerely,

A handwritten signature in black ink, consisting of a stylized 'N' and 'A' followed by a horizontal line.

**Nick Arnold**

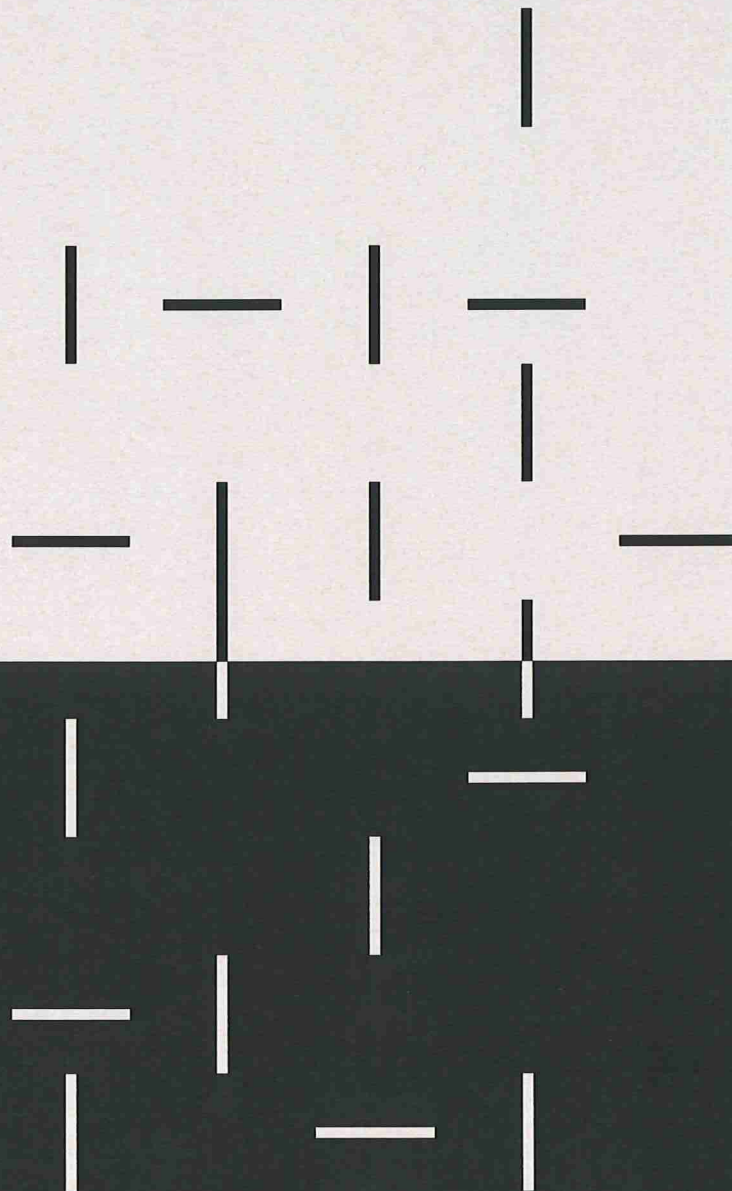
Consulting Arborist

Dip. Arb., BSC Biology, MSC Soil Management, NZQF (equiv. AQF) Level 5

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|  
— TAYLOR  
ROBINSON —  
CHANEY —  
BRODERICK —  
|



**Cottesloe Surf Club**  
**18022**  
Development Application  
  
Rev E  
  
Cottesloe  
December 2019

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1  
Club Identity

2  
Robustness

3  
Working with the old Clubhouse

4  
Smart Money

5  
Amenity + Functionality

6  
Views + Aspect

7  
Coastal context + Setting  
Building Landscape

8  
Passive Design

**Design Concept Summary**

**Clubhouse at the Cottesloe Surf Life Saving Club**

This proposal for the Cottesloe Surf Life Saving Club building includes a major refurbishment of the existing building to meet the current and projected needs of the club as well as enabling broader community access and usage of the club building and facilities.

The development is largely contained within the existing building footprint with relatively minor extensions to the southern and western ends of the building. The refurbishment accommodates an additional second level of additional community meeting rooms that will facilitate other community groups' access to this unique site and location on the Cottesloe waterfront.

**Design Principles**

**Surf Club Identity**

The refurbished surf club will strengthen the club's identity and association with the site and broaden its community by providing additional opportunities and options for meeting and gatherings on the site.

**Robust Architecture**

The club building is located on an exposed, coastal site that imposes severe environmental impacts on building structures and materials. The refurbished building will incorporate robust and generally self-finished materials to the external fabric of the structure to minimise ongoing maintenance requirements and recurrent costs on the club.

**Adaptive Re-Use**

The adaptive re-use of the existing building structure delivers multiple benefits including real cost savings, a sense of the surf club's heritage and continuity and measurable savings in embodied energy costs for the realised project.

**Responsible Investment**

Cottesloe Surf Life Saving Club provides services and support and is supported by its local community. Proposed works to and investment in the club's existing facilities are therefore framed by self-evident obligations to manage and deliver the project with optimal economy in both capital and recurrent costs.

**Amenity and Functionality**

The expanded club building will largely provide for existing operations and activities which are currently accommodated within highly constrained and sub-optimal spaces. This applies equally to the core club facilities including administration, changerooms and the gymnasium as much as to the proposed expansion of existing kitchen and function spaces that each require major equipment and finishes upgrades.

**Views and Aspect**

The upper floor of the existing Clubhouse enjoys spectacular views up and down the coast, but the capacity of external balcony spaces is relatively limited. The proposed refurbishment will substantially expand the outdoor balcony area and increase glazing areas to the lower level gymnasium. All glazing will benefit from overhanging eaves and balcony spandrels that will reduce heat loads and glare impacts on western and northern oriented windows.

**Coastal Context and Setting**

The extraordinary physical context of the surf club includes the dramatic cliff top setting, a heritage-listed indigenous landscape and proximity to the proposed redevelopment of the Indiana Tearooms site at the northern end of Cottesloe Beach. This proposal responds directly to each of these contextual elements by reinforcing the site's natural/ indigenous coastal landscape setting and adopting a deliberately neutral material and architectural palette that will complement the proposed tearooms redevelopment.

**Passive Design**

The refurbished building incorporates a series of passive design features that will minimise energy costs associated with the ongoing operation of the clubhouse. These initiatives include solar shading, high performance glazing, light-coloured/ heat reflective external materials and natural ventilation of the building.

**Architecture**

The reconfigured building will include a largely reconstructed external envelope that will deliver a robust and contextually appropriate built form on this prominent coastal site. The new external skin will be made up of high performance, non-reflective glazing and limestone-coloured face brickwork that will wrap around the internal spaces in sinuous, continuous ribbons of balcony and sunscreening spandrel panels.

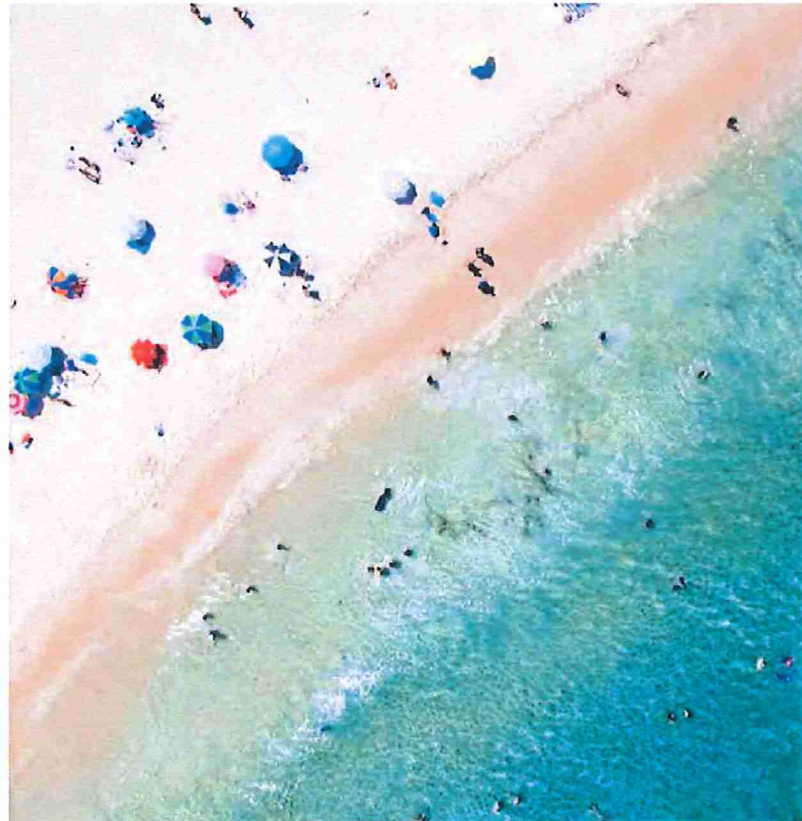
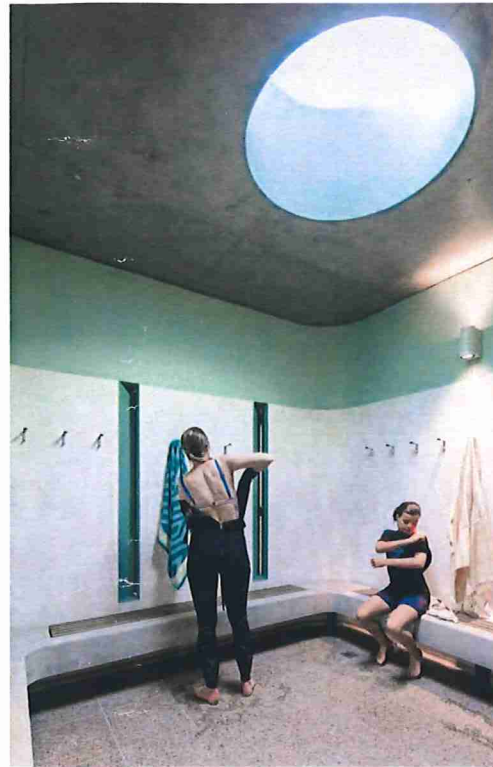
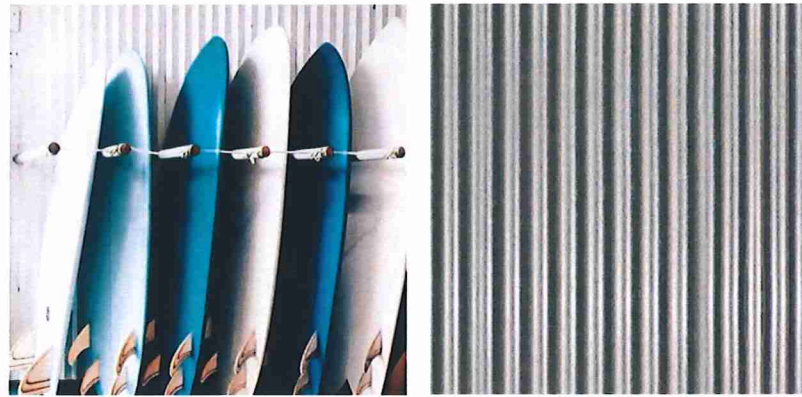
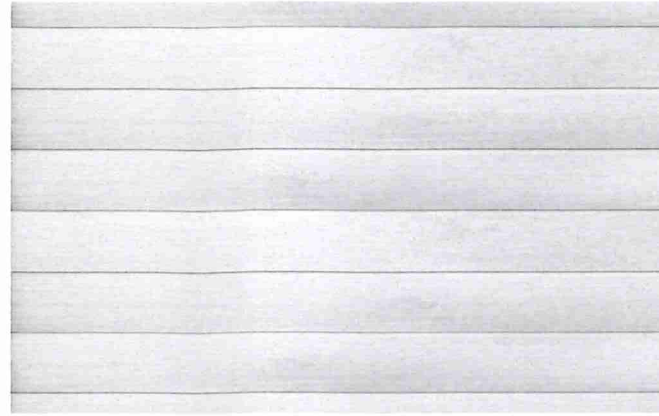
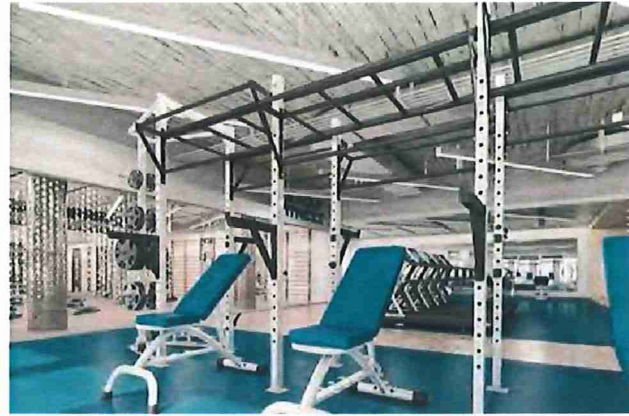
New aluminum flat bar balcony balustrading will be finished in a dark metallic powdercoat finish to match new glazing systems on the building.

More expansive and generous glazing to the ground floor gymnasium will improve both daylighting and aspect to the surrounding landscape and coastline and create a more welcoming and inviting clubhouse building on this prominent coastal site in metropolitan Perth.

The additional level at the eastern end of the Clubhouse building accommodates expanded community meeting rooms and facilities thereby expanding the capacity of the club to host other ('non-club') community organisations and activities. The additional floor level is comfortably accommodated within a reconfigured street-facing façade and address to Marine Parade.

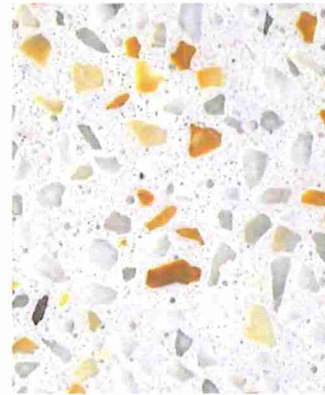
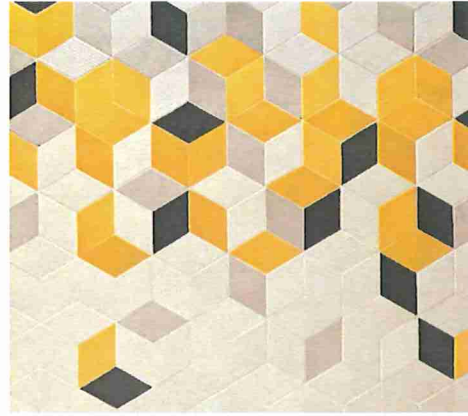


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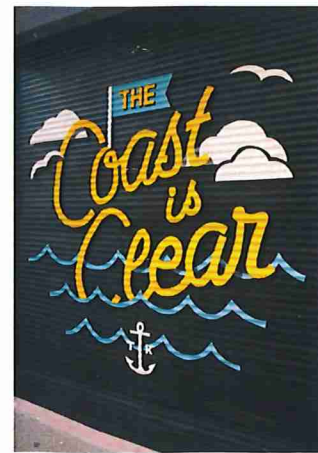


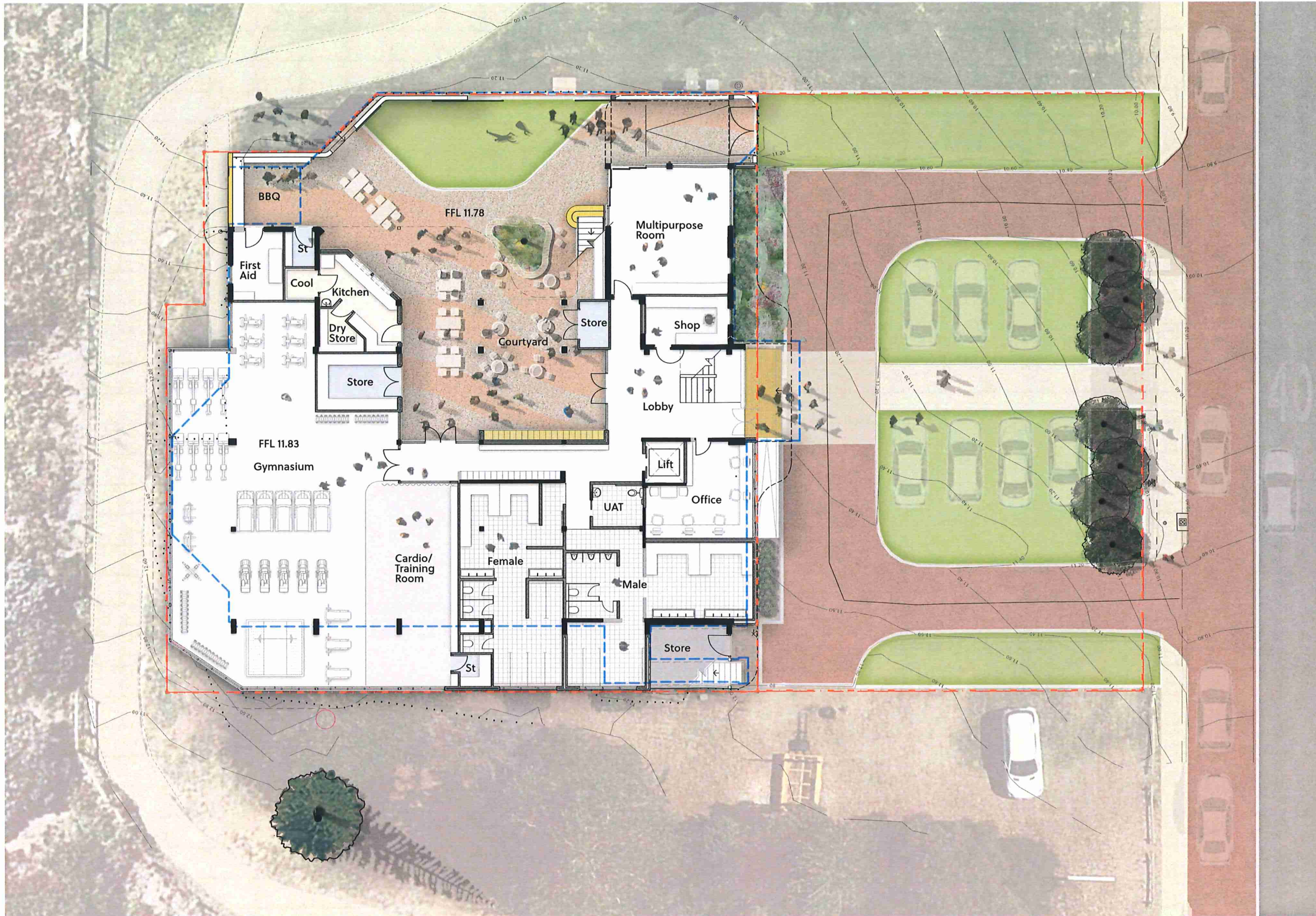


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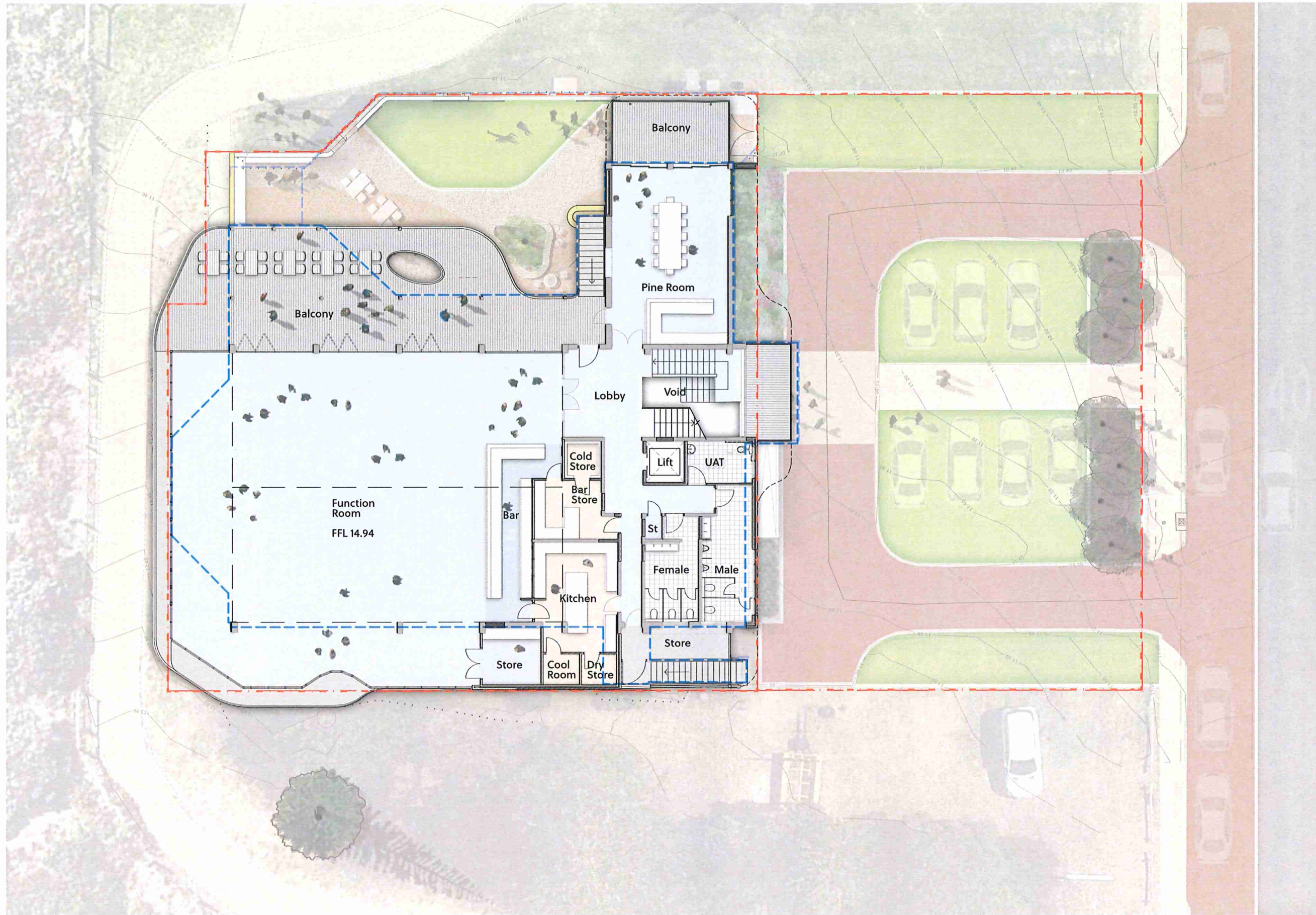
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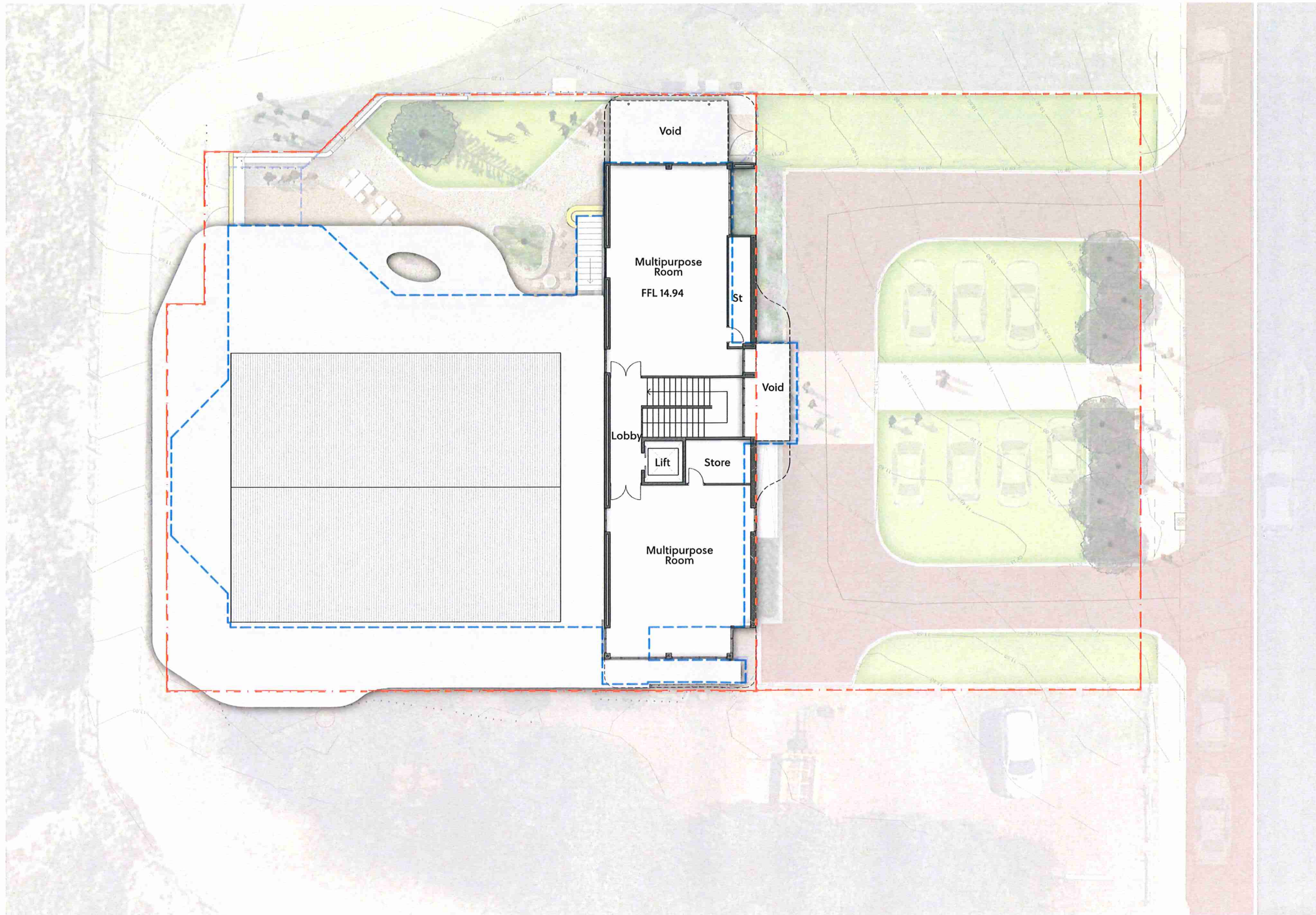
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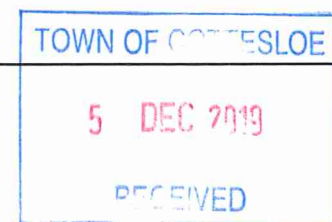
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Bar/cafe  
Counter

Light-well  
Internal : yellow tiles  
External : Clay bricks

Hit & miss brick fence

Perforated metal screen gate



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# GENERAL ARRANGEMENT

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## GENERAL NOTES

- Total Landscape Area within lot: 435 sq m
- Plant Mix One: Layered Feature Coastal Planting. 40sq m
- Plant Mix Two: Low Coastal Groundcover. 45sq m
- Internal Lawn: 350sq m (300sq m existing)
- All landscape areas to be fully irrigated. Irrigation may be switched off or reduced beyond the two year maintenance period.
- All garden beds to have pine bark mulch.

North facing turf area.

Retain existing lawn.

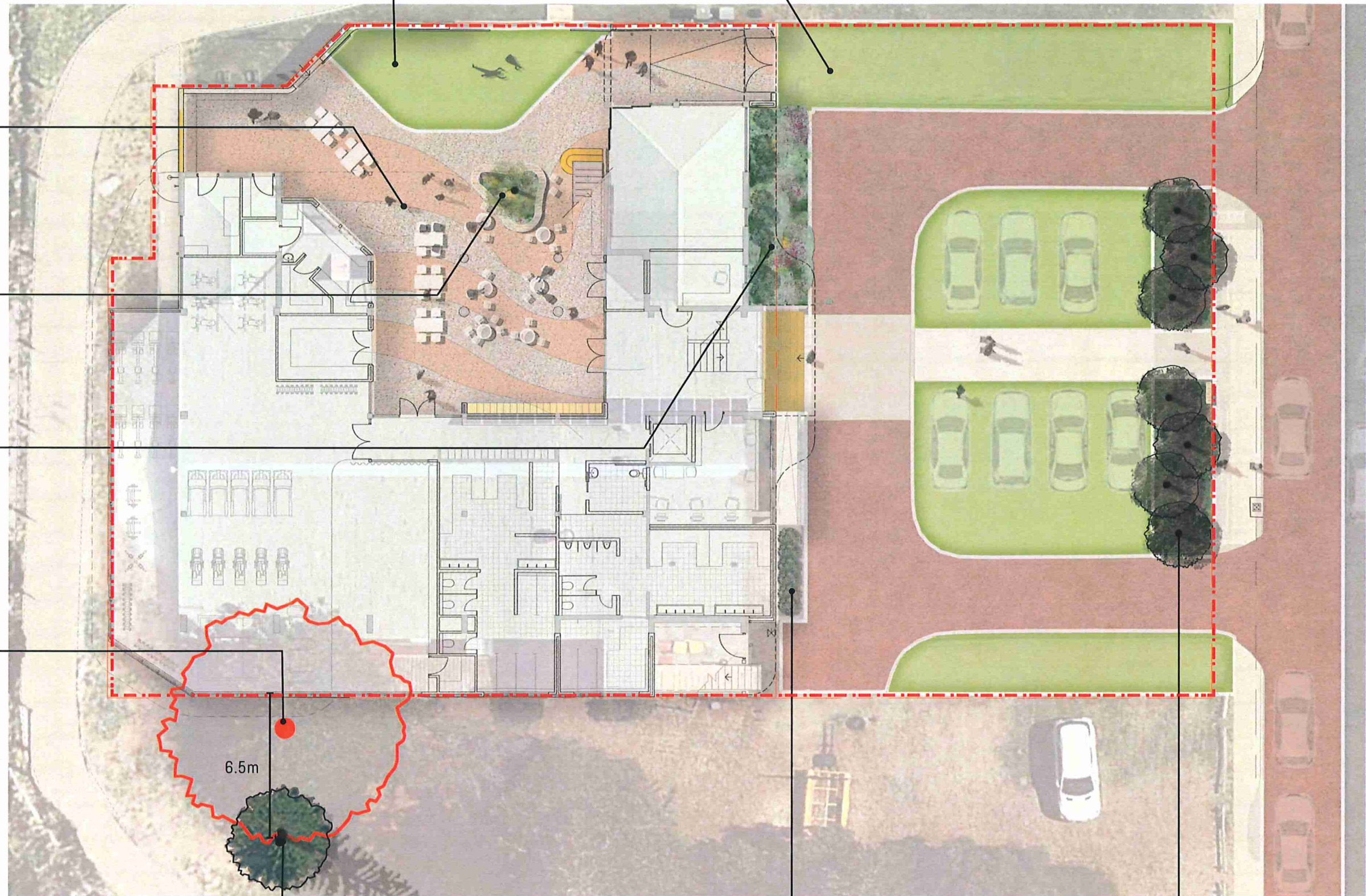
Alternating insitu concrete.  
Exposed agg (2 types/tones)  
Wave / coastal banding.

Raised seating planter with:  
1 x *Olea europea*.  
Plant Mix One (see pg. 2)  
Layered Feature Coastal  
Planting.

Plant Mix One (see pg. 2)  
Layered Feature Coastal Planting.

Remove 1 x *Araucaria heterophylla*  
Norfolk Island Pine.

Replace 1 x *Araucaria heterophylla*  
Norfolk Island Pine.



6.5m

*Westringea fruticosa* Hedge (see pg. 2)

Plant Mix Two: Low Coastal Groundcover with  
7 x *Melaleuca Lanceolata* (see pg. 2)  
Mow Kerb between grass & PM02

## COTTESLOE SLSC DA - LANDSCAPE



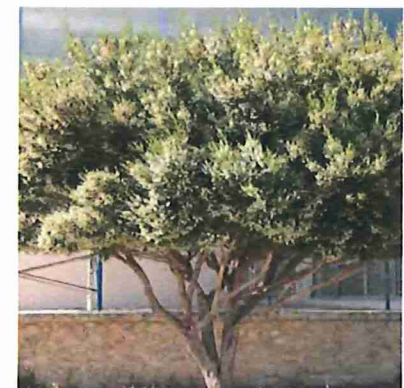
# PLANTING PALETTE

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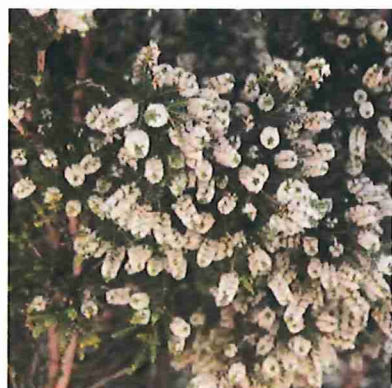
## TREES



*Araucaria heterophylla* - 'Norfolk Island Pine'  
Mature size: 15m x 35m  
Type: Large exotic Tree  
Flowers: nil  
Stock: 100lt



*Melalueca lanceolata* - 'Rottneest Island Tea Tree'  
Mature size: 7m x 4m  
Type: Small Native Tree  
Flowers: Cream, White, Spring  
Stock: 45lt



*Olea europaea* - 'Olive'  
Mature size: 7m x 4m  
Type: Small Native Tree  
Flowers: Cream, White, Spring  
Stock: 45lt



## PLANT MIX 1 - LAYERED FEATURE COASTAL PLANTING - 6PLANTS/M<sup>2</sup>



*Conostylis candicans* 'Cottonheads'  
Mature size: 0.6m x .4m  
Type: Small Shrub  
Flowers: Yellow  
Stock: Tubestock



*Senecio* 'Chalk Sticks',  
Mature size: 0.6m x 1.2m  
Type: Small Shrub/groundcover  
Flowers: White, Winter  
Stock: Tubestock



*Ficinia nodosa* 'Knotted Club Rush',  
Mature size: 0.6m x .7m  
Type: Reed/rush  
Flowers: nil



*Leuchophyta brownii* 'Silver Nuggest'  
Mature size: 0.6m x 1.2m  
Type: Small Shrub  
Flowers: White, Winter  
Stock: Tubestock



*Grevillea* 'Gin Gin Gem',  
Mature size: 0.2m x 1.2m  
Type: Small Shrub  
Flowers: Red, Winter  
Stock: Tubestock



*Limonium perezii* 'blue' 'Sea Lavender'  
Mature size: 0.6m x .7m  
Type: Small Shrub  
Flowers: Purple, Autum, Spring, Winter  
Stock: Tubestock

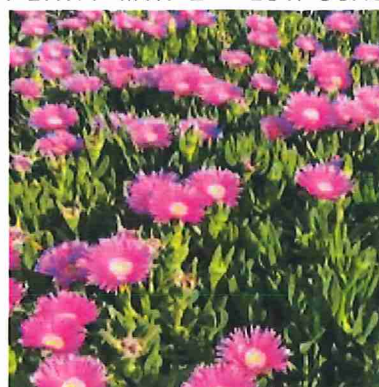


*Westringia fruticosa* 'Coastal Rosemary'  
Mature size: 0.6m x 1.2m  
Type: Small Shrub  
Flowers: White, Winter  
Stock: Tubestock

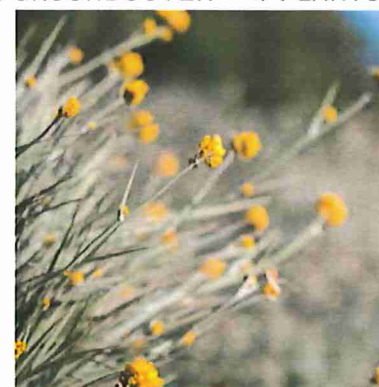


*Adenanthos cuneatus* 'Coral Carpet'  
Mature size: 0.6m x 1.2m  
Type: Groundcover  
Flowers: nil  
Stock: Tubestock

## PLANT MIX 2 - LOW COASTAL GROUNDCOVER - 4 PLANTS/M<sup>2</sup>



*Carpobrotus glaucescens* 'Pigface',  
Mature size: 0.2m x 1.2m  
Type: Small Shrub  
Flowers: Pink, Summer  
Stock: Tubestock



*Conostylis candicans* 'Cottonheads'  
Mature size: 0.6m x .4m  
Type: Small Shrub  
Flowers: Yellow  
Stock: Tubestock

## HEDGE - 2 PLANTS/M<sup>2</sup>



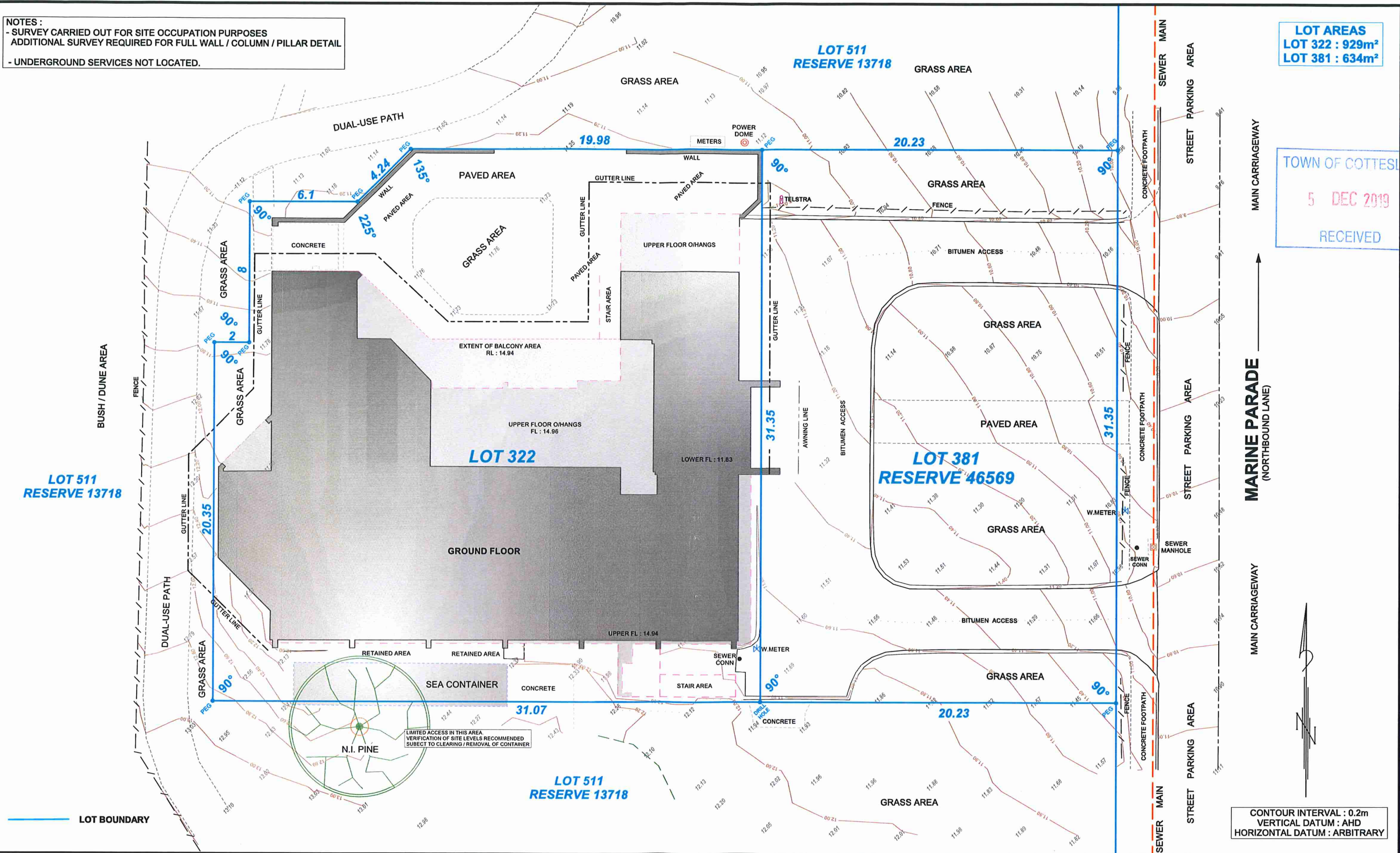
*Westringia fruticosa* 'Coastal Rosemary'  
Mature size: 0.6m x 1.2m  
Type: Small Shrub  
Flowers: White, Winter  
Stock: 140mm



NOTES :  
 - SURVEY CARRIED OUT FOR SITE OCCUPATION PURPOSES  
 - ADDITIONAL SURVEY REQUIRED FOR FULL WALL / COLUMN / PILLAR DETAIL  
 - UNDERGROUND SERVICES NOT LOCATED.

LOT AREAS  
 LOT 322 : 929m<sup>2</sup>  
 LOT 381 : 634m<sup>2</sup>

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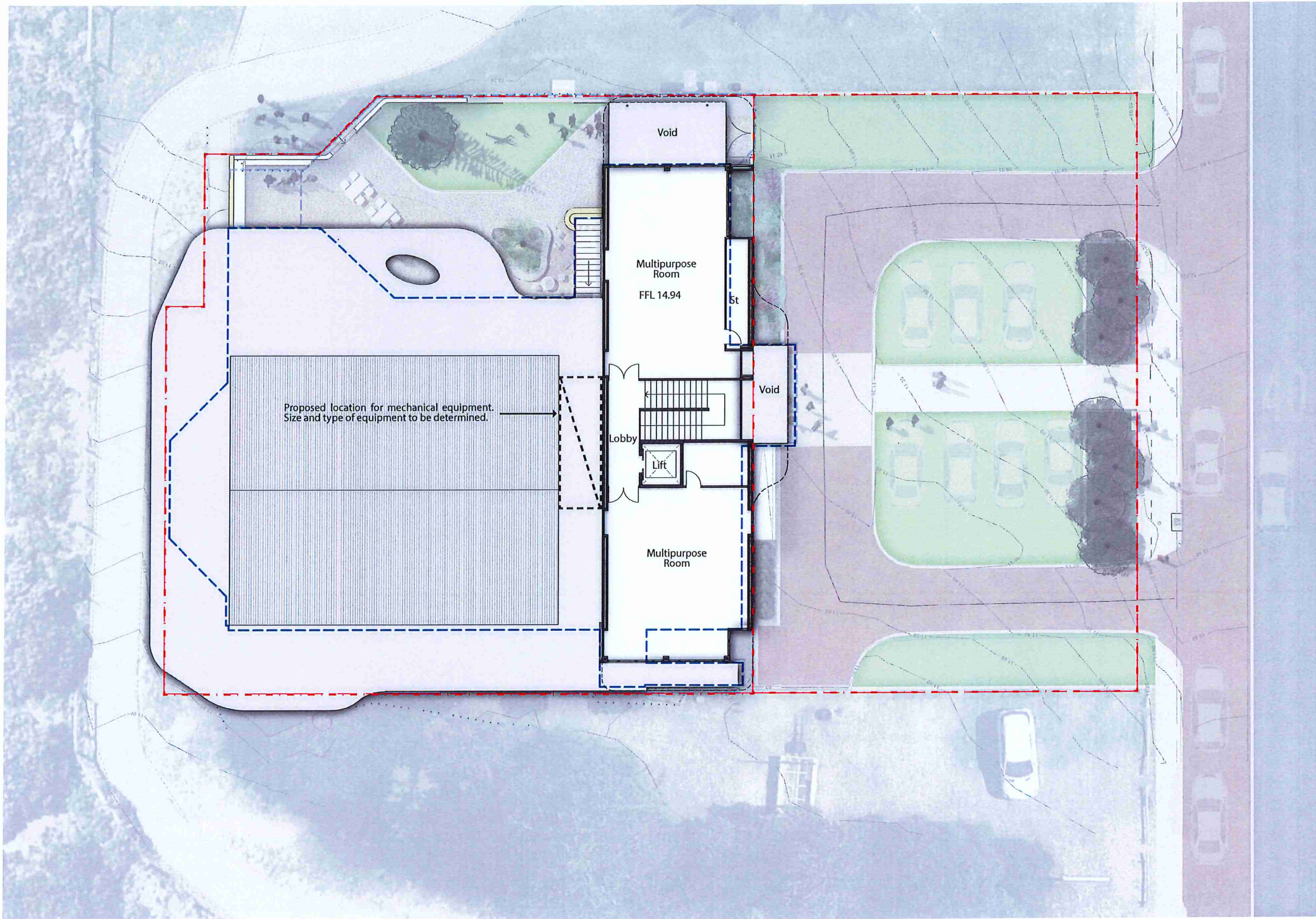


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 Office : 3/589 STIRLING HWY, COTTESLOE W.A. 6011  
 Postal : P.O. BOX 1701, SUBIACO W.A. 6904  
 Ph : 1300 72 8485  
 M : 0417 983 786 F : 9286 3977  
 E : mail@austinsurveys.com.au  
 FILE : C:\MAGNET\AUSTIN\235-18

**COTTESLOE SURF LIFE SAVING CLUB**  
**BOUNDARY & FEATURE SURVEY - CLUBROOM FACILITIES**  
 LOT 322 ON DEPOSITED PLAN 166812  
 LOT 381 ON DEPOSITED PLAN 219613  
 MARINE PARADE, COTTESLOE

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DATE : 19-1-2018	OUR REF : 235-18	DRAWN : CPA



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Town of Cottesloe Beach Policy			
No.	Policy Text		Response
	<i>To ensure that the land area west of the Marine Parade road pavement is maintained or restored so that:</i>		Minimal increased footprint and carefully considered location of the expansion would not reduce accessibility to the beach or negatively impact the sand dune and landscape rehabilitation zones.
5 (a)	<i>(i) the sea is accessible and free from pollutants and that the shore line is not altered except as a result of properly investigated and designed works to rehabilitate the land area;</i>		
	<i>(ii) the store of sand in the dune system to the east of the strand is maintained and stabilised with vegetation;</i>		
	<i>(iii) the remnant dunes bordering the Marine Parade road pavement are stabilised and protected using native vegetation as far as possible;</i>		
5(c)	<i>To ensure that the primary consideration against which all uses are measured is the public interest, particularly for residents of Cottesloe, and safety having regard to the environmental parameters and limits of capacity of the beach reserve. In this context, the beach reserves are to be administered in the interest of residents of Cottesloe, the people of Western Australia and visitors to the metropolitan region</i>		The Club's identity is synonymous with the beach precinct, it fulfills an integral role in maintaining the safety of beach users. The refurbishment and remodelling of the clubhouse will also improve passive surveillance of the public reserve in all directions around the club building.
5(c)	<i>To provide a level of essential amenity on the beach reserves which meets the expectations of residents of Cottesloe, the people of Western Australia and visitors to the metropolitan region.</i>		There would be no fundamental change to how the club interacts with the beach precinct, so there would not be any negative impact to the amenity of the beach reserve.
5(f)	<i>To identify and develop mechanisms to offset the cost of maintaining the beach area in order that the expenditure is not borne solely by residents and ratepayers of Cottesloe.</i>		The upgraded function spaces would increase venue bookings that have dwindled due to outdated and run down facilities, increasing revenue streams and minimising maintenance requirements.
6(a)	<i>No use will be permitted within the area west of Marine Parade unless it contributes directly to the amenity of the recreational users of the beach reserves and is designed, constructed and operated in a way that protects and enhances the natural coastal environment.</i>		Proposed additions would provide new and improved facilities, encouraging community based events and improved education and training.
6(b)	<i>No use, activity or modification should be permitted on the beach reserves if it has a significant adverse environmental effect.</i>		Improvements to both the visual and functional amenity of the precinct, including passive surveillance of the beach and coastal reserve. The new facility would maintain use of the club in its current function.
State Planning Policy 2.6			
No.	Policy Text		Response
5.2	<i>(i) Encourage urban development to be concentrated in and around existing settlements, particularly those with established infrastructure and services. Continuous linear urban development along the coast should be discouraged or, where it has occurred, carefully controlled. Proposed major urban development outside existing settlements will only be supported where a genuine community need has been demonstrated and the environmental capability has been properly assessed.</i>		The proposal complements and enhances the coastal environment (visual, amenity, social and ecological values) The Club is dependent on its foreshore location and access to facilities and the development is not expected to increase its exposure to coastal hazards.
	<i>(ii) Ensure that when selecting a development location, regard is given to infrastructure capacity and where possible, existing infrastructure be upgraded and improved.</i>		
	<i>(iii) Ensure that when identifying areas suitable for development, consideration is given to strategic sites for coastal access and commercial development that is demonstrably dependent on a foreshore location including ports, boat harbours and regional boat ramps.</i>		
	<i>The provisions of this part of the policy apply to all development within 300 metres of the horizontal shoreline datum, but do not apply to industrial or resource development, transport, telecommunications and engineering infrastructure, and Port Works and Facilities (as defined by the Port Authorities Act 1999).</i>		The development takes into account the built form, topography and landscape character of the site.
	<i>(ii) Maximum height limits should be specified as part of controls outlined in a local planning scheme and/or structure plan, in order to achieve outcomes which respond to the desired character, built form and amenity of the locality.</i>		The location is part of an identified coastal node. The building parapet height is currently at 1m above the prescribed limit of 10m, but the overall roof height is still within the 11.5m maximum prescribed top of roof ridge height.
5.4	<i>(iii) When determining building height controls in a local planning scheme and/or structure plan, building heights should have due regard to the following planning criteria:</i>		The site is fortuitously located in that the additional height has minimal impact with regard to overshadowing and obstruction of residential views to the ocean.
	<i>(a) development is consistent with the overall visual theme identified as part of land use planning for a locality or in an appropriate planning control instrument such as a local planning strategy;</i>		
	<i>(b) development takes into account the built form, topography and landscape character of the surrounding area;</i>		
	<i>(c) the location is part of an identified coastal node;</i>		
	<i>(d) the amenity of the coastal foreshore is not detrimentally affected by any significant overshadowing of the foreshore; and</i>		
	<i>(e) there is overall visual permeability of the foreshore and ocean from nearby residential areas, roads and public spaces.</i>		
5.5	<i>Coastal hazard risk management and adaptation planning</i>		The elevated location protects the site and structure from coastal hazard. The expected rate of coastal erosion to rocky coasts is relatively low.
7.6	<i>Surf Life saving clubs</i>		Maintenance of the existing coastal reserve and beachfront through adaptive reuse. The State Coastal Planning Policy notes that preference should be given to Surf Life Saving Clubs that are identified in a strategic plan and co-located with public recreation facilities.
Local Planning Scheme No. 3			
No.	Policy Text		Response
	<i>Parking requirements for the expansion to the gym areas are based on 1 space to every 25m<sup>2</sup> gross floor area. All other uses may be determined by Council considering the likely demand for parking having regard to the nature of the proposed use, the likely volumes of goods &amp; materials, and the number of people moving to and from the land, and the likelihood of traffic congestion on roads or in public places in the locality. Please can you confirm the existing and proposed gross floor area of each of the floors and how parking is proposed to be provided/managed;</i>		Additional gym area would increase parking requirements by 3 bays, other additional uses attributed to the development are not anticipated to overlap so significant additional strain on parking requirements is not expected.