

Pymble Golf Club Cowan Road, St Ives NSW

Planning Proposal - Urban Design Report

Version 5| March 2023





CONTENTS

| 1.0 INTRODUCTION | 3 | 6.0 PRELIMINARY PREFERRED OPTION |
|---|----|--|
| 1.1 BACKGROUND | 4 | 6.1 OVERVIEW AND INDICATIVE PLANS |
| 1.2 PYMBLE GOLF CLUB LAND | 5 | 6.2 ESTIMATED YIELD AND SITE AREA CALCULATIONS |
| 1.3 SITE DESCRIPTION | 6 | 6.3 INDICATIVE LANDSCAPE PLAN |
| | | 6.4 VISUALISATION |
| 2.0 URBAN PLANNING CONTEXT | 7 | 6.5 INDICATIVE LANDSCAPE CHARACTER IMAGERY |
| 2.1 DISTRICT CONTEXT | 8 | 6.6 INDICATIVE SECTION |
| 2.2 LOCAL CENTRE CONTEXT | 9 | 6.7 SHADOW AND SOLAR ANALYSIS |
| 2.3 EXISTING PLANNING CONTEXT | 10 | |
| 2.4 EMERGING PLANNING CONTEXT | 13 | |
| | | 7.0 INDICATIVE DESIGN |
| 3.0 SITE ANALYSIS | 14 | 7.1 OVERVIEW AND INDICATIVE PLANS |
| 3.1 TOPOGRAPHY AND ACCESS | 15 | 7.2 ESTIMATED YIELD AND SITE AREA CALCULATIONS |
| 3.2 GENERAL AMENITY | 16 | 7.3 INDICATIVE LANDSCAPE PLAN |
| 3.3 STREETSCAPE | 17 | 7.4 VISUALISATION |
| 3.4 PROXIMITIES | 18 | 7.5 INDICATIVE LANDSCAPE CHARACTER IMAGERY |
| 3.5 CONSTRAINTS | 19 | 7.6 INDICATIVE SECTION |
| 3.6 HERITAGE | 20 | 7.7 SHADOW AND SOLAR ANALYSIS |
| 3.7 OPPORTUNITIES SUMMARY | 21 | |
| | | 8.0 CONCLUSION |
| 4.0 URBAN DESIGN PRINCIPLES | 22 | |
| 4.1 BUILDING HEIGHT AND NEIGHBOURING INTERFACES | 23 | |
| 4.2 OPEN SPACE | 23 | APPENDICES |
| 4.3 STREETSCAPE | 24 | APPENDIX A: BUILDING ENVELOPE DIAGRAM |
| 4.4 VEHICULAR AND PEDESTRIAN ACCESS | 24 | APPENDIX B: LIST OF CONTRIBUTING CONSULTANTS |
| | | APPENDIX C: LANDSCAPE ARCHITECT REPORT |
| 5.0 PRELIMINARY OPTIONS ASSESSMENT | 25 | |
| 5.1 PRELIMINARY OPTIONS | 26 | |
| 5.2 PRELIMINARY OPTIONS COMPARISON TABLE | 29 | |
| 5.3 ASSESSMENT SUMMARY | 30 | REVISIONS |
| | | |

Page 2 230222_PGC Planning Proposal - Urban Design Report V5

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V1: DRAFT ISSUED ON 27.11.19

V2: PLANNING PROPOSAL SUBMISSION ISSUED ON 19.12.19

V3: COTTAGE RETENTION - AMENDED PLANNING PROPOSAL SUBMISSION ISSUED ON 19.04.22
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v5: REZONING AREA AMENDED TO SUIT FUTURE CLUBHOUSE RE-DEVELOPMENT 07.02.23



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1.0 INTRODUCTION

1.1 BACKGROUND

Mayoh Architects has prepared this report to summarise our findings in preparing the Indicative Site Design for the proposed rezoning of select land within the Pymble Golf Club site fronting Cowan Rd. St Ives, NSW.

This work has been commissioned by Pymble Golf Club and has been prepared in conjunction with investigations and studies undertaken by other specialist consultants in town planning, ecology, aboriculture, traffic, heritage, landscape, and contamination.

This report sets out the analysis, design principles, option testing and selection of a preferred site development

option which underpins the associated Planning Proposal.

Pymble Golf Club was established in 1924 on its presentday site and has been in continuous operation since its establishment. The current board are preparing for both the club's centenary celebrations as well as considering its "next 100 years". In that regard, the board recognises that it will need to keep the Club and its offer to members both attractive and relevant in the context of an evolving private golf club market. The board has two objectives which are the driving forces behind the Planning Proposal:

- Develop and build a new clubhouse
- Secure the financial future of the club

The board has also established that no significant changes to the course should be required to achieve those objectives. The opportunity to better utilise the club's land, with particular reference to the club land fronting Cowan Road, has been identified as a means of supporting the growth and revitalisation of both the Pymble Golf Club and the St Ives Local Centre.



As this land is part of the St Ives Town Centre, the opportunity to infill a missing portion of town centre built form has been identified as an appropriate urban planning approach which can achieve value for the Club as well as appropriate urban planning outcomes for the community and Ku-ring-gai Council.

Figure 1.1.1 Pymble Golf Club Existing Car Park (Subject Site)



1.2 PYMBLE GOLF CLUB LAND

The Club owns and occupies a total site of approximately 40 hectares as shown in Figure 1.2.1 below. The land has a moderate and fairly consistent fall from east to west, toward Cowan Creek located along the western border of the course. All members and visitors access the site from the Cowan Road entry (adjacent to #12 Cowan Rd, also owned by the Club). Secondary access for maintenance vehicles (only) exists on Pentecost Ave. (adjacent to 101 Pentecost Ave).





Figure 1.2.1 Total Club Land



1.0 INTRODUCTION

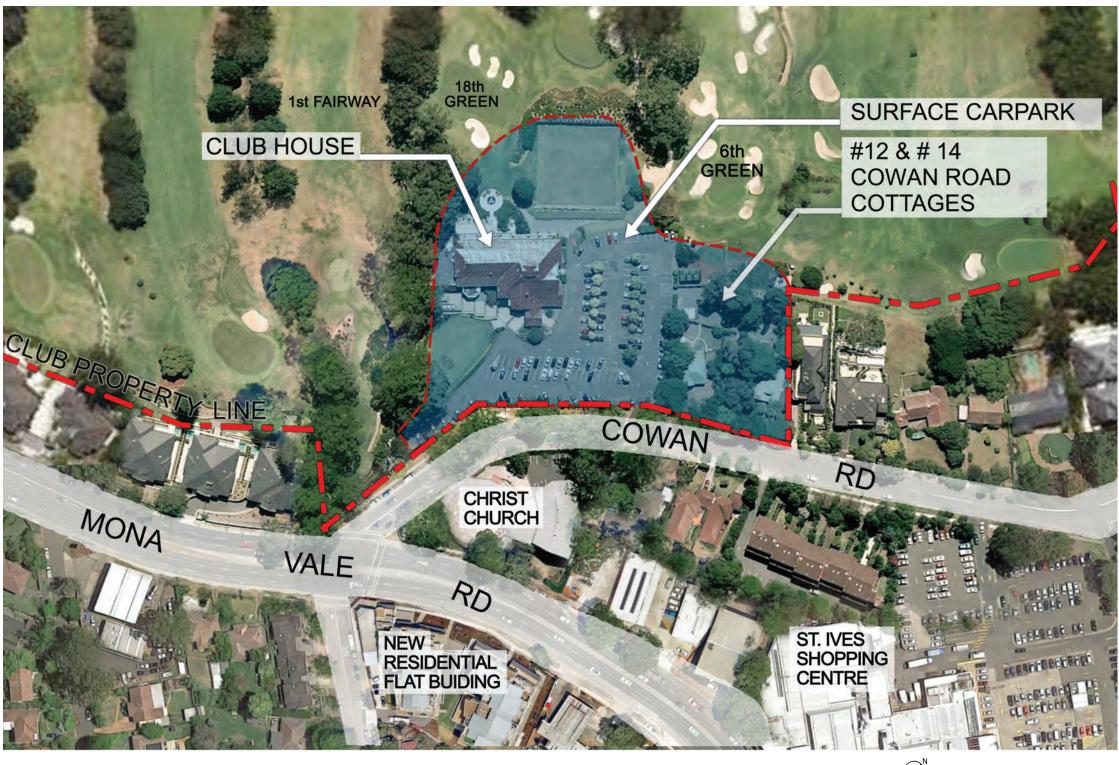
1.3 SITE DESCRIPTION

The site area investigated for the purposes of this Planning Proposal is centred on the existing surface car park, putting green, clubhouse and 2 adjacent cottages owned by the Club (#12 and #14 Cowan Rd). This site investigation area is approximately 15,000 sqm from which, approximately 11,000 sqm is subject to the proposed rezoning (less than 3% of the Club's total land)

This investigation area has been chosen for future development for several reasons including:

- Vehicular and pedestrian access to Cowan Rd
- Proximity and level access to the rest of the St Ives Town Centre
- Potential to minimise impact on the existing golf course and it's associated flora and fauna
- Potential to utilise site area already developed with mostly hard surfaces
- Potential for future development to take advantage of expansive views over the golf course and the local tree canopy

The site investigation area falls gently from east to west and has only one immediately adjacent neighbouring building at 16 Cowan Rd – positioned to the north of the investigation area. Neighbouring land to the east on the opposite side of Cowan Rd is occupied by Christ Church St Ives whilst the golf course borders the investigation area to the south and west.



 \bigcirc

Figure 1.2.2 Site Investigation Area



2.0 URBAN PLANNING CONTEXT

2.1 DISTRICT CONTEXT

The site is positioned within the St Ives Town Centre area. St Ives Town Centre is one of several local centres identified within the North District Plan prepared by the Greater Sydney Commission. St Ives local centre has a geographically large catchment area of primarily low-density residential suburbs. It is centred on Mona Vale Rd, the key arterial road linking St Ives and the upper North Shore with the other key transport, employment, retail and recreational destinations within the Northern Beaches, the Pacific Highway, the North Shore rail line, Macquarie Park, Rhodes and Sydney Olympic Park among other destinations.



Figure 2.1.1 North District Plan (Source: Greater Sydney Commission)



2.2 LOCAL CENTRE CONTEXT

The St Ives Town Centre straddles Mona Vale Rd with the predominance of retail, commercial and recreational facilities on the north side of Mona Vale Rd and a predominance of residential uses at varying densities on the south side of Mona Vale Rd, excepting the shop frontages which also line this side of the arterial road. St Ives Shopping Village provides a central location as the local retail hub and has the potenial for future redevelopment involving both Council and private owners. The St Ives Village Green/ William Cowan Oval/ and the St Ives Bowling Club are located adjacent to one another and provide extensive active recreation opportunities. The St Ives Community Hall and skateboard park are located within the Village Green.

The Pymble Golf Club Planning Proposal site is located at the southern end of the town centre, opposite the Christ Church site, approximately 50 M from the key intersection of Cowan Rd and Mona Vale Rd and approximately 150 M to the St Ives Shopping Village. The periphery of the town centre is predominantly residential, made up of varying density. This is as a result of the area undergoing transition to higher density forms of housing, enabled by the current planning controls. It is within this residential context, at one of the gateway entries to the town centre, that this planning proposal seeks to integrate with the evolving town centre.





Figure 2.2.1 St Ives Town Centre with Site and Local Amenities



2.3 EXISTING PLANNING CONTEXT

The planning proposal site falls within the Ku-ring-gai LEP 2015.

The site occupies an important position within the Town Centre context adjacent to the southern town centre gateway marked by the intersection of Mona Vale Rd and Cowan Rd.

KEY LEP BUILT FORM CONTROLS SUMMARY

| CONTROL | EXISTING SITE | EXISTING SURROUNDINGS | PROPOSED FOR THE SITE |
|-----------------------|----------------------|----------------------------|--------------------------|
| Zoning | RE2 and R3 | RE2, R3, R4, B2 | R4 |
| Height of Building | N/A and 11.5M | 9.5M, 11.5M, 17.5M | 11.5M/ 14.5M/17.5M |
| FSR | N/A and 0.8 | 0.5, 0.8, 1.0, 1.3, 1.6 | 0.9/1.1 |
| Lot Size | N/A and 1,200 SQM | 930 SQM AND 1,200 SQM | 1,200 SQM |

Zone

| B1 | Neighbourhood Centre |
|-----------------|--|
| B2 | Local Centre |
| B4 | Mixed Use |
| B7 | Business Park |
| E1 | National Parks & Nature Reserves |
| E2 | Environmental Conservation |
| E3 | Environmental Management |
| | |
| R3 | Medium Density Residential |
| R3 R4 | Medium Density Residential High Density Residential |
| | |
| R4 | High Density Residential |
| R4 R5 | High Density Residential Large Lot Residential |
| R4 R5 RE1 | High Density Residential Large Lot Residential Public Recreation |

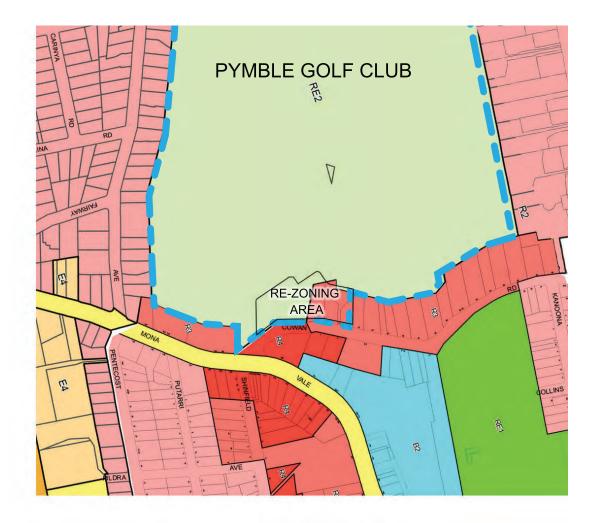




Figure 2.3.1 Existing KLEP Zoning Extract



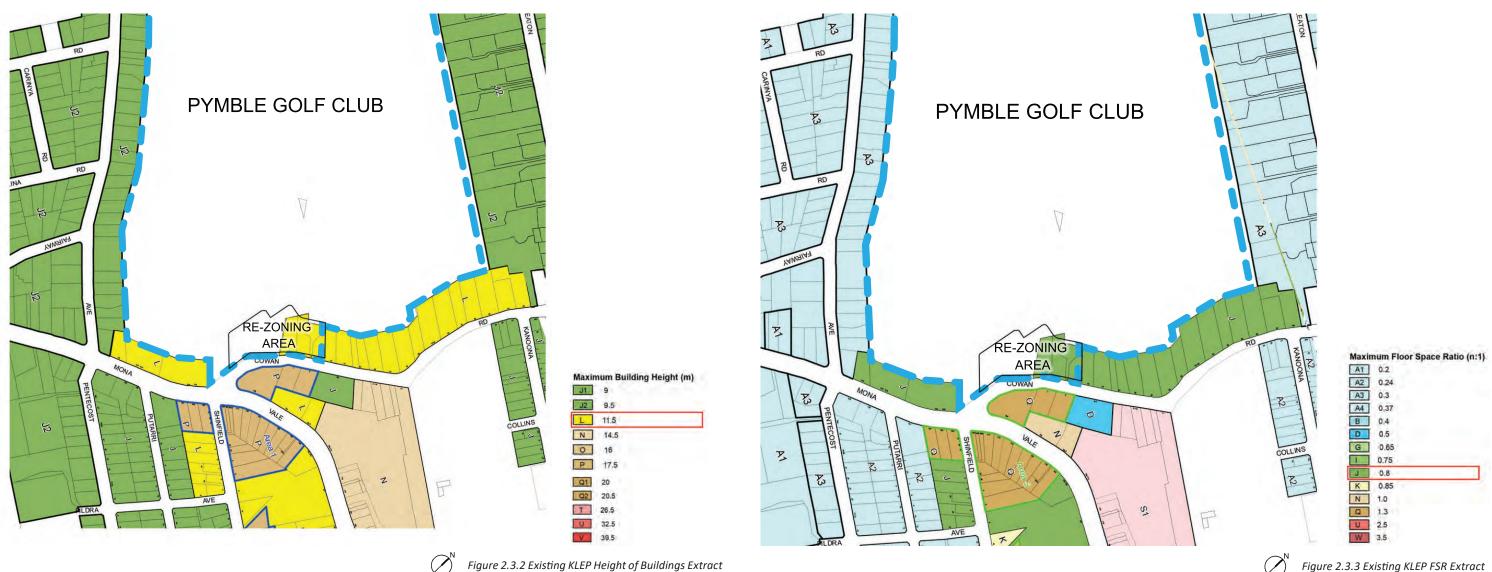
ZONING AND BUILDING HEIGHT

It is considered that in order to complete the southern entry gateway to the town centre and maximise open space, the zoning and maximum building height on the Club land, opposite the Christ Church site, should mirror that land use and height (i.e. R4 zoning and 17.5 M building height).

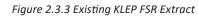
FLOOR SPACE RATIO

Several densities have been tested on the site and reviewed with the Club. This process has identified a proposed FSR varying between 0.9 and 1.1 which is between the two adjacent FSR controls of 0.8 and 1.3.

Justification for the proposed zoning, height and FSR



controls is based upon a design led planning process which has prepared concept design work ahead of determining proposed development controls. In this regard the justification of the proposed controls is largely based on the considered appropriateness and suitability of the preferred indicative design option contained within the following sections of this report.



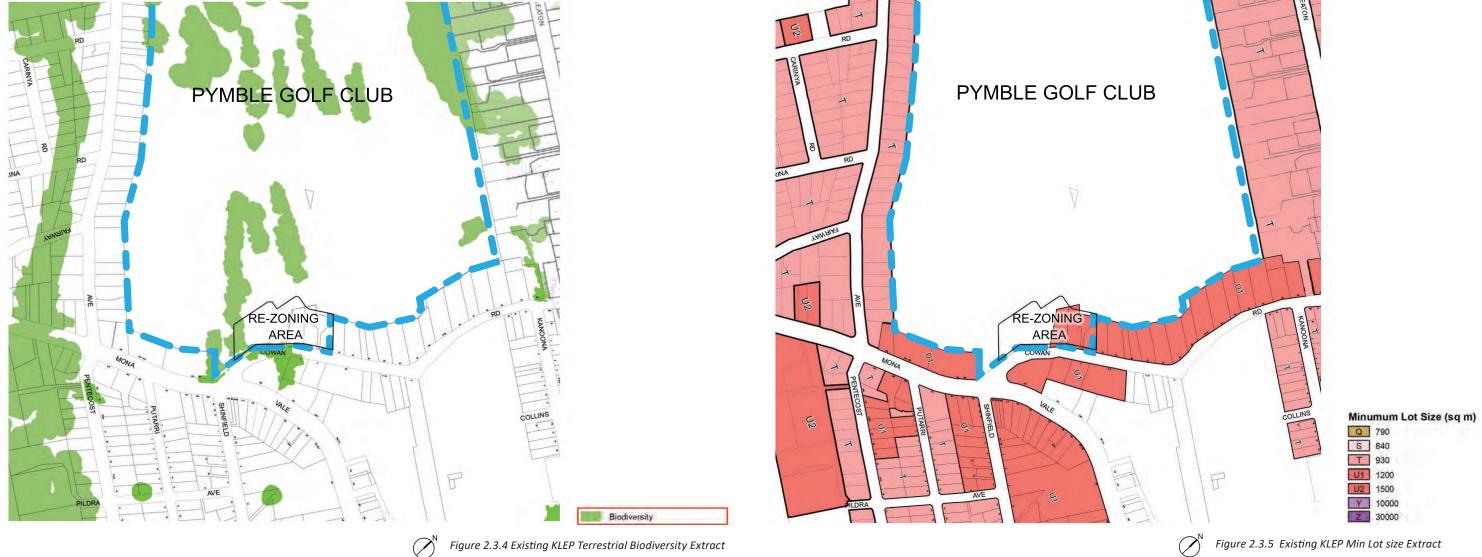


BIODIVERSITY LAND

Areas surrounding the subject site are mapped as biodiversity land. Specialist consultants in ecology and arboriculture have been engaged to provide advice to the development of the Indicative Design Site master plans. It is expected that the proposed quantity and form of development can occur without any negative impacts on the biodiversity of the area.

MINIMUM LOT SIZE

Proposed new residential development to be consistent with minimnum lot size provision on adjacent R3 and R4 zoned land.





2.4 EMERGING PLANNING CONTEXT

Ku-ring-gai Council have recently adopted their Local Strategic Planning Statement (LSPS). The LSPS is a recent requirement of the State Government to identify land use planning priorities for the Council over the next 20 years. The LSPS is to provide a link between the Greater Sydney Metropolitan Plan and its associated North District Plan with Council's planning for upcoming amendments to the LEP. Future LEP amendments will be based upon the strategies, principles and directions set out in the LSPS.

The Ku-ring-gai LSPS identifies that the population of Ku-ring-gai is forecast to grow from 126,000 as of 2016 to approximately 155,000 in 2036, an increase of 25% over 20 years. The provision of housing to accommodate this population growth will require amendment to the current LEP to accommodate more housing supply in the period commencing from 2021 onward. The LSPS identifies that future housing supply will firstly be considered in and around the existing primary local centres of the LGA, being Gordon, Lindfield, Turramurra and St Ives. Furthermore, these four primary local centres are expected to add significant additional housing supply in the period 2021-2031. St Ives Local Centre is planned to become "an active green lifestyle and shopping destination."

This Planning Proposal seeks to compliment the Ku-ring-gai LSPS and by extension the North District Plan, by providing new residential capacity within a residential area of the St Ives local centre, immediately adjacent to the local centre business zone.

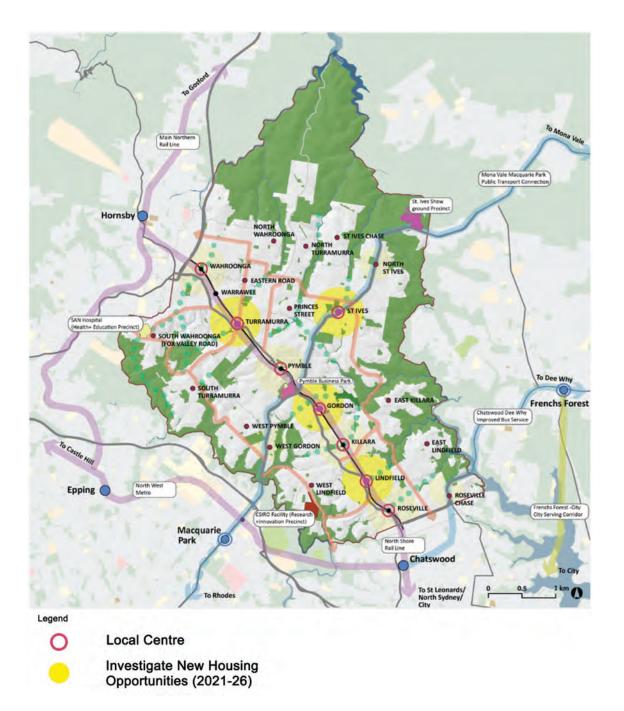
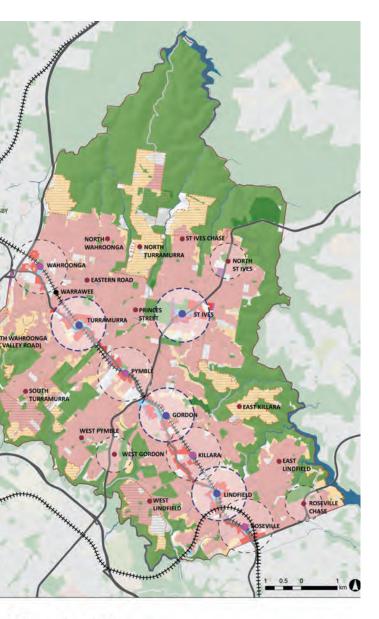


Figure 2.4.1 Ku-ring-gai LSPS - Structure Plan



Primary Local Centres

Legend

0

Priority Investigation Areas for Future Housing (2021-26)

Figure 2.4.2 Ku-ring-gai LSPS - Housing Supply Plan



3.0 SITE ANALYSIS

3.1 TOPOGRAPHY AND ACCESS

The existing Club car park sits at the top of a ridge roughly following the alignment of Cowan Rd. The land falls to the west, allowing for sweeping views over the course. The land falls to the east in a more gradual manner with ground level views terminated by existing vegetation and development.

Access points for the existing Golf Club and cottages are shown on the following diagram. No vehicular access is currently present on the west side of Cowan Rd between the existing Club entry point and the intersection of Cowan Rd and Mona Vale Rd.

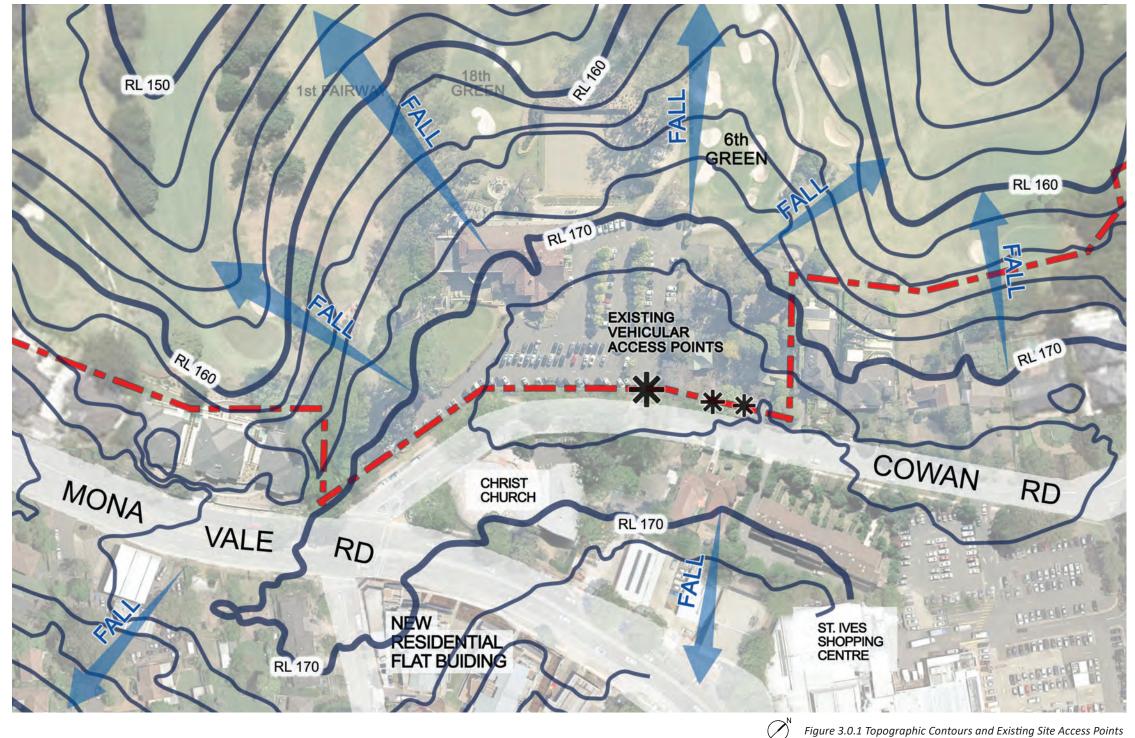


Figure 3.0.1 Topographic Contours and Existing Site Access Points





Figure 3.0.2 Central Amenity Analysis - Noise, Views & Sunlight

3.2 GENERAL AMENITY

The site's orientation and topography demonstrates a key opportunity to capture both expansive views over the golf course and local tree canopy combined with excellent solar access. Traffic along Mona Vale Rd is the primary source of local noise.





3.3 STREETSCAPE AND NEIGHBOURING PROPERTY CHARACTERISTICS

The existing streetscape on the western side of Cowan Rd is dominated by residential buildings of medium scale set behind substantial vegetation located in both the street verge as well as within the front setbacks of private property.

The eastern side of Cowan Rd demonstrates a greater mix of land use including place of public worship (Christ Church) with associated carparking, residential townhouses, surface carparking for the St Ives Shopping Village and vegetated frontage to William Cowan Oval





Figure 3.0.3 Looking South down Cowan Road

before becoming exclusively residential north of the Oval. The eastern side of Cowan Rd is likely to experience more change to development and the streetscape compared to the western side of Cowan Rd over the short and medium term due to the under development of these properties in comparison to the development potential contained within the existing KLEP and KDCP. Conversely the eastern side of Cowan Rd. has had many recent residential developments which has maximised the development consistent with the current development controls.

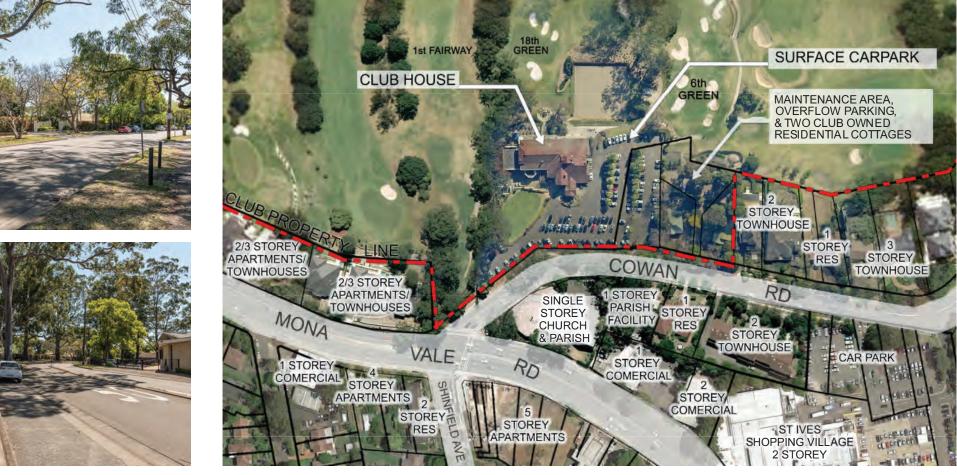


Figure 3.0.4 Looking North up Cowan Road



Figure 3.0.5 Surrounding Property Land Use Plan



3.4 PROXIMITIES (TRANSPORT, RETAIL, RECREATION, COMMUNITY)

The site's proximity to local retail, services, bus transport, recreation and community facilities is excellent due to the short distances and relatively level topography between the site and the rest of the town centre in which these facilities are located.



| PROXIMITY | AMENITY |
|-----------|-------------------------------------|
| 40m | 40m |
| 120m | Bus Stop - Mona Vale Road |
| 250m | St Ives Village Green |
| 270m | St Ives Shopping Village |
| 500m | St Ives Community Hall |
| 680m | Bus Stop - Killeaton Street |
| 700m | Dalrymple-Hay Nature Reserve |
| 750m | St Ives Bowling and Recreation Club |
| | |

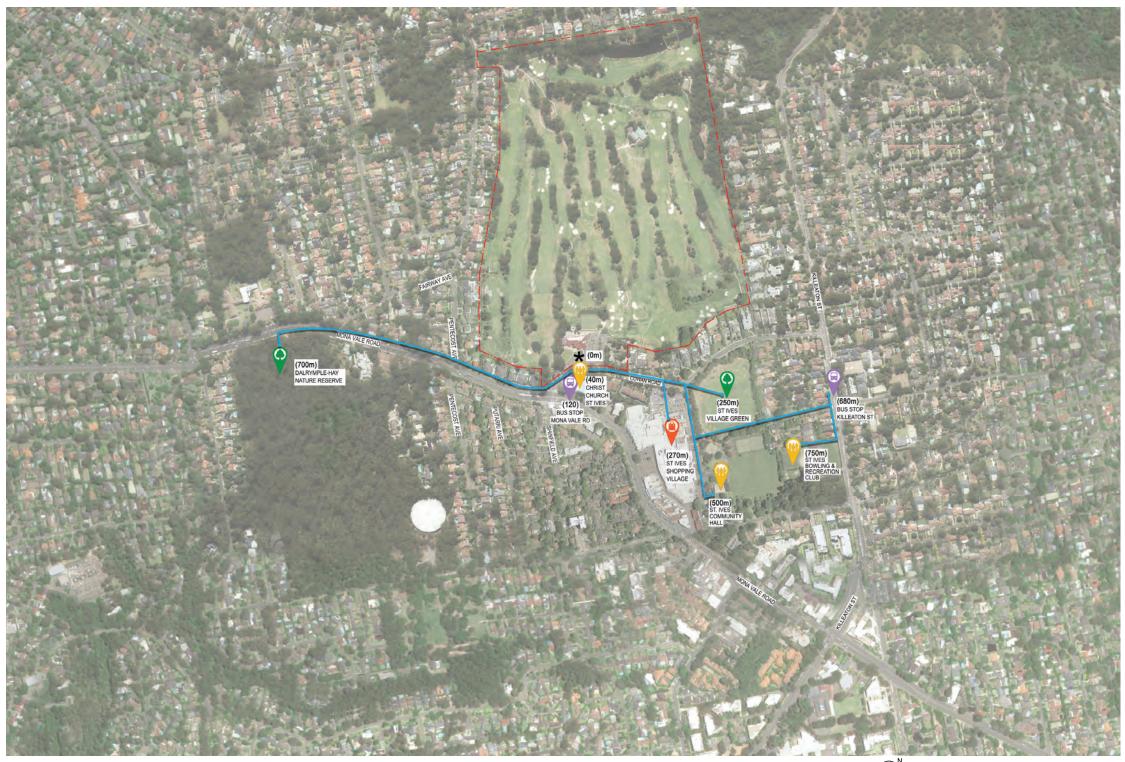


Figure 3.0.6 Proximities to Local Facilities



3.5 CONSTRAINTS

The primary site constraints are focused on the biodiversity and ecological value associated with the site's surrounding vegetation. The following graphics demonstrate the site relationship to the areas currently mapped in the KLEP for biodiversity protection, as well as ecologically sensitive land identified by the proponents specialist consultants-Narla Environmental. Additionally, consultant arborist DKG Arboricultural Services, has identified the tree retention values of the on-site and surrounding trees from which the following graphics are created.



LEGEND

AREAS OF HIGH BIODIVERSITY SIGNIFICANCE (AS PER KLEP'S)

Figure 3.0.7 Existing Biodiversity Land \bigcirc per KLEP Biodiversity Map

LEGEND



- \bigcirc HIGH RETENTION VALUE (WITH TPZ & SRZ SHOWN DASHED)
 - Figure 3.0.8 Tree Retention Mapping per MEDIUM RETENTION VALUE Report from Seasoned Tree Consulting





Figure 3.0.9 Ecologically Sensitive Land per Report by Narla Environmental



3.6 HERITAGE

KLEP 2015 does not identify any heritage items or conservation zones on the club's land or on any of the properties immediately surrounding the proposed rezoning area.

The proponent's Heritage consultants, Heritage 21, undertook an Assessment of Heritage Significance in late 2018 which drew the conclusion that the existing clubhouse as well as #12 and #14 Cowan Rd did not meet the criterion for inclusion on Schedule 5 of the Ku-ring-gai Local Environmental Plan. Accordingly, demolition after archival recording, was considered appropriate at the time.

The preliminary options, including the Preliminary Preferred Option were based upon the 2018 heritage advice.

A further study, also undertaken by Heritage 21 in September 2020, recommended conservation of the two timber cottages at #12 and #14 Cowan Rd due primarily to the relative rarity in the LGA of timber framed, timber clad cottages which were once much more common.

The Indicative Design incorporates retention of the two cottages. (Refer to section 7.0)





No 12 Cowan Rd - Front



No 12 Cowan Rd - Back

No 14 Cowan Rd - Front



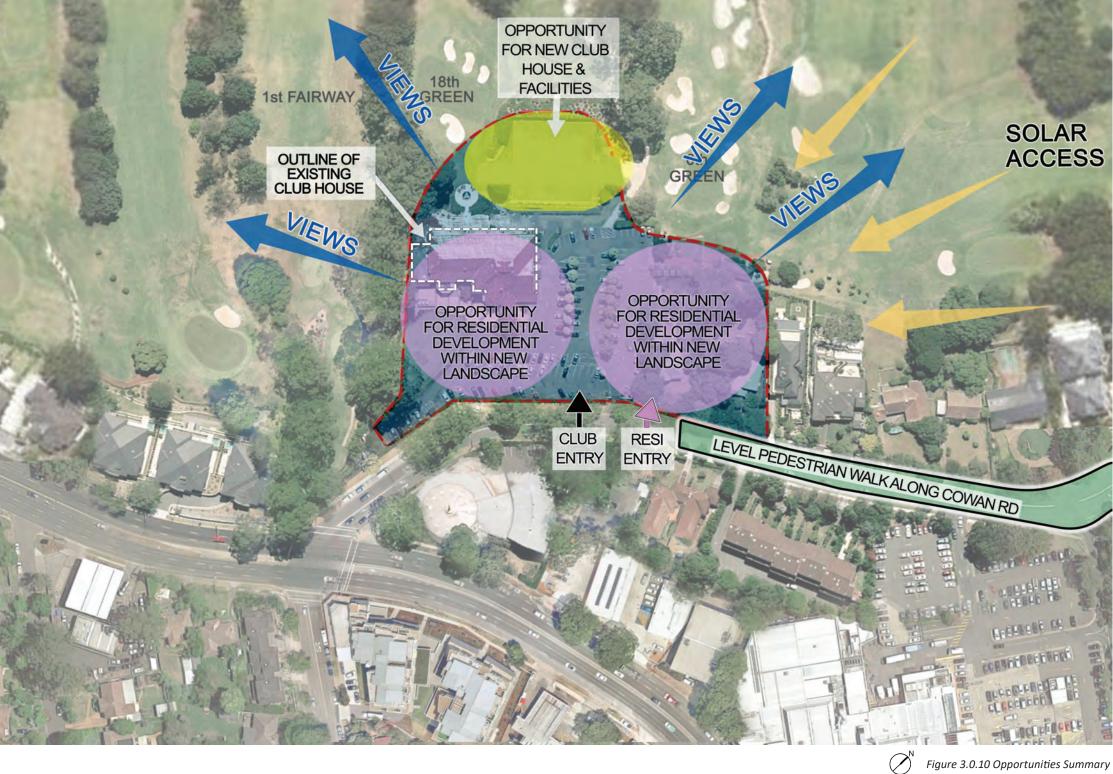
No 14 Cowan Rd - Side

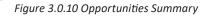


3.0 SITE ANALYSIS

3.7 OPPORTUNITIES SUMMARY

The existing site primarily contains surface car parking as well as the existing clubhouse building and 2 free-standing residences. The conversion of this site to incorporate residential development with parking located in basements below the future buildings above ground, creates an opportunity to dramatically improve the quantity of deep soil landscape across the site, whilst simultaneously providing new housing stock in a location which provides both convenience to local facilities and transport, excellent outlook and solar access.







4.0 URBAN DESIGN PRINCIPLES

The following urban design principles have been adopted for exploration of the site development options:

4.1 BUILDING HEIGHT AND NEIGHBOURING INTERFACES

Building heights to range from 3-5 storeys to provide continuity and interface with current permissible heights within both the adjacent R3 and R4 zones. Provide 5 storey height where closest to the Christ Church site with its 5 storey permissible height and in the context of the tallest existing street trees, in order to establish the southern end of Cowan Rd as part of the southern town centre gateway. Provide for 3 storey height adjacent to the 3- storey R3 zone and to the open space of the golf course. Provide substantial side setback to the side boundary adjacent to the R3 zone.

4.2 OPEN SPACE

Arrange the built form to enable substantial private and communal open space within the new residential development in a manner which compliments the open space of the golf course. Providing a blending of the golf course landscape with residential landscape.





Figure 4.2.1 Open Space Principle \bigcirc



4.3 STREETSCAPE

Ensure the streetscape retains highly vegetated setback, enabling partial screening of future built form and suitable privacy for ground floor courtyards. Retain use of hedging and combination of masonry and open palisade fencing to define private/ public realms.

4.4 VEHICULAR AND PEDESTRIAN ACCESS

Enable separate access points for the Golf Club and future residential development off Cowan Rd. to ensure the Club retains its street presence and identity in the public realm and is distinguished from the future residential development. Ensure vehicular access points do not impact operation of the Cowan Rd/ Mona Vale Rd. intersection.



Figure 4.3.1 Existing Cown Road View



Figure 4.4.1 Map Indicating Entry Points and Front Setback Zone



5.0 PRELIMINARY OPTIONS

5.1 PRELIMINARY OPTIONS

Based on the analysis, market research and establishment of the urban design principles, three preliminary options were developed and assessed as follows:

- Option 1 Townhouses
- Option 2 Combination of Townhouses and Apartments
- Option 3 Apartments

Preliminary options 1,2 & 3 were developed prior to the latest heritage investigations and therefore did not allow for retention of the cottages at #12 and #14 Cowan Rd (refer to section 7.0 for latest option retaining the cottages).

Each preliminary option and its associated development yield is shown below.

PRELIMINARY OPTION 1

| DEVELOPMENT SUMMARY - OPTION 1 (TOWNHOUSES) | |
|--|---|
| APPROX SITE AREA | 9030 SQM |
| EST GROSS FLOOR AREA (GFA) | 6700 SQM |
| EST FSR | 0.74: 1 |
| EST. NET SALEABLE AREA (NSA) | 6700 SQM |
| % OF SITE AS RES COMMON OPEN SPACE | 30% |
| EST. RES UNITS | 36 TOWNHOUSES AT 185 SQM AVERAGE ABOVE GROUND (PLUS BASEMENT GARAGE/ STORAGE) |







Figure 5.1.1 Option 1 - Townhouse Plan

PRELIMINARY OPTION 2

| DEVELOPMENT SUMMARY - OPTION 2 (TOWNHOUSES & APARTMENTS MIX) | | |
|---|---|--|
| APPROX SITE AREA | 8815 SQM | |
| EST GROSS FLOOR AREA (GFA) | 9000 SQM | |
| EST FSR | 1.02 : 1 | |
| EST. NET SALEABLE AREA (NSA) | 8100 SQM | |
| % OF SITE AS RES COMMON OPEN SPACE | 34% | |
| EST. RES UNITS | 65 APARTMENTS AT 85 SQM AVG + 14 TOWNHOUSES AT 185 SQM ABOVE GROUND (PLUS BASEMENT GARAGE/ STORAGE) | |









Figure 5.1.2 Option 2 - Townhouse and Apartment Plan



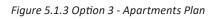
PRELIMINARY OPTION 3

| DEVELOPMENT SUMMARY - OPTION 3 (APARTMENTS) | |
|--|---------------------------------|
| APPROX SITE AREA | 9770 SQM |
| EST GROSS FLOOR AREA (GFA) | 9780 SQM |
| EST FSR | 1.00 |
| EST. NET SALEABLE AREA (NSA) | 8886 SQM |
| % OF SITE AS RES COMMON OPEN SPACE | 55% |
| EST. RES UNITS | 77 APARTMENTS AT 113 SQM AVG |



| LUCEND | |
|-------------|--|
| | CLUB HOUSE |
| | RESIDENTIAL BUILDING |
| 3 | HEIGHT IN STOREYS |
| | RESIDENTIAL COMMON AREA |
| | SITE BOUNDARY |
| | EXISTING CLUB HOUSE |
| 0 | TREE PROTECTION ZONE (TPZ) RADIUS |
| (-) | STRUCTURAL ROOT ZONE (SRZ) RADIUS |
| | TREES MUST BE RETAINED (BIODIVERSITY MAPPED) |
| • | TREES RECOMMENDED FOR RETENTION BY ABORIST |
| | RESIDENTIAL FENCING |
| \triangle | PEDESTRIAN RESIDENTIAL ENTRY |
| | RESIDENTIAL PRIVATE TERRACE COURTYARD |
| | |







5.2 PRELIMINARY OPTIONS COMPARISON TABLE

| ASSESSMENT CRITERIA | OPTION 1 | OPTION 2 | |
|------------------------|---|---|--|
| Development Yield | Lowest | Highest | Middle |
| Financial Feasibility | Lowest | Middle | Highest |
| Site Density | Lowest | Highest | Middle |
| Open Space | Townhouses require a large portion of open space to be dedicated to private courtyards – not seen as sympathetic to the course landscape and visual predominance of fencing would likely prevail | Townhouses would become the primary interface with the course and same issues regarding full privatisation of open space in this interface as per Option 1 remain | Apartment dev common open ensuring its up |
| Market Suitability | Low – not a strong fit with local "downsizer" target market. Large unit sizes driven by 3 storey built form unaffordable for "non-downsizers" | Combination of Option 1 and 2 Comments | Best fit - due to accessible with market is seeki |
| Impact on Biodiversity | Highest – requires removal of several high significance trees | Middle | Lowest - requir |
| Visual Impacts | Low | Medium | Medium |
| Access to Views | Low | Medium | High |
| Solar Access | High | Medium | High |
| Pedestrian Circulation | Individual townhouse entries requires extensive pedestrian circulation, reducing potential for quantity and quality of landscape planting | Individual townhouse entries requires extensive pedestrian circulation reducing potential for quantity and quality of landscape planting | Apartment dev and private are circulation path achieve disable lift per townho |
| Vehicular Circulation | Townhouse development requires parking to be directly below each townhouse resulting in poor basement parking efficiency and lack of deep soil area | Combination of Option 1 and 2 comments | Apartment dev parking and ma |

| OPTION 3 |
|---|
| |
| |
| |
| levelopment provides opportunity for significant en space controlled and maintained by a body corporate upkeep an appropriate visual fit with course landscape |
| e to potential for single level living with entire site ith lifts. High flexibility with unit sizes though target eking large 2 and 3 bed units of high quality |
| uires no removal of high significance trees |
| |
| |
| |
| levelopment pedestrian circulation allows for communal area with landscape unbroken by as much external aths. Apartment developments also allow for all units to bled access via lifts without the need for an inefficient 1 house scenario |
| levelopment allows for highest efficiency basement maximisation of deep soil area |



5.3 ASSESSMENT SUMMARY

PRELIMINARY OPTION 1 (NOT PREFERRED)

Feasibility testing of Option 1 did not support the Club's financial requirements to enable future redevelopment of a new clubhouse

Real estate market advice identified down-sizing local residents as the key target demographic. The real estate market advice did not support the development of 3 storey townhouses as a suitable product for the entire development.

Townhouse development places an emphasis on private open space over communal and this is not supported by the Club on the basis that visual impact of the common residential landscape will remain an important aspect to the presentation of the Club.

Pedestrian and vehicular circulation requirements of townhouse development make achievement of high % of deep soil landscape extremely difficult.

Option 1 requires removal of several trees identified as having high significance and within the biodiversity and ecologically constrained areas.

This option has significant potential for cross-looking and privacy issues between units without the use of high fencing

On the basis of each point outlined above, Option 1 was eliminated from further investigation.

PRELIMINARY OPTION 2 (NOT PREFERRED)

In this scenario, where townhouses and apartments are mixed, it is considered that the townhouses are required to "front" the course in order to match the most premium site position with the most expensive residential dwellings (due to size and land devoted to each townhouse). Apartments would align with and front Cowan Rd and, where possible, obtain golf course views by looking over the top of the townhouses. Having townhouses fronting the golf course does not suit the desire to have a common residential landscape blend with the golf course landscape, instead placing private courtyards behind privacy fencing adjacent to the course.

Option 2 also suffers from the same pedestrian and vehicular circulation challenges as Option 1 which reduces the amount of deep soil landscape achievable.

Option 2 has the highest potential for overlooking / cross looking and general privacy conflicts between units and townhouses and does not maximise the number of dwellings with views over the course.

On the basis of each point outlined above, Option 2 was eliminated from further investigation.

PRELIMINARY OPTION 3 (PREFERRED PRIOR TO 2020 HERITAGE REVIEW)

Option 3 responds to the real estate market advice and satisfies the Club's brief to enable high quality and high amenity development which enhances the Club and does not detract from the neighbouring properties. Apartments are considered the most appropriate form of housing for the site's position within the St Ives Town Centre and provides the opportunity to maximise common open space and deep soil planting in order that the future development sits sympathetically within the golf course environment.

The building massing and configuration in this option maximises the amount of residential space with open views over the course, and the quantity of residential common open space located in appropriate, sunny positions.

The proposed building envelopes have shallow depth throughout, discouraging internal configuration of double loaded corridors, and promoting high levels of cross ventilation and internal daylighting. The narrow and winding building configuration promotes maxmimisation of open outlook and minimisation of apartments oriented toward one another, ensuring high level of visual privacy.

Design of basement parking for apartments allows for the most efficient basement layout (compared to townhouses) and one which can typically align closely with the footprint of the building above ground.



6.0 PRELIMINARY PREFERRED OPTION

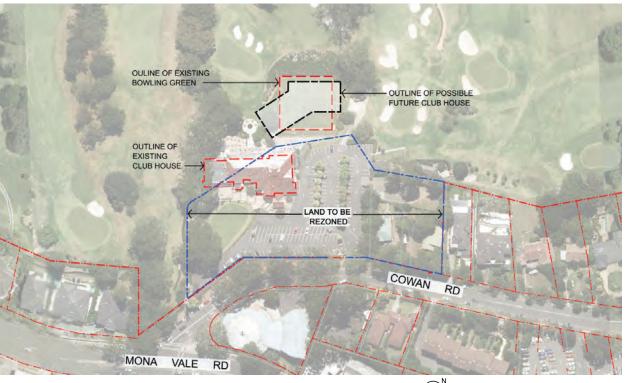
6.1 OVERVIEW

Following the selection of Option 3 from the preliminary options, further development and testing resulted in the following Preliminary Preferred Option, prior to the 2020 Heritage review. This option demonstrates that a high amenity and high-performance residential development is achievable on the site in the configuration shown. Importantly, it demonstrates a massing and spatial configuration which responds to the following:

- Appropriate interface to the neighbouring residential building to the north at 16 Cowan Rd with a 3-storey height and 9M side boundary setback adjacent to this neighbour.
- Appropriate 5 storey massing opposite the Christ Church site where 5 storey development is currently permissible
- Preservation of a heavily vegetated front setback varying from 10-12 M in dimension
- Substantial residential common open spaces which visually integrates with the open space of the golf course
- Achievement of greater than 50 % deep soil area
- Building configuration which maximises views over the course or other open space
- All units have an open outlook, with no units looking onto one another for primary outlook.
- High percentage of units (78%) which achieve at least 2 hours of direct sun in mid-winter
- High percentage of units (95%) which achieve cross-ventilation.



Figure 6.1.1 Proposed Massing - Aerial View Looking South-West



 \checkmark Figure 6.1.2 Land to be Re-zoned



GROUND FLOOR PLAN

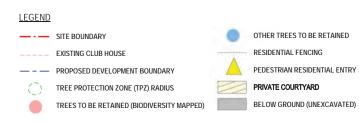




Figure 6.1.3 Preliminary Preferred Option - Ground Floor Plan



6.0 PRELIMINARY PREFERRED OPTION

LEVEL 1 PLAN







Figure 6.1.4 Preliminary Preferred Option - Level 1 Plan



6.0 PRELIMINARY PREFERRED OPTION

LEVEL 2 PLAN







Figure 6.1.5 Preliminary Preferred Option - Level 2 Plan



6.0 PRELIMINARY PREFERRED OPTION

LEVEL 3 PLAN







Figure 6.1.6 Preliminary Preferred Option - Level 3 Plan



6.0 PRELIMINARY PREFERRED OPTION

LEVEL 4 PLAN





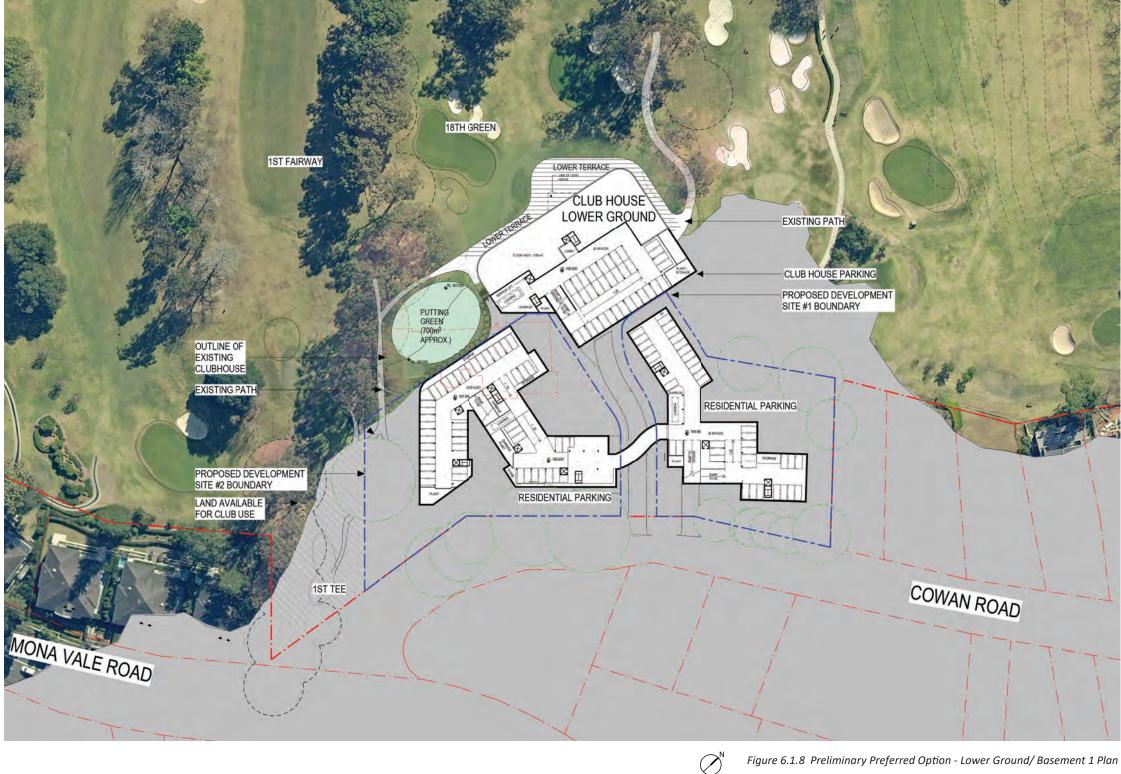


Figure 6.1.7 Preliminary Preferred Option - Level 4 Plan



LOWER GROUND/ BASEMENT 1 PLAN





Page 38 230222_PGC Planning Proposal - Urban Design Report V5

Figure 6.1.8 Preliminary Preferred Option - Lower Ground/ Basement 1 Plan



BASEMENT 2 PLAN



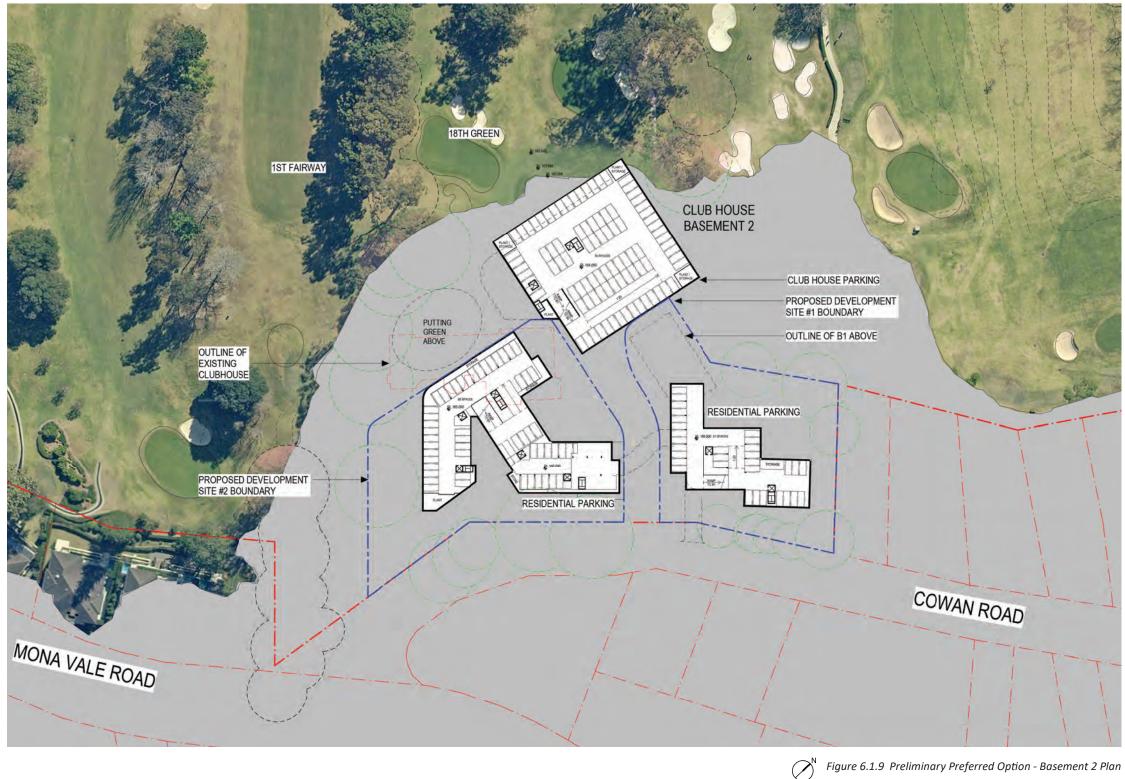


Figure 6.1.9 Preliminary Preferred Option - Basement 2 Plan



6.0 PRELIMINARY PREFERRED OPTION

BASEMENT 3 PLAN



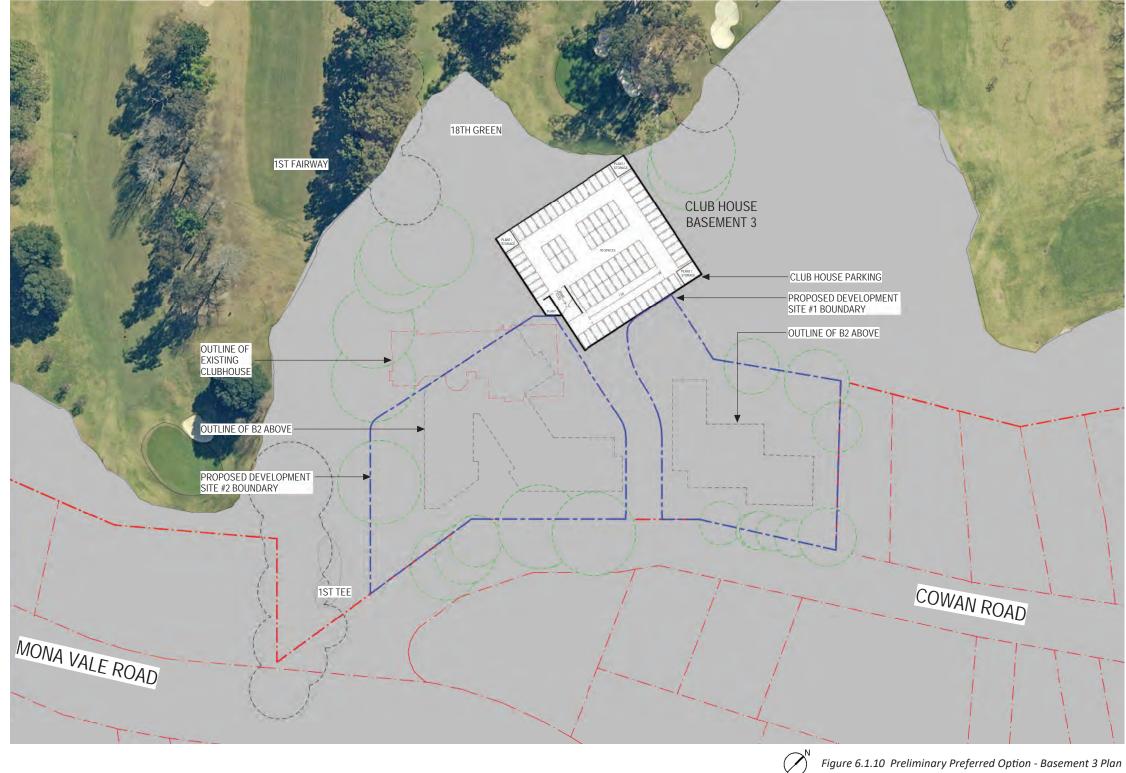


Figure 6.1.10 Preliminary Preferred Option - Basement 3 Plan



6.2 ESTIMATED YIELD AND SITE AREA CALCULATIONS

DEVELOPMENT YIELD AND DENSITY

Approximate Site Area

Estimated Gross Floor Area (GFA)

Estimated Floor Space Ratio (FSR)

Estimated # of Res Units (113 m² Avg NSA)

- Estimated # of 2 Bed Units

- Estimated # of 3 Bed Units

DCP COMPLIANCE

Residential Common Open Space - % of Site

Deep Soil - % of Site

Site Coverage - % of Site

RESIDENTIAL AMENITY AND ADG OVERVIEW

Views of Golf Course

Solar Access (2 Hours)

Cross-Ventilation

| RES SITE #1 | RES SITE #2 | TOTAL SITE |
|-------------|-------------|------------|
| | | |
| 4300 m² | 5500 m² | 9800 m² |
| 3800 m² | 6000 m² | 9800 m² |
| 0.90 | 1.10 | 1.00 |
| 28 | 49 | 77 |
| 8 | 26 | 34 |
| 20 | 23 | 43 |

| 9 | 48% | 55% | 52% |
|---|-----|-----|-----|
| | 53% | 56% | 55% |
| | 30% | 30% | 30% |

| 89% | 67% | 75% |
|-----|-----|-----|
| 89% | 71% | 78% |
| 89% | 98% | 95% |



6.3 PRELIMINARY LANDSCAPE PLAN

Place Design Group has prepared the Indicative Landscape Plan in support of the preferred development option. Refer to Appendix B.0 for complete landscape documentation.



Figure 6.3.1 Indicative Landscape Plan by Place Design Group





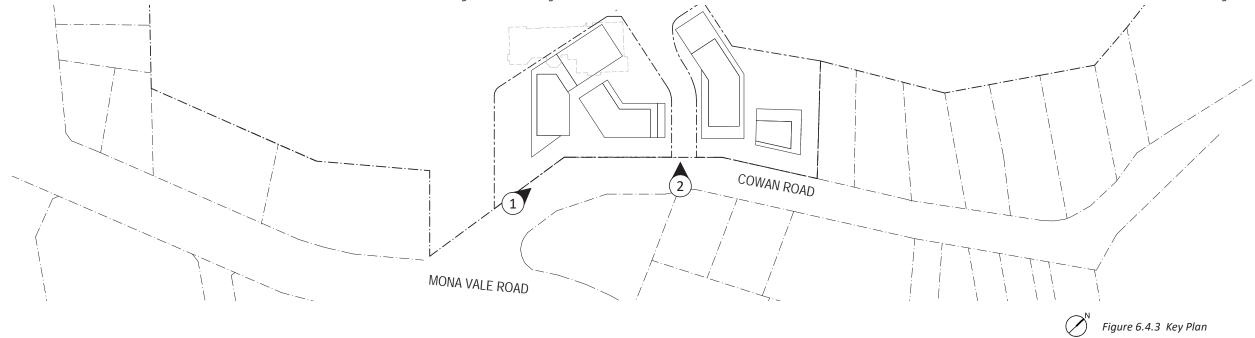




Figure 6.4.2 Existing Site Photo - View 2



6.0 PRELIMINARY PREFERRED OPTION



Figure 6.4.4 Photo-montage - View 1 Looking North to Cowan Road



6.0 PRELIMINARY PREFERRED OPTION



Figure 6.4.5 Photo-montage - View 2 Looking to Proposed Club Entry



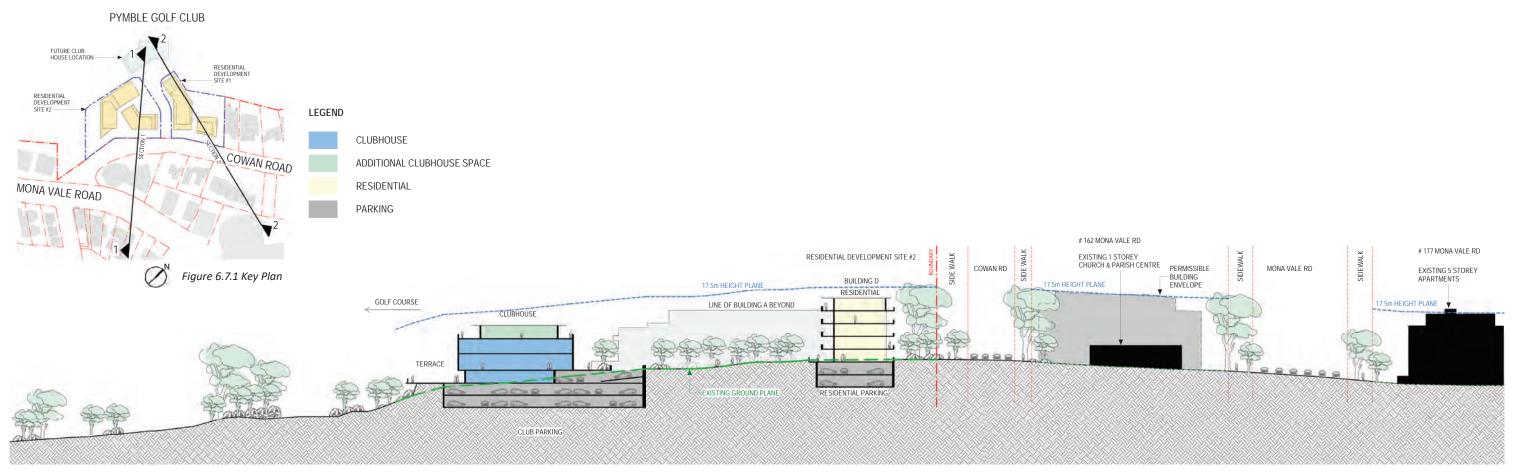
6.5 INDICATIVE LANDSCAPE CHARACTER IMAGERY



Figure 6.6.1 Indicative Character Imagery Prepared by Place Design Group



6.6 INDICATIVE SECTIONS



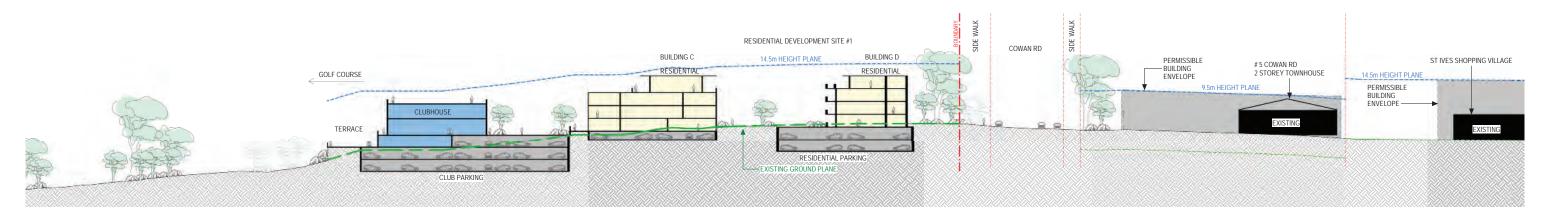


Figure 6.7.2 Section 1

Figure 6.7.3 Section 2



6.7 SHADOW AND SOLAR ANALYSIS

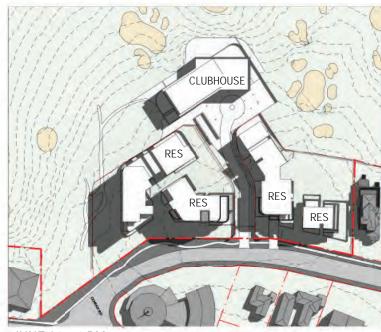
Shadow and solar access analysis has been undertaken, utilising 3-D digital modelling of the Preliminary Preferred Option in the context of the area's topography and existing buildings.

As demonstrated in the following shadow diagrams, this option does not cast shadow on adjoining or adjacent private property between 9am and 3pm on the shortest day of the year (June 21), which will impact on those properties abilities to achieve the solar access provisions within SEPP65 and the ADG.

Additionally, the site receives almost no shadow from adjoining properties throughout the year including June 21. The configuration of the site enables access to direct sunlight in winter from east, north and westerly orientations, the sum total of which allows for a high percentage of residential space to achieve greater than 2 hours of direct sunlight on June 21.

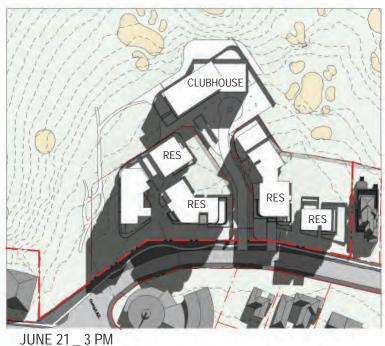


JUNE 21 _ 9 AM

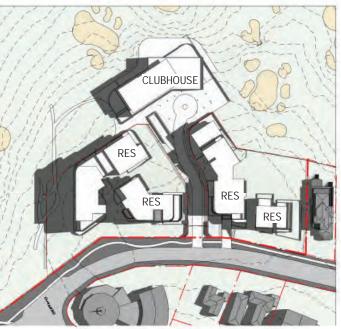


JUNE 21 _ 1 PM









JUNE 21 _ 11 AM

 \bigcirc

Figure 6.8.1 Preliminary Preferred Option - Shadow Analysis Diagrams



7.1 OVERVIEW

Following feedback from Ku-ring-gai Council's planners and heritage advisors, Heritage 21 undertook an updated Assessment of Heritage Impact in September 2020. The updated report recommended retention of the two cottages at #12 and #14 Cowan Rd. In addition to their retention, it was recommended that unsympathetic additions to the cottages be removed and that relocation on site was also possible from a heritage perspective.

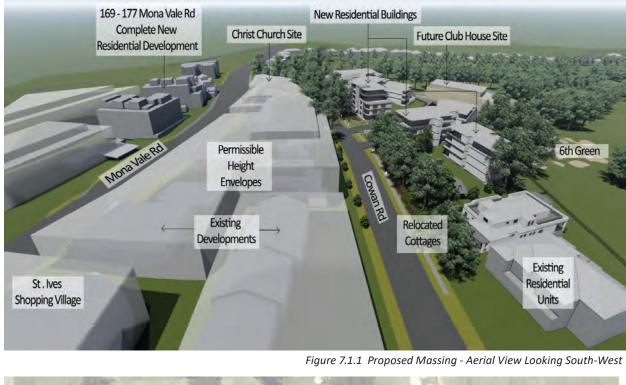
Investigation into the feasibility of relocation was undertaken by the proponent. Subsequent advice received from McDonald Contracting indicates relocation of the cottages is feasible.

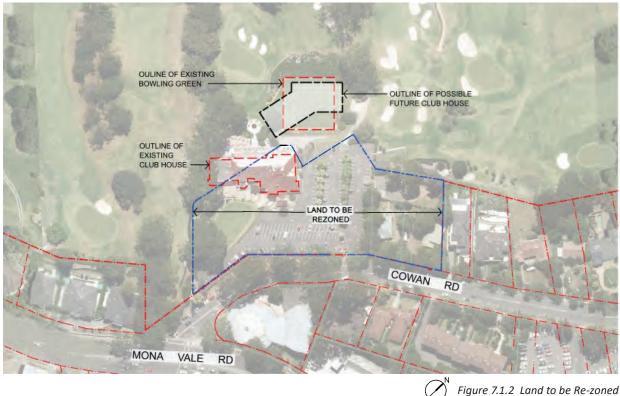
The following Indicative Design differs from the preliminary preferred option with respect to the residential development site #1 (Buildings C and D). The Indicative Design retains the proposed built form for residential development site #2 (buildings A and B). The proposed position of the future new clubhouse also remains unchanged in the Indicative Design and remains outside of the proposed rezoning area.

For residential development site #1, both cottages at #12 and #14 Cowan Rd are proposed to be relocated within the same general area of the site to enable low rise apartment development on the west side of the cottages (amended Building D). Building C is amended to accommodate both the retention of the cottages and the relocation and resizing of Building D. It is envisaged that the refurbished cottage at #12 Cowan Rd should be used as a common facility for the future residents suitable for meetings, small group entertainment etc. The proposed position allows the cottage to directly interact with the primary common open space on the site. The refurbished cottage at #14

Cowan Rd is proposed to be a residential unit and part of the future strata subdivision.

The resulting Indicative Design preserves the high amenity of all the residential spaces and the appropriate contextual fit developed in the preliminary preferred option, with the added benefit of retaining the two cottages. The proposed maximum FSR and Building Heights are unchanged from the preliminary preferred option.







GROUND FLOOR PLAN







| <u>u</u> | |
|----------|--|
| - | SITE BOUNDARY |
| | EXISTING CLUB HOUSE |
| - | PROPOSED RE-ZONING BOUNDARY |
|) | TREE PROTECTION ZONE (TPZ) RADIUS |
| í. | TREES TO BE RETAINED (BIODIVERSITY MAPPED) |
|) | OTHER TREES TO BE RETAINED |
| 1 | PEDESTRIAN RESIDENTIAL ENTRY |
| | BALCONY / TERRACE |
| | PRIVATE TERRACE |
| | BELOW GROUND (UNEXCAVATED) |



Figure 7.1.3 Indicative Design - Ground Floor Plan

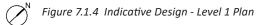


LEVEL 1 PLAN





| GEND | |
|------|--|
| | SITE BOUNDARY |
| | EXISTING CLUB HOUSE |
| | PROPOSED RE-ZONING BOUNDARY |
| 0 | TREE PROTECTION ZONE (TPZ) RADIUS |
| | TREES TO BE RETAINED (BIODIVERSITY MAPPED) |
| | OTHER TREES TO BE RETAINED |
| | PEDESTRIAN RESIDENTIAL ENTRY |
| | BALCONY / TERRACE |
| - | PRIVATE TERRACE |
| | BELOW GROUND (UNEXCAVATED) |
| | |





LEVEL 2 PLAN



Figure 7.1.5 Indicative Design - Level 2 Plan



LEVEL 3 PLAN









Figure 7.1.6 Indicative Design - Level 3 Plan



LEVEL 4 PLAN





Figure 7.1.7 Indicative Design - Level 4 Plan



LOWER GROUND/ BASEMENT 1 PLAN

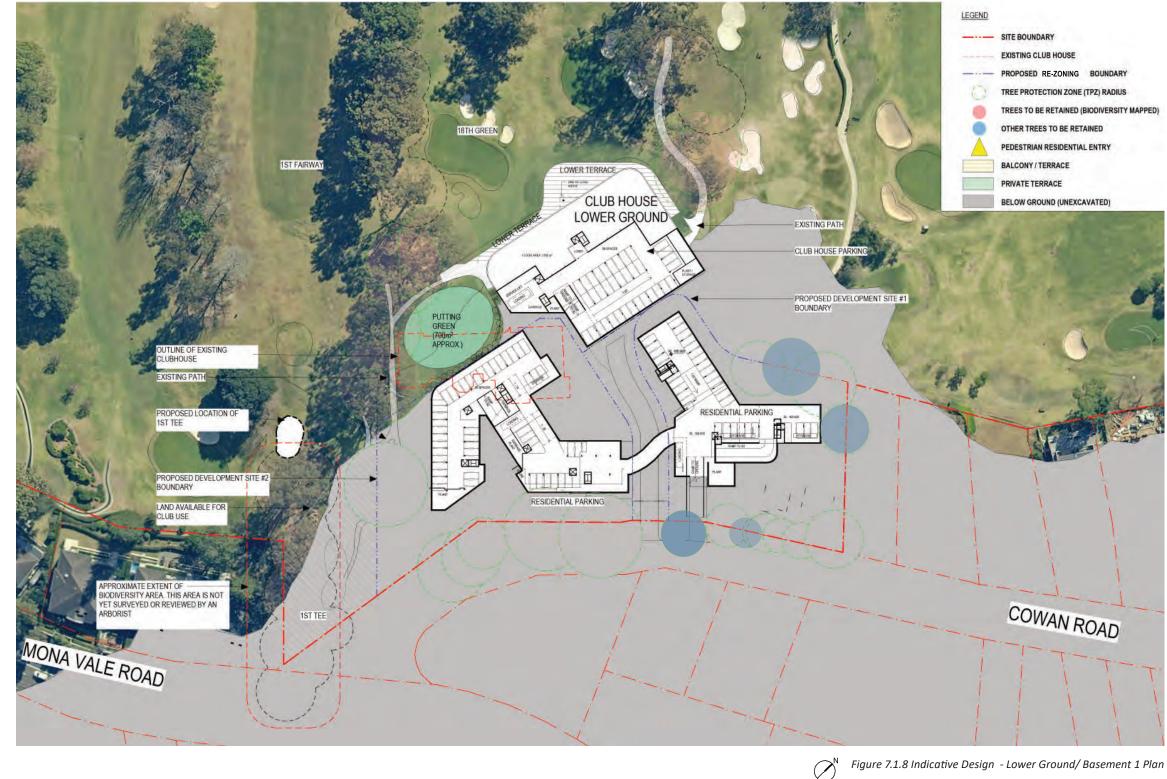


Figure 7.1.8 Indicative Design - Lower Ground/ Basement 1 Plan



BASEMENT 2 PLAN

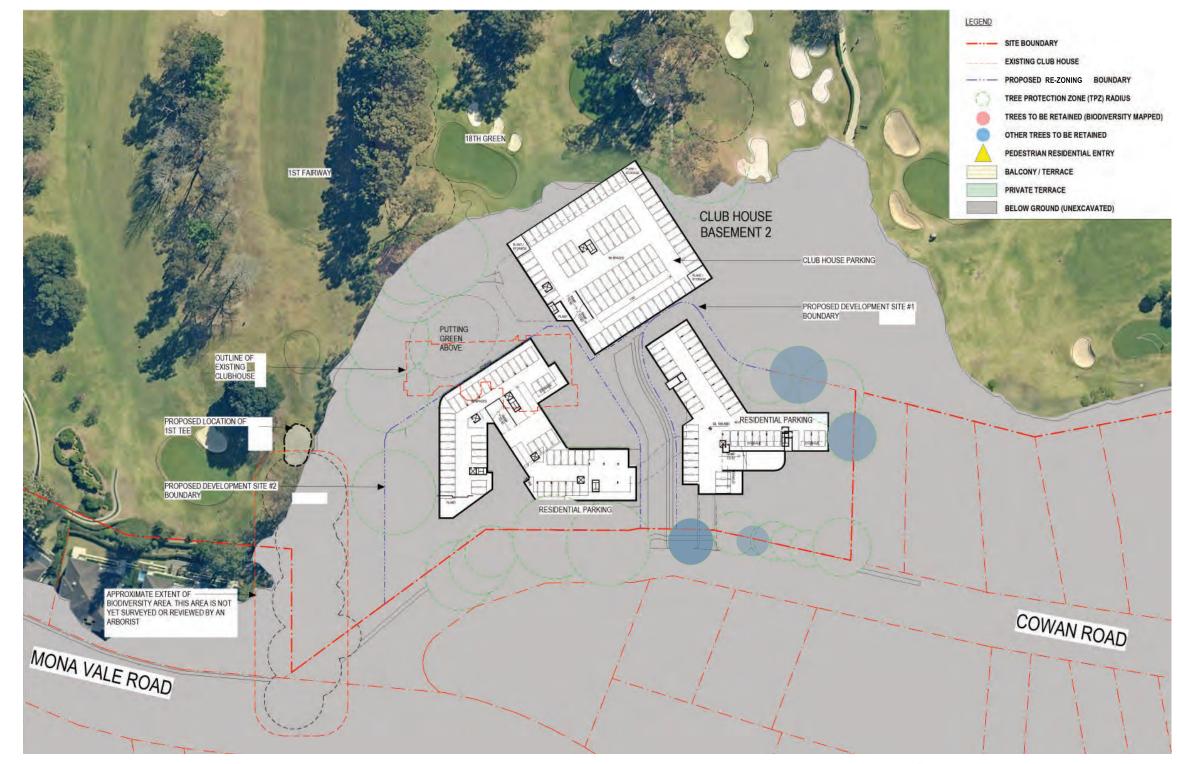


 Figure 7.1.9 Indicative Design - Basement 2 Plan



BASEMENT 3 PLAN



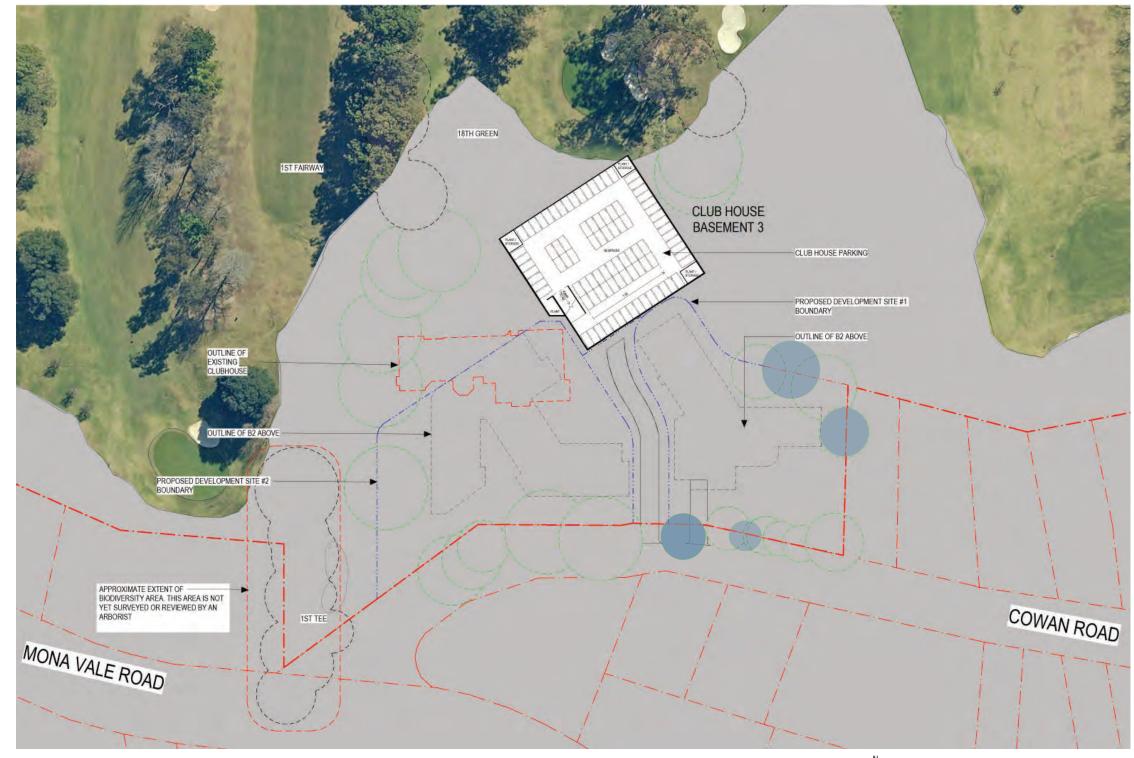
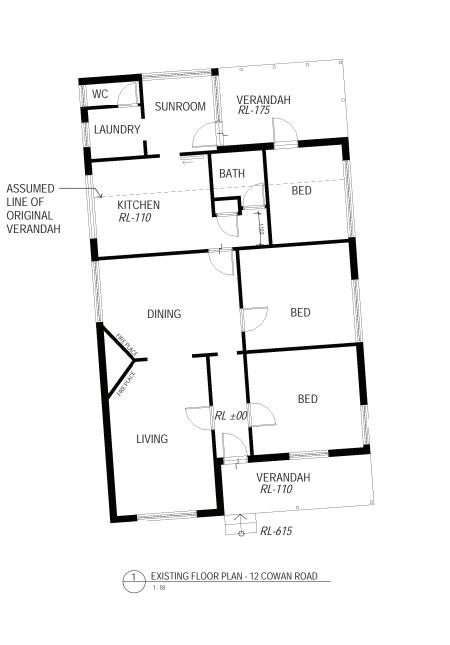


Figure 7.1.10 Indicative Design - Basement 3 Plan



EXISTING FLOOR PLAN - COTTAGES



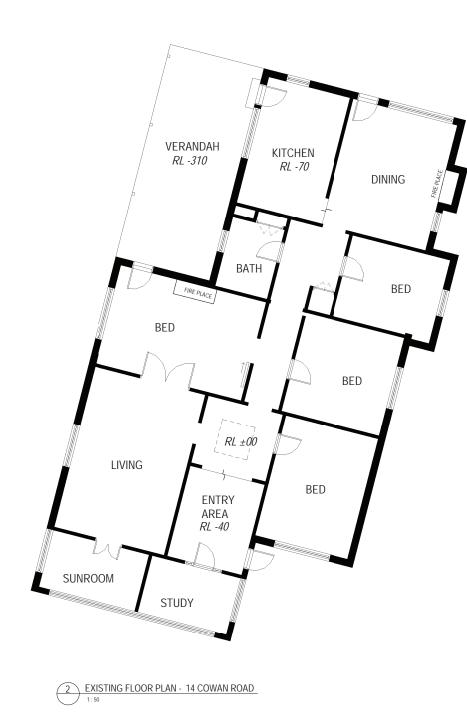
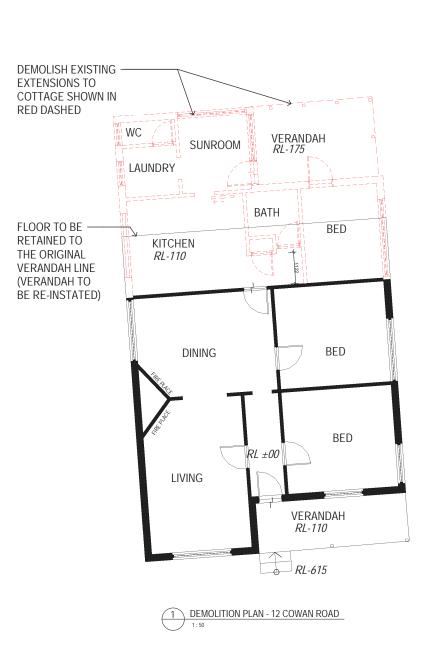


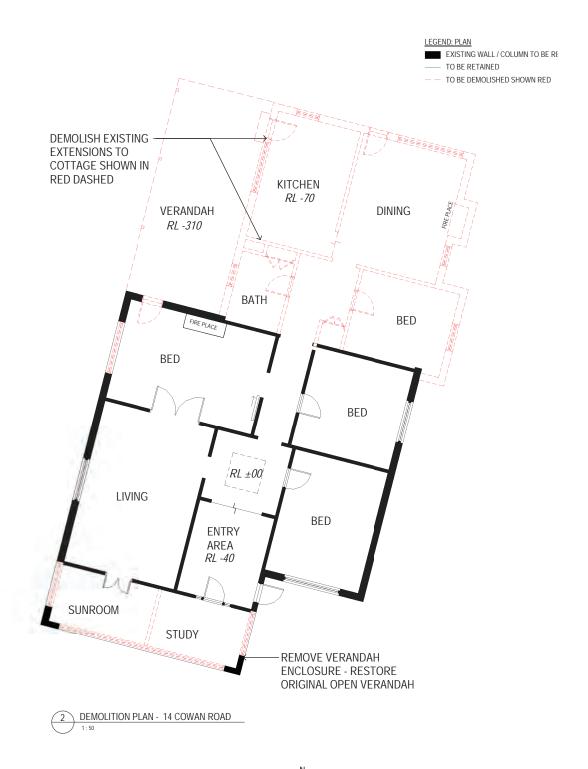


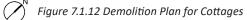
Figure 7.1.11 Existing floor plan - cottages



DEMOLITION PLAN FOR COTTAGES

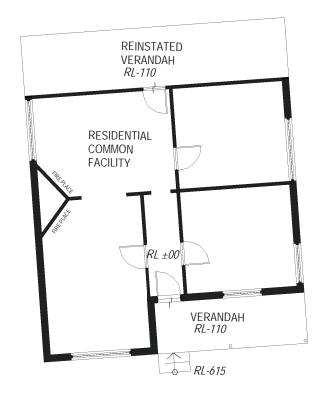




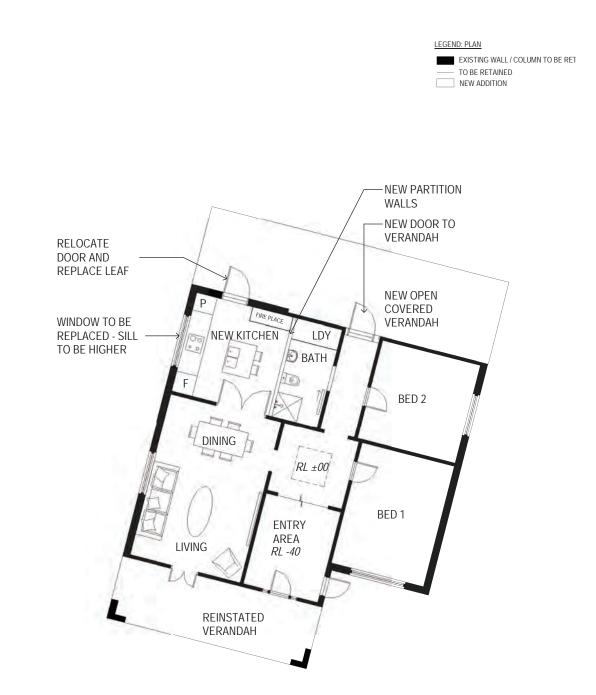




PROPOSED GROUND FLOOR PLAN - COTTAGES



12 Cowan Rd - Proposed Alterations



14 Cowan Rd - Proposed Alterations



Figure 7.1.13 Proposed Ground Floor Plan - Cottages



7.2 ESTIMATED YIELD AND SITE AREA CALCULATIONS

| | RES SITE #1 | RES SITE #2 | CLUB DRIVEWAY WITHIN ZONING AREA | TOTAL |
|--|-------------|-------------|----------------------------------|-----------|
| DEVELOPMENT YIELD AND DENSITY | | | | |
| Approximate Site Area | 4477 m² | 5480 m² | 975 m² | 10,932 m² |
| Estimated Gross Floor Area (GFA) | 3970 m² | 6000 m² | 0 m² | 9970 m² |
| Estimated Floor Space Ratio (FSR) | 0.89 | 1.10 | 0.00 | 0.92 |
| Estimated # of Res Units (113 m ² Avg NSA)* | 29 | 49 | 0 | 78 |
| - Estimated # of 2 Bed Units* | 9 | 26 | 0 | 35 |
| - Estimated # of 3 Bed Units | 20 | 23 | 0 | 43 |

| DCP COMPLIANCE | | | | |
|---|-----|-----|-----|--|
| Residential Common Open Space - % of Site | 37% | 55% | N/A | |
| Deep Soil - % of Site | 50% | 56% | N/A | |
| Site Coverage - % of Site | 30% | 30% | N/A | |

| RESIDENTIAL AMENITY AND ADG OVERVIEW | | | | |
|--------------------------------------|-----|-----|-----|--|
| Views of Golf Course | 78% | 67% | N/A | |
| Solar Access (2 Hours) | 89% | 71% | N/A | |
| Cross-Ventilation | 89% | 98% | N/A | |

* Includes 1 Cottage (# 14 Cowan Rd) in proposed refurbished

2bed layout, measuring 100 sqm NSA approx

| N/A |
|-----|
| N/A |
| N/A |

| .71% |
|------|
| 78% |
| 95% |



7.3 INDICATIVE LANDSCAPE PLAN

Place Design Group has prepared the Indicative Landscape Plan in support of the preferred development option. Refer to Appendix B.0 for complete landscape documentation.

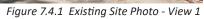


Figure 7.3.1 Indicative Landscape Plan by Place Design Group



7.4 VISUALISATION







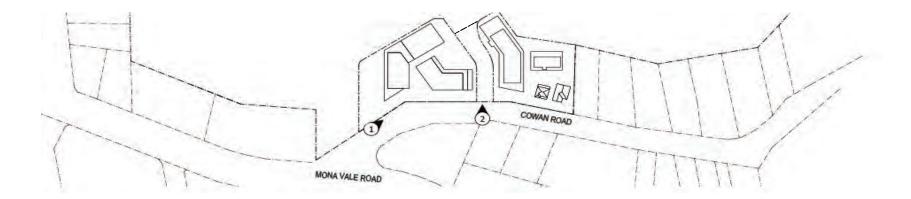


Figure 7.4.2 Existing Site Photo - View 2

Figure 7.4.3 Key Plan





Figure 7.4.4 Photo-montage - View 1 Looking North to Cowan Road





Figure 7.4.5 Photo-montage - View 2 Looking on Proposed Club Entry



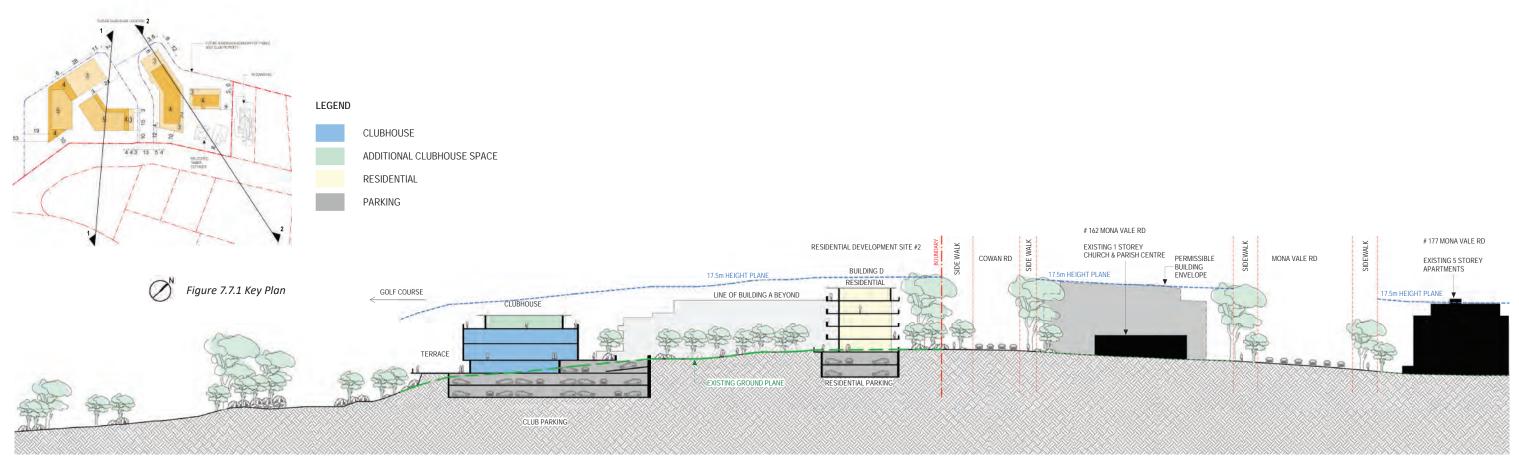
7.5 INDICATIVE LANDSCAPE CHARACTER IMAGERY



Figure 7.6.1 Indicative Character Imagery Prepared by Place Design Group



7.6 INDICATIVE SECTION



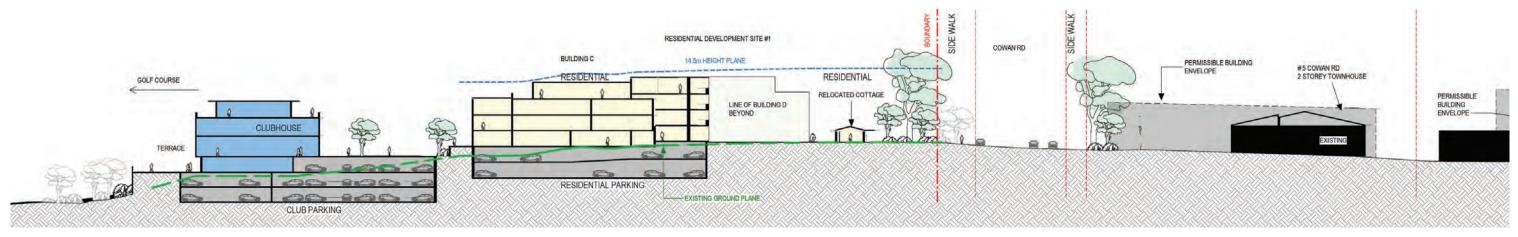


Figure 6.7.2 Section 1

Figure 7.7.3 Section 2



7.7 SHADOW AND SOLAR ANALYSIS

Shadow and solar access analysis has been undertaken, utilising 3-D digital modelling of the Indicative Design in the context of the area's topography and existing buildings.

As demonstrated in the following shadow diagrams, the Indicative Design does not cast shadow on adjoining or adjacent private property between 9am and 3pm on the shortest day of the year (June 21), in a manner which would impact on those properties abilities to achieve the solar access Provisions within SEPP65 and the ADG.

Additionally, the site receives almost no shadow from adjoining properties throughout the year including June 21. The configuration of the site and the indicative design enables access to direct sunlight in winter from east, north and westerly orientations, the sum total of which allows for a high percentage of residential space to achieve greater than 2 hours of direct sunlight on June 21.

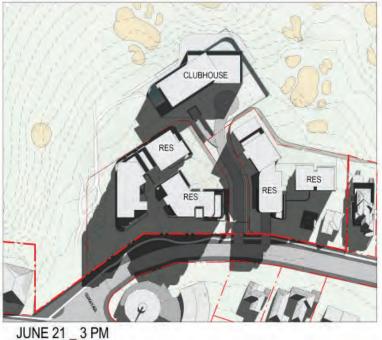


JUNE 21 9 AM



JUNE 21 _ 1 PM





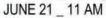




Figure 7.8.1 Indicative Design - Shadow Analysis Diagrams



8.0 CONCLUSION

8.0 CONCLUSION

Based on the context and urban design analysis undertaken, this report concludes that a residential apartment development ranging from 3-5 storeys, and in a configuration consistent with the Indicative Design contained within section 7.0 of this report, will provide the following:

- A development which suits the St Ives Town Centre as it evolves into a more mature centre with a greater concentration of housing, services, retail, recreational and cultural facilities
- A development which supports the Christ Church site to establish a southern gateway to the Town Centre
- Future new housing stock in a location consistent with the Ku-ring-gai Local Strategic Planning Statement (LSPS)
- A development which will not have adverse impacts on the local biodiversity, ecology and adjacent neighbours of the area
- A development which will improve the deep soil landscape of the land affected by the proposal
- A development which will be complimentary to the Golf Club and the golf course
- A development which will enable the Golf Club to maintain its visual presence in the public realm and maintain operations completely independent of the future residential development
- Provide new residences which enjoy a high amenity position and layout which optimises views, accessibility, daylight, privacy and landscape
- Allow for the conservation of the existing cottages at #12 and #14 Cowan Rd

In order for development consistent with the Amended Indicative Design to occur, changes to the KLEP and KDCP will be required including:

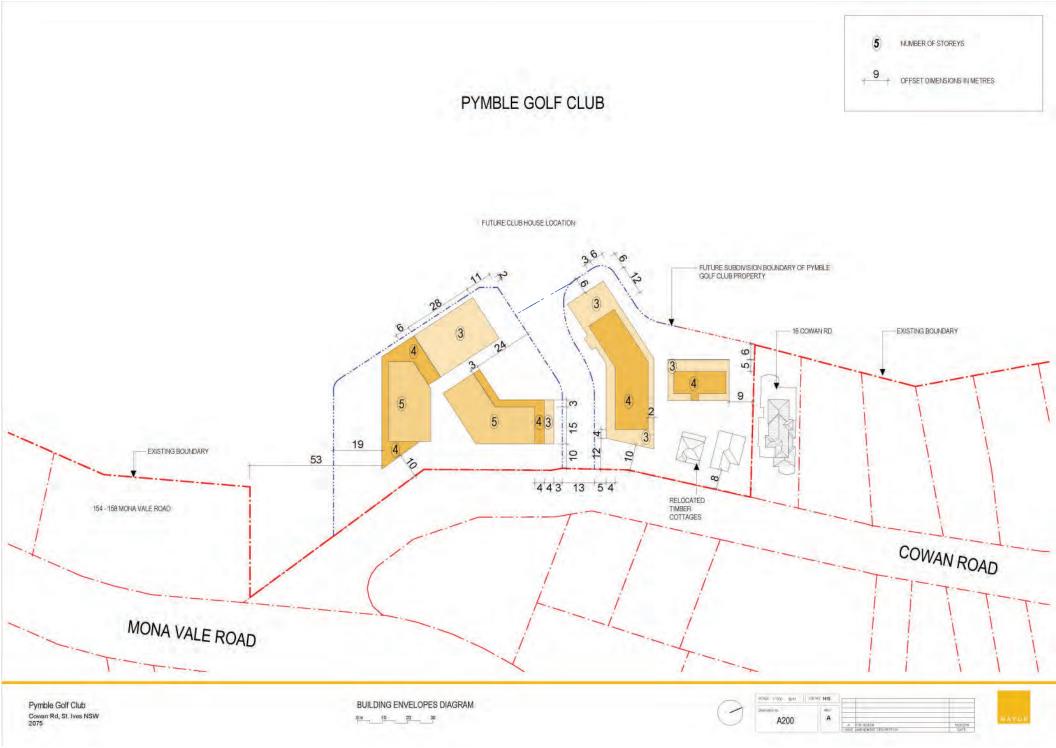
- Change zoning to R4 High Density Residential and part RE2 Private Recreation
- Change of maximum Height of Buildings to range from 11.5 M to 17.5M
- Change the FSR control to 0.92
- Incorporate a minimum 1200 sqm minimum lot size
- Adopt site specific DCP provisions

In conclusion, this study supports the Planning Proposal seeking to make such changes to the KLEP.





APPENDICES





| TOREYS | |
|------------------|--|
| NSIONS IN METRES | |
| | |

| CONSULTANT | |
|-----------------------|----------|
| Town Planner | DMPS |
| Arborist | DKG Ab |
| Ecologist | Narla E |
| Traffic | Anson |
| Contamination | El Austi |
| Heritage | Heritag |
| Quantity Surveyor | Altus G |
| Landscape Architect | Place D |
| Photomontage Graphics | PODGro |
| | |

COMPANY

| Town Planning & Property Developm | ent Specialists |
|-----------------------------------|-----------------|
| poricultural Services | |

Environmental

tralia

ge 21

Group

Design Group

roup



APPENDIX C - PLACE DESIGN GROUP - INDICATIVE LANDSCAPE REPORT





CONTENTS

CONTENTS

INDICATIVE LANDSCAPE MASTERP CHARACTER PRECEDENT IMAGES TYPICAL PLANTING PALETTE

MATERIAL PALETTE

place design group.

Australia China South East Asia

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| Report title | eport title Pymble Golf Club, Cowan Road, St Ives Planning Proposal Indicative Landscape Concept | | |
|--|--|--|--|
| Document number | 2519071 | | |
| Prepared for | Mayoh Architects | | |
| Authors | Sophie Yao, Kassie Cottee, Caleb Wright | | |
| Revision number | [D] | | |
| Revision issue date | 23.08.2022 | | |
| Approved | Nick Ison | | |
| Reason for revision | For planning proposal | | |
| of services describe Group Pty Ltd ACN 0 data, surveys, measi times and conditions recommendations o | ort has been prepared in accordance with the scope d in the contract or agreement between Place Design 82 370063 and the Client. The report relies upon urements and results taken at or under the particular s specified herein. Any findings, conclusions or nly apply to the aforementioned circumstances and no | | |
| greater reliance sho | uld be assumed or drawn by the Client, Furthermore | | |

greater reliance should be assumed or drawn by the Client. Furthermore, the report has been prepared solely for use by the Client and Place Design Group accepts no responsibility for its use by other parties.

| | 001 |
|------|---------|
| PLAN | 002 |
| | 003 |
| | 004-005 |
| | 006 |





place design group. Place Design Group Pty Ltd 3b/830-832 Elizabeth St Waterloo, NSW 2017 Australia T + 61 2 9290 3300 F + 61 2 9262 6108

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Character Precedent Images





Place Design Group Pty Ltd 3b/830-832 Elizabeth St Waterloo, NSW 2017 Australia T + 61 2 9290 3300 F + 61 2 9262 6108





Typical Planting Palette - Full Sun/Part Shade











Eucalyptus saligna (Sydney Blue Gum)

SHRUBS

(Lipan Crepe Myrtle) (Dwarf magnolia) Pistacia chinesis (Chinese pistache)

Pyrus calleryana 'Chanticleer (Ornamental Pear)



(Hybrid Indian Hawthorn)







'Wyngabbie Bule' (Coast Rosemary)

SYM BOTANICAL NAME COMMON NAME Dwarf Apple Angophora hispida Eucalyptus saligna Sydney Blue Gum Ficus sp. Fig Tree Lagerstroemia indica 'Natchez Crepe Myrtle Lagerstroemia indica 'Lipan' Lipan Crepe Myrtle Lagerstroemia indica 'Natchez Crepe Myrtle Lagerstroemia indica 'Souix' Crepe Myrtle Magnolia grandiflora 'Little Gem' Chinese Magnolia Nyssa sylvatica Pistacia chinensis Tupelo Chinese pistache Pyrus calleryana 'Chantic Pyrus calleryana 'Clevela Ornamental Pea Ornamental Pea Syzygium australe sp. Jacaranda mimosifolia Brush cherry Jacaranda JBS AND HEDGES Acmena smithii Lilly Pilly Acmena smithii 'Allyn Magic Drawf Lilly Pilly Alternanthera dentata Ruby Leaf Alternanthe Azalea 'Alba Magnific Azalea Azalea Azalea gretel Azalea indica Azalea Azalea 'Pride of Dorki Evergreen Azalea Azalea 'Red Glitter Azalea- single rose red Buxus microphylla Japanese Box Buxus semperviren European Box Drawf Bottlebrush Camellia Callistemon viminalis 'Little Johr Camelia japonica sp. Camellia sasanqua sp Camellia Carissa 'Desert Star' Natal Plum Cuphea hyssopifolia 'Jocelyn's Pink' False Heather Pride of Madeira Euonymus Dwarf Spin Echium candicans Euonymus 'Tom Thu Gardenia augusta 'Florid Gardenia Florida Hebe sp. Hebe Ixora coccinea 'Flame of th ' Jungle Flame Ixora chinensis Lavandula angustifolia 'Munstead' Prince of Orange Munstead Lavender Lavandula sp. stoechas 'Avonview' Bush Lavender Metrosideros 'Fiji Fire Fiji Fire Michelia figo Port Wine Magnolia Murraya paniculata Orange Jessamine Photinia glabra 'Rubens Small Leaf Photinia Blue Plumbago Plumbago auriculata 'Bl Rhaphiolepis delacourii Hybrid Indian Hawthor Rhaphiolepis 'Snow Maide Rhododendron sp. Snow Rose Rhododendron Rosmarinus officinal Rosemary Salvia leucantha Mexican Sage trelitzia reginae Bird of Paradise Aussie Compact Bush Syzygium 'Aussie compact' Syzygium australe 'Select Lily Pilly Select Syzygium australe 'Winter Lights' Syzygium Winter Light Tibouchina 'Allure' Tibouchina Allure Tibouchina heteromalla 'Jules' Silver Leafed Princess Viburnum odoratissimum Sweet Viburnum Westringia fruticosa 'Aussie Box' Coastal Rosemary Westringia fruticosa 'Wyngabbie Bule' astal Rosemary GRASSES & GROUND COVERS Agapanthus Agapanthus 'White' Agapanthus 'Blue' Agapanthus Carpobrotus edulis Hottentot Fig Dietes grandiflora Wild Iris Gardenia augusta 'Radicans' Rock Gardenia asminum sambac 'Arabian Jasmine' Arabian Jasmine Juniperus conferta 'Pacific Blue' shore juniper Liriope muscari "Evergreen Giant" Turf Lily Liriope muscari 'Variegata' Turf Lily Serissa foetida Pink 'Snow Rose' Snow Rose Serissa foetida Pink 'Snow Leaves' Serissa Snow Leaves Star Jasmine

TREES

Jasminum sambac

'Arabian Jasmine'

(Arabian Jasmine)

Acmena smithii

GROUNDCOVERS

Agapanthus 'White' (Agapanthus)

(Lilly Pilly)

HEDGES



(Fiji Fire)



(Mock Orange)



Murraya paniculata

Michelia figo (Port Wine Magnolia)



Acmena smithii 'Allyn Magic' Euonymus 'Tom Thumb' Photinia glabra 'Rubens' Viburnum odoratissimum Westringia fruticosa

(Sweet Viburnum)



jasminoides (Star Jasmine)

place design Waterloo, NSW 2017 Australia group. F + 61 2 9262 6108



(Drawf Lilly Pilly)

Agapanthus 'Blue' (Agapanthus) (Wild Iris)



Liriope muscari 'Variegata' (Turf Lily)

Trachelospermum





Dietes grandiflora





Page 79

(Euonymus Dwarf Spindle Bush) (Small leaf Photinia)



| | HEIGHT | SPACING | POT SIZE |
|----------|---------------|--------------------------------------|----------------|
| | | A (1 | 0001 |
| | 8m | As Shown As Shown | 200L 200I |
| | 60m 5m | As Shown | 200L 200L |
| | 3.5m | As Shown | 200L |
| | 3.5 | As Shown | 200L |
| | 3.5m | As Shown | 200L |
| | 5m | As Shown | 200L |
| | 7m 11m | As Shown As Shown | 200L 200L |
| | 15m | As Shown | 200L 200L |
| | 11m | As Shown | 200L |
| | 10m | As Shown | 200L |
| | 5m | As Shown | 200L |
| | 10m | As Shown | 400L |
| | | | |
| | 2.0m | 500mm | 5L 5l |
| а | 1.0m 0.5m | 500mm 4/m ² | 5L 150mm |
| | 1.0m | 4/m ² | 200mm |
| | 1.0m | 2/m² | 200mm |
| | 1.2m | 2/m² | 200mm |
| | 1.0m | 2/m² | 200mm |
| blooms | 1.0m | 2/m² | 200mm |
| | 1.0m | 300mm | 200mm |
| | 1.0m | 300mm | 200mm |
| | 0.6m 3.0m | 4/m ² 750mm | 150mm 25L |
| | 3.0m 3.0m | 750mm 750mm | 25L 25L |
| | 1.0m | 4/m ² | 200mm |
| | 0.6m | 4/m ² | 150mm |
| | 1.5m | 2/m ² | 5L |
| lle Bush | 0.8m | 300mm | 200mm |
| | 1.0m | 4/m² | 200mm |
| | 1.0m | 4/m ² | 200mm |
| | 1.0m | 3/m ² | 200mm |
| | 1.0m | 3/m² | 200mm |
| | 1.0m 1.0m | 4/m ² 4/m ² | 200mm 200mm |
| | 1.0m | 300mm | 5L |
| | 3.0m | 1/m² | 25L |
| | 3.0m | 750mm | 25L |
| | 2.0m | 750mm | 25L |
| | 2.0m | 1/m ² | 5L |
| 1 | 1.5m | 500mm | 5L |
| | 0.75m 1.0m | 500mm 2/m² | 5L 5L |
| | 1.0m | 2/m ² | 5L |
| | 1.0m | 2/m ² | 5L 150L |
| | 1.5m | 4/m ² | 5L |
| Cherry | 1.0m | 300mm | 5L |
| | 3.0m | 750mm | 25L |
| | 3.0m | 750mm | 25L |
| | 1.0m | 2/m ² | 5L |
| lower | 1.0m | 2/m² | 5L |
| | 4.0m | 750mm 500mm | 25L |
| | 1.0m 1.0m | 500mm 500mm | 5L 51 |
| | 1.011 | 30011111 | JL |
| | | | · |
| | 0.6m | 5/m² | 150mm |
| | 0.6m | 5/m² | 150mm |
| | 0.3m | 4/m ² | 150mm |
| | 0.6m | 7/m ² | 75mm Tube |
| | 0.3m | 4/m ² | 150mm |
| | 0.5m 0.7m | 4/m² 7/m² | 150mm |
| | 0.7m 0.7m | 7/m² 5/m² | 150mm 150mm |
| | 0.7m | 7/m² | 150mm |
| | 0.6m | 4/m ² | 150mm |
| | | | |
| | 1.0m | 4/m ² 5/m ² | 150mm 150mm |



Typical Planting Palette - Full Sun/Part Shade

Dicksonia antarctica

(Soft Tree Fern)





Cyathea australis (Rough Tree Fern)

SHRUBS



Alpinia zerumbet (Shell Ginger)



Hedychium coronarium (White Ginger)





Macrozamia communis (Burrawang)

Philodendron 'Xanadu' (Philodendron Xanadu)

Crinum pedunculatum (Swamp Lily)

Fatsia japonica (Japanese Fatsia)

GROUND COVERS



Cissus rthombifolia



Lepidozamia peroffskyana

(Pineapple Zamia)

Dichondra repens



Liriope muscari 'Evergreen Giant'







Rhapis excelsa (Laddy Palm)

| SYM | BOTANICAL NAME | COMMON NA |
|-------|------------------------------------|------------------|
| TREES | & PALMS | |
| | Cyathea australis | Rough Tree Fer |
| | Cyathea cooperi | Lacy Tree Fern |
| | Dicksonia antarctica | Soft Tree Fern |
| | Elaeocarpus eumundi | Quandong |
| | Elaeocarpus reticulatus | Blueberry Ash |
| SHRUE | IS | |
| | Alpinia zerumbet | Shell Ginger |
| | Asplenium australasicum | Bird's Next Fern |
| | Cordyline fruticosa rubra | Cordyline rubra |
| | Cordyline australis 'Red Sensation | n' Red Cabbage |
| | Crinum pedunculatum | Swamp Lily |
| | Cycas revoluta | Sago palm |
| | Doryanthes excelsa | Gymea Lily |
| | Fatsia japonica | Japanese Fatsia |
| | Hedychium coronarium | White Ginger |
| | Indigofera australis | Austral Indigo |
| | Lepidozamia peroffskyana | Pineapple Zemi |
| | Macrozamia communis | Burrawang |
| | Philodendron 'Xanadu' | Phildodendron ' |
| | Phormium tenax sp. | New Zealand Fl |
| | Rhapis excelsa | Lady Palm |
| GRASS | ES & GROUND COVERS | |
| | Cissus rhombifolia | Grape Ivy |
| | Clivia miniata | Kaffir Lily |
| | Dianella caerulea | Flax Lily |
| | Dianella tasmanica 'Tasred' | Flax Lily |
| | Dichondra repens | Kidney Grass |
| | Liriope muscari "Evergreen Giant' | Turf Lily |
| | Lomandra longifolia | Matt Rush |
| | Viola Hederacea | Australian Nativ |
| | | |

| ME | HEIGHT | SPACING | POT SIZE |
|--------|--------|------------------|------------|
| | | | |
| | 5m | As Shown | Trunk 3-4m |
| | 7m | As Shown | Trunk 3-4m |
| | 2m | As Shown | Trunk 1-2m |
| | 7m | As Shown | 200L |
| | 15m | As Shown | 200L |
| | | | |
| | 1.5m | 4/m ² | 150mm |
| | 0.5m | 4/m ² | 200mm |
| | 1.5m | 4/m ² | 200mm |
| ree | 1.5m | 3/m ² | 5L |
| | 1.0m | 4/m ² | 5L |
| | 1.0m | 2/m ² | 25L |
| | 2.0m | 2/m ² | 5L |
| | 1.0m | 4/m ² | 5L |
| | 1.0m | 4/m ² | 5L |
| | 1.8m | 2/m ² | 5L |
| I | 1.5m | 2/m ² | 5L |
| | 1.5m | 3/m ² | 5L |
| anadu' | 1.2m | 4/m ² | 200mm |
| х | 1.5m | 3/m ² | 5L |
| | 2.5m | 3/m ² | 5L |
| | | | |
| | 0.3m | 3/m ² | 150mm |
| | 0.6m | 4/m ² | 150mm |
| | 0.6m | 4/m ² | 150mm |
| | 0.6m | 4/m ² | 150mm |
| | 0.3m | 7/m ² | 75mm Tube |
| | 0.7m | 5/m ² | 150mm |
| | 1.0m | 4/m ² | 150mm |
| Violet | 0.1m | 7/m ² | 150mm |

ARCHITECTS

Material Palette

DECOMPOSED GRANITE





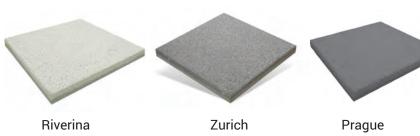
RAISED CONCRETE PLANTER



STEPPING STONES







place design group.

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