

PART A – ADMINISTRATIVE CONDITIONS

1. Construction Certificate & PCA Notification

Before any site works, building or use is commenced, the person having the benefit of the development consent must:

- a. obtain a Construction Certificate from Shellharbour City Council or other accredited certifier, and
- b. appoint a Principal Certifying Authority.

2. Prescribed Conditions

This development consent is subject to the prescribed conditions made under the *Environmental Planning & Assessment Regulation 2000*.

3. Development in Accordance with Plans and Documents

The development must be in accordance with the approved Development Application plans and documents as endorsed by Council's Stamp except as modified by conditions of this consent.

| Name of Plan/Document | Prepared By | Drawing/Document No./Revision | Drawing/Document Date |
|-----------------------------------|-------------------------------------|--|--|
| Existing Site Survey | DWA | 18 – 1725 – Rev. V | 04/03/2019 |
| Site Plan | DWA | 19 – 1725 – Rev. Y | 13/05/2019 |
| Basement 1 Floor Plan | DWA | 21 – 1725 – Rev. V | 04/03/2019 |
| Lower Ground Floor Plan | DWA | 22 – 1725 – Rev. Y | 13/05/2019 |
| Upper Ground Floor Plan | DWA | 23 – 1725 – Rev. Y | 13/05/2019 |
| Level 1 Floor Plan | DWA | 24 – 1725 – Rev. Y | 13/05/2019 |
| Level 2 Floor Plan | DWA | 25 – 1725 – Rev. Y | 13/05/2019 |
| Level 3 Floor Plan | DWA | 26 – 1725 – Rev. V | 04/03/2019 |
| Level 4 Floor Plan | DWA | 27 – 1725 – Rev. Y | 13/05/2019 |
| Level 5 Floor Plan | DWA | 28 – 1725 – Rev. V | 04/03/2019 |
| Level 6 Floor Plan | DWA | 29 – 1725 – Rev. V | 04/03/2019 |
| Roof Plan | DWA | 30 – 1725 – Rev. V | 04/03/2019 |
| Post Adaptable Layouts | DWA | 31 – 1725 – Rev. V | 04/03/2019 |
| Elevations Plans | DWA | 35-39 – 1725 – Rev. Y | 13/05/2019 |
| Sections A-G | DWA | 40-43 – 1725 – Rev. Y | 13/05/2019 |
| BASIX* | Planning Principals | 92379M_07 | 04 March 2019 |
| Operational Waste Management Plan | Elephants Foot Recycling Solutions | Revision D | 21/02/2019 |
| Landscape Plan | Taylor Brammer Landscape Architects | Sheets 3-15, Issue C | 09/05/2019 |
| Natural Ventilation Assessment | SLR | 610.18626-R03 | February 2019 |
| Concept Drainage Plans | ATB Consulting Engineers | 18029, SW1, Rev. B 18029, SW2, Rev. B 18029, SW3, Rev. C 18029, SW4, Rev. B | 25/02/2019 21/02/2019 27/02/2019 25/02/2019 |
| Colour Board | DWA | PN1725 – Issue B | February 2019 |

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|--|---------------------------------------|--------------------------------------|------------------|
| Environmental Noise Impact and Noise Intrusion Assessment | Harwood Acoustics | 1802013T-R | 22 February 2019 |
| Geotechnical Investigation Report | Aargus | GS7197-1B | 29 January 2019 |
| Draft Construction Management Plan | ATB Consulting Engineers | Revision B | 25/02/2019 |
| Stormwater Treatment Train Water Sensitive Urban Design Report | ATB Consulting Engineers | WSUD Report – PN: 18_029, Revision B | 21/02/2019 |
| Electrical Services | Arrow Consulting Engineers | NS18124, ELO1-9, Rev 2 & 3 | 04/03/2019 |
| Lighting Design Statement | Arrow Consulting Engineers | - | 4 March 2019 |
| Due Diligence Aboriginal Archaeological Assessment | Dominic Steele Consulting Archaeology | - | 26 February 2019 |
| Statement of Compliance Access for People with a Disability | Accessible Building Solutions | 218055 - Issue B | 25/02/2019 |

* The approved BASIX Certificate may only be updated, without the need to lodge a modification to the development consent, where any change to the BASIX Commitments does not result in the proposal being inconsistent with this development consent and/or alter the approved development application plans.

4. Compliance with Notations on Drawings

Works must comply with any notations highlighted on the approved plans and specifications.

5. Utility Services

The developer must meet the full costs to adjust/repair/relocate any affected utility services. The developer must make the necessary arrangements with the service authorities.

PART B - PRIOR TO ISSUE OF CONSTRUCTION CERTIFICATE

6. Section 94 Contributions

A contribution of \$588,996.82 subject to annual indexation, must be paid to Council towards the provision of public amenities and public services prior to the issue of the Construction Certificate. This amount has been calculated in accordance with Shellharbour City Council's *Section 94 Contributions Plan 2016 Amendment 1* dated 8 March 2017 in the following manner:

- Residential contribution - \$587,117.29
- Benefit Area contribution - \$1,879.53

The contribution amount contained in this condition is the base rate indexed to the date the consent is issued. The contribution amount will be adjusted in accordance with the indexation methods detailed in the *Contributions Plan*. Current indexed rates are available from Council. The *Contributions Plan* may be inspected or a copy purchased at the Customer Service Counter at Council's offices, or downloaded from www.shellharbour.nsw.gov.au

7. Street Numbering

The allocated street numbers must be shown on the Construction Certificate plans and Subdivision plans. Where plans and details are provided to service suppliers, numbers must be in accordance with the above.

- Primary addresses (as allocated in table below) shall be included on the Construction Certificate plans.
- The finished building shall have effective visible identification of each primary address, with number signage displayed prominently, oriented to the correct road and on contrasting background.
- Ensure unique unit identifiers are noted on Construction Certificate plans for both commercial and residential units.
- Prior to issuing of Construction Certificate, contact GIS department to obtain unit sub-address numbers for each commercial and residential unit.
- For the application of 'hotel-style addressing', the level referred on the plans as 'Upper Ground' level will be called 'Ground' level.

PRIMARY ADDRESS ALLOCATION

| Description | Street Number | Street Name | Locality |
|--|---------------|----------------|--------------------------|
| DWG No. 22 - Business Premise on the corner of Bimbala Place and College Avenue (floor area shown – 179.6m ²) | 16 | College Avenue | Shellharbour City Centre |
| DWG No. 22 – Residential Units accessed from Residential Lobby B | 18 | College Avenue | Shellharbour City Centre |
| DWG No. 22 - Business Premise accessed from College Avenue (floor area shown – 122.9m ²) | 20 | College Avenue | Shellharbour City Centre |
| DWG No. 23 - Businesses accessed via the Business Lobby | 22 | College Avenue | Shellharbour City Centre |
| DWG No. 23 – Residential Units accessed from Residential Lobby A | 24 | College Avenue | Shellharbour City Centre |

8. Building Plan Approval - Sydney Water

The approved plans must be submitted to a Sydney Water Tap in™ to determine whether the development will affect Sydney Water wastewater and water mains, stormwater drains and/or easements, and if any requirements need to be met. Sydney Water's Tap in™ online service is available at:

<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

The Certifier must ensure that Sydney Water Tap in™ has issued the appropriate electronic approval prior to the commencement of any works.

9. Construction Site Management Plan (CSMP) - Amended

An amended Construction Site Management Plan must be submitted with the application for the Construction Certificate, and must include the following measures:

- location of protective site fencing;
- location of site storage areas/offices/equipment;
- location of building materials for construction, e.g. stockpiles
- provisions for public safety;
- dust control measures;
- method used to provide site access location and materials used;
- details of methods of disposal of demolition materials;
- provisions for temporary sanitary facilities;
- location and size of waste containers/skip bins;
- details of proposed sediment and erosion control measures;
- method used to provide construction noise and vibration management;
- type A or B hoardings;
- no designated area within the adjoining mid-block public parking area (this includes the area at the southern end of the city centre (College Avenue, Moolawang Place, Cygnet Avenue, Bimba Place, Gadu Place, Amaroo Way, Memorial Drive, Commemoration Place & Remembrance Place) for workers vehicles; and
- construction traffic management details consistent with other required amendments.

The site management measures are to be implemented prior to the commencement of any works including demolition and excavation. The site management measures are to be maintained throughout the works, to maintain reasonable levels of public health, safety and amenity. A copy of the Construction Management Plan must be retained on site and is to be made available upon request.

10. Construction Traffic Management Plan (CTMP) - Amended

Prior to the release of Construction Certificate, an amended CTMP detailing vehicle routes, number of trucks, access arrangements, impact on pedestrians and traffic control must be submitted to and approved by Shellharbour City Councils Traffic Committee.

The permanent use of the public vehicle parking area adjoining Moolawang Place for construction workers vehicles is not supported. The applicant should consider making arrangements for sites in close proximity that are in private ownership.

The use of Moolawang Place for the loading & unloading of Trucks or other vehicles during excavation and construction of the building is not supported.

It is the developer's responsibility to adequately inform all construction workers, sub-contractors and supervisors to ensure that the Construction Traffic Management procedures are adhered to at all times.

11. SEPP 65 Design Verification Statement

In accordance with clause 143A of the *Environmental Planning & Assessment Regulation 2000*, a Certifying Authority must not issue a Construction Certificate for residential apartment development unless the Principal Certifying Authority has received a design verification from a qualified designer, being a statement in which the qualified designer verifies that the plans and specifications achieve or improve the design quality of the development for which development consent was granted, having regard to the design quality principles set out in Part 2 of *State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development*.

12. Acoustic Mitigation Measures

With regard to ensuring internal noise levels comply with AS 2107:2016, final design specifications must include construction methods and materials as detailed in Section 5.3 of the Acoustic Assessment (Harwood 2019), or an acoustic equivalent Rw rating.

With regard to ensuring the noise impact of the proposal is within project noise goals for residential receivers, final design specifications must include acoustic screening for mechanical plant as detailed in Section 4.4 (Harwood 2019). An acoustic assessment must be submitted to the Principal Certifying Authority prior to the issue of a Construction Certificate that verifies:

- Mechanical plant to be utilised and final detailed design for acoustic screening is adequate to achieve project specific noise goals for residential receivers as detailed in Section 3.4 of the acoustic assessment (Harwood 2019);
- Construction methods and materials are adequate to achieve internal noise levels to comply with AS2107:2016. Final building design specifications must include mechanical ventilation that meets the ventilation requirements of the Building Code of Australia for all apartments. Further acoustic assessment based on final design specifications that demonstrates internal noise levels for certain apartments are likely to be within 10dB of AS 2107:2016 levels with windows open will negate the need for such mechanical ventilation for these apartments.

13. Vibration Control Plan

A Vibration Control Plan that ensures vibration remains within acceptable levels and minimises the potential effects of vibration must be submitted to the Principal Certifying Authority for approval. The plan must detail monitoring to be implemented and alarm levels selected in accordance with the type of structures present within the zone of influence of the proposed excavation.

14. Future Flight Procedures – Illawarra Regional Airport

The applicant must engage an appropriately qualified and experienced consultant in airspace procedural design, to review any future flight procedures Illawarra Regional Airport including Runways and ensure that its future functionality is not impacted by the development.

In the event that such review highlights an impact, mitigation measures and design solutions for amendments to the building must also be included.

The consultant must provide a report with findings and recommendations to Councils Manager Airport for review and approval, unless otherwise agreed by Council in writing any time prior.

15. Shoring and Adequacy of Adjoining Property

Where the development involves an excavation for which the zone of influence extends beyond the lot boundary and into adjoining land, the person having the benefit of the development consent must, at the person's own expense:

- a. protect and support the adjoining land/premises/infrastructure from possible damage from the excavation
- b. where necessary, provide support to prevent any such damage.

The condition referred to above does not apply if the person having the benefit of the development consent owns the adjoining land or the owner of the adjoining land has given consent in writing to that condition not applying.

Details, where relevant, must be submitted to the Certifying Authority prior to the issue of a Construction Certificate.

16. BASIX Commitments

All energy efficiency measures as detailed in the approved BASIX Certificate as per Condition 3, must be implemented on the plans lodged with the application for the Construction Certificate.

17. Barrier Controls – Moolawang Place

- a. Where a parking area is accessed by a barrier control such as a boom gate, intercom, card reader, automatic security gate and the like, then that control must be located at least 6 metres within the site from the street front property boundary to Moolawang Place.
- b. Where a boom gate, barrier control or security gate is in place and controls access to spaces available to the public then it must be accessible to public by the location of an intercom (or card controller system) at the parking entry and at least 6m clear of the property boundary to Moolawang Place.
- c. The location and layout of any controls and associated devices in the staff car park must be designed in accordance with AS 1428 and AS/NZS 2890.1 - 2004 Parking facilities Part 1: Off-street car parking (or subsequent amendments) and with regard to queuing and access to nearby car parking spaces.
- d. Details must be submitted to and approved by the Certifying Authority prior to a Construction Certificate being issued.

18. Detailed Drainage Design

A detailed drainage design of the site must be submitted and approved prior to the release of the Construction Certificate. The detailed plan must:

- a. be generally in accordance with Project 18029 SW1-5 Rev. A prepared by ATB Consulting Engineers on 21/02/19,

- b. all connections must drain directly to the council inlet pits and not discharge to street kerb (as proposed for the RWT overflow),
- c. indicate the method of disposal of all stormwater and must include rainwater tanks, existing ground levels, finished surface levels on all paved areas, estimated flow rates, invert levels and sizes of all pipelines,
- d. be to the satisfaction of the Certifying Authority,
- e. be designed to cater for a 1 in 20 year Average Recurrence Interval storm event,
- f. overflow drainage paths are to be provided and be designed to cater for 1 in 100 year Average Recurrence Interval storm event,
- g. comply with Council's *Shellharbour Development Control Plan* unless variation is specifically noted and approved on DA concept drainage plan.

19. Development Engineering - Stormwater Systems With Basement

The submitted stormwater plan has been assessed as a concept plan only and no detailed assessment of the design has been undertaken.

The underground basement vehicle park must pump to:

- a. the street gutter
- b. the existing drainage system
- c. the easement to drain water
- d. the upper level of the new kerb inlet pit required to be constructed directly in front of the development site.

The design of the proposed drainage system must be prepared by a qualified practising hydraulics engineer (with details of qualifications being provided) and be submitted for approval with the Construction Certificate application.

20. Engineer Designed Pavement

All car parking areas, manoeuvring areas and the access aisle must be paved, drained and marked. The pavement must be designed by a qualified civil engineer and certified to be satisfactory for the expected traffic loadings from a development of this size and type. *AUSTROADS Guide to Pavement Technology* can be used as the design guideline for the pavement design.

The laybacks and crossings must be designed to accommodate expected traffic loadings. In this regard they must be constructed to a commercial/industrial standard with the work carried out by Council or a Council approved contractor at the Developer's expense, including all alteration to public infrastructure where necessary.

21. Engineering -Traffic Management - Compliance with AS2890

All driveways, access ramps, vehicular crossings and car parking spaces shall be designed and constructed in accordance with the current version of Australian Standards, AS 2890.1 (for car parking facilities) and AS 2890.2 (for commercial vehicle facilities).

22. Street Tree Inspection Fee

The developer must lodge with Council an inspection fee of \$89.00 in accordance with Council's Fees and Charges for:

- street tree inspection prior to occupation of the development.
- street tree inspection following completion of the maintenance period

prior to the issue of the Construction Certificate.

23. Bond - New Street Trees

A deposit of \$300 per tree (17) must be lodged with Council prior to the issue of the Construction Certificate to ensure that the street trees are maintained for a 6 month period following the issue of the Occupation Certificate.

24. Reflectivity of Materials

The visible light reflectivity (reflectivity index) of the roof and other external building materials/colours (including exposed windows) must not exceed 20%. Written evidence that this requirement is not exceeded must be submitted to the Certifying Authority prior to issue of the Construction Certificate.

25. Crime Prevention Through Environmental Design

The development must include security measures. Such measures are to include the following:

- a. use sensor lights to encourage user safety and illuminate potential offenders after dark,
- b. incorporate additional lighting below awnings to adequately illuminate footpath areas,
- c. illuminate possible concealment and entrapment areas particularly in car parks,
- d. lighting strategies that enable users to identify a face from within 15 metres to assist with personal safety,
- e. light access routes for user safety and to encourage surveillance,
- f. the development is to ensure appropriate security and locking mechanisms on all entry/exit points including main doors, roller doors and fire escapes,
- g. Access control shall be installed to the car parking area, residential forecourt areas and foyers to permit admission of authorised persons only (including employees of the commercial premises and residents). An intercom system shall be installed to enable controlled access for visitors.
- h. the car park roller door to be a security grille to allow for passive surveillance,
- i. mail boxes must be lockable by separate keys, using locks that cannot be opened by common master keys. The mail box area is to be well lit and secured by the main entry door and not accessible to external patrons.

Graffiti resistant surfaces and paint must be used at the ground level of the development. Details of such surfaces and paint are to be shown on plan or included in building specifications and are to be submitted with the Construction Certificate application to the satisfaction of the Principal Certifying Authority.

Full details concerning the above security arrangements for the site must be provided on plan and/or written submission with the Construction Certificate and is to be approved by the Principal Certifying Authority.

26. External Lighting of Building

Documentary evidence must be provided to the Principal Certifying Authority demonstrating that the external lighting strategy of the building does not exceed the limits of the Australian Standard 4282-1997 Control of the Obtrusive effects of outdoor lighting. The lighting strategy must be prepared by a suitably qualified, practicing lighting engineer or lighting designer.

27. Long Service Levy

The Long Service Levy must be paid prior to the issue of the Construction Certificate.

28. Substation & Visual Impact

Any substation must be screened from all street frontages and public places by the use of screen enclosures and/or landscaping. Screening measures must not compromise the requirements of the electricity supplier. Details must be submitted with the Construction Certificate Application.

PART C - PRIOR TO COMMENCEMENT OF WORKS

29. Street Trees - Removal on Public Land

Permission is granted for the removal of the following street trees located on Council's public footpath:

- Eight existing *Lagerstroemia* sp. (Crepe Myrtle) specimens along College Avenue.

This work is to be undertaken at the applicant's expense.

Should you choose a Private Contractor to undertake the work; the private contractor must have a minimum of \$20 million dollars public liability insurance. Prior to the commencement of any work, the form entitled Application for the Removal of a tree by private contractor on public footpath accompanied by evidence of the Public Liability Insurance must be lodged with Council Tree Services Division.

30. Site Meeting

A site meeting with a representative from Council's City Development Group, Manager Compliance and Regulation, the applicant/owner representative and the contractor must be held not less than 2 days prior to the commencement of work on site.

31. Utility Arrangements

Arrangements are to be made with utility authorities in respect to the services supplied by those authorities to the development. The cost associated with the provision or adjustment of services within the road and footway areas is to be at the developer's expense.

32. Section 138 Roads Act 1993

For works within the road reserve, the requirements of the Section 138 of the *Roads Act 1993* apply. In this regard:

- If a driveway is proposed, a Driveway Application must be made, or
- If any other works are proposed and/or occupation of the road reserve proposed, a Road Opening Application must be made.

This application must be made prior to any works commencing within the road reserve and an application fee in accordance with Council's Fees and Charges will apply.

33. Structural Engineers Details - Supporting Council Road/Footway

Prior to the commencement of work in connection with the excavation of the site associated with the basement carpark, structural engineer's details relating to the method of supporting Council's roadways/footways must be submitted to the satisfaction of the Certifying Authority

34. Erosion & Runoff Controls

Before work starts, erosion and runoff controls must be installed to prevent soil erosion, water pollution or the discharge of loose sediment on surrounding land, stormwater systems or watercourses.

These controls must be in accordance with the Sediment Control Plan and may include the following (where applicable):

- a. erect a silt fence
- b. limit the removal or disturbance of vegetation and topsoil
- c. divert uncontaminated run-off around cleared or disturbed areas
- d. install sediment traps/socks around any stormwater inlets and drainage lines
- e. stockpile topsoil, excavated material, construction and landscaping materials and debris within the site. These should be covered or seeded to prevent loss of these materials
- f. provide a single vehicle access to the site including measures to prevent the tracking of sediment off the site
- g. provide adequate control measures to suppress dust.

These measures must be in place prior to commencement of any demolition, excavation or construction works.

35. Dilapidation Report

It is the applicant's responsibility to notify Council of any existing damage to public areas in the vicinity of the development site through the submission of a Dilapidation Report. The report must be supported with suitable photographic records. This information must be submitted to Council prior to the commencement of work.

36. Structural Details

The following structural details must be provided to the Certifying Authority prior to commencing work:

- a. structural engineer's design for all reinforced concrete footings and slabs,
- b. structural engineer's design for all structural steel beams, framing and connections,
- c. roof truss and bracing details, and
- d. manufacturer's specifications for any patented construction systems.

37. Structural Capacity of Stormwater Pipes

Pipes under buildings shall be structurally designed to withstand all applied forces. Details to this effect shall be incorporated on the detailed drainage design that is submitted to the certifying authority for the Construction Certificate.

38. Public Liability

Prior to the commencement of works, the owner or contractor must provide evidence to Council of a Public Risk Insurance Policy with a minimum cover of \$20M in relation to the occupation of and works within Council's road reserve, for the full duration of the proposed works. The Policy is to note Council as an interested party.

PART D - DURING CONSTRUCTION WORKS

39. Hours of Work

Noise generating activities, including excavation, construction and delivery of equipment and materials, must only be carried out between:

- 7am to 5pm Mondays to Fridays
- 7am to 4pm Saturdays.

Work must not be carried out on Sundays or public holidays.

40. Approved External Materials & Colours

The external treatment/appearance of the development must be in accordance with the approved plans, prepared by DWA titled "Colour Board", Issue B – February 2019.

41. Obstruction of Road or Footpath

The use of the road or footpath for the storage of any building materials, waste materials, temporary toilets, waste or skip bins, or any other matter is not permitted unless separately approved by Council under *Section 138 of the Roads Act* and/or under *Section 68 of the Local Government Act 1993*. Penalty infringement Notices may be issued for any offences and severe penalties apply.

42. Works In, On or Over a Public Road

In accordance with section 142(i)(a) of the *Roads Act 1993* the person who has development consent to do works, must maintain the road reserve (including footpath crossing) in a satisfactory state of repair.

43. Structural Engineer's Certification During Construction

The proposal must be constructed in accordance with details designed and certified by the practising qualified structural engineer. All structural works associated with the foundations, piers, footings and slabs for the proposed building must be inspected and structurally certified for compliance by an independent practising geotechnical and structural engineer.

In addition a Compliance or Structural Certificate, to the effect that the building works have been carried in accordance with the structural design, must be submitted to the Principal Certifying Authority at each stage of Construction or prior issue of the Occupation Certificate.

44. Air Quality - Dust & Odour

Dust emissions shall be confined within the site boundary. The following dust control procedures may be employed to achieve this objective:

- a. Dust screens may be erected around the perimeter of the site.
- b. All loads entering or leaving the site must be securely covered.
- c. Water sprays may be used across the site to suppress dust.
- d. All stockpiles of contaminated soil shall be covered if remaining more than 24 hours.
- e. When excavating, the surface should be kept moist to minimise dust.
- f. All dust generating construction activities are to cease during high wind conditions unless such operations can be controlled by localised watering or other control means.

45. Fuels and Chemicals

Fuels and chemicals must be stored safely onsite, in a site shed, work vehicle or within a bunded area. Refuelling and mixing chemicals must be conducted in designated bunded area/s. Emergency protocols must be in place and implemented in the event of a fuel or chemical spill. Spill kits must be maintained and stored in designated areas. Waste chemical and paint cleaning drums must be disposed of by accredited waste contractors.

46. Earthing – Electricity

The construction of any building or structure (including fencing, signage, flag poles, hoardings etc.) whether temporary or permanent that is connected to or in close proximity to Endeavour Energy's electrical network is required to comply with Australian/New Zealand Standard AS/NZS 3000:2018 'Electrical installations' as updated from time to time. This Standard sets out requirements for the design, construction and verification of electrical installations, including ensuring there is adequate connection to the earth. Inadequate connection to the earth to allow a leaking/fault current to flow into the grounding system and be properly dissipated places persons, equipment connected to the network and the electricity network itself at risk from electric shock, fire and physical injury.

47. Records of Disposal

All records demonstrating the lawful disposal of construction waste and recycling must be retained and kept readily available for inspection by regulatory authorities such as Council, Department of Environment and Heritage or WorkCover NSW.

48. Survey Certificate Confirming Setbacks

A survey certificate prepared by a registered surveyor must be submitted to the Principal Certifying Authority immediately upon completion of the first structural work, to confirm that the development is constructed at the approved setbacks from the boundaries.

49. Traffic Disruption

During any construction works on the public road that is associated with this approval, the developer must provide appropriate signage and traffic control facilities as per the requirements of AS 1742.3 and the RTA (RMS) "Traffic Control at Works Sites" manual.

50. Loading and Unloading During Construction

- a. All loading and unloading associated with construction activity must be accommodated on site.
- b. The approval will be reviewed periodically for any adjustment necessitated by the progress of the construction activities.
- c. In addition to any approved construction zone, provision must be made for loading and unloading to be accommodated on site once the development has reached ground level.
- d. The structural design of the building must allow the basement and/or the ground floor to be used as a loading and unloading area for the construction of the remainder of the development.
- e. Ensure safe access to and from the site including the road reserve and footpath area, crossings by heavy equipment, plant and materials delivery, or static loads from cranes, concrete pumps and the like;
- f. Ensure safe loading and unloading of excavation machines, building materials, formwork and the erection of the structures within the site.

51. Maintenance of Erosion & Runoff Controls

The site management controls must be maintained at all times and checked for adequacy daily. The controls must not be removed until the development is completed and the disturbed areas have been stabilised.

Maintenance must include but is not limited to ensuring:

- a. all sediment fences, sediment traps and socks are properly placed and are working effectively
- b. drains, gutters and roads must be maintained clear of sediment at all times.

It is an offence under the *Protection of the Environment Operations Act 1997* to allow soil or other pollutants to fall or be washed into any waters or be placed where it is likely to fall or be washed into any waters. Substantial penalties may be issued for any offence.

52. Waste Management

The management of waste must comply with the approved Waste Management Plan. Any variations to the Waste Management Plan must have prior written approval of Council.

53. Storage of Materials

Building materials and equipment must not be stored on the road reserve/footpath area.

54. Driveway and Layback - From Kerb to Property Boundary

Standard commercial vehicular concrete driveways and laybacks must be constructed between the kerb and the property boundary. All driveways must:

- a. maintain a perpendicular alignment from the kerb to the property boundary line,
- b. have widths as per the DA Approved Plans,
- c. not interfere with the existing public utility infrastructure,
- d. be located 500mm clear of all drainage structures and 2m from the street tree,
- e. be finished with a slip resistant coating, and
- f. be constructed by Council, or a Council approved contractor, at the developer's expense, including all alterations of public infrastructure where necessary.

Where there is conflict between the location of the proposed driveway and the assets of a service utility, such as Telstra pits/manholes, the relevant service provider must be contacted **prior to any driveway works commencing**. It is an offence to modify or tamper with the assets of a service provider.

55. Protection of Property

The structural integrity of adjoining properties and structures must be protected at all times during construction. All costs associated to any ramification works are strictly borne on the developer.

56. Classification of Excavated Material

All excavated material to be removed will require classification according to the Waste Classification Guidelines, Part 1: Classifying Waste (EPA 2014) prior to removal from site.

57. Building Height

The building must not exceed the height shown on the approved plans.

58. Survey Certification

A report from a registered surveyor must be provided to the Certifying Authority on completion of the ground floor slab formwork prior to the concrete being poured and/or prior to external walls being raised above ground floor level where there is no ground floor slab.

The report must certify all of the following:

- a. the distance of the structure to all boundaries of the allotment are in accordance with the approved plans,
- b. the height of the floor level/s in relation to the natural ground level are in accordance with the approved plans, and
- c. the garage floor level complies with the garage floor level shown on the approved plans and grades comply with Council's gradient standards.

Australian Height Datum must be used.

59. Connection to Council Pit and/or Pipe

Any connection to a Council pit and/or pipe must:

- a. be made at the pipe obvert (pipe only),
- b. be through a hole that is neatly made by cutting or drilling with any reinforcement encountered cut away,
- c. not protrude past the inner surface of the pit and/or pipe,
- d. have all junctions finished with 2:1 cement mortar,
- e. have a minimum pipe size of 150mm in diameter and either sewer grade PVC or concrete, and
- f. when the diameter of the connection is more than 1/3 the diameter of the Council pipe, connection is to be made by construction of a standard pit.

All construction is to be carried out as per Council's Subdivision Code requirements. The Certifying Authority must arrange for a satisfactory inspection by Shellharbour City Council prior to backfilling. At least one working day's notice is required for the inspection and is to be arranged through Council's Customer Services.

An inspection fee will apply in accordance with Council's Fees & Charges.

60. Geotechnical Testing – Drainage

Geotechnical testing must be carried out and results submitted to the Certifying Authority to verify that the pipe trench bedding and backfill complies with the requirements outlined in Australian Standard AS 3725 - *Design for Installation of Buried Concrete Pipe*. Geotechnical testing must verify that the pipe trench bedding and backfill complies with the requirements for HS3 bedding/backfill must be performed at the rate of one test per 50m of pipeline with not less than two tests in any section of pipe exceeding 25m in length.

PART E - PRIOR TO OCCUPATION

61. SEPP 65 Design Verification Statement

In accordance with clause 154A of the *Environmental Planning & Assessment Regulation 2000*, a Certifying Authority must not issue an Occupation Certificate to authorise a person to commence occupation or use of residential flat development unless the Principal Certifying Authority has received a design verification statement from a qualified designer. The statement from the qualified designer must verify that the residential apartment development achieves the design quality of the development as shown in the plans and specifications in respect of which the Construction Certificate was issued, having regard to the design quality principles set out in Part 2 of *State Environmental Planning Policy No. 65 - Design Quality of Residential Apartment Development*.

The design verification statement must also validate the provision of adaptable housing for a minimum of 16 apartments, as identified on approved Drawing No. 31, Rev. V, by DWA dated 04/03/2019.

62. Acoustic Verification Report

Prior to the issue of an Occupation Certificate, a suitably qualified acoustic engineer is to provide a written Acoustic Verification Report validating that the development complies with the requirements set out condition 12 Acoustic Attenuation.

63. Repairs to Public Infrastructure

Any damage to public infrastructure, other than that previously noted in the Dilapidation Report (refer Part C), is the responsibility of the developer and must be repaired and reinstated within two months of completion of works subject to this consent. This work must be carried out by Council, or Council approved contractor, at the developer's expense.

64. Occupation Certificate

All conditions in Parts A, B, C, D & E of this consent are preconditions for the purpose of section 109H of the *Environmental Planning & Assessment Act 1979*. Compliance with all preconditions must be verified by the Principal Certifying Authority prior to issue of a final Occupation Certificate. The building must not be used until the Principal Certifying Authority issues an Occupation Certificate.

65. BASIX

All commitments listed in the BASIX Certificate for the development must be carried out prior to the issue of an Occupation Certificate.

66. Repairs to Public Infrastructure

Any damage to public infrastructure, other than that previously noted in the Dilapidation Report (refer Part C), is the responsibility of the developer. All damage must be repaired and reinstated prior to the issue of the Occupation Certificate. This work must be carried out by Council, or Council approved contractor, at the developer's expense.

67. Section 73 Certificate

A Section 73 Compliance Certificate under the *Sydney Water Act 1994* must be obtained from Sydney Water. This Section 73 Certificate must be submitted to the Principal Certifying Authority prior to the issue of an Occupation Certificate.

It is recommended that applicants apply early for the certificate, as there may be water and sewer pipes to be built and this can take some time. This can also impact on other services and building, driveway or landscape design.

Application must be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Land development or telephone 13 2092.

68. Works As Executed - Stormwater Drainage

Prior to the issue of an Occupation Certificate, Works As Executed Plans must be submitted the Certifying Authority by a registered surveyor certifying compliance of all drainage works with the approved design plans.

The Works As Executed dimensions and levels must be shown in red on a copy of the approved Construction Certificate plans. This plan must verify surface and invert levels on all pits, invert levels and sizes of all pipelines, and finished surface levels on all paved areas. All levels must relate to Australian Height Datum.

69. Obstacle Lighting – Manuel of Standard (MOS)

The building must have obstacle lighting installed utilising low intensity steady red lighting during the hours of darkness at the highest point of the building. Obstacle lights are to be arranged to ensure the building can be observed in a 360 degree radius as per subsection 9.4.3 of the Manual of Standard Part 139 – Aerodromes (MOS Part 139). Characteristics for low intensity lights are stated in subsection 9.4.6 of the Manuel of Standards Part 139 – Aerodromes (MOS).

Obstacle light is to have a remote monitoring capacity, in lieu of observation every 24 hours, to alert Wollongong Aerodrome reporting staff of any outage. For detailed requirements for obstacle monitoring, within the OLS of the aerodrome, refer to the subsection 9.4.10 of the MOS.

The proponent is to provide information to Council that the obstacle lighting provisions that are to be installed in accordance with the MOS; and

The proponent is to inform the Council, upon completion, of the finished building heights.

70. Verification of Waste Management

Documentation verifying that all waste streams were managed in accordance with the Waste Management Plan must be provided to the Principal Certifying Authority prior to the issue of an Occupation Certificate. All records, such as waste disposal docketts or photographic evidence, must be retained by the Principal Certifying Authority.

71. Completion of Landscape Works

A report from a suitably qualified person must be provided to the Principal Certifying Authority on completion of the landscape works certifying that the landscape is in accordance with the approved Landscape Plan. This also includes ensuring the area between the property boundary and kerb is finished with selected hardstand, in accordance with the approved Landscape Plan.

Any variations to the design or species used must be authorised by Council in writing before any changes are made.

72. Street Tree Pre-Occupation Inspection

The street tree/s must be inspected by Council prior to the occupation of the development. It is the responsibility of the developer to notify Council for the street tree inspection.

73. Operational Plan of Management

The developer shall prepare an Operational Management Plan which addresses all operational and management procedures to be employed, to ensure that the 7 business premises and use

of the rooftop Common Open Space (COS), can operate safely and without disturbance to the surrounding locality.

Matters to be addressed include (but are not limited to):

- a. hours of operation of the various uses within the business premises and use of the rooftop Common Open Space (COS),
- b. noise emissions generated by mechanical plant to satisfy criteria set out in the EPA's *Industrial Noise Policy 2000*;
- c. management of deliveries, all loading and unloading operations associated with servicing the site must be carried out within the confines of the site, at all times and must not obstruct other properties/units or the public way,
- d. management measures to control vehicle activity,
- e. the emergency management of the movement of people within and surrounding the site,
- f. maintenance regime – graffiti removal etc,
- g. security management – lighting, CCTV etc, and

74. Relevant Leases, Licences and Easements

Prior to issue of the Occupation Certificate any required leases, licences or easements as relevant must be obtained from the appropriate authorities including Shellharbour City Council.

An easement is required for the through site link to allow for public access, as this will remain in private ownership.

75. Food & Drink Premises

Inspection & Registration Prior to the issue of any Occupation Certificate or occupation or use of any food premises:

- (a) a satisfactory final inspection must have been undertaken by the Principal Certifying Authority certifying that the use of the premises for the preparation, display and storage of food has been carried out in accordance with the development consent; and
- (b) the food proprietor must submit to Shellharbour City Council a 'Food Business Registration Form'. The form can be found on Council's website by visiting:
<http://www.shellharbour.nsw.gov.au/Documents/Forms-and-Application/Compliance/Foodbusinessregistration-form.aspx>

PART F - AFTER ISSUE OF OCCUPATION CERTIFICATE/DURING OCCUPATION

76. Waste Management

Waste management must remain consistent with the requirements of the approved Operation Waste Management Plan in Condition 3.

Further to this the following waste removal requirements are to be complied with:

- a. The collection of waste and recycling must only occur between 7.00am and 8.00pm weekdays, to avoid noise disruption to the surrounding area,
- b. Garbage and recycling must be collected wholly within the site. At no time are any waste bins be presented the kerbside.

- c. The bins must be presented within the designated residential/commercial waste removal pick up zone as illustrated on the approved plans,
- d. The respective residential and business bin storage areas must be in compliance with approved plans.
- e. Requirement that all bins must be cleaned on a regular basis by building management,
- f. Practical measures are also to be taken to ensure that odour emission from the garbage storage area does not cause offensive odour as defined under the provision of the *Protection of the Environment Operations Act, 1997* (as amended),
- g. For any future food and drink premises, used oil shall be contained in a leak proof container and stored in a covered and bunded area prior to off-site disposal. Copies of receipts for the disposal of used cooking oil shall be kept on-site and made available to Council Officers upon request,
- h. The Waste Management Plan - Operational must be available to all residents and tenancies, and
- i. All waste removal to be undertaken by a private contractor, unless otherwise agreed by Council in writing.
- j. Acoustic mitigation requirements as required by this development consent, including garbage chutes.

77. Use for Lower & Upper Ground Floor Tenancies

This approval grants consent for the use of the lower & upper ground floor tenancies and only as business premises or retail premises to support *shop top housing* as defined in *Shellharbour Local Environmental Plan 2013*. The definition of each use is as follows:

Business Premises:

means a building or place at or on which:

- a. an occupation, profession or trade (other than an industry) is carried on for the provision of services directly to members of the public on a regular basis, or
- b. a service is provided directly to members of the public on a regular basis, and includes a funeral home and, without limitation, premises such as banks, post offices, hairdressers, dry cleaners, travel agencies, internet access facilities, betting agencies and the like, but does not include an entertainment facility, home business, home occupation, home occupation (sex services), medical centre, restricted.

Retail Premises:

means a building or place used for the purpose of selling items by retail, or hiring or displaying items for the purpose of selling them or hiring them out, whether the items are goods or materials (or whether also sold by wholesale), and includes any of the following:

- a. cellar door premises,
- b. food and drink premises,
- c. garden centres,
- d. hardware and building supplies,
- e. kiosks,
- f. landscaping material supplies,

- g. markets,
- h. plant nurseries,
- i. roadside stalls,
- j. rural supplies,
- k. shops,
- l. specialised retail premises,
- m. timber yards,
- n. vehicle sales or hire premises, but does not include highway service centres, service stations, industrial retail outlets or restricted premises.

The hours for operation of business or retail premises are limited to 7am – 11pm

78. Outdoor Lighting

Outdoor lighting must comply with AS 4282-1997: Control of the obtrusive effects of outdoor lighting. The maximum luminous intensity from each luminaire must not exceed the Level 1 control relevant under Table 2.2 of AS 4282. The maximum illuminance and the threshold limits must be in accordance with Table 2.1 of AS 4282.

79. Enclosure of Balconies

At no time shall any of the Balcony's within the development site be enclosed.

80. Air Conditioning Units to Façade

Approval is not granted for the installation of individual air conditioning units to the facade or balconies of the building without screening or an enclosure.

81. Protection of the Environment Operations Act 1997

Any activity including waste generation being carried out with this approval shall not give rise to offensive odour or pollution of land and/or water as defined under the *Protection of the Environment Operations Act 1997*.

82. Parking – Signage

Proposed parking areas, service bays, truck docks, driveways and turning areas shall be maintained clear of obstructions and be used exclusively for purposes of vehicle parking loading/unloading, and vehicle access respectively for the life of the development. Under no circumstances are such areas to be used for the storage of goods or waste materials.

83. BASIX Commitments

All commitments listed in the BASIX Certificate for the development must be maintained for the life of the development.

84. Street Tree Bond Refund

The street tree bond will be refunded following a six month maintenance period commencing from the date of the issue of the Occupation Certificate, provided the 17 street trees remain in

a satisfactory condition. In the event that any street tree/s are found damaged, dying or removed, Council will have the option to retain the whole or part of the bond. The developer/Certifying Authority must notify Council for a reinspection of the street tree/s.

85. Allocation of Visitor Parking

All visitor car parking spaces must always be available for visitor parking and must not at any time be allocated, sold or leased to an individual owner/occupier. In this regard, the visitor car parking spaces must form part of the common property in any future subdivision.

86. Separate Consent Required for Signage

This consent does not authorise the erection of any advertising/identification signage.

A separate development application for any proposed signage (other than exempt signs under Council's *Exempt Development Control Plan* or *State Environmental Planning Policy (Exempt & Complying Development Codes) 2008*) must be submitted to Council, and approval granted, prior to the erection or display of any such signs.

Regard must be given to Council's *Advertising and Identification Signs Development Control Plan* and *State Environmental Planning Policy No. 64 - Advertising & Signage* when preparing such an application.

REASONS FOR THE IMPOSITION OF CONDITIONS

1. To minimise any possible adverse environmental impacts of the proposed development.
2. To ensure that the amenity and character of the surrounding area is protected.
3. To ensure that the design and siting of the development complies with the provisions of Environmental Planning Instruments and Council's Codes and Policies.
4. To ensure that the development does not conflict with the public interest.

| |
|---------------------------------|
| Advisory Notes – General |
|---------------------------------|

Compliance with *Building Code of Australia*

The development must comply with the *Building Code of Australia* and all related standards and legislation.

Access to Premises

As a Class 3 development, compliance is required to the Disability (Access to Premises – Building) Standards 2010. The development is to ensure compliance with the Disability (Access to Premises – Building) Standards 2010.

SafeWork NSW

The requirements of SafeWork NSW must be satisfied at all times.

Failure to Comply with Consent

Failure to comply with any of the conditions of consent may result in a Penalty Infringement Notice being issued against the owner/applicant/builder. Substantially greater penalties may be imposed by the Court for non-compliance.

Lapsing of Development Consent

In accordance with Part 4, Division 4.9, section 4.53 of the *Environmental Planning & Assessment Act 1979*, the development approval lapses five years after the approval date unless building, engineering or construction work relating to the building has physically commenced.

Right to Appeal

If you are dissatisfied with this decision, Part 8, Division 8.3, section 8.7 of the *Environmental Planning & Assessment Act 1979* gives you the right to appeal to the Land & Environment Court within six months after the date on which you receive this notice.

Review of Determination

If you are dissatisfied with this decision, Part 8, Division 8.2 of the *Environmental Planning & Assessment Act 1979* provides that you may request Council to review its determination. The request cannot be made after the time limit for making of an appeal under section 97 expires.

Division 8.2 of the *Environmental Planning & Assessment Act 1979* does not apply to:

- a. a determination to issue or refuse to issue a complying development certificate
- b. a determination in respect of designated development
- c. a determination made by the Council under Division 4.6 in respect of an application made by the Crown.

To Vary Development Consent

The plans and/or conditions of this consent are binding and may only be varied upon application to Council under section 4.55 of the *Environmental Planning & Assessment Act 1979*. The appropriate fee shall accompany the application and no action shall be taken on the requested variation unless and until the written authorisation of Council is received by way of an amended consent.

BASIX

Please note that the requirement for lodging a modification of development consent under section 4.55 of the *Environmental Planning & Assessment Act 1979* may result in the requirement for a revised BASIX certificate to be submitted for assessment.

Telecommunications Act 1997 (Commonwealth)

Telstra (and its authorised contractors) are the only companies that are permitted to conduct works on Telstra's network and assets. Any person interfering with a facility or installation owned by Telstra is committing an offence under the *Criminal Code Act 1995* (Commonwealth) and is liable for prosecution. Furthermore, damage to Telstra's infrastructure may result in interruption to the provision of essential services and significant costs. If you are aware of any works or proposed works which may affect or impact on Telstra's assets in any way, you are required to contact Telstra's Network Integrity Team on 1800810443.

Native Fauna Protection

Measures to minimise risk of harm to native fauna must be implemented including:

- Inspect in an around all vehicles and machines to ensure no native fauna is present prior to turning on or recommencing work;
- Cover trenches when possible to avoid trapping native fauna such as frogs and reptiles;
- Inspect trenches prior to filling; and,
- Contact WIRES or South Coast Wildlife Rescue on 0418 427 214 immediately in the event of injury to native fauna.

Graffiti Management

If graffiti does occur, it should be removed within 24 - 48 hours to reduce the notoriety sought by offenders and decrease its likelihood of appearing again in the future. The use of anti-graffiti paint and coatings could also be considered.

END OF NOTICE

DRAWING LIST

| SHEET NO. | SHEET NAME | REV. |
|-----------|--|------|
| 00 | COVERSHEET | Y |
| 01 | DCP ANALYSIS & LOCATION PLAN | V |
| 02 | REGIONAL CONTEXT & URBAN ANALYSIS | V |
| 03 | LOCAL CONTEXT | V |
| 04 | DESIGN OPPORTUNITIES | V |
| 05 | SITE ANALYSIS - CONTEXTUAL RELATIONSHIP | V |
| 06 | SITE ANALYSIS - ACCESS & CIRCULATION | V |
| 07 | SITE ANALYSIS - PUBLIC DOMAIN | V |
| 08 | SITE ANALYSIS - STREET ACTIVATION | V |
| 10 | 3D FUTURE DEVELOPMENTS | V |
| 15 | PRECEDENCE | V |
| 18 | EXISTING SURVEY | V |
| 19 | SITE PLAN | Y |
| 20 | GFA PLANS | V |
| 21 | BASEMENT 1 FLOOR PLAN | V |
| 22 | LOWER GROUND FLOOR PLAN | Y |
| 23 | UPPER GROUND FLOOR PLAN | Y |
| 24 | LEVEL 1 FLOOR PLAN | Y |
| 25 | LEVEL 2 FLOOR PLAN | Y |
| 26 | LEVEL 3 FLOOR PLAN | V |
| 27 | LEVEL 4 FLOOR PLAN | Y |
| 28 | LEVEL 5 FLOOR PLAN | V |
| 29 | LEVEL 6 FLOOR PLAN | V |
| 30 | ROOF PLAN | V |
| 31 | POST ADAPTABLE LAYOUTS | V |
| 32 | STORAGE CALCULATIONS | V |
| 33 | STORAGE CALCULATIONS | V |
| 35 | EAST & WEST SITE ELEVATIONS | Y |
| 36 | NORTH & SOUTH SITE ELEVATIONS | Y |
| 37 | EAST ELEVATION | Y |
| 38 | WEST ELEVATION | Y |
| 39 | NORTH & SOUTH ELEVATION | Y |
| 40 | SITE SECTIONS | Y |
| 41 | BUILDING SECTIONS | Y |
| 42 | BUILDING SECTIONS | Y |
| 43 | BUILDING SECTIONS | Y |
| 44 | DETAILED BUILDING SECTION | Y |
| 50 | 3D VIEWS | Y |
| 51 | 3D VIEW - NORTH (FROM COLLEGE AVENUE) | Y |
| 52 | 3D VIEW - NORTH-EAST (FROM COLLEGE AVENUE) | Y |
| 53 | 3D VIEW - EAST (FROM COLLEGE AVENUE) | V |
| 54 | 3D VIEW - SOUTH-EAST (FROM COLLEGE AVENUE) | V |
| 55 | 3D VIEW - SOUTH (FROM COUNCIL FORECOURT) | V |
| 56 | 3D VIEW - WEST (FROM CARPARK) | V |
| 57 | 3D VIEW - NORTH-WEST (FROM CARPARK) | Y |
| 58 | 3D VIEWS - URBAN CONTEXT | Y |
| 59 | 3D VIEWS - URBAN CONTEXT | Y |
| 60 | WINTER SHADOWS - JUNE 9 AM - 12 NOON | V |
| 61 | WINTER SHADOWS - JUNE 1 PM - 3 PM | V |
| 62 | SUMMER SHADOWS - DECEMBER | V |
| 63 | VIEWS FROM THE SUN - WINTER | Y |
| 64 | VIEWS FROM THE SUN - WINTER | Y |
| 65 | VIEWS FROM THE SUN - WINTER | Y |
| 66 | VIEWS FROM THE SUN - WINTER | Y |
| 67 | VIEWS FROM THE SUN - WINTER | Y |
| 68 | VIEWS FROM THE SUN - WINTER | Y |
| 70 | VIEW ANALYSIS LOCATION MAP | V |
| 71 | VIEW ANALYSIS - POI 1 (EXISTING PHOTOS) | V |
| 71A | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | V |
| 71B | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | V |
| 71C | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | V |
| 72 | VIEW ANALYSIS - POI 2 (EXISTING PHOTOS) | V |
| 72A | VIEW ANALYSIS - POI 2 (PROPOSED PHOTOS) | V |
| 72B | VIEW ANALYSIS - POI 2 (PROPOSED PHOTOS) | V |
| 73 | VIEW ANALYSIS - POI 3 (EXISTING PHOTOS) | V |
| 73A | VIEW ANALYSIS - POI 3 (PROPOSED PHOTOS) | V |
| 74 | VIEW ANALYSIS - POI 4 (EXISTING PHOTOS) | V |
| 74A | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | V |
| 74B | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | V |
| 75 | VIEW ANALYSIS - POI 5 (EXISTING PHOTOS) | V |
| 75A | VIEW ANALYSIS - POI 5 (PROPOSED PHOTOS) | V |
| 75B | VIEW ANALYSIS - POI 5 (PROPOSED PHOTOS) | V |
| 76 | VIEW ANALYSIS - POI 6 (EXISTING PHOTOS) | V |
| 76A | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | V |
| 76B | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | V |

DISCLAIMER
 Subject to full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
 All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
 All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright © DWA.

Legend:

| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| R001 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| R002 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| R001 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| R002 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SLT SLOUGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |

SITE ADDRESS

16 COLLEGE AVENUE, SHELLHARBOUR
 LOT 3 D.P. 1072916

SITE AREA

3213 sqm TOTAL

SUMMARY

GFA TOTAL ALLOWABLE N/A
 TOTAL PROPOSED 9407.6 sqm

FSR ALLOWABLE N/A
 PROPOSED 2.93 : 1

COMMON OPEN SPACE AREA
 REQUIRED 803.25 sqm (25%)
 PROPOSED 1379.4 sqm (42.9%)

CARPARKING REQUIRED 77 RESIDENTIAL
 (1 SPACE PER UNIT)
 VISITORS
 (0.2 SPACES PER UNIT)
 BUSINESS

CARPARKING PROVIDED 77 RESIDENTIAL
 16 VISITORS
 2 BUSINESS

MOTORBIKE SPACES PROVIDED 4 RESIDENTIAL
 BICYCLE SPACES PROVIDED 28 RESIDENTIAL
 7 VISITOR
 14 BUSINESS

| DISCIPLINE | CONSULTANTS | CONTACT | PH. | EMAIL. |
|---------------------------|---|--------------------------------|----------------|---|
| ARCHITECT | DESIGN WORKSHOP AUSTRALIA | ROBERT GIZZI | (02) 4227 1661 | robert@designworkshop.com.au |
| PROJECT COORDINATOR | DESIGN WORKSHOP AUSTRALIA | AMANDA KOSTOVSKI | (02) 4227 1661 | amanda@designworkshop.com.au |
| PLANNING | CITY PLAN | STEPHEN KERR / CARLO DI GIULIO | (02) 8270 3500 | stephenk@cityplan.com.au |
| SURVEYOR | LANDTEAM AUSTRALIA PTY LTD | - | (02) 4296 7055 | wolongong@landteam.com.au |
| BASIX | PLANNING PRINCIPLES | BARRY COTTEN | 0437 804 079 | admin@planningprinciples.net.au |
| DRAINAGE CONSULTANT | ATB CONSULTING ENGINEERS | GORAN UGRINOVSKI | (02) 4226 6646 | goran@atbconsulting.com.au |
| GEOTECHNICAL | AARGUS PTY LTD | KENNETH BURGESS | 1300 137 0038 | Kenneth@aargus.net |
| LANDSCAPE | TAYLOR BRAMMER | MATTHEW TAYLOR | (02) 9387 8855 | dmtaylor@taylorbrammer.com.au |
| TRAFFIC CONSULTANT | TRANSPORT & TRAFFIC PLANNING ASSOCIATES | ROSS NETTLE | (02) 9411 5660 | ross@tpta.com.au |
| BCA CONSULTANT | BUILDING CODE ASSISTANCE | PETER DIX | 0407 270 908 | peter@buildingcodeassistance.com.au |
| ACCESS CONSULTANT | ACCESSIBLE BUILDING SOLUTIONS | HOWARD MOUTRIE | (02) 9528 0276 | howard@absaccess.com.au |
| WASTE MANAGEMENT | ELEPHANTS FOOT RECYCLING SOLUTIONS | ASHLEIGH ARMSTRONG | 0437 150 164 | ashleigh.armstrong@elephantsfoot.com.au |
| ACOUSTIC CONSULTANT | HARDWOOD ACOUSTICS | MATTHEW HARWOOD | 0414 315 775 | matthew@harwoodacoustics.com.au |
| SOLAR / CROSS VENTILATION | SLR CONSULTING | HORATIO CAI | 0433 692 251 | hcai@slrconsulting.com |
| MECH / ELEC / HYD / FIRE | ARROW CONSULTING ENGINEERS | JEREMY MONTGOMERY | 0414 013 987 | jmontgomery@arrowce.com.au |

SHOP TOP HOUSING

16 COLLEGE AVENUE, SHELLHARBOUR

SHILOH PTY LTD

| UNIT TYPE SCHEDULE | |
|--------------------|-----|
| UNIT TYPE | NO. |
| 1 BED | 15 |
| 2 BED | 50 |
| 3 BED | 12 |
| Grand total | 77 |

NOTES:

20% REQUIREMENT FOR ADAPTABLE UNITS (SDCP)
 20% REQUIREMENT FOR LIVABLE HOUSING (ADG)

TOTAL NUMBER REQUIRED 16 UNITS
 TOTAL NUMBER PROVIDED 16 UNITS

| GFA SCHEDULE | | |
|----------------|------------------|-----------------------|
| LEVEL | | AREA |
| GROUND (LOWER) | BUSINESS | 179.8 m ² |
| GROUND (LOWER) | BUSINESS | 68.6 m ² |
| GROUND (UPPER) | BUSINESS | 1760.6 m ² |
| GROUND (UPPER) | RESIDENTIAL - G | 437.9 m ² |
| LEVEL 1 | RESIDENTIAL - L1 | 1615.8 m ² |
| LEVEL 2 | RESIDENTIAL - L2 | 1641.6 m ² |
| LEVEL 3 | RESIDENTIAL - L3 | 1583.5 m ² |
| LEVEL 4 | RESIDENTIAL - L4 | 779.6 m ² |
| LEVEL 5 | RESIDENTIAL - L5 | 670.1 m ² |
| LEVEL 6 | RESIDENTIAL - L6 | 670.1 m ² |
| Grand total | | 9407.6 m ² |



ADDITIONAL INFORMATION

| | | | | | | | | | |
|--------|-----------------|----------------------------------|---------|-------------------------------|--|--|--|----------------|------------------|
| REF. Y | DATE 13.05.2019 | AMENDMENT ADDITIONAL INFORMATION | Legend: | DWA DESIGN WORKSHOP AUSTRALIA | Wollongong 81a Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Woli Creek NSW 2205 Nominated Architect: Robert Gizzi (Reg. 826) | CLIENT: SHILOH PTY LTD SHOP TOP HOUSING | DATE: JAN 18 | PROJECT No. 1725 |
| | | | | | | | ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: AK | DWG No. 00 |
| | | | | | | | DRAWING NAME: COVERSHEET | SCALE: 1 : 100 | Rev. Y |
| | | | | | | | | QA: RG | |

SITE LOCATION



ZONING MAP

B3 COMMERCIAL CORE ZONE

SITE LOCATION



FSR MAP

N/A

SITE LOCATION



BUILDING HEIGHT MAP

18 METER LIMIT

SITE LOCATION



LOCATION PLAN

NTS



STREET VIEW

16 COLLEGE AVE, SHELLHARBOUR



SITE

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|---|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright © DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: DCP ANALYSIS & LOCATION PLAN

| | |
|--------------|------------------|
| DATE: JAN 18 | PROJECT No. 1725 |
| DRAWN: TN | DWG No. 01 |
| SCALE: | Rev. V |
| QA: RG | |

ADDITIONAL INFORMATION



SITE LOCATION

REGIONAL CONTEXT

NTS

LEGEND

COMMERCIAL
PUBLIC SPACE
CIVIC/SCHOOLS
INSTITUTIONAL
BEACHES
WATER WAYS



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

Legend:

| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OSCURE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 02 |
| DRAWING NAME: | REGIONAL CONTEXT & URBAN ANALYSIS | QA: | RG | Rev. | V |



LOCAL CONTEXT

NTS

DISCLAIMER
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| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

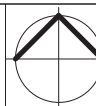
Legend:

| | | |
|-------------------------|-------------------|--------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBSCURE WINDOW |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 03 |
| DRAWING NAME: | LOCAL CONTEXT | SCALE: | NTS | Rev. | V |
| | | QA: | RG | | |

DESIGN OPPORTUNITIES & CONSTRAINTS

NTS

DISCLAIMER

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

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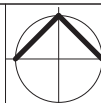
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|------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| B | BLOCKWORK | D | DOOR | SK | SKYLIGHT | PC | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | |
| RW | RETAINING WALL | BFD | BIFOLD DOOR | RWT | RAINWATER TANK | | |



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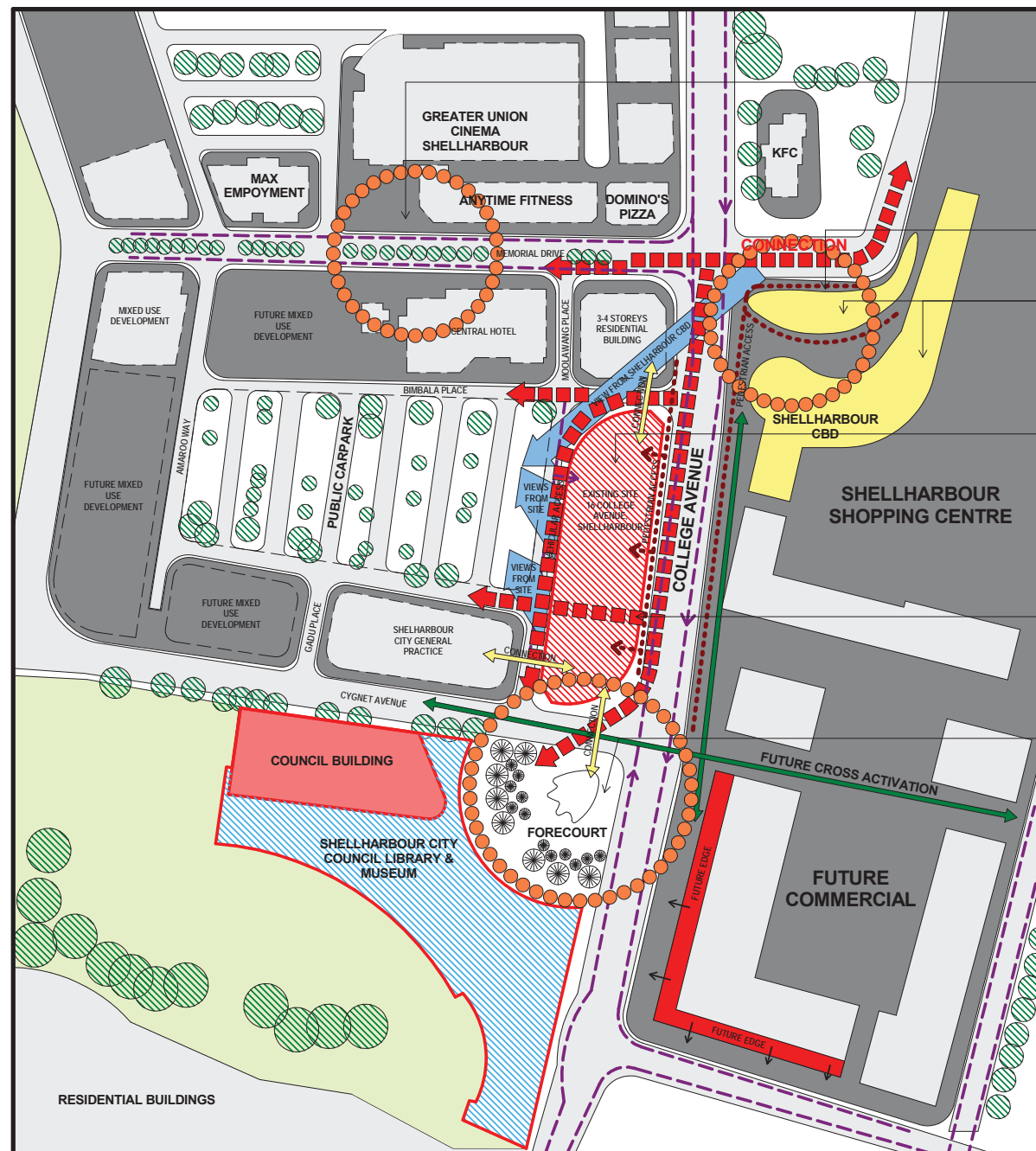
Sydney
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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: DESIGN OPPORTUNITIES

| | | | |
|--------|--------|-------------|------|
| DATE: | JAN 18 | PROJECT No. | 1725 |
| DRAWN: | RG | DWG No. | 04 |
| SCALE: | 1:100 | Rev. | V |
| QA: | RG | | |



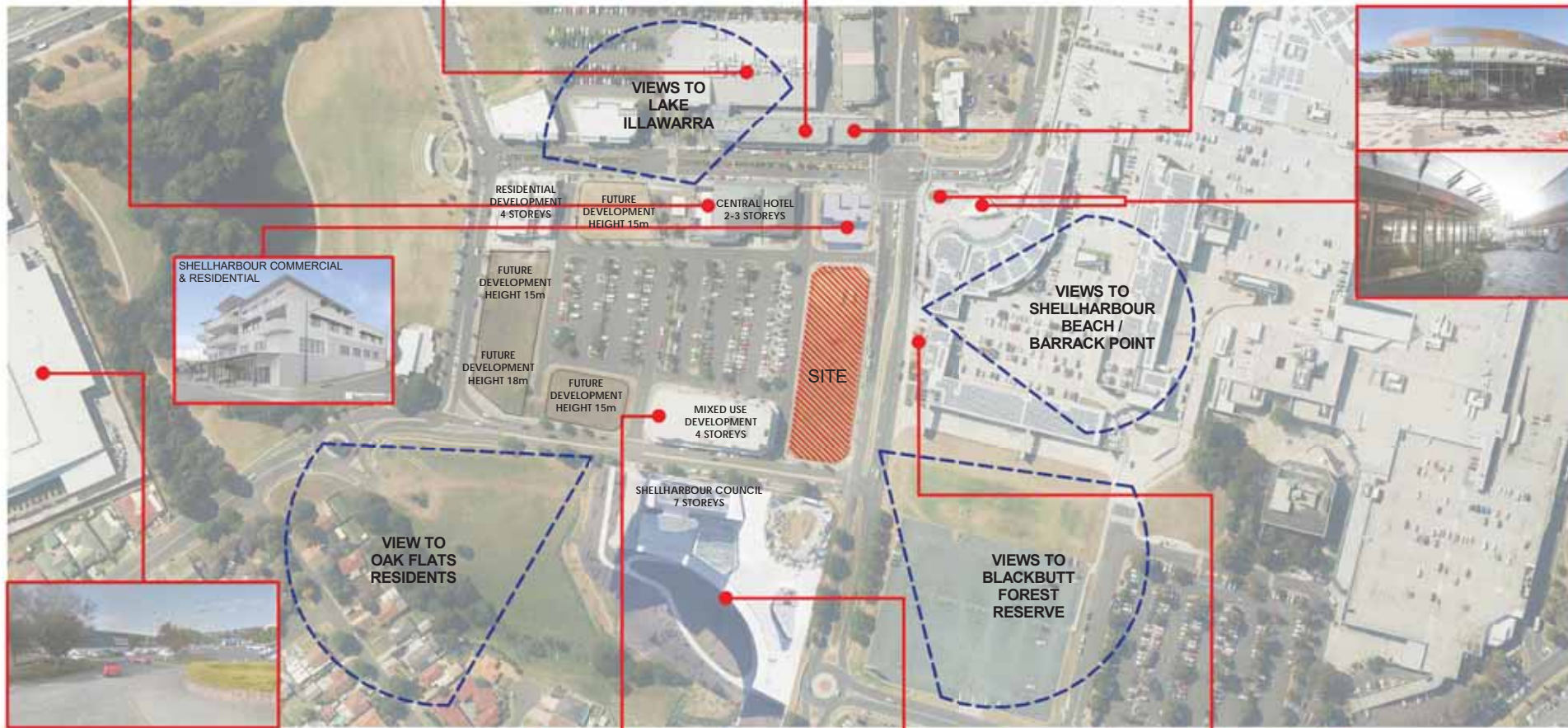
- NODAL POINT
 - CENTRAL HOTEL
 - GREATER UNION CINEMA
- NODAL POINT
 - STOCKLAND
- CURVED BUILDING FORM
- ACTIVATION
- THROUGH SITE LINK
- NODAL POINT
 - SQUARE / MEETING PLACE
 - OPPORTUNITY TO LINK AND ACTIVATE EXISTING FORECOURT

LEGEND

- VEHICULAR ACCESS
- ... PEDESTRIAN ACCESS



RESTAURANTS & CAFES



SHELLHARBOUR BUNNINGS



WILD ABOUT HEALTH



SHELLHARBOUR CITY COUNCIL LIBRARY & MUSEUM



SHELLHARBOUR SHOPPING CENTER

CONTEXTUAL RELATIONSHIP

1 : 100

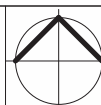
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| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|----------------|--------------------|-----------|------------------------|
| V | 04.03.2019 | | |
| Legend: | | | |
| RB01 | RENDERED BRICKWORK | S | STONERWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B01 | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| SLW | SLIDING WINDOW | PW | FIXED WINDOW |
| OB | OBSCURE WINDOW | AW | AWNING WINDOW |
| SK | SKYLIGHT | WH | WINDOW HOOD |
| LV | LOUVRES | RWT | RAINWATER TANK |
| P | POST | T | TIMBER FLOORS |
| CT | CERAMIC TILES | CPT | CARPET |
| PC | POLISHED CONCRETE | SP | FEATURE SCREENING |



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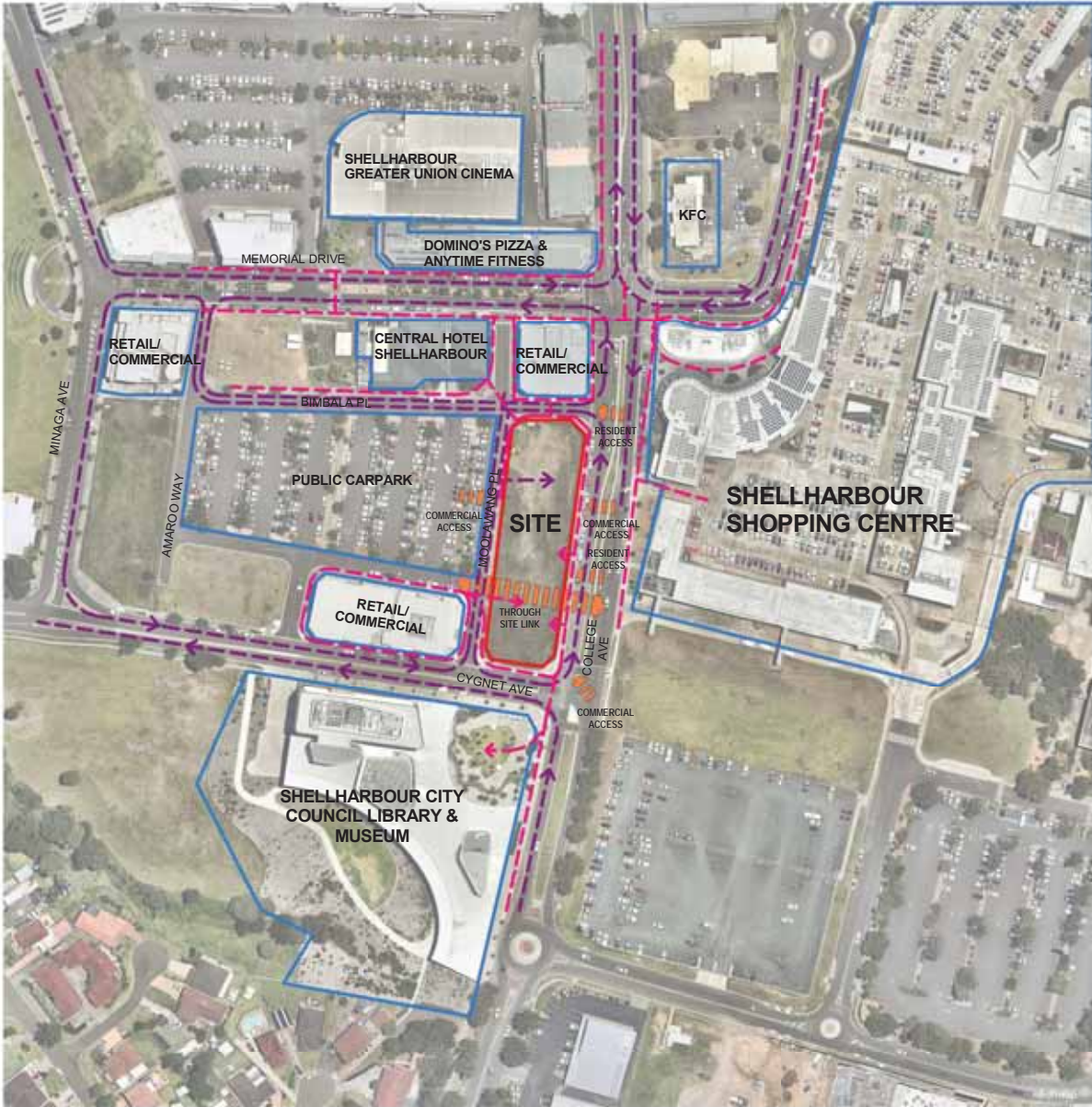
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: SITE ANALYSIS - CONTEXTUAL RELATIONSHIP

DATE: JAN 18
DRAWN: TN
SCALE: 1 : 100
QA: RG
PROJECT No. 1725
DWG No. 05
Rev. V

ADDITIONAL INFORMATION



SITE ANALYSIS - VEHICULAR/PEDESTRIAN ACCESS & CIRCULATION

NTS

LEGEND

--- VEHICULAR ACCESS
--- PEDESTRIAN ACCESS

DISCLAIMER
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All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
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| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONERWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | BRIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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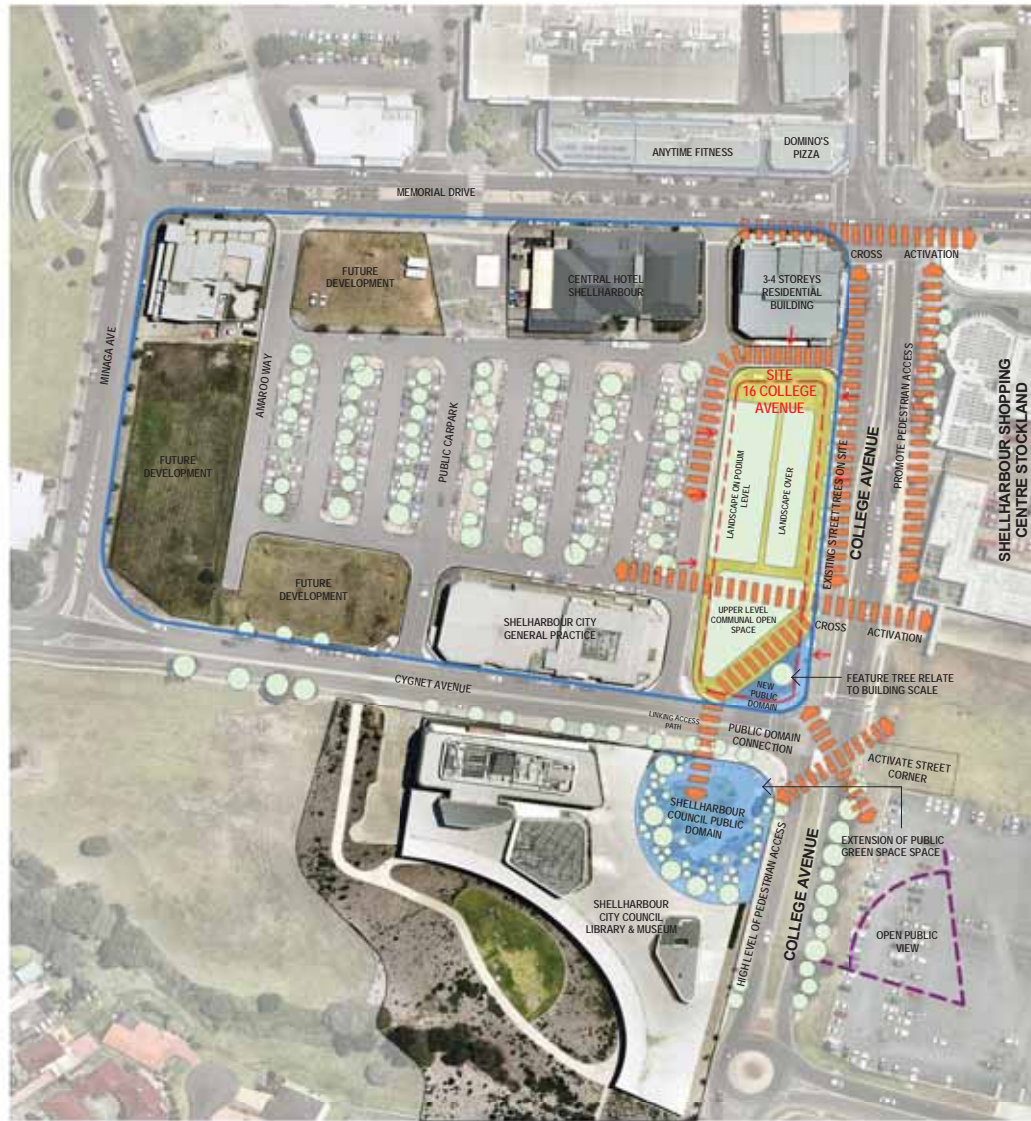
Sydney
Level 10, 6 Mount
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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHLOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: SITE ANALYSIS - ACCESS & CIRCULATION

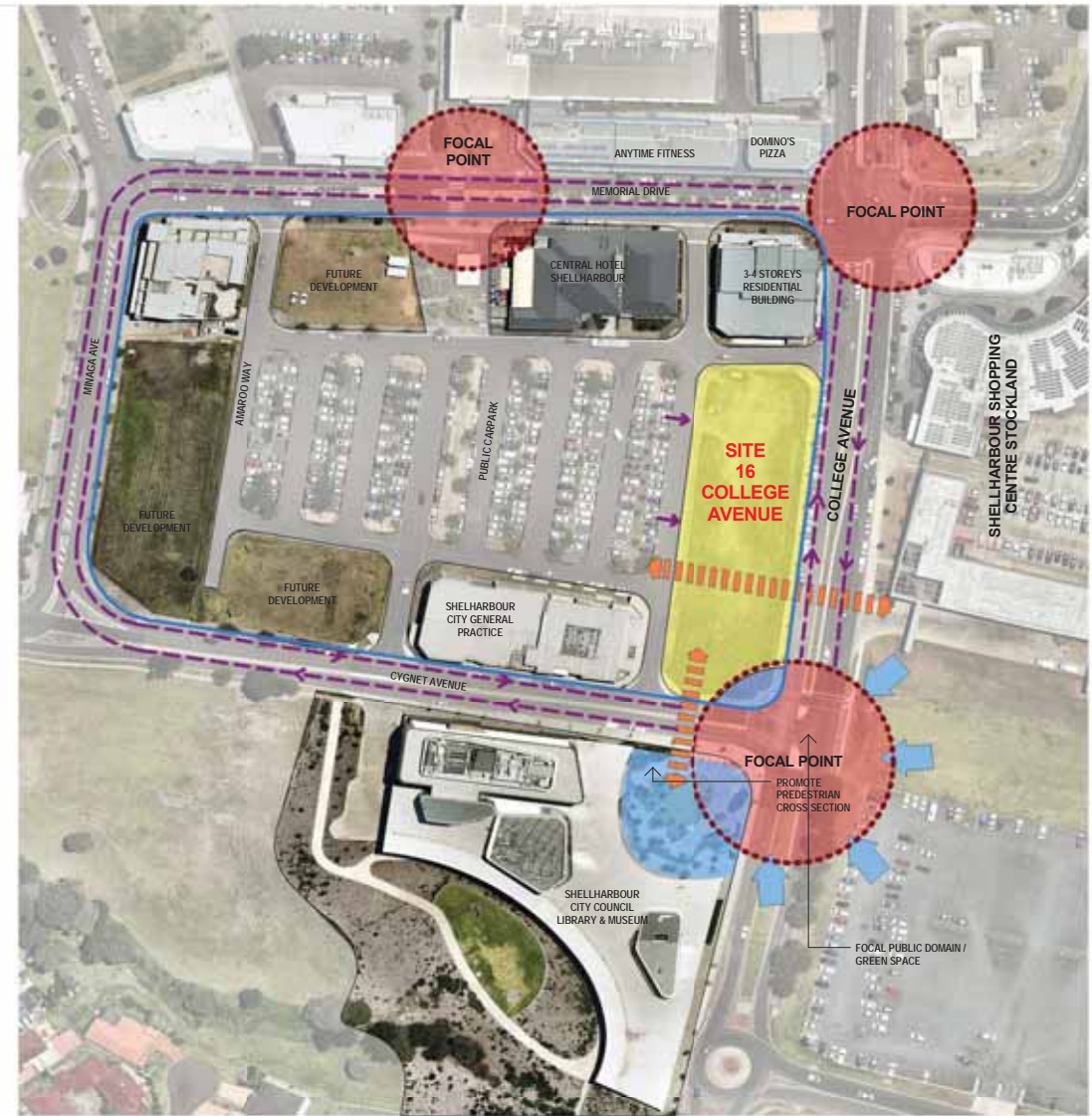
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|--------------|------------------|
| DATE: JAN 18 | PROJECT No. 1725 |
| DRAWN: TN | DWG No. 06 |
| SCALE: NTS | Rev. V |
| QA: RG | |

ADDITIONAL INFORMATION



PUBLIC DOMAIN CONNECTION

NTS



FOCAL POINT

DISCLAIMER
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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

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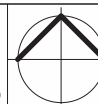
Legend:

| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| CL03 CLADDING | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |
| RW RETAINING WALL | | | |



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Nominated Architect:
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ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 07 |
| DRAWING NAME: | SITE ANALYSIS - PUBLIC DOMAIN | SCALE: | NTS | Rev. | V |
| | | QA: | RG | | |



COMMERCIAL STREET ACTIVATION

NTS

VEHICULAR ACCESS ON SITE

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| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |

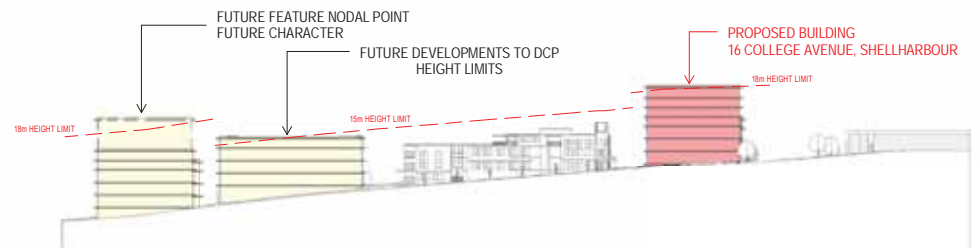
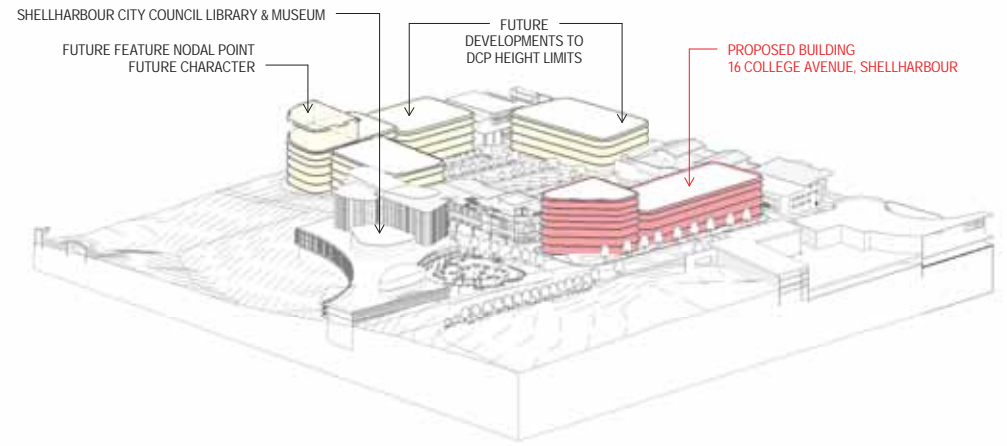
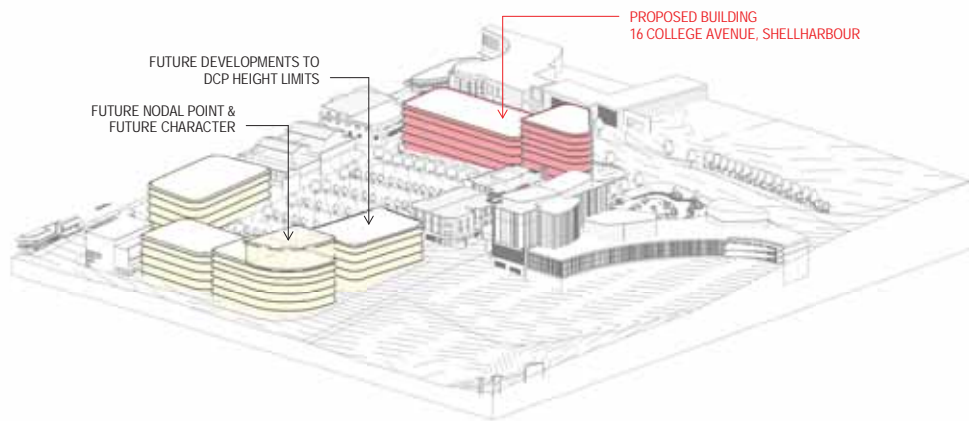
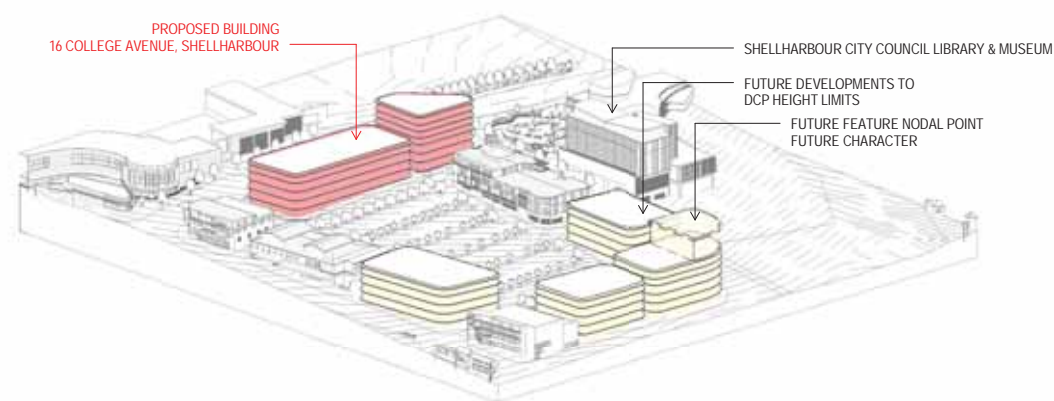
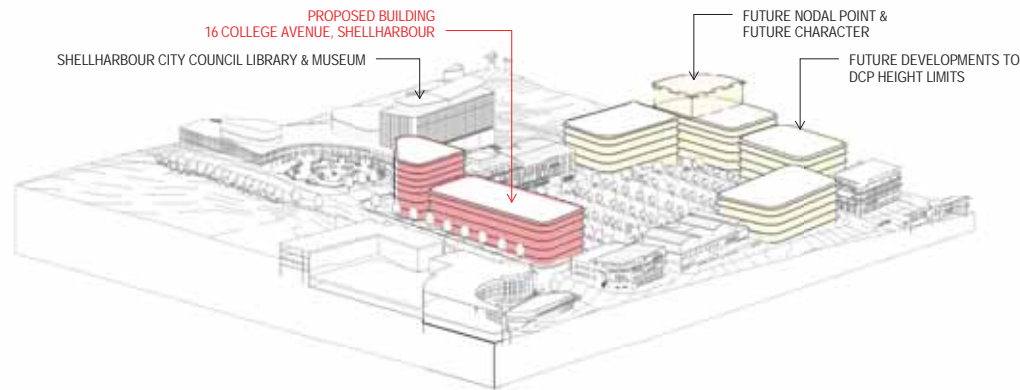


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Nominated Architect:
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ADDITIONAL INFORMATION

| | | | | | |
|---------------|-----------------------------------|--------|--------|-------------|------|
| CLIENT: | SHLOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 08 |
| DRAWING NAME: | SITE ANALYSIS - STREET ACTIVATION | SCALE: | NTS | Rev. | V |
| | | QA: | RG | | |



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| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| V | 04.03.2019 | | |

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| Legend: | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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Nominated Architect:
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ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN / NT | DWG No. | 10 |
| DRAWING NAME: | 3D FUTURE DEVELOPMENTS | SCALE: | QA: RG | Rev. | V |



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| REF. | DATE | AMENDMENT |
|----------------|--------------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| Legend: | | |
| R801 | RENDERED BRICKWORK | S STONEWORK |
| R802 | RENDERED BRICKWORK | R ROOF |
| F801 | FACE BRICKWORK | DP DOWNPIPES |
| F802 | FACE BRICKWORK | TB TIMBER BATTENS |
| B8 | BLOCKWORK | D DOOR |
| CL01 | CLADDING | GD GARAGE DOOR |
| CL02 | CLADDING | SLD SLIDING DOOR |
| RW | RETAINING WALL | BFD BI-FOLD DOOR |
| SLW | SLIDING WINDOW | P POST |
| FW | FIXED WINDOW | T TIMBER FLOORS |
| OB | OBSCURE WINDOW | CT CERAMIC TILES |
| AW | AWNING WINDOW | CPT CARPET |
| SK | SKYLIGHT | PC POLISHED CONCRETE |
| WH | WINDOW HOOD | SP FEATURE SCREENING |
| LV | LOUVRES | |
| RWT | RAINWATER TANK | |

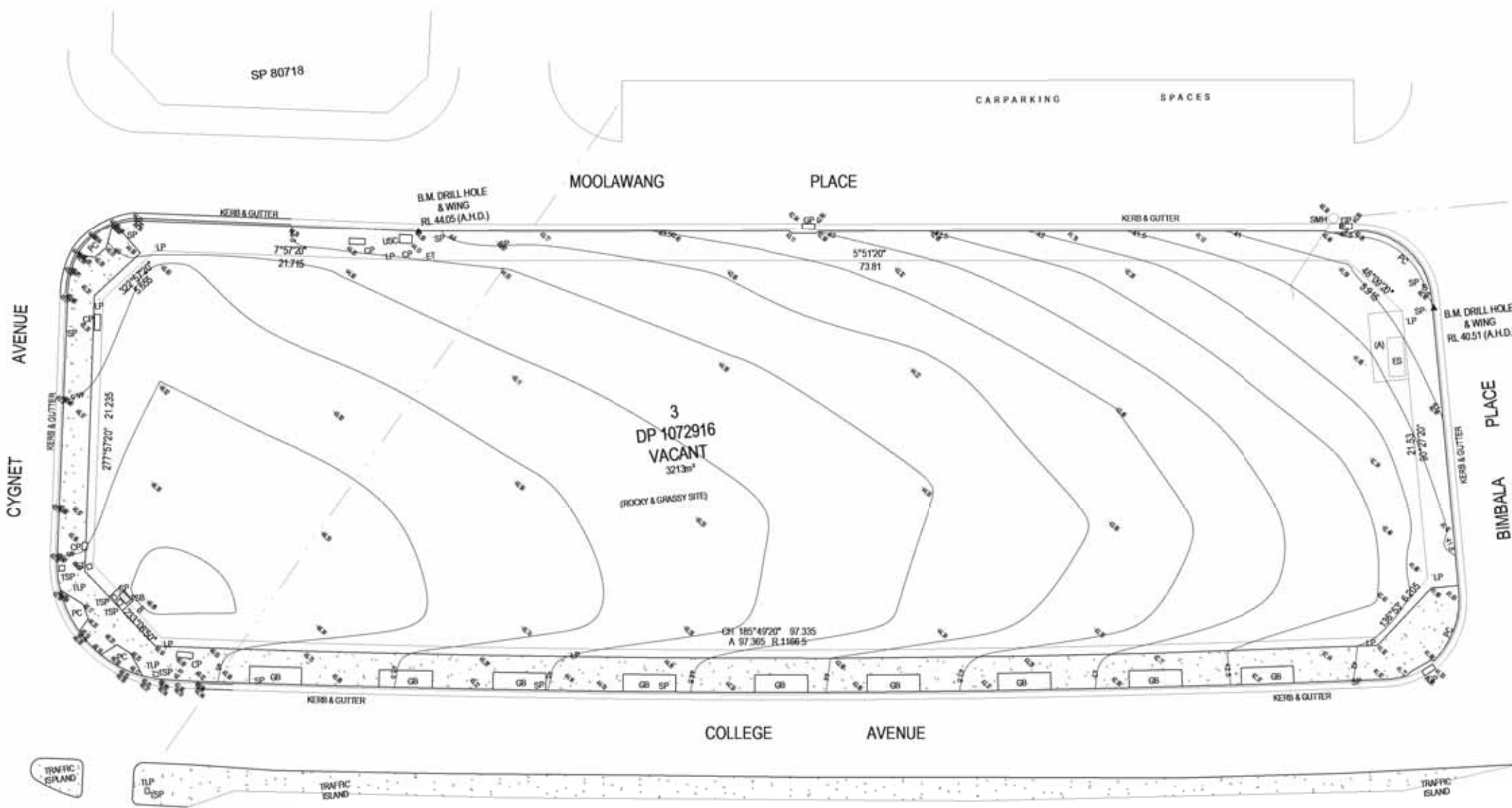


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Sydney
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Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 15 |
| DRAWING NAME: | PRECEDENCE | SCALE: | | Rev. | V |
| | | QA: | RG | | |



1
37

EXISTING SITE SURVEY

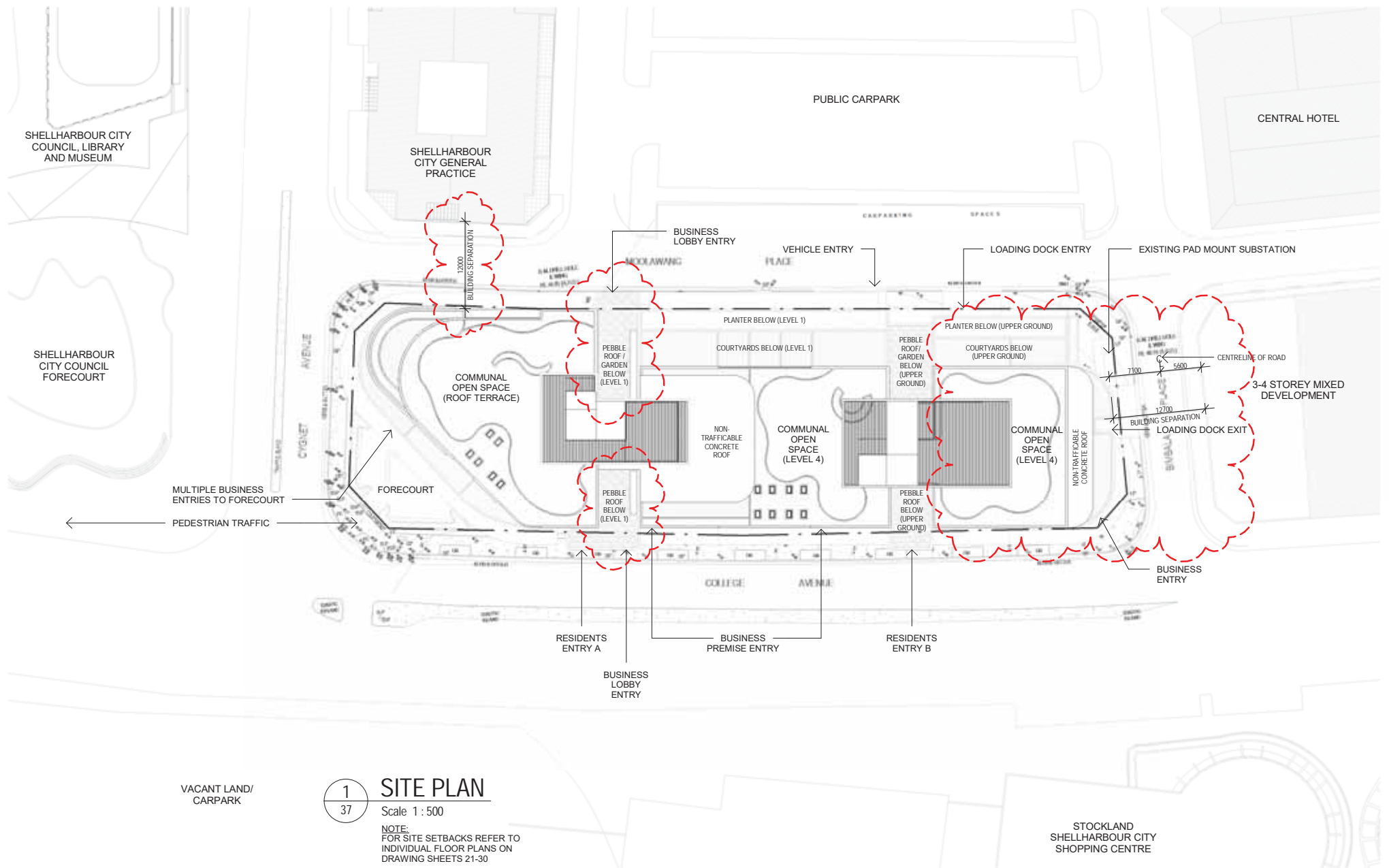
Scale 1 : 300

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| | | | | | | | | | | |
|--------|------------------|-----------------------------------|--|---|--|--|--|---|--|--|
| REF: V | DATE: 04.03.2019 | AMENDMENT: ADDITIONAL INFORMATION | Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK B BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBLIQUE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWK RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING | DWA DESIGN WORKSHOP AUSTRALIA | Wollongong 81a Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Wooli Creek NSW 2205 Nominated Architect: Robert Gizzi (Reg. 8286) | | CLIENT: SHILOH PTY LTD SHOP TOP HOUSING ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR DRAWING NAME: EXISTING SURVEY | DATE: JAN 18 DRAWN: AK/TN SCALE: 1 : 300 QA: RG | PROJECT No. 1725 DWG No. 18 Rev. V |
|--------|------------------|-----------------------------------|--|---|--|--|--|---|--|--|

ORIGINAL SURVEY BY LANDTEAM AUSTRALIA PTY LTD
5/97 SHELLHARBOUR ROAD, WARILLA NSW, 2528
(02)4296 7055
WOLLONGONG@LANDTEAM.COM.AU
SURVEYED : 07/12/2017

ADDITIONAL INFORMATION



VACANT LAND/
CARPARK

1
37

SITE PLAN

Scale 1:500

NOTE:
FOR SITE SETBACKS REFER TO
INDIVIDUAL FLOOR PLANS ON
DRAWING SHEETS 21-30

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

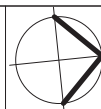
Legend:

| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OSCURE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



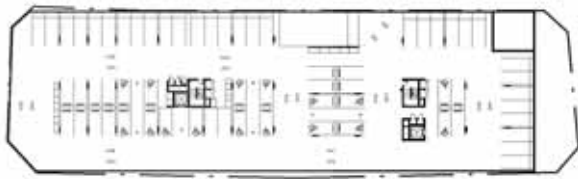
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Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

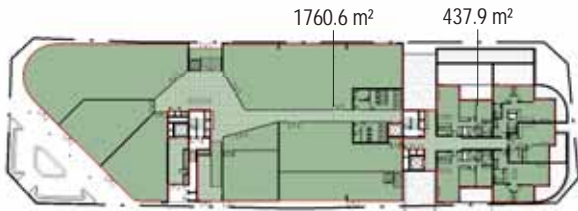
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|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK / NT | DWG No. | 19 |
| DRAWING NAME: | SITE PLAN | SCALE: | 1:500 | Rev. | Y |
| | | QA: | RG | | |



1
40
GFA PLAN - BASEMENT 1
Scale 1 : 1000



2
37
GFA PLAN - GROUND (LOWER)
Scale 1 : 1000



3
37
GFA PLAN - GROUND (UPPER)
Scale 1 : 1000



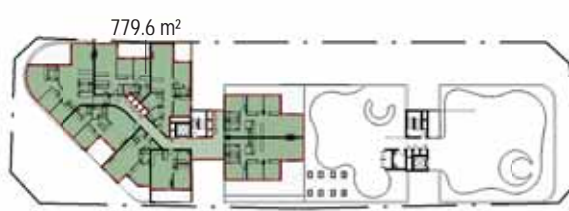
4
37
GFA PLAN - LEVEL 1
Scale 1 : 1000



5
37
GFA PLAN - LEVEL 2
Scale 1 : 1000



6
37
GFA PLAN - LEVEL 3
Scale 1 : 1000

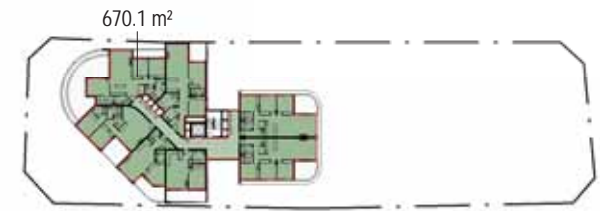


7
37
GFA PLAN - LEVEL 4
Scale 1 : 1000

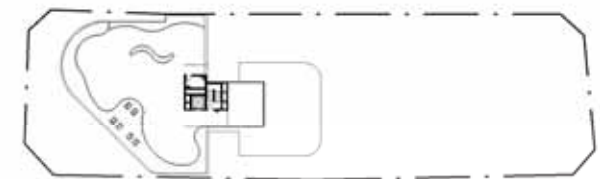


8
37
GFA PLAN - LEVEL 5
Scale 1 : 1000

| GFA SCHEDULE | | |
|----------------|------------------|-----------------------|
| LEVEL | | AREA |
| GROUND (LOWER) | BUSINESS | 179.8 m ² |
| GROUND (LOWER) | BUSINESS | 68.6 m ² |
| GROUND (UPPER) | BUSINESS | 1760.6 m ² |
| GROUND (UPPER) | RESIDENTIAL - G | 437.9 m ² |
| LEVEL 1 | RESIDENTIAL - L1 | 1615.8 m ² |
| LEVEL 2 | RESIDENTIAL - L2 | 1641.6 m ² |
| LEVEL 3 | RESIDENTIAL - L3 | 1583.5 m ² |
| LEVEL 4 | RESIDENTIAL - L4 | 779.6 m ² |
| LEVEL 5 | RESIDENTIAL - L5 | 670.1 m ² |
| LEVEL 6 | RESIDENTIAL - L6 | 670.1 m ² |
| Grand total | | 9407.6 m ² |



9
37
GFA PLAN - LEVEL 6
Scale 1 : 1000



10
37
GFA PLAN - ROOF
Scale 1 : 1000

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

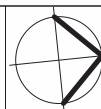
| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BB | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |



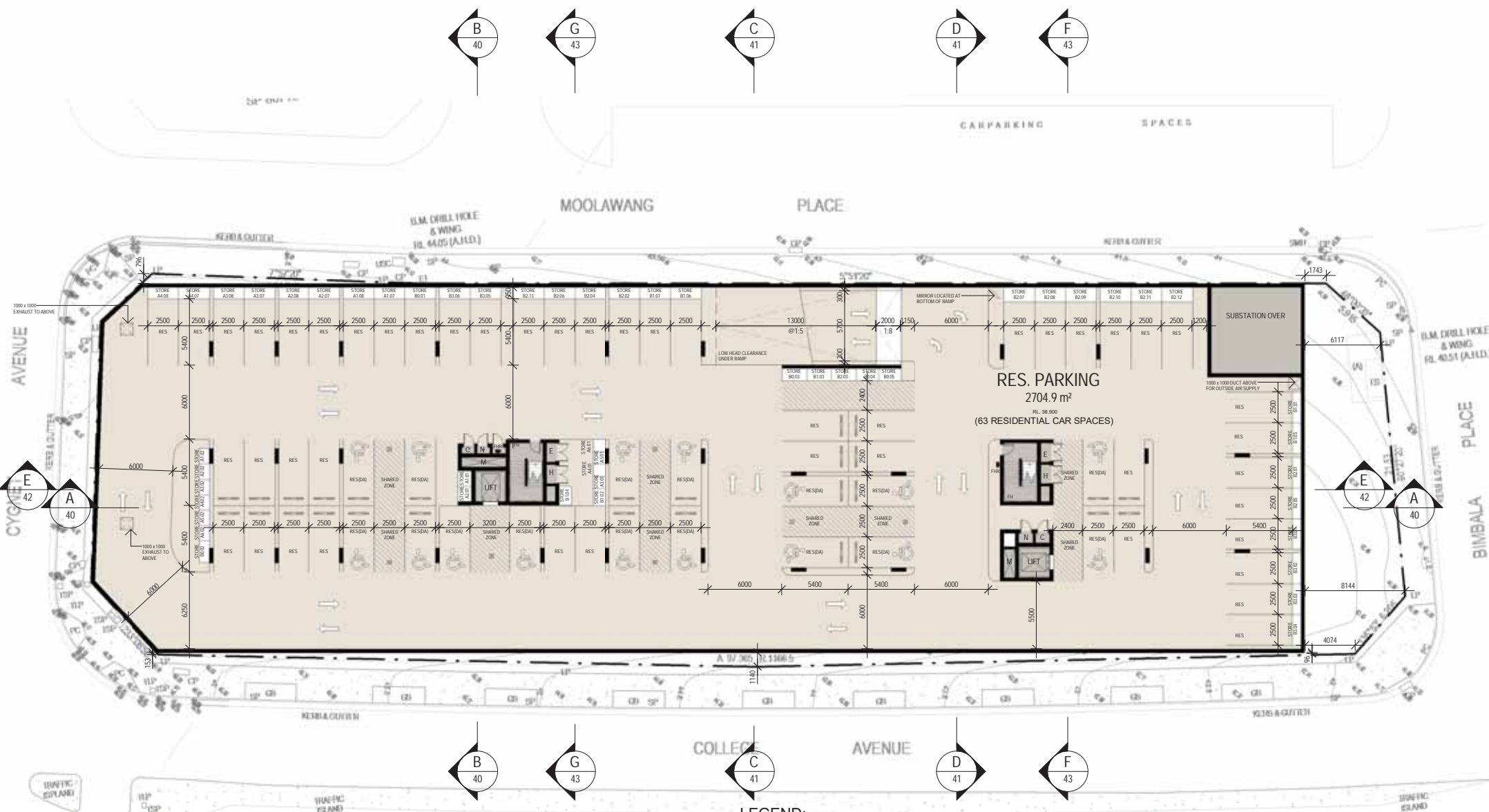
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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|----------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK / NT | DWG No. | 20 |
| DRAWING NAME: | GFA PLANS | SCALE: | 1 : 1000 | Rev. | V |
| | | QA: | RG | | |



LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

NOTES:

FLOOR FINISHES:
- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
- CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
- CARPET TO BEDROOMS

SK - SKYLIGHT

1 BASEMENT 1 FLOOR PLAN
Scale 1 : 300

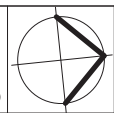
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| REF. | DATE | AMENDMENT |
|---------|--------------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| Legend: | | |
| RB01 | RENDERED BRICKWORK | S STONEWORK |
| RB02 | RENDERED BRICKWORK | R ROOF |
| FB01 | FACE BRICKWORK | DB DOWNPIPES |
| FB02 | FACE BRICKWORK | TB TIMBER BATTENS |
| B | BLOCKWORK | D DOOR |
| CL01 | CLADDING | GD GARAGE DOOR |
| CL02 | CLADDING | SLD SLIDING DOOR |
| RW | RETAINING WALL | BFD BI-FOLD DOOR |
| SLW | SLIDING WINDOW | LV LOUVRES |
| FW | FIXED WINDOW | RWT RAINWATER TANK |
| OB | OBSCURE WINDOW | |
| AW | AWNING WINDOW | |
| SK | SKYLIGHT | |
| WH | WINDOW HOOD | |
| PC | POLISHED CONCRETE | |
| SP | FEATURE SCREENING | |
| P | POST | |
| T | TIMBER FLOORS | |
| CT | CERAMIC TILES | |
| CPT | CARPET | |



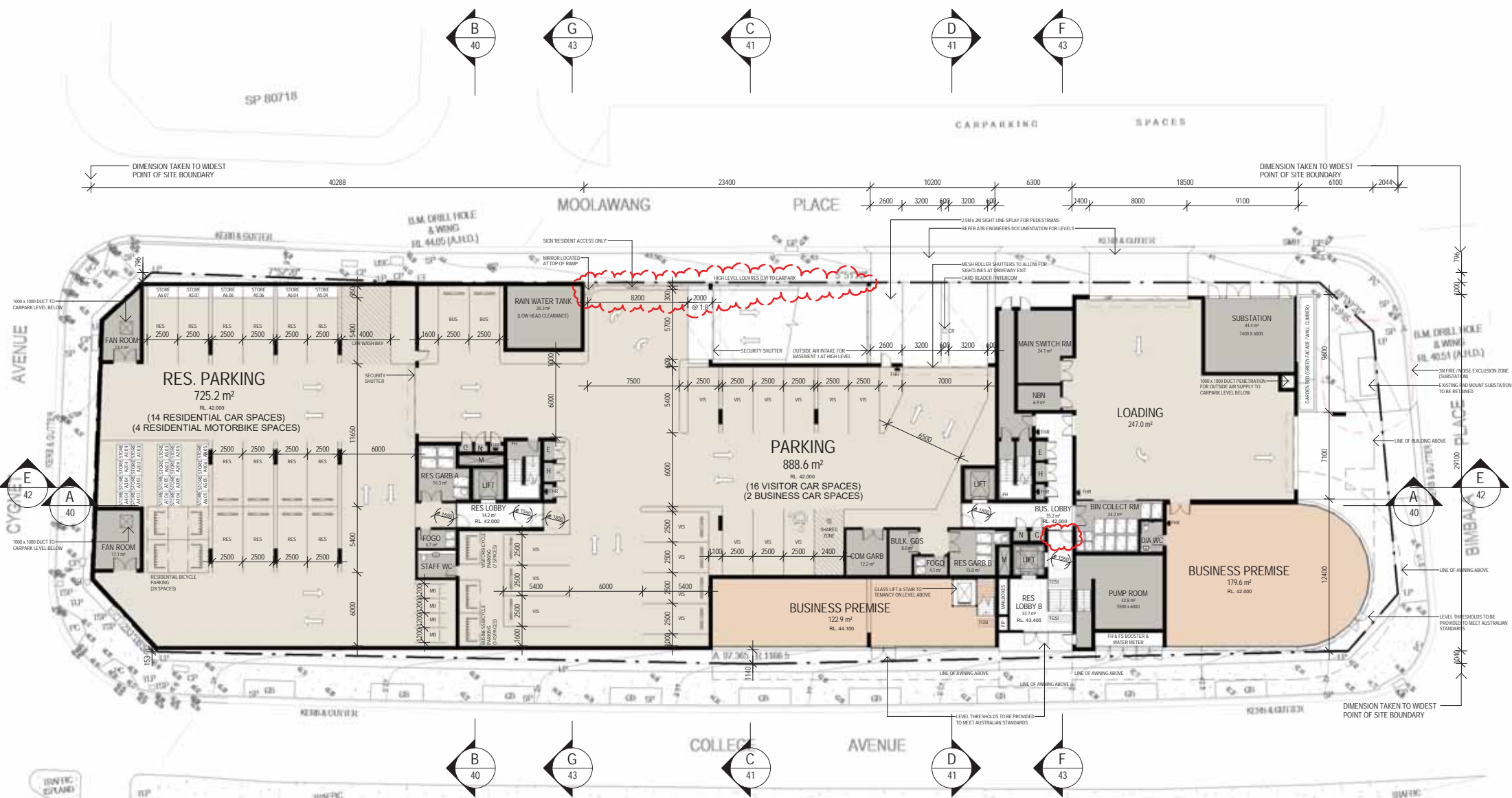
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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8266)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 21 |
| DRAWING NAME: | BASEMENT 1 FLOOR PLAN | SCALE: | 1 : 300 | Rev. | V |
| | | QA: | RG | | |



1 LOWER GROUND FLOOR PLAN
37 Scale 1 : 300

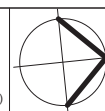
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| REF. | DATE | AMENDMENT | Legend: |
|------|--------------------|------------------------|----------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION | |
| RB01 | RENDERED BRICKWORK | S | STONEMARK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| SLW | SLIDING WINDOW | SW | SLIDING WINDOW |
| OB | OBSCURE WINDOW | AW | AWNING WINDOW |
| SK | SKYLIGHT | WH | WINDOW HOOD |
| LV | LOUVRES | LV | LOUVRES |
| RWT | RAINWATER TANK | | |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8266)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: LOWER GROUND FLOOR PLAN

DATE: JAN 18
DRAWN: AK
SCALE: 1 : 300
QA: RG
PROJECT No. 1725
DWG No. 22
Rev. Y

LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

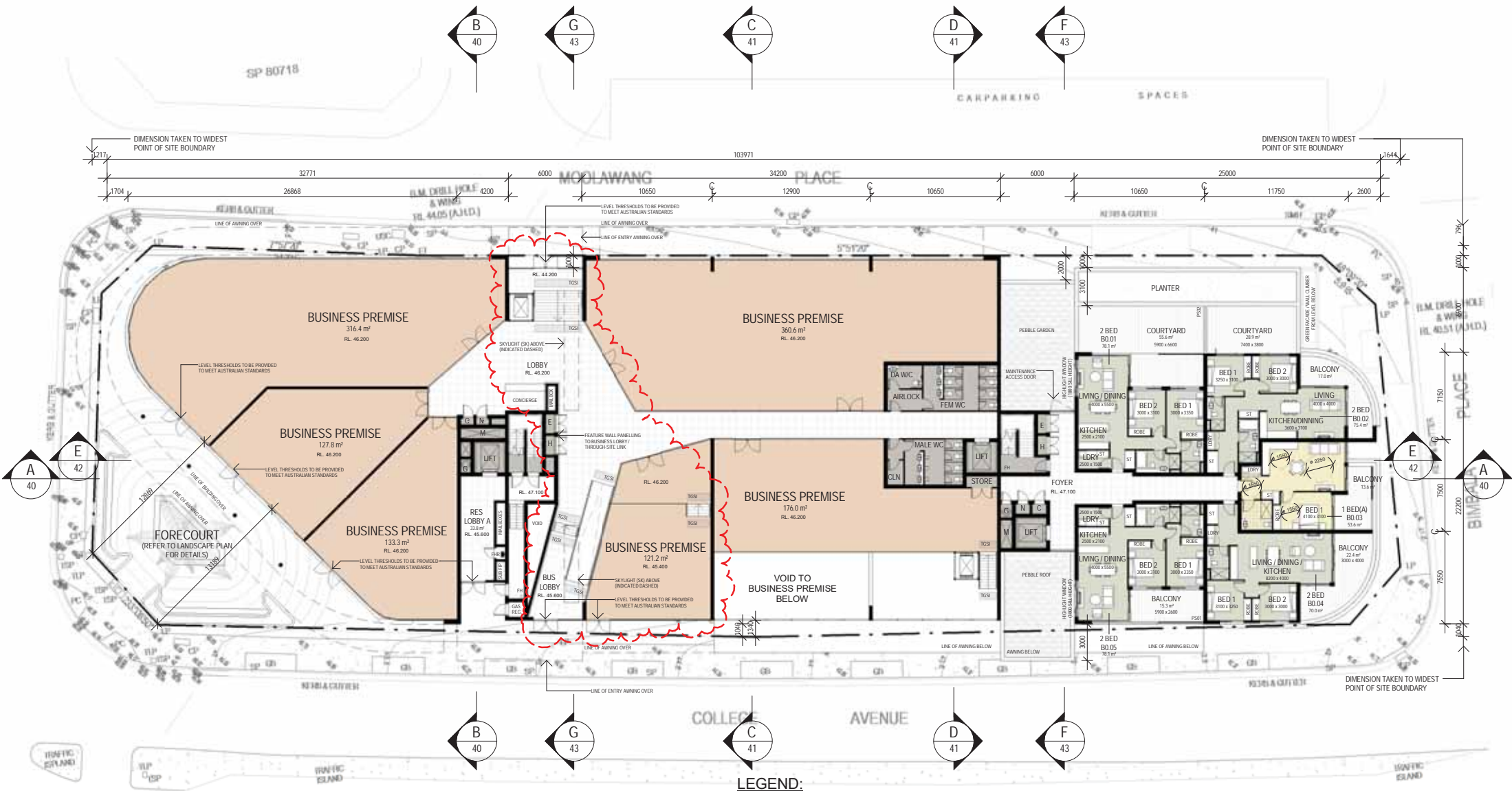
NOTES:

- FLOOR FINISHES:
- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
- CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
- CARPET TO BEDROOMS

SK - SKYLIGHT



ADDITIONAL INFORMATION



1 UPPER GROUND FLOOR PLAN

Scale 1 : 300

LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

NOTES:

- FLOOR FINISHES:
 - ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
 - CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
 - CARPET TO BEDROOMS

SK - SKYLIGHT

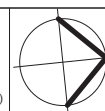
DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: |
|------|--------------------|------------------------|----------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION | |
| R801 | RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| R802 | RENDERED BRICKWORK | R ROOF | P POST |
| F801 | FACE BRICKWORK | DP DOWNPIPES | T TIMBER FLOORS |
| R8 | BLOCKWORK | TB TOWER BATTENS | CT CERAMIC TILES |
| CL01 | CLADDING | GD GARAGE DOOR | CPT CARPET |
| CL02 | CLADDING | DOOR | PC POLISHED CONCRETE |
| CL03 | CLADDING | WH WINDOW HOOD | SP FEATURE SCREENING |
| RW | RETAINING WALL | LV LOUVRES | |
| | | BFD BI-FOLD DOOR | |
| | | RWT RAINWATER TANK | |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8266)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: UPPER GROUND FLOOR PLAN

DATE: JAN 18
DRAWN: AK
SCALE: 1 : 300
QA: RG
PROJECT No. 1725
DWG No. 23
Rev. Y



ADDITIONAL INFORMATION



1
37

LEVEL 1 FLOOR PLAN

Scale 1 : 300

LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

NOTES:

- FLOOR FINISHES:
- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
 - CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
 - CARPET TO BEDROOMS

SK - SKYLIGHT

DISCLAIMER
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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

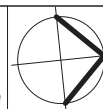
DISCLAIMER
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| Legend: | | | | | |
|-------------------------|-------------------|--------------------|----------------------|----------------------|----------------------|
| R801 RENDERED BRICKWORK | S STONEMASON | SLW SLIDING WINDOW | P POST | T TIMBER FLOORS | CT CERAMIC TILES |
| R802 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | CT CERAMIC TILES | CPT CARPET | PC POLISHED CONCRETE |
| F801 FACE BRICKWORK | D DOWNPIPES | OB OBLIQUE WINDOW | PC POLISHED CONCRETE | SP FEATURE SCREENING | |
| B BLOCKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | | | |
| CL1 CLADDING | D DOOR | SK SKYLIGHT | | | |
| CL2 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | | | |
| CL3 CLADDING | SLS SLIDING DOOR | LV LOUVRES | | | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | | | |



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Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING

ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR

DRAWING NAME: LEVEL 1 FLOOR PLAN

DATE: JAN 18
DRAWN: AK
SCALE: 1 : 300
QA: RG

PROJECT No. 1725
DWG No. 24
Rev. Y



ADDITIONAL INFORMATION



1
37

LEVEL 2 FLOOR PLAN

Scale 1 : 300

LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

NOTES:

- FLOOR FINISHES:
- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
 - CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
 - CARPET TO BEDROOMS

SK - SKYLIGHT

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

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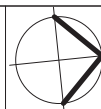
Legend:

| | | |
|-------------------------|-------------------|--------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| RB02 RENDERED BRICKWORK | R ROOF | PW FIXED WINDOW |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD |
| CL02 CLADDING | SLS SLIDING DOOR | LV LOUVRES |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING

ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR

DRAWING NAME: LEVEL 2 FLOOR PLAN

| | | | |
|--------|---------|-------------|------|
| DATE: | JAN 18 | PROJECT No. | 1725 |
| DRAWN: | AK | DWG No. | 25 |
| SCALE: | 1 : 300 | Rev. | Y |
| QA: | RG | | |



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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

Legend:

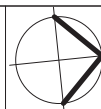
| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| R801 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| R802 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| F801 FACE BRICKWORK | DP DOWNPIPES | OB OBSOLETE WINDOW | CT CERAMIC TILES |
| F802 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLS SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |

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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 26 |
| DRAWING NAME: | LEVEL 3 FLOOR PLAN | SCALE: | 1 : 300 | Rev. | V |
| | | QA: | RG | | |



LEVEL 4 FLOOR PLAN Scale 1 : 300

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: |
|------|------------|------------------------|---|
| Y | 13.05.2019 | ADDITIONAL INFORMATION | |
| | | | RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL |

| | | |
|---|---|---|
| S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR RW RAINWATER TANK | SLW SLIDING WINDOW FW FIXED WINDOW OB OBLIQUE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK | P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING |
|---|---|---|

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Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8266)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: LEVEL 4 FLOOR PLAN

DATE: JAN 18
DRAWN: AK
SCALE: 1 : 300
QA: RG
PROJECT No. 1725
DWG No. 27
Rev. Y

ADDITIONAL INFORMATION





1 37 LEVEL 5 FLOOR PLAN Scale 1 : 300

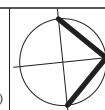
DISCLAIMER
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| REF. | DATE | AMENDMENT | Legend: |
|------|--------------------|------------------------|----------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION | |
| R801 | RENDERED BRICKWORK | S | STONEMARK |
| R802 | RENDERED BRICKWORK | R | ROOF |
| F801 | FACE BRICKWORK | DP | DOWNPIPES |
| B8 | BLOCKWORK | TB | TIMBER BATTENS |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLS | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: LEVEL 5 FLOOR PLAN

| | | | |
|--------|---------|-------------|------|
| DATE: | JAN 18 | PROJECT No. | 1725 |
| DRAWN: | AK | DWG No. | 28 |
| SCALE: | 1 : 300 | Rev. | V |
| QA: | RG | | |

ADDITIONAL INFORMATION



LEGEND:

- SERVICE ZONES / AMENITIES
- CARPARK / LOADING AREAS
- BUSINESS PREMISES
- 1 BEDROOM UNIT
- 2 BEDROOM UNIT
- 3 BEDROOM UNIT

NOTES:

FLOOR FINISHES:

- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
- CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
- CARPET TO BEDROOMS

SK - SKYLIGHT

DISCLAIMER
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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

Legend:

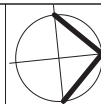
| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| R801 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| R802 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| F801 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| F802 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| B BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.



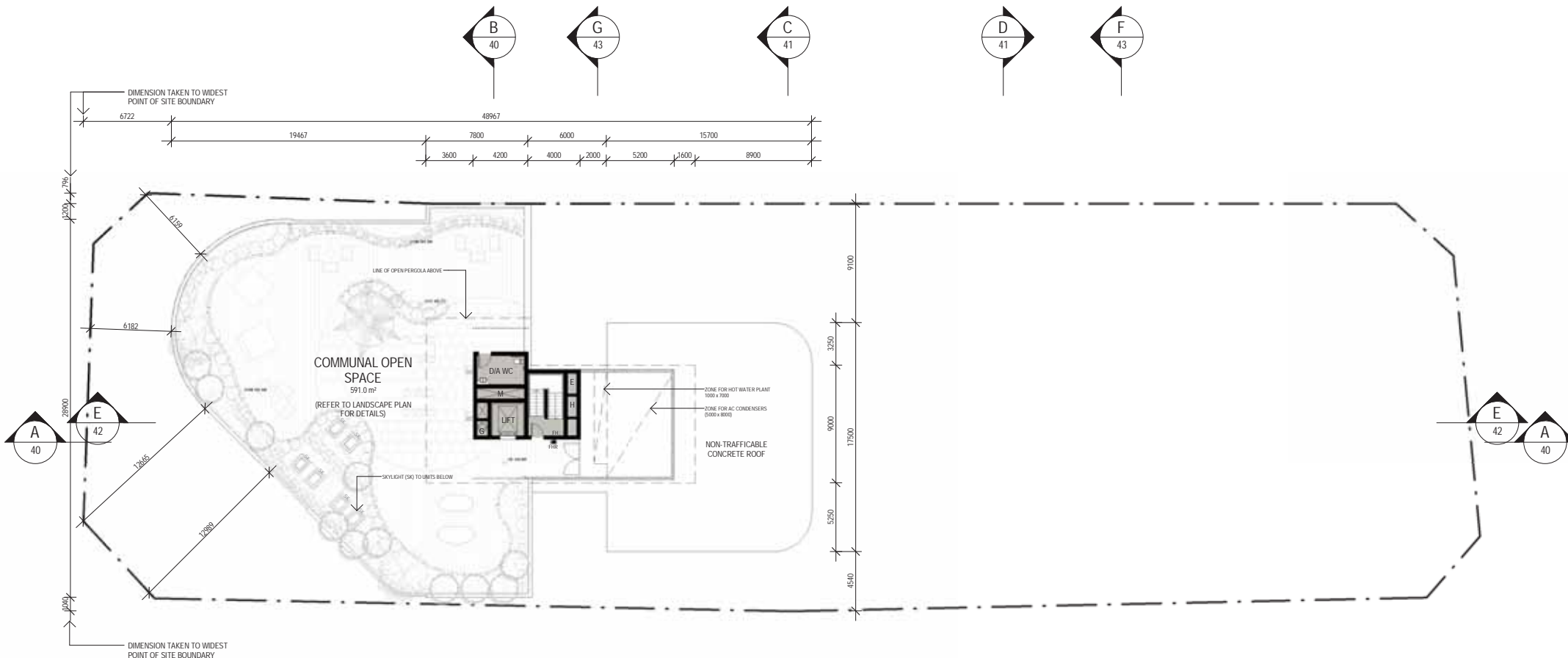
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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 29 |
| DRAWING NAME: | LEVEL 6 FLOOR PLAN | SCALE: | 1 : 300 | Rev. | V |
| | | QA: | RG | | |



1 ROOF PLAN
37 Scale 1 : 300

LEGEND:

| | |
|---------------------------|----------------|
| SERVICE ZONES / AMENITIES | 1 BEDROOM UNIT |
| CARPARK / LOADING AREAS | 2 BEDROOM UNIT |
| BUSINESS PREMISES | 3 BEDROOM UNIT |

NOTES:

FLOOR FINISHES:
- ENGINEERED TIMBER FLOORING TO LIVING, DINING AND KITCHEN AREAS
- CERAMIC FLOOR TILES TO WET AREAS (BATHROOMS & LAUNDRY)
- CARPET TO BEDROOMS

SK - SKYLIGHT

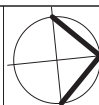
DISCLAIMER
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All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: |
|------|--------------------|------------------------|--------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION | |
| RB01 | RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| RB02 | RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW |
| FB01 | FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW |
| FB02 | FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW |
| BL | BLOCKWORK | D DOOR | SK SKYLIGHT |
| CL01 | CLADDING | GD GARAGE DOOR | WH WINDOW HOOD |
| CL02 | CLADDING | SLD SLIDING DOOR | LV LOUVRES |
| RW | RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)



CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: ROOF PLAN

| | |
|-----------------------|-------------------------|
| DATE: JAN 18 | PROJECT No. 1725 |
| DRAWN: AK | DWG No. 30 |
| SCALE: 1 : 300 | Rev. V |
| QA: RG | |



2 BED - POST ADAPTABLE LAYOUT

1 : 100

NOTE:

TYPICAL LAYOUT FOR
A1.06 / A2.06 / A3.06 / A4.06 / A5.05 / A6.05

Future adaptation works include minor changes only, such as the installation of grabrails to the main bathroom, and installation of adjustable height kitchen benches and sinks.
Circulation spaces are accessible without adaption.

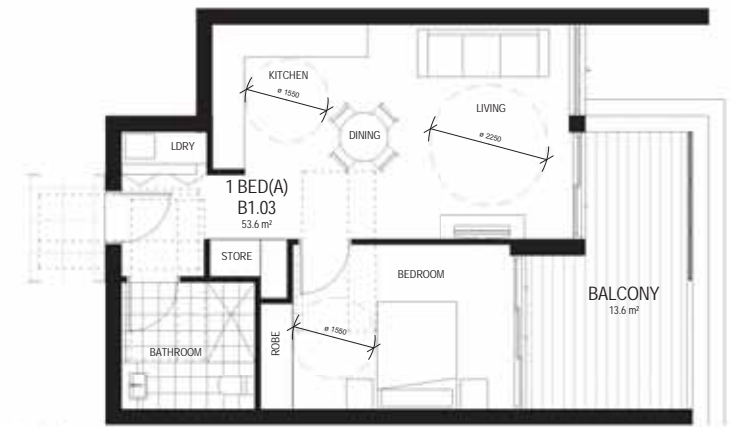


2 BED - POST ADAPTABLE LAYOUT (B3.03)

1 : 100

NOTE:

LAYOUT FOR B3.03



1 BED - POST ADAPTABLE LAYOUTS

1 : 100

NOTE:

TYPICAL LAYOUT FOR
B0.03 / B1.03 / B2.03



1 BED - POST ADAPTABLE LAYOUT

1 : 100

NOTE:

TYPICAL LAYOUT FOR
A1.01 / A2.01 / A3.01 / A4.01 / A5.01 / A6.01

DISCLAIMER

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

Legend:

| | | |
|-------------------------|-------------------|--------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW |
| B BLOCKWORK | D DOOR | SK SKYLIGHT |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD |
| CL02 CLADDING | SLS SLIDING DOOR | LV LOUVRES |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 31 |
| DRAWING NAME: | POST ADAPTABLE LAYOUTS | SCALE: | 1 : 100 | Rev. | V |
| | | QA: | RG | | |

| STORAGE SCHEDULE (BUILDING A) | | | | | | |
|-------------------------------|------------------|------|------|------|----------|--|
| LOCATION | TYPE | D | W | H | VOL | |
| A1.01 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 820 | 1600 | 2700 | 3.54 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1100 | 1250 | 2700 | 3.71 m³ | |
| | | | | | 7.25 m³ | |
| A1.02 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 2100 | 2700 | 3.40 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 800 | 1250 | 2700 | 2.70 m³ | |
| | | | | | 6.10 m³ | |
| A1.03 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 9.26 m³ | |
| A1.04 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 900 | 2700 | 2700 | 6.56 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 1100 | 1275 | 2700 | 3.79 m³ | |
| | | | | | 10.35 m³ | |
| A1.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.78 m³ | |
| A1.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1600 | 2700 | 3.46 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 400 | 1500 | 2700 | 1.62 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.35 m³ | |
| A1.07 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 2000 | 2700 | 3.24 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 13.54 m³ | |
| A1.08 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1900 | 2700 | 4.10 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 14.40 m³ | |
| A2.01 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 820 | 1600 | 2700 | 3.54 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1100 | 1250 | 2700 | 3.71 m³ | |
| | | | | | 7.25 m³ | |
| A2.02 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 2100 | 2700 | 3.40 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 800 | 1250 | 2700 | 2.70 m³ | |
| | | | | | 6.10 m³ | |
| A2.03 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 9.26 m³ | |
| A2.04 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 2700 | 2700 | 6.56 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 1100 | 1275 | 2700 | 3.79 m³ | |
| | | | | | 10.35 m³ | |

| STORAGE SCHEDULE (BUILDING A) | | | | | | |
|-------------------------------|------------------|------|------|------|----------|--|
| LOCATION | TYPE | D | W | H | VOL | |
| A2.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.78 m³ | |
| A2.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1600 | 2700 | 3.46 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 400 | 1500 | 2700 | 1.62 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.35 m³ | |
| A2.07 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 11.27 m³ | |
| A2.08 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 11.27 m³ | |
| A3.01 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 820 | 1600 | 2700 | 3.54 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 1000 | 2700 | 2.70 m³ | |
| | | | | | 6.24 m³ | |
| A3.02 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 2100 | 2700 | 3.40 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 800 | 1250 | 2700 | 2.70 m³ | |
| | | | | | 6.10 m³ | |
| A3.03 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 9.26 m³ | |
| A3.04 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 900 | 2700 | 2700 | 6.56 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 1100 | 1275 | 2700 | 3.79 m³ | |
| | | | | | 10.35 m³ | |
| A3.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.78 m³ | |
| A3.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 800 | 1600 | 2700 | 3.46 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 400 | 1500 | 2700 | 1.62 m³ | |
| GROUND (LOWER) | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ | |
| | | | | | 8.35 m³ | |
| A3.07 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 2000 | 2700 | 3.24 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 13.54 m³ | |

| STORAGE SCHEDULE (BUILDING A) | | | | | | |
|-------------------------------|--|------------------|------|------|------|----------|
| LOCATION | | TYPE | D | W | H | VOL |
| A3.08 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | | STORE (INTERNAL) | 800 | 1900 | 2700 | 4.10 m³ |
| LEVEL 3 | | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ |
| | | | | | | 14.40 m³ |
| A4.01 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 820 | 1600 | 2700 | 3.54 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 1000 | 1000 | 2700 | 2.70 m³ |
| | | | | | | 6.24 m³ |
| A4.02 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 2100 | 2700 | 3.40 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 800 | 1250 | 2700 | 2.70 m³ |
| | | | | | | 6.10 m³ |
| A4.03 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ |
| GROUND (LOWER) | | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ |
| | | | | | | 9.26 m³ |
| A4.04 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 900 | 2700 | 2700 | 6.56 m³ |
| GROUND (LOWER) | | STORE (BASEMENT) | 1100 | 1275 | 2700 | 3.79 m³ |
| | | | | | | 10.35 m³ |
| A4.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ |
| LEVEL 4 | | STORE (INTERNAL) | 800 | 1800 | 2700 | 3.89 m³ |
| GROUND (LOWER) | | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ |
| | | | | | | 8.78 m³ |
| A4.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 800 | 1600 | 2700 | 3.46 m³ |
| LEVEL 4 | | STORE (INTERNAL) | 400 | 1500 | 2700 | 1.62 m³ |
| GROUND (LOWER) | | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ |
| | | | | | | 8.35 m³ |
| A4.07 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 1100 | 1400 | 2700 | 4.16 m³ |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 600 | 2700 | 0.97 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ |
| | | | | | | 11.54 m³ |
| A4.08 | | | | | | |
| 3 BEDROOM UNIT | | | | | | |
| LEVEL 4 | | STORE (INTERNAL) | 1100 | 1400 | 2700 | 4.16 m³ |
| LEVEL 4 | | STORE (INTERNAL) | 600 | 600 | 2700 | 0.97 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ |
| | | | | | | 11.54 m³ |
| A5.01 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 5 | | STORE (INTERNAL) | 820 | 1600 | 2700 | 3.54 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 1000 | 1000 | 2700 | 2.70 m³ |
| | | | | | | 6.24 m³ |
| A5.02 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 5 | | STORE (INTERNAL) | 600 | 2100 | 2700 | 3.40 m³ |
| BASEMENT 1 | | STORE (BASEMENT) | 800 | 1250 | 2700 | 2.70 m³ |
| | | | | | | 6.10 m³ |
| A5.03 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 5 | | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ |
| LEVEL 5 | | STORE (INTERNAL) | 600 | 1850 | 2700 | 3.00 m³ |
| GROUND (LOWER) | | STORE (BASEMENT) | 950 | 1275 | 2700 | 3.27 m³ |

| STORAGE SCHEDULE (BUILDING B) | | | | | | |
|-------------------------------|------|---|---|---|-----|--|
| | TYPE | D | W | H | VOL | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B0.01 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| GROUND (RES) | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| GROUND (RES) | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| 11.27 m³ | | | | | | |

B0.02

2 BEDROOM UNIT

| | | | | | |
|--------------|------------------|-----|------|------|---------|
| GROUND (RES) | STORE (INTERNAL) | 900 | 1750 | 2700 | 4.25 m³ |
| BASEMENT 1 | STORE (BASEMENT) | 800 | 1800 | 2700 | 3.89 m³ |
| | | | | | 8.14 m³ |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B0.03 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| GROUND (RES) | STORE (INTERNAL) | 700 | 1050 | 2700 | 1.98 m³ | |
| GROUND (RES) | STORE (INTERNAL) | 1100 | 500 | 2700 | 1.49 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 2000 | 2700 | 5.40 m³ | |
| 8.87 m³ | | | | | | |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B0.04 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| GROUND (RES) | STORE (INTERNAL) | 900 | 1650 | 2700 | 4.01 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 1825 | 2700 | 4.93 m³ | |
| 8.94 m³ | | | | | | |

B0.05

2 BEDROOM UNIT

| | | | | | |
|--------------|------------------|------|------|------|---------|
| GROUND (RES) | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ |
| GROUND (RES) | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 1825 | 2700 | 4.93 m³ |
| | | | | | 9.79 m³ |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B1.01 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 700 | 2500 | 2700 | 4.73 m³ | |
| | | | | | 9.59 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B1.02 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 900 | 1750 | 2700 | 4.25 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1600 | 2700 | 2.59 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 1400 | 2700 | 3.78 m³ | |
| 10.62 m³ | | | | | | |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B1.03 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 700 | 1050 | 2700 | 1.98 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 1100 | 500 | 2700 | 1.49 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 2000 | 2700 | 5.40 m³ | |
| | | | | | 8.87 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B1.04 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 900 | 1650 | 2700 | 4.01 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 1550 | 2700 | 4.19 m³ | |
| 8.19 m³ | | | | | | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B1.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 700 | 2500 | 2700 | 4.73 m³ | |
| | | | | | 9.59 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B1.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 700 | 3600 | 2700 | 6.80 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| 13.22 m³ | | | | | | |

| STORAGE SCHEDULE (BUILDING B) | | | | | | |
|-------------------------------|------|---|---|---|-----|--|
| | TYPE | D | W | H | VOL | |

| | | | | | | |
|----------------|------------------|-----|------|------|----------|--|
| B1.07 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 1 | STORE (INTERNAL) | 700 | 3600 | 2700 | 6.80 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 13.22 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B2.01 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 700 | 2500 | 2700 | 4.73 m³ | |
| | | | | | 9.59 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B2.02 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1750 | 2700 | 4.25 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| 10.67 m³ | | | | | | |

| | | | | | | |
|----------------|------------------|------|------|------|---------|--|
| B2.03 | | | | | | |
| 1 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 700 | 1050 | 2700 | 1.98 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 1100 | 500 | 2700 | 1.49 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1000 | 2000 | 2700 | 5.40 m³ | |
| | | | | | 8.87 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B2.04 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1650 | 2700 | 4.01 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| 10.42 m³ | | | | | | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B2.05 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 700 | 2500 | 2700 | 4.73 m³ | |
| | | | | | 9.59 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|----------|
| B2.06 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | | 11.27 m³ |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.07 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.08 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.09 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 1 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| STORAGE SCHEDULE (BUILDING B) | | | | | | |
|-------------------------------|------|---|---|---|-----|--|
| | TYPE | D | W | H | VOL | |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.10 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.11 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| | | | | | | |
|----------------|------------------|------|------|------|----------|--|
| B2.12 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 900 | 1000 | 2700 | 2.43 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1100 | 2700 | 1.78 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 1200 | 2500 | 2100 | 6.30 m³ | |
| | | | | | 10.51 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|----------|--|
| B2.13 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 2 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 2 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 950 | 2500 | 2700 | 6.41 m³ | |
| | | | | | 11.27 m³ | |

| | | | | | | |
|----------------|------------------|-----|------|------|---------|--|
| B3.01 | | | | | | |
| 2 BEDROOM UNIT | | | | | | |
| LEVEL 3 | STORE (INTERNAL) | 800 | 1500 | 2700 | 3.24 m³ | |
| LEVEL 3 | STORE (INTERNAL) | 600 | 1000 | 2700 | 1.62 m³ | |
| BASEMENT 1 | STORE (BASEMENT) | 700 | 2500 | 2700 | 4.73 m³ | |
| | | | | | 9.59 m³ | |

| | | |
|-------|--|--|
| B3.02 | | |
|-------|--|--|



1 EAST ELEVATION (COLLEGE AVENUE)
Scale 1 : 500



2 WEST ELEVATION (MOOLAWANG PLACE)
Scale 1 : 500

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|----------------|--------------------|-----------|------------------------|
| Y | 13.05.2019 | | |
| Legend: | | | |
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



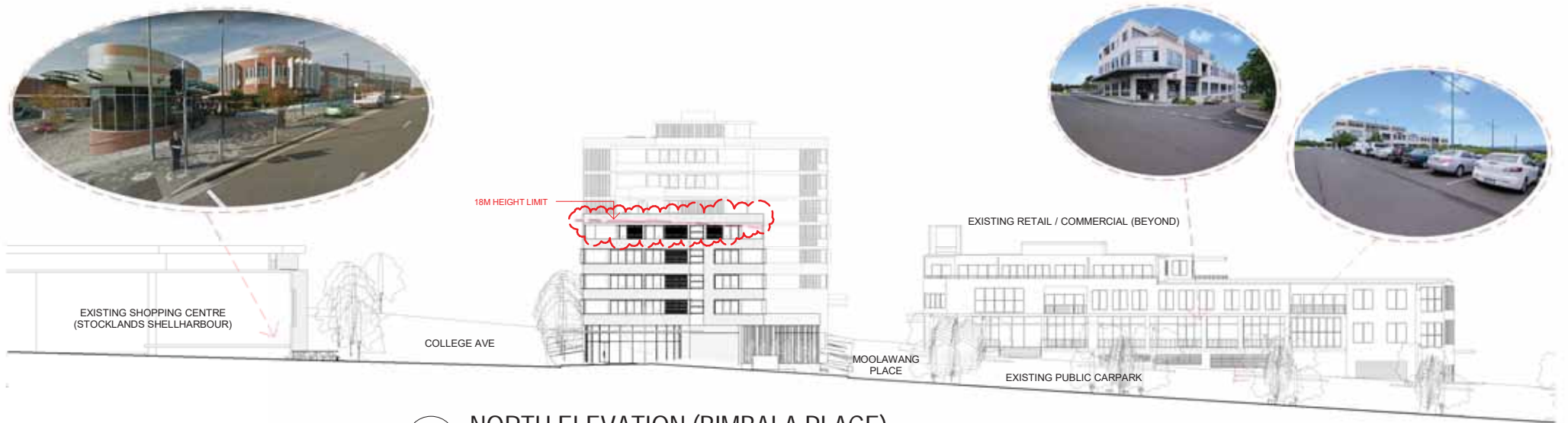
Wollongong
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Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

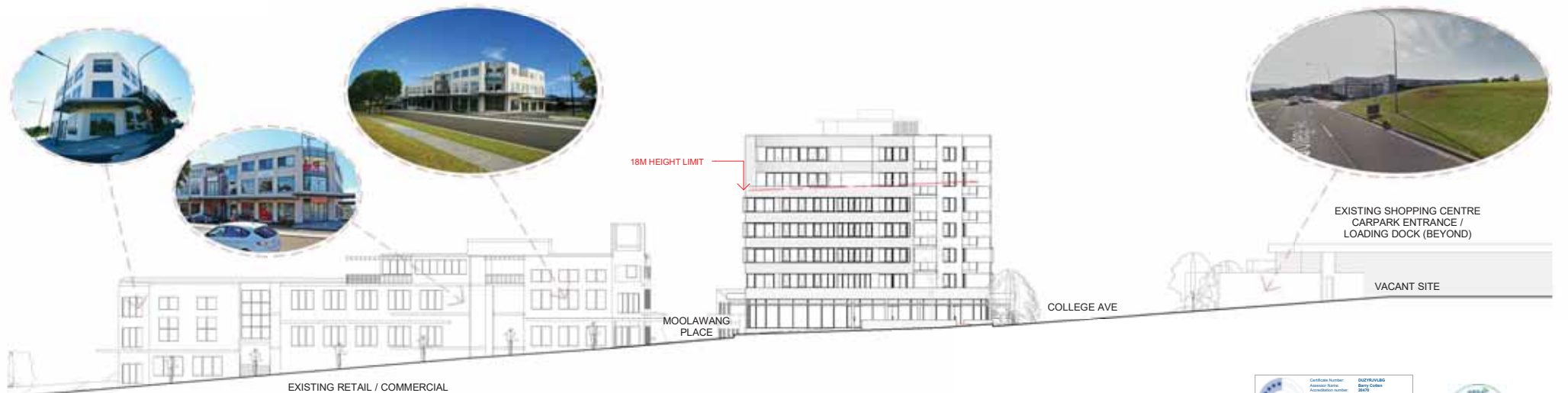


ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 35 |
| DRAWING NAME: | EAST & WEST SITE ELEVATIONS | SCALE: | 1 : 500 | Rev. | Y |
| | | QA: | RG | | |



1 NORTH ELEVATION (BIMBALA PLACE)
Scale 1 : 500



2 SOUTH ELEVATION (CYGNET AVENUE)
Scale 1 : 500

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|----------------|--------------------|-----------|------------------------|
| Y | 13.05.2019 | | |
| Legend: | | | |
| RB01 | RENDERED BRICKWORK | S | STONEMARK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B01 | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| SLW | SLIDING WINDOW | FW | FIXED WINDOW |
| OB | OBSCURE WINDOW | AW | AWNING WINDOW |
| SK | SKYLIGHT | WH | WINDOW HOOD |
| LV | LOUVRES | RWT | RAINWATER TANK |
| P | POST | T | TIMBER FLOORS |
| CT | CERAMIC TILES | CPT | CARPET |
| PC | POLISHED CONCRETE | SP | FEATURE SCREENING |



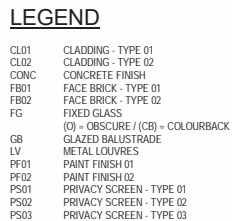
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Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 36 |
| DRAWING NAME: | NORTH & SOUTH SITE ELEVATIONS | SCALE: | 1 : 500 | Rev. | Y |
| | | QA: | RG | | |





| | | |
|---|--------------------|-------------------------------------|
| REF. Y | DATE 13.05.2019 | AMENDMENT ADDITIONAL INFORMATION |
| <p>DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright © DIWA.</p> | | |

| Legend: | | | | | | | |
|---------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| R801 | RENDERED BRICKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST |
| R802 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| F801 | FACED BRICKWORK | DP | DOWNPIPES | OW | OBSCURE WINDOW | CT | CERAMIC TILES |
| F802 | FACED BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| B1 | BLOCKWORK | D | DOOR | SK | SKYLIGHT | PCP | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOW/RES | | |
| RW | RETAINING WALL | BFD | BUFFED DOOR | RWT | RAINWATER TANK | | |

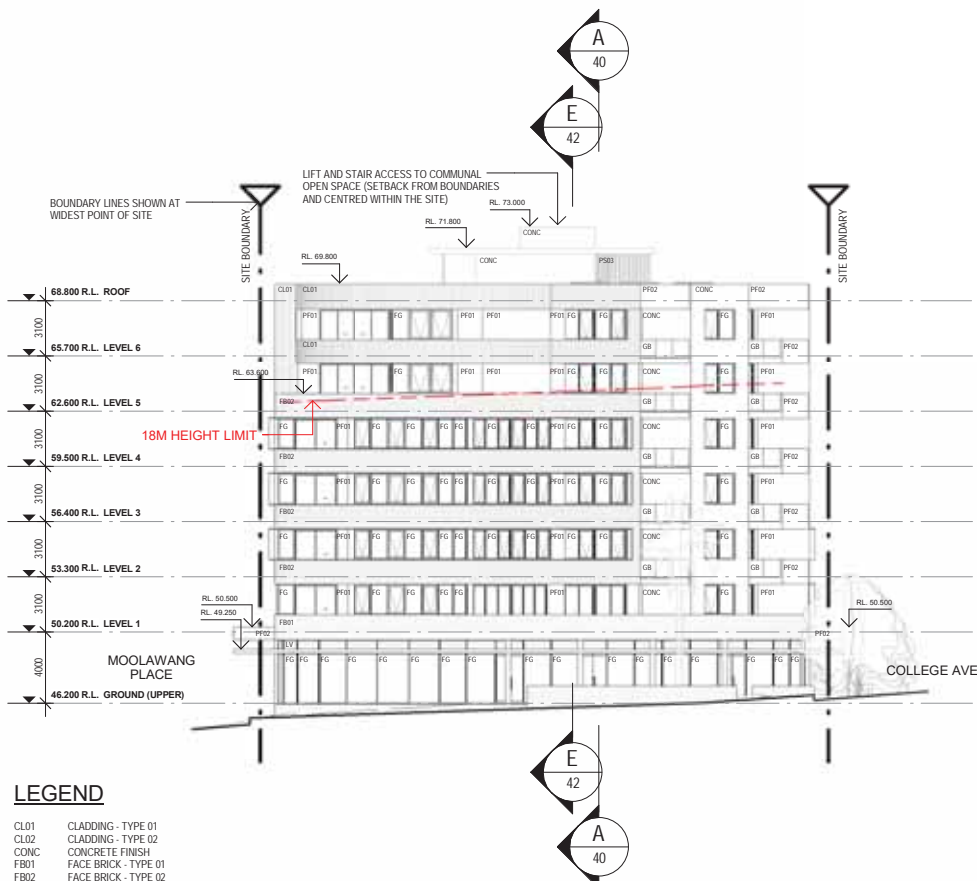


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Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wolli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

| | |
|---------------|------------------------------------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR |
| DRAWING NAME: | EAST ELEVATION |

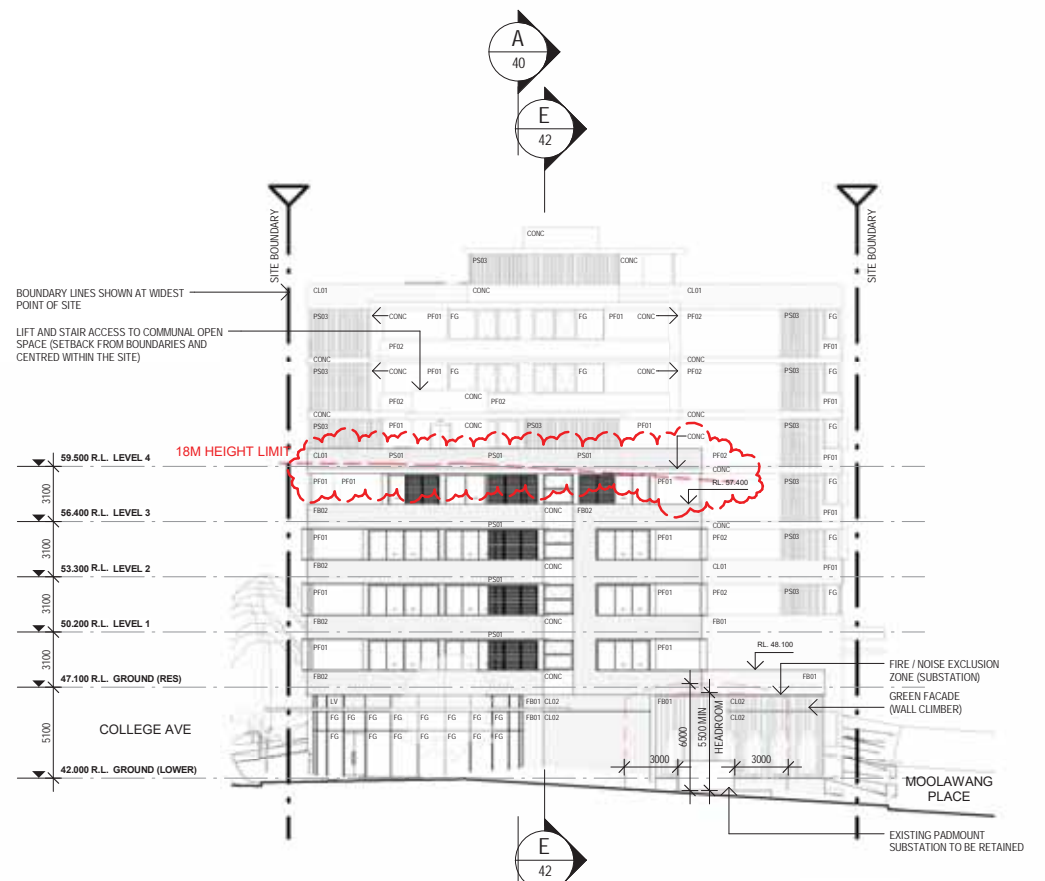
| | |
|----------------|--------------|
| DATE: JAN 18 | PROJECT No. |
| DRAWN: AK | 1725 |
| SCALE: 1 : 300 | DWG No. Rev. |
| QA: RG | 37 Y |



LEGEND

| | |
|------|----------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| GB | (C) - OBTUSE / (CB) - COLOURBACK |
| LV | METAL LOUVRES |
| PF01 | PAINT FINISH 01 |
| PF02 | PAINT FINISH 02 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

1 SOUTH ELEVATION
Scale 1 : 300



2 NORTH ELEVATION
Scale 1 : 300



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

Legend:

| | | | | | | | |
|------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEMARK | SLW | SLIDING WINDOW | P | POST |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | CB | OBTUSE WINDOW | CT | CERAMIC TILES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| BL | BLOCKWORK | D | DOOR | SK | SKYLIGHT | PC | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | |
| RW | RETAINING WALL | BFD | BIFOLD DOOR | RWT | RAINWATER TANK | | |



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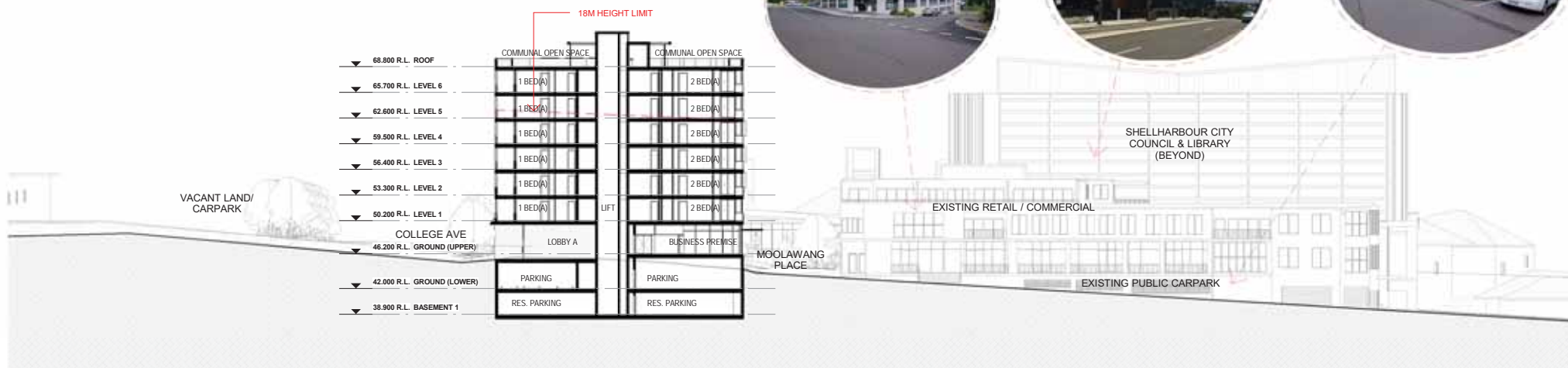
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 39 |
| DRAWING NAME: | NORTH & SOUTH ELEVATION | SCALE: | 1 : 300 | Rev. | Y |
| | | QA: | RG | | |



A SITE SECTION A
21 Scale 1 : 500



B SITE SECTION B
21 Scale 1 : 500

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

Legend:

| | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DB DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |

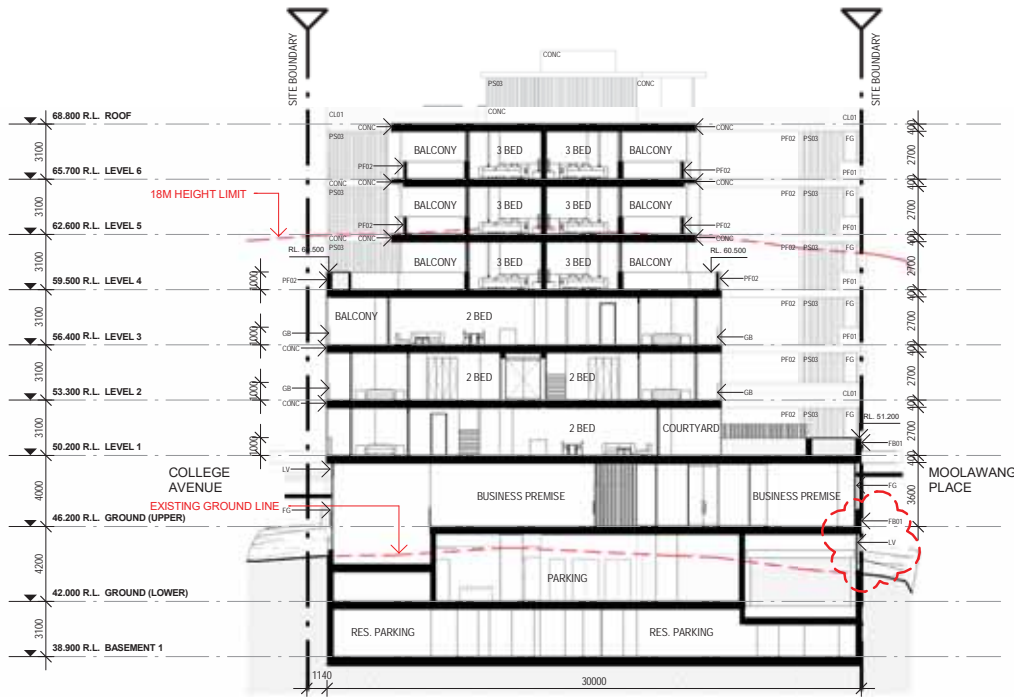


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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 40 |
| DRAWING NAME: | SITE SECTIONS | SCALE: | 1 : 500 | Rev. | Y |
| | | QA: | RG | | |



C
21
SECTION C
Scale 1 : 300

LEGEND

| | |
|------|-----------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| | (O) = OBSCURE / (CB) = COLOURBACK |
| GB | GLAZED BALUSTRADE |
| LV | METAL LOUVRES |
| PF01 | PAINT FINISH 01 |
| PF02 | PAINT FINISH 02 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

Legend:

| | | | | | | | |
|------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEMWORK | SLW | SLIDING WINDOW | P | POST |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| BL | BLOCKWORK | D | DOOR | SK | SKYLIGHT | PC | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | |
| RW | RETAINING WALL | BFD | BIFOLD DOOR | RWT | RAINWATER TANK | | |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 41 |
| DRAWING NAME: | BUILDING SECTIONS | SCALE: | 1 : 300 | Rev. | Y |
| | | QA: | RG | | |



E SECTION E
21 Scale 1 : 300

LEGEND

| | |
|------|-------------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| GB | (G) - OBTAINURE ((CB)) - COLOURBACK |
| LV | GLAZED BALUSTRADE |
| LV | METAL LOUVRES |
| PF01 | PAINT FINISH 01 |
| PF02 | PAINT FINISH 02 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|----------------|--------------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| Legend: | | |
| RB01 | RENDERED BRICKWORK | S STONEWORK |
| RB02 | RENDERED BRICKWORK | R ROOF |
| FB01 | FACE BRICKWORK | DP DOWNPIPES |
| FB02 | FACE BRICKWORK | TB TIMBER BATTENS |
| BL | BLOCKWORK | D DOOR |
| CL01 | CLADDING | GD GARAGE DOOR |
| CL02 | CLADDING | SLD SLIDING DOOR |
| RW | RETAINING WALL | BFD BI-FOLD DOOR |
| | | SLW SLIDING WINDOW |
| | | RW RAINWATER TANK |
| | | P POST |
| | | T TIMBER FLOORS |
| | | CT CERAMIC TILES |
| | | CPT CARPET |
| | | PC POLISHED CONCRETE |
| | | SP FEATURE SCREENING |

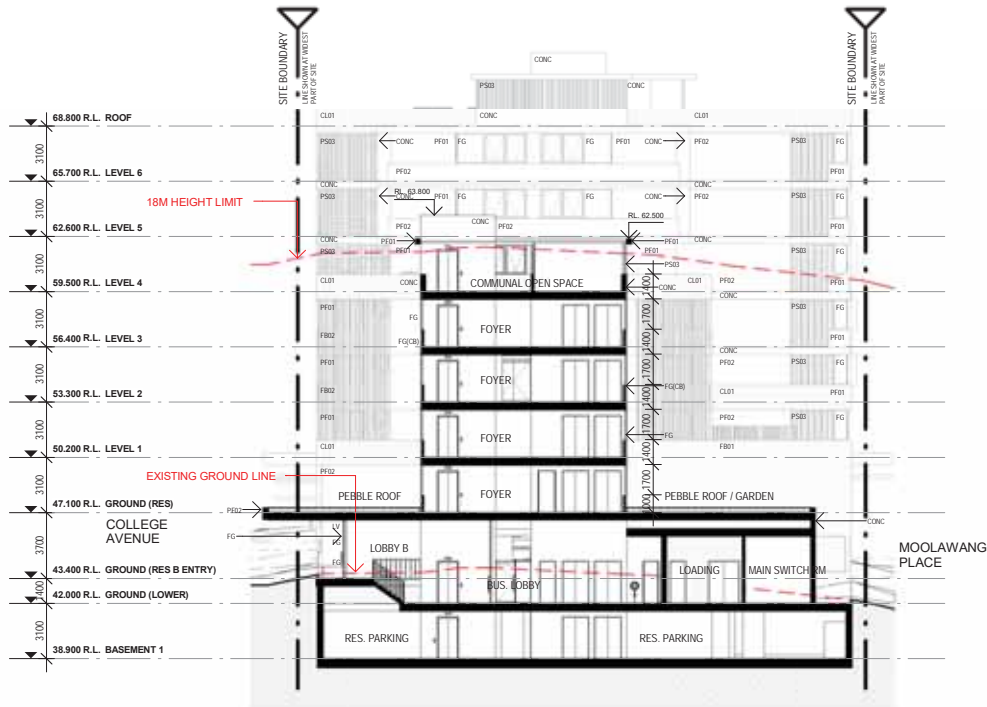


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Nominated Architect:
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ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 42 |
| DRAWING NAME: | BUILDING SECTIONS | SCALE: | 1 : 300 | Rev. | Y |
| | | QA: | RG | | |



F
21
SECTION F
Scale 1 : 300

LEGEND

| | |
|------|----------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| GB | (G) - OBTUSE / (CB) - COLOURBACK |
| LV | GLAZED BALUSTRADE |
| PF01 | METAL LOUVRES |
| PF02 | PAINT FINISH 01 |
| PS01 | PAINT FINISH 02 |
| PS02 | PRIVACY SCREEN - TYPE 01 |
| PS03 | PRIVACY SCREEN - TYPE 02 |
| PS04 | PRIVACY SCREEN - TYPE 03 |

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All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

Legend:

| | | | | | | | |
|------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEMWORK | SLW | SLIDING WINDOW | P | POST |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| BB | BLOCKWORK | D | DOOR | SK | SKYLIGHT | PC | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR | RWT | RAINWATER TANK | | |



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ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|---------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 43 |
| DRAWING NAME: | BUILDING SECTIONS | SCALE: | 1 : 300 | Rev. | Y |
| | | QA: | RG | | |



1 3D VIEW - NORTH-WEST (MOOLAWANG PLACE & BIMBALA PLACE)
Scale



2 3D VIEW - SOUTH-WEST (CYGNET AVE)
Scale



3 3D VIEW - SOUTH-EAST (COLLEGE AVE & CYGNET AVE)
Scale



4 3D VIEW - NORTH-EAST (COLLEGE AVE)
Scale



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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 50 |
| DRAWING NAME: | 3D VIEWS | SCALE: | QA: | Rev. | Y |



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Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
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| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: 3D VIEW - NORTH (FROM COLLEGE AVENUE)

| | |
|--------------|------------------|
| DATE: JAN 18 | PROJECT No. 1725 |
| DRAWN: AK | DWG No. 51 |
| SCALE: | Rev. Y |
| QA: RG | |

ADDITIONAL INFORMATION



DISCLAIMER
 Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
 All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| Y | 13.05.2019 | | |

DISCLAIMER
 All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.

| Legend: | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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 Nominated Architect:
 Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|--|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 52 |
| DRAWING NAME: | 3D VIEW - NORTH-EAST (FROM COLLEGE AVENUE) | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



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Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

ADDITIONAL INFORMATION

| | | | | | | | | | | | | |
|--------|--|------------------|-----------------------------------|---|--|---|--|---|---|---|---|--|
| REF: V | | DATE: 04.03.2019 | AMENDMENT: ADDITIONAL INFORMATION | Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWT RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING | | DWA DESIGN WORKSHOP AUSTRALIA | | Wollongong 81a Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Wolli Creek NSW 2205 Nominated Architect: Robert Gizzi (Reg. 8286) | CLIENT: SHLOH PTY LTD SHOP TOP HOUSING ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR DRAWING NAME: 3D VIEW - EAST (FROM COLLEGE AVENUE) | DATE: JAN 18 DRAWN: AK SCALE: QA: RG | PROJECT No. 1725 DWG No. 53 Rev. V |
|--------|--|------------------|-----------------------------------|---|--|---|--|---|---|---|---|--|



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 Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
 All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | RW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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 Olympus Boulevard,
 Woll Creek NSW 2205
 Nominated Architect:
 Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
 SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: 3D VIEW - SOUTH-EAST (FROM COLLEGE AVENUE)

| | |
|---------------------|--------------------|
| DATE: JAN 18 | PROJECT No. |
| DRAWN: AK | 1725 |
| SCALE: | DWG No. |
| QA: RG | 54 |
| | Rev. |
| | V |

ADDITIONAL INFORMATION



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONework |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



| | |
|---|---|
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| Tel: (02) 4227 1661 | Nominated Architect: Robert Gizzi (Reg. 8286) |
| Email: info@designworkshop.com.au | |
| Web: www.designworkshop.com.au | |

ADDITIONAL INFORMATION

| | | | | | |
|---------------|--|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 55 |
| DRAWING NAME: | 3D VIEW - SOUTH (FROM COUNCIL FORECOURT) | SCALE: | | Rev. | V |
| | | QA: | RG | | |



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

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All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONework |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| SLW | SLIDING WINDOW | P | POST |
| FW | FIXED WINDOW | T | TIMBER FLOORS |
| OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| AW | AWNING WINDOW | CPT | CARPET |
| SK | SKEW | PC | POLISHED CONCRETE |
| WH | WINDOW HOOD | SP | FEATURE SCREENING |
| LV | LOUVRES | | |
| RWT | RAINWATER TANK | | |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 56 |
| DRAWING NAME: | 3D VIEW - WEST (FROM CARPARK) | SCALE: | QA: RG | Rev. | Y |



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| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|-------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 57 |
| DRAWING NAME: | 3D VIEW - NORTH-WEST (FROM CARPARK) | SCALE: | QA: | Rev. | Y |



1 3D VIEW - SOUTH-EAST (URBAN CONTEXT)
Scale



2 3D VIEW - NORTH-EAST (URBAN CONTEXT)
Scale

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.

| Legend: | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |

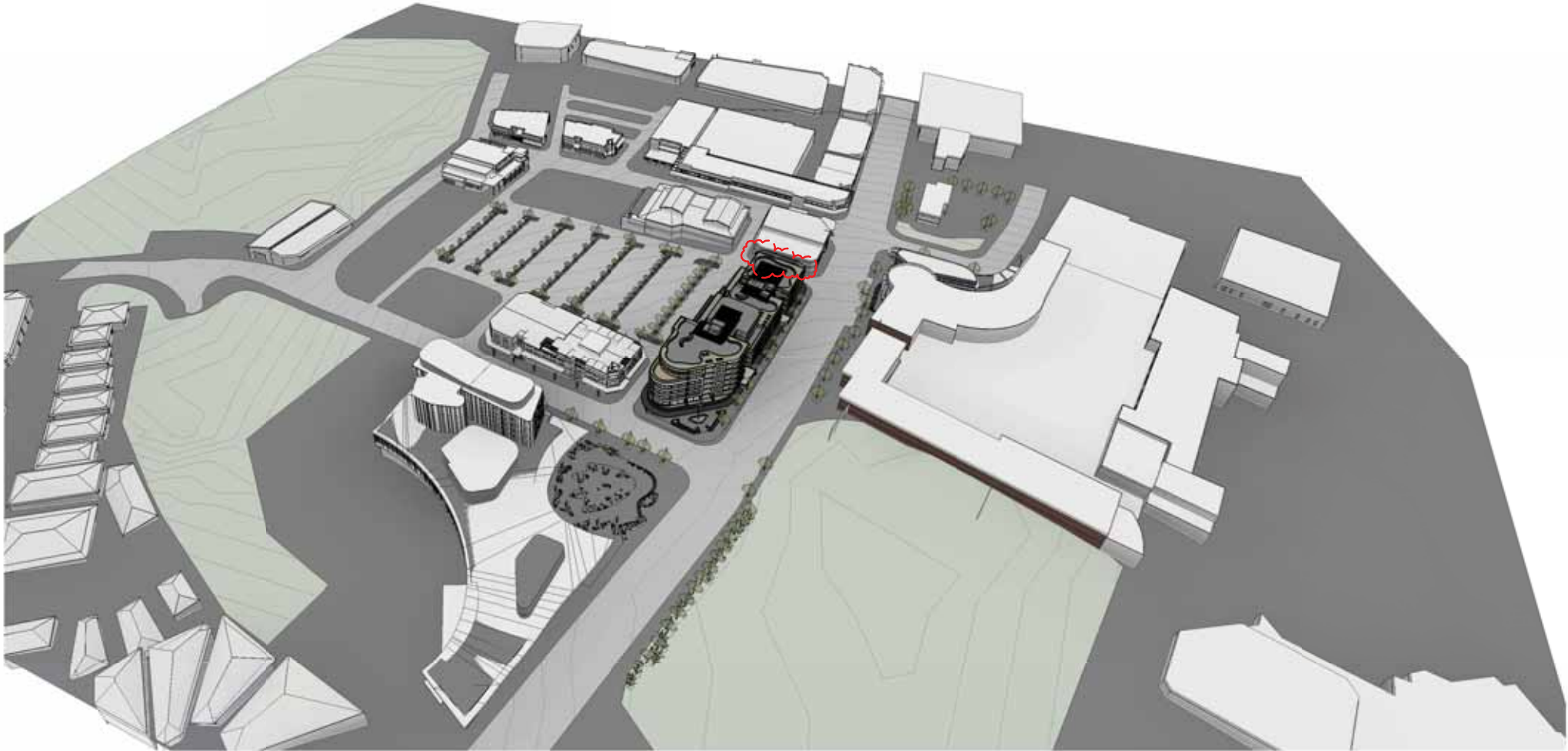


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Sydney
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Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 58 |
| DRAWING NAME: | 3D VIEWS - URBAN CONTEXT | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



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Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
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| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

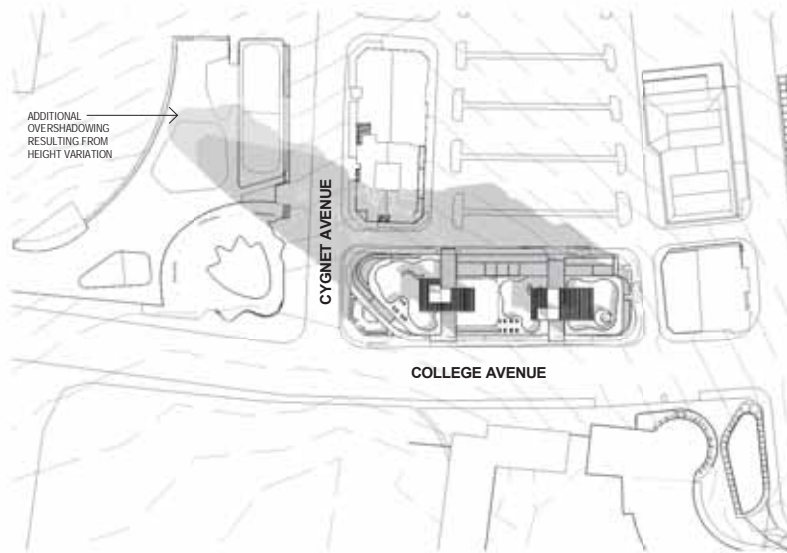
| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| SLW | SLIDING WINDOW | PW | FIXED WINDOW |
| OB | OBSCURE WINDOW | AW | AWNING WINDOW |
| SK | SKYLIGHT | WH | WINDOW HOOD |
| LV | LOUVRES | RWT | RAINWATER TANK |
| P | POST | T | TIMBER FLOORS |
| CT | CERAMIC TILES | CPT | CARPET |
| PC | POLISHED CONCRETE | SP | FEATURE SCREENING |



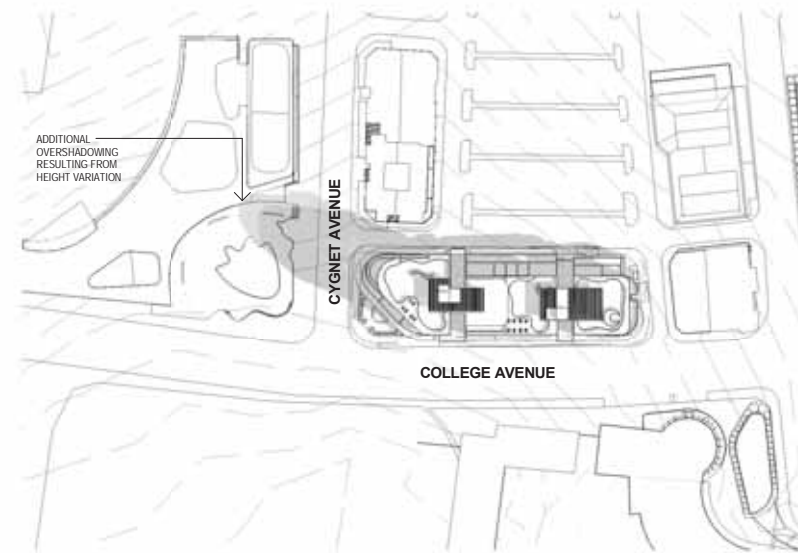
| | |
|---|---|
| Wollongong | Sydney |
| 81a Princes Highway, Fairy Meadow NSW 2519 | Level 10, 6 Mount Olympus Boulevard, Wooli Creek NSW 2205 |
| Tel: (02) 4227 1661 | Nominated Architect: Robert Gizzi (Reg. 8286) |
| Email: info@designworkshop.com.au | |
| Web: www.designworkshop.com.au | |

ADDITIONAL INFORMATION

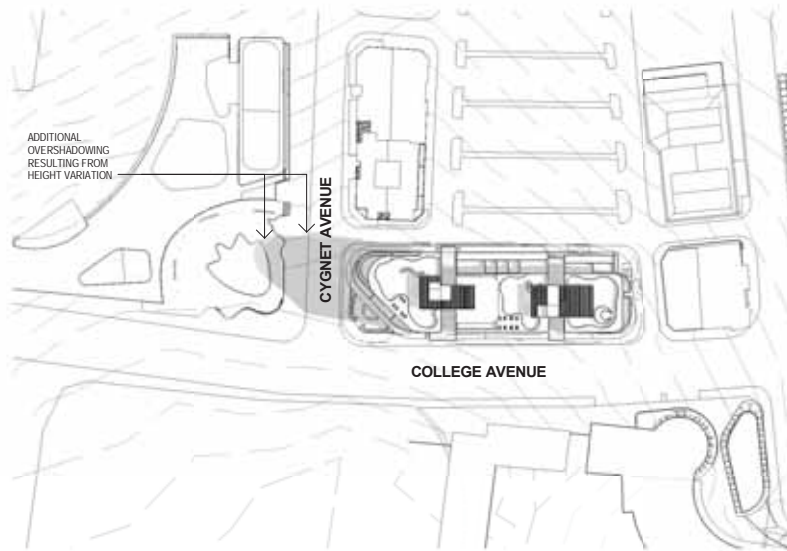
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|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 59 |
| DRAWING NAME: | 3D VIEWS - URBAN CONTEXT | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



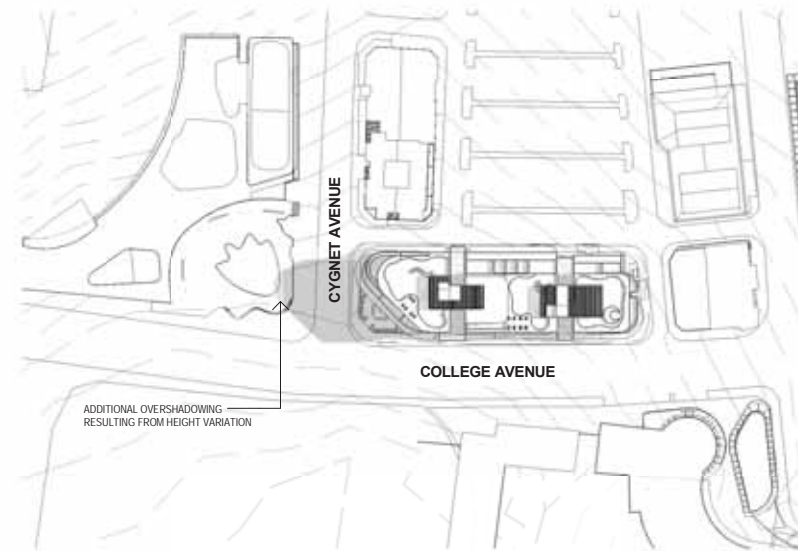
2 WINTER JUNE 9 AM SHADOW
Scale 1 : 2000



1 WINTER JUNE 10 AM SHADOW
Scale 1 : 2000



3 WINTER JUNE 11 AM SHADOW
Scale 1 : 2000



4 WINTER JUNE 12 NOON SHADOW
Scale 1 : 2000

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.

| Legend: | | |
|-------------------------|-------------------|--------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW |
| B BLOCKWORK | D DOOR | SK SKYLIGHT |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK |



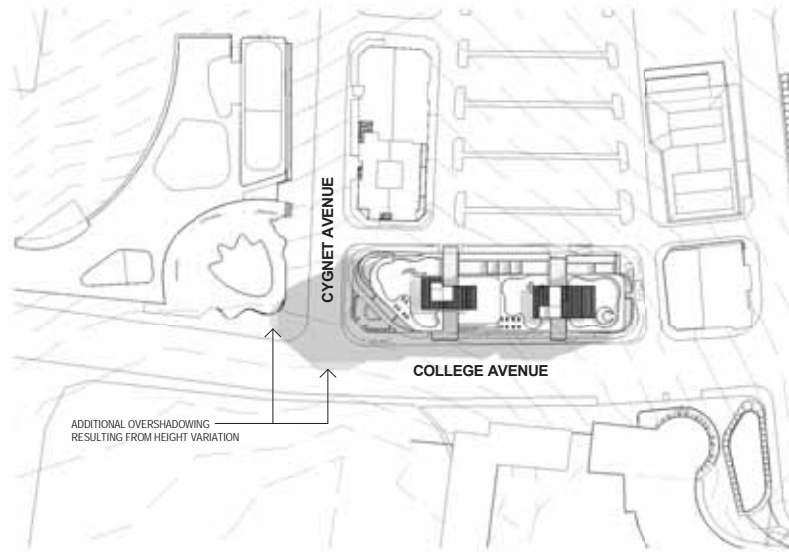
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Sydney
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Nominated Architect:
Robert Gizzi (Reg. 8286)

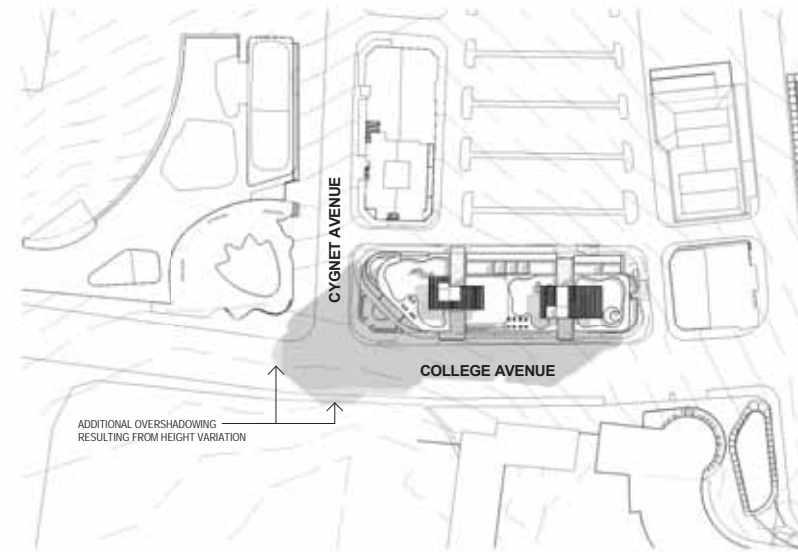


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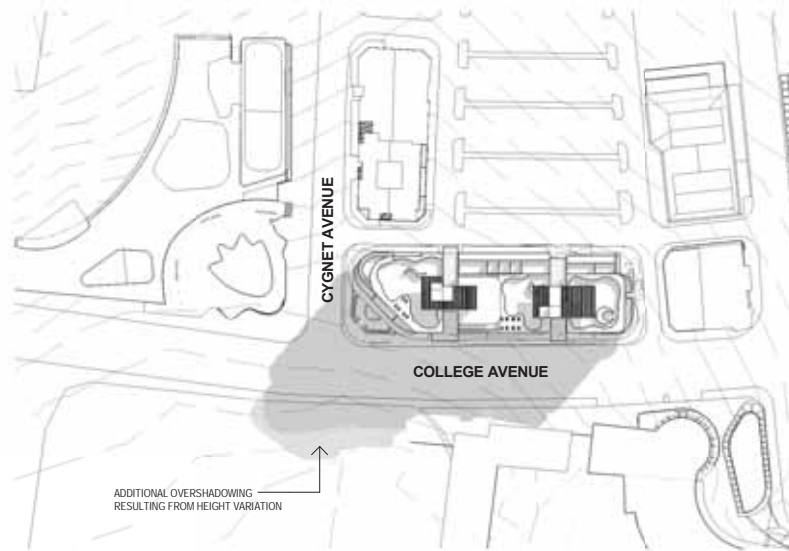
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|---------------|--------------------------------------|--------|----------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 60 |
| DRAWING NAME: | WINTER SHADOWS - JUNE 9 AM - 12 NOON | SCALE: | 1 : 2000 | Rev. | V |
| | | QA: | RG | | |



1 WINTER JUNE 1 PM SHADOW
37 Scale 1 : 2000



2 WINTER JUNE 2 PM SHADOW
37 Scale 1 : 2000



3 WINTER JUNE 3 PM SHADOW
37 Scale 1 : 2000

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All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

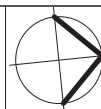
DISCLAIMER
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| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| BB | BLOCKWORK | TB | TIMBER BATTENS |
| CL01 | CLADDING | D | DOOR |
| CL02 | CLADDING | GD | GARAGE DOOR |
| SLD | SLIDING DOOR | WH | WINDOW HOOD |
| LV | LOUVRES | SLW | SLIDING WINDOW |
| RF01 | BI-FOLD DOOR | CB | OBSCURE WINDOW |
| RWT | RAINWATER TANK | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



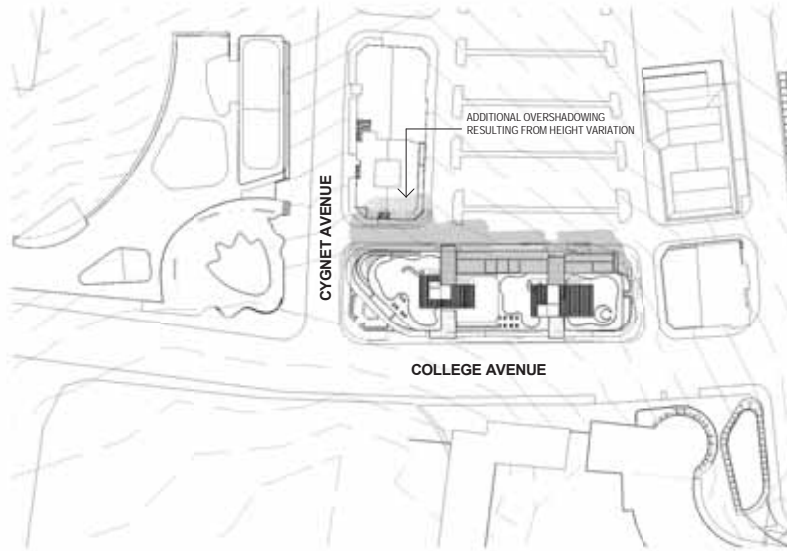
Wollongong
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Email: info@designworkshop.com.au
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Sydney
Level 10, 6 Mount
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Nominated Architect:
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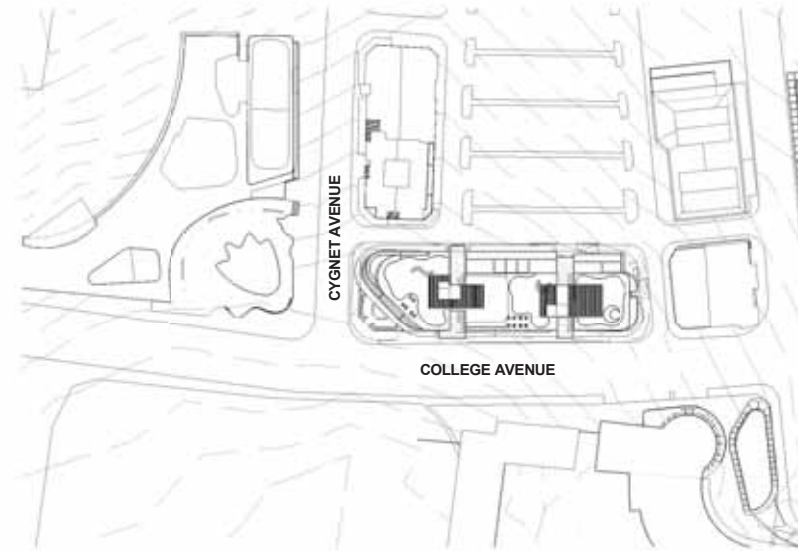


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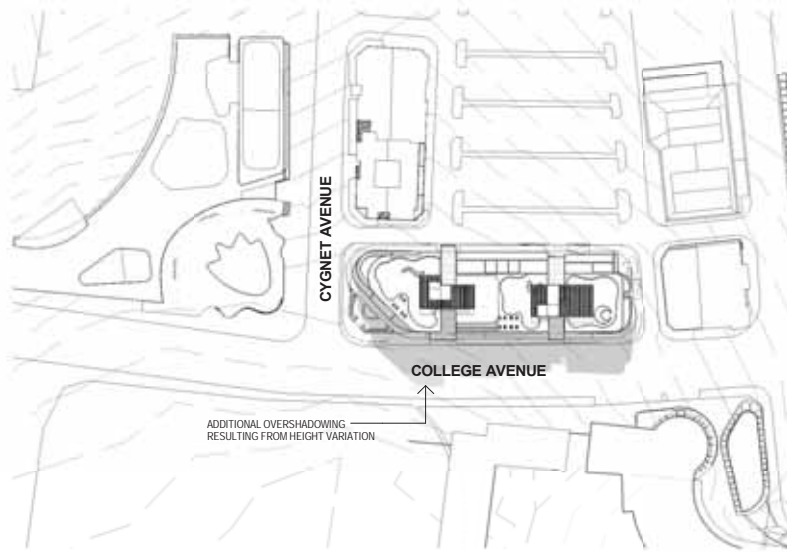
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|---------------|------------------------------------|--------|----------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 61 |
| DRAWING NAME: | WINTER SHADOWS - JUNE 1 PM - 3 PM | SCALE: | 1 : 2000 | Rev. | V |
| | | QA: | RG | | |



1 SUMMER DECEMBER 9 AM SHADOW
37 Scale 1 : 2000



2 SUMMER DECEMBER 12 NOON SHADOW
37 Scale 1 : 2000



3 SUMMER DECEMBER 3 PM SHADOW
37 Scale 1 : 2000

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

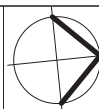
DISCLAIMER
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| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



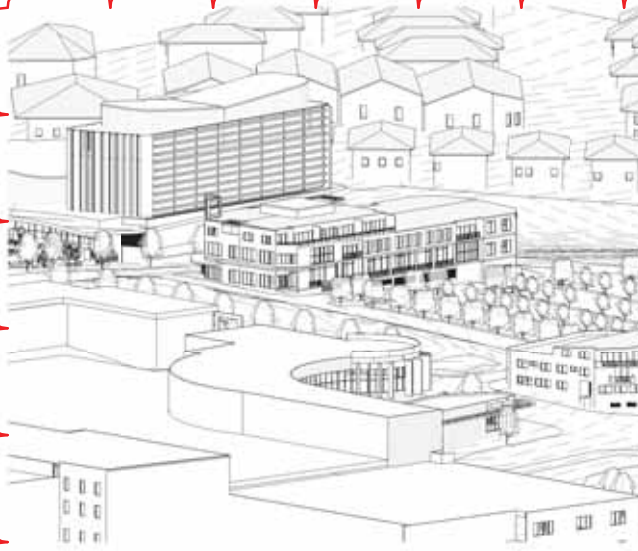
Wollongong
81a Princes Highway,
Fairy Meadow NSW 2519
Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

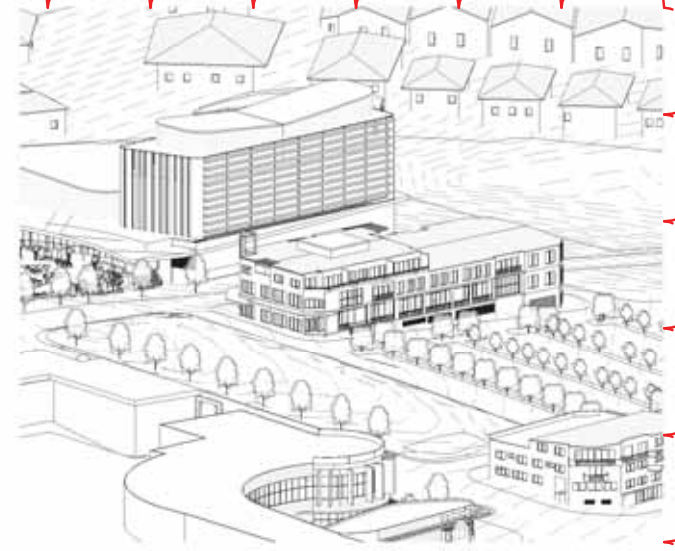


| | | | | | |
|---------------|------------------------------------|--------|----------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | TN | DWG No. | 62 |
| DRAWING NAME: | SUMMER SHADOWS - DECEMBER | SCALE: | 1 : 2000 | Rev. | V |
| | | QA: | RG | | |

ADDITIONAL INFORMATION



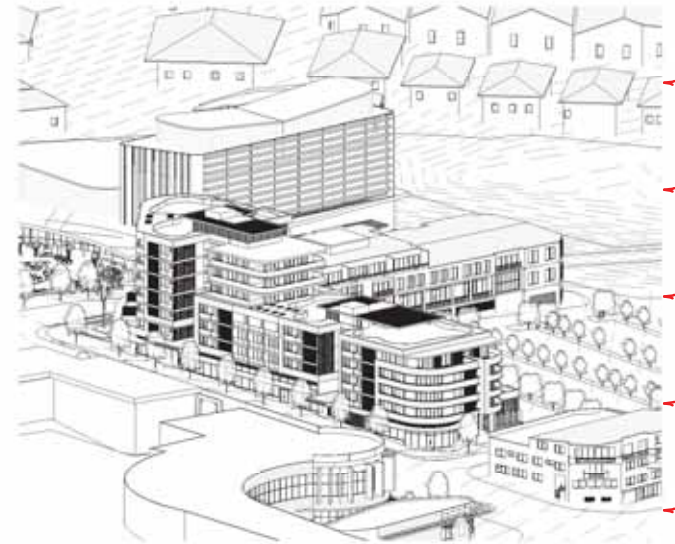
EXISTING SOLAR ACCESS - WINTER - 8.00AM



EXISTING SOLAR ACCESS - WINTER - 8.30AM



PROPOSED SOLAR ACCESS - WINTER - 8.00AM



PROPOSED SOLAR ACCESS - WINTER - 8.30AM

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
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| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B- | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| SLW | SLIDING WINDOW | P | POST |
| FW | FIXED WINDOW | T | TIMBER FLOORS |
| OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| AW | AWNING WINDOW | CPT | CARPET |
| SK | SKYLIGHT | PC | POLISHED CONCRETE |
| WH | WINDOW HOOD | SP | FEATURE SCREENING |
| LV | LOUVRES | | |
| RWT | RAINWATER TANK | | |

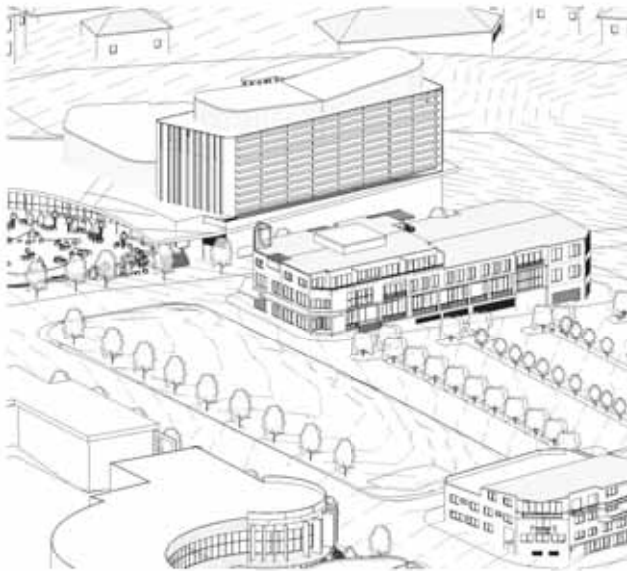


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Web: www.designworkshop.com.au

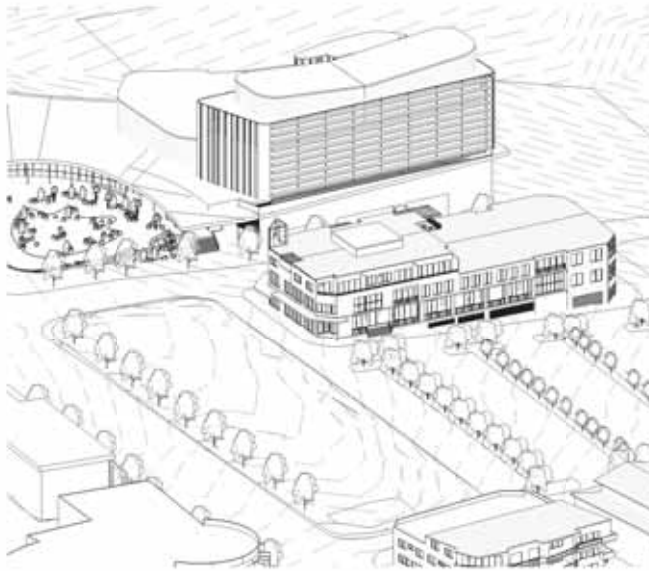
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
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ADDITIONAL INFORMATION

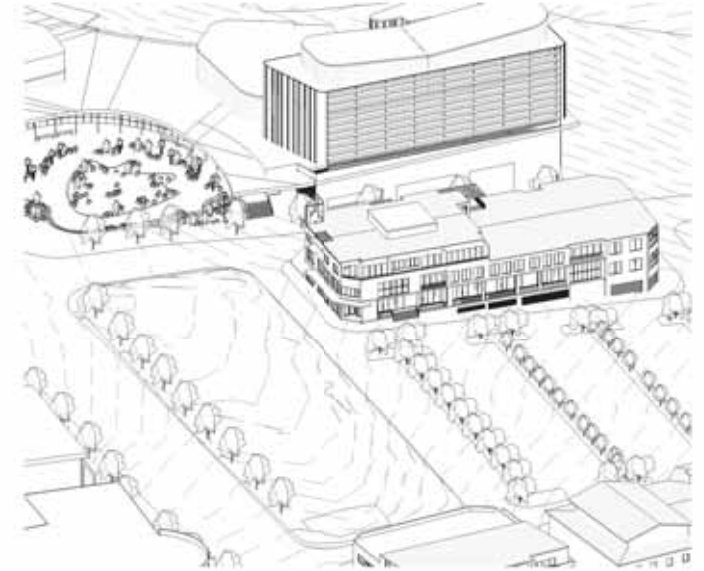
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|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 63 |
| DRAWING NAME: | VIEWS FROM THE SUN - WINTER | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



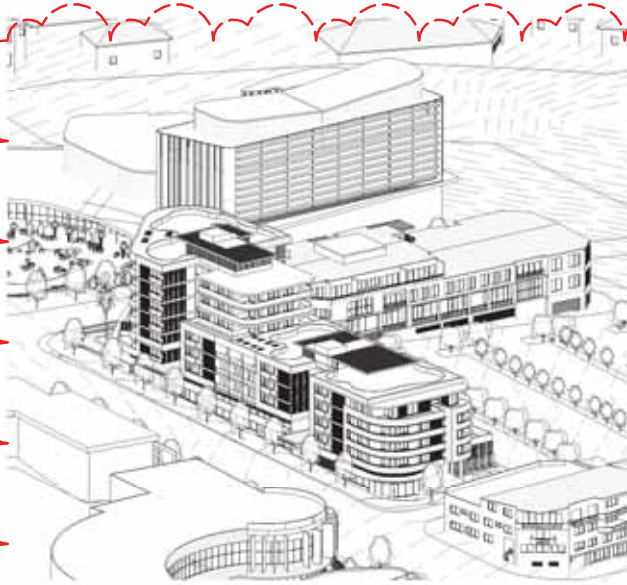
EXISTING SOLAR ACCESS - WINTER - 9.00AM



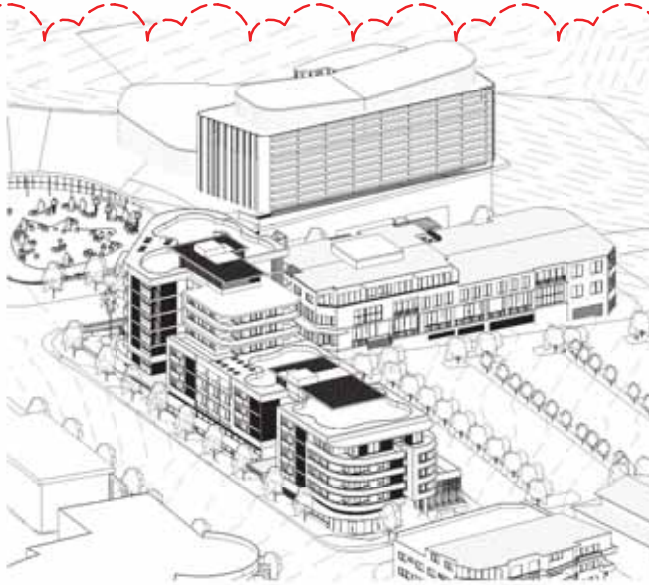
EXISTING SOLAR ACCESS - WINTER - 9.30AM



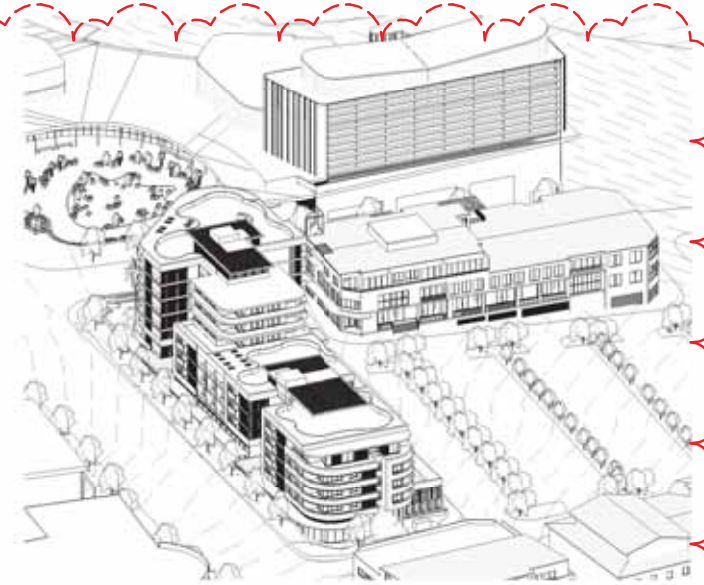
EXISTING SOLAR ACCESS - WINTER - 10.00AM



PROPOSED SOLAR ACCESS - WINTER - 9.00AM



PROPOSED SOLAR ACCESS - WINTER - 9.30AM



PROPOSED SOLAR ACCESS - WINTER - 10.00AM

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

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| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONERWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |

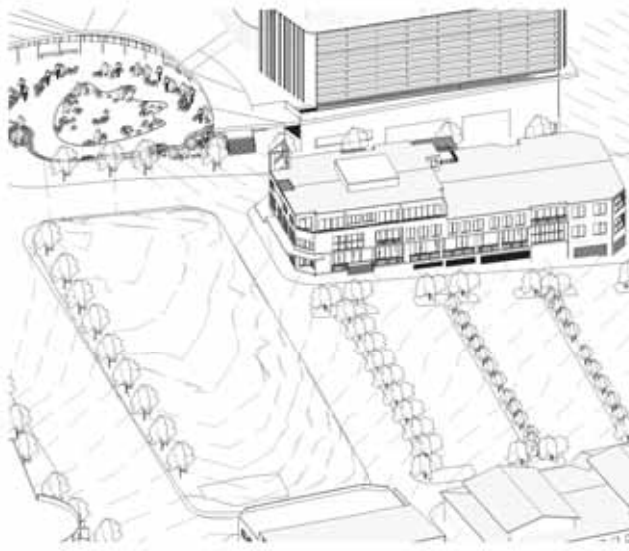


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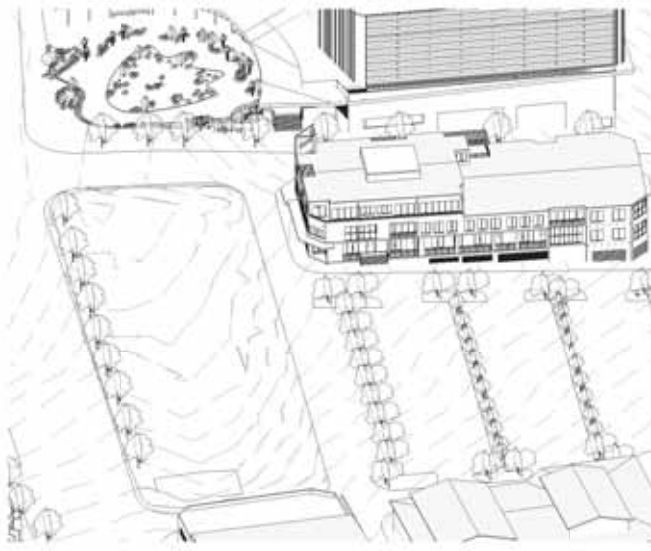
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

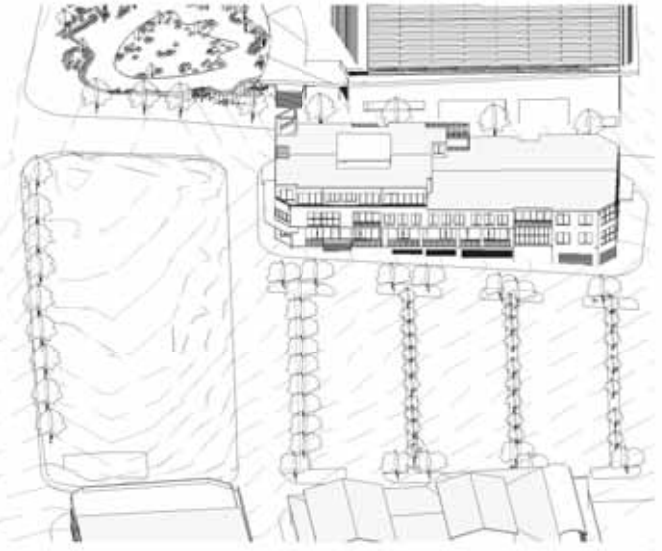
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|---------------|-----------------------------------|--------|--------|-------------|------|
| CLIENT: | SHLOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 64 |
| DRAWING NAME: | VEWS FROM THE SUN - WINTER | QA: | RG | Rev. | Y |



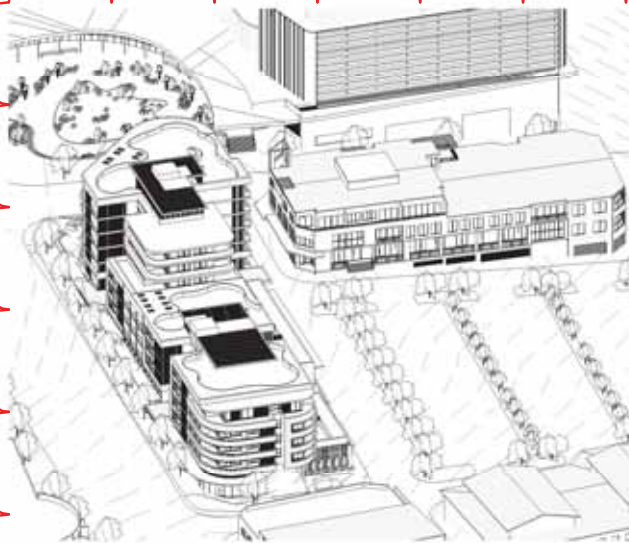
EXISTING SOLAR ACCESS - WINTER - 10.30AM



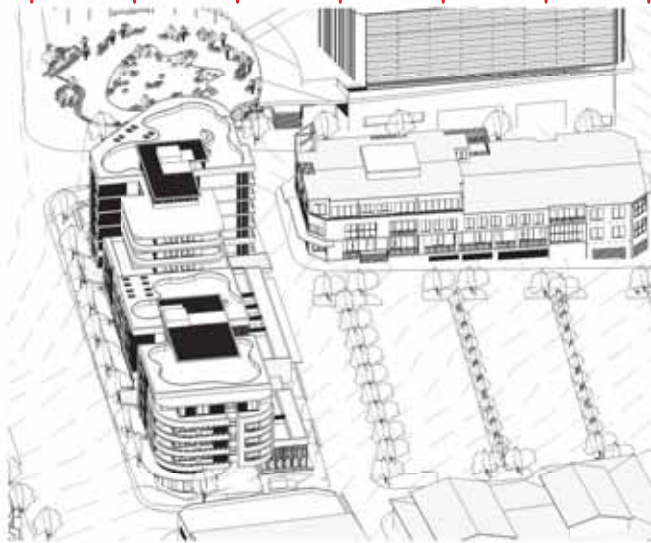
EXISTING SOLAR ACCESS - WINTER - 11.00AM



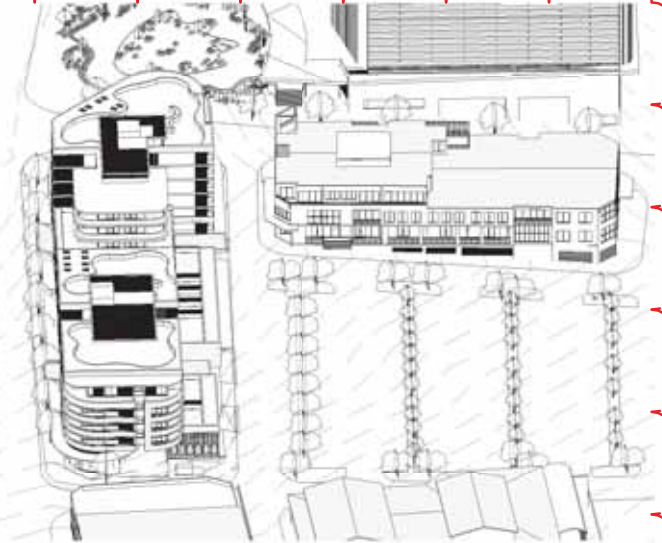
EXISTING SOLAR ACCESS - WINTER - 11.30AM



PROPOSED SOLAR ACCESS - WINTER - 10.30AM



PROPOSED SOLAR ACCESS - WINTER - 11.00AM



PROPOSED SOLAR ACCESS - WINTER - 11.30AM

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

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| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONERWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SUNLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |

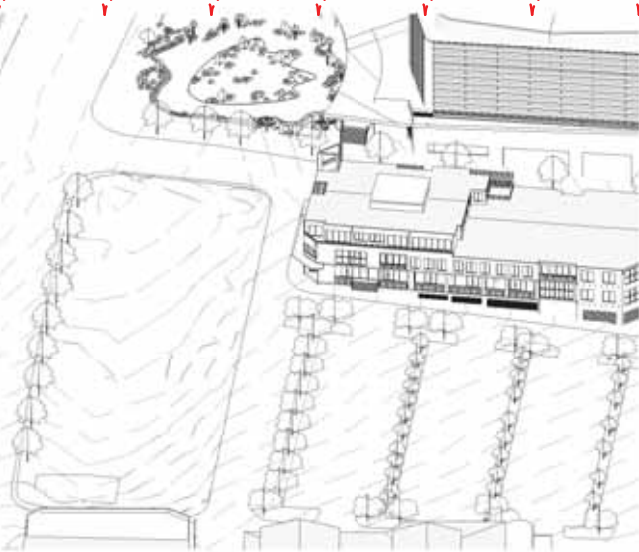


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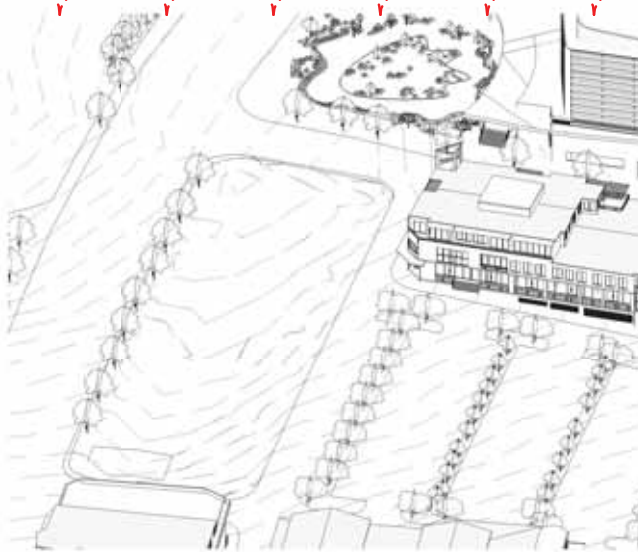
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

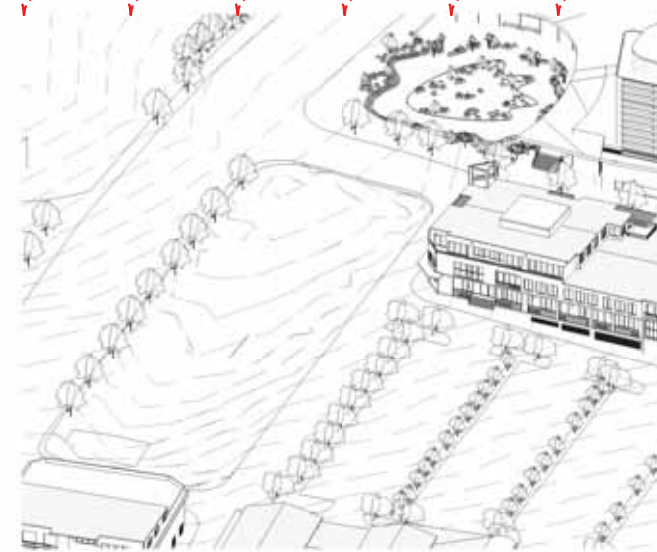
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|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 65 |
| DRAWING NAME: | VIEWS FROM THE SUN - WINTER | SCALE: | QA: | Rev. | Y |



EXISTING SOLAR ACCESS - WINTER - 12.00 NOON



EXISTING SOLAR ACCESS - WINTER - 12.30PM



EXISTING SOLAR ACCESS - WINTER - 1.00PM



PROPOSED SOLAR ACCESS - WINTER - 12.00 NOON



PROPOSED SOLAR ACCESS - WINTER - 12.30PM



PROPOSED SOLAR ACCESS - WINTER - 1.00PM

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | |
|---------|--------------------|--------------------|
| RB01 | RENDERED BRICKWORK | S STONEWORK |
| RB02 | RENDERED BRICKWORK | R ROOF |
| FB01 | FACE BRICKWORK | DP DOWNPIPES |
| FB02 | FACE BRICKWORK | TB TIMBER BATTENS |
| BL | BLOCKWORK | D DOOR |
| CL01 | CLADDING | GD GARAGE DOOR |
| CL02 | CLADDING | WH WINDOW HOOD |
| LD | SLIDING DOOR | LV LOUVRES |
| RD | SLIDING DOOR | BLF BI-FOLD DOOR |
| RW | RETAINING WALL | RWT RAINWATER TANK |



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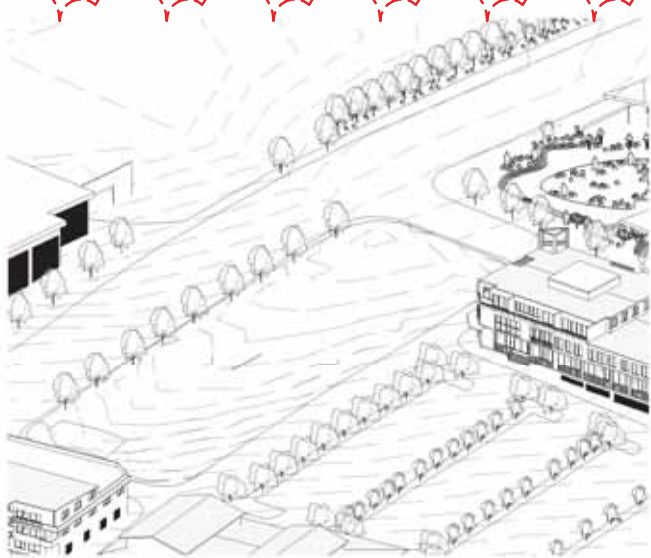
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

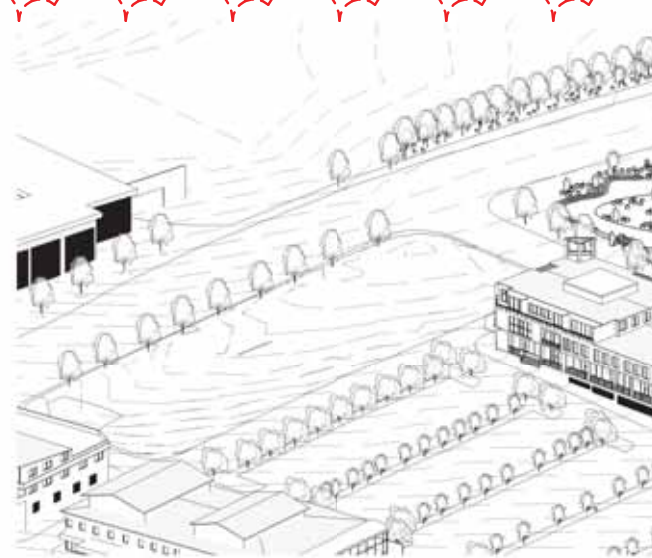
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|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 66 |
| DRAWING NAME: | VIEWS FROM THE SUN - WINTER | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



EXISTING SOLAR ACCESS - WINTER - 1.30PM



EXISTING SOLAR ACCESS - WINTER - 2.00PM



EXISTING SOLAR ACCESS - WINTER - 2.30PM



PROPOSED SOLAR ACCESS - WINTER - 1.30PM



PROPOSED SOLAR ACCESS - WINTER - 2.00PM



PROPOSED SOLAR ACCESS - WINTER - 2.30PM

DISCLAIMER

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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.

Legend:

| | | | | | |
|------|--------------------|-----|----------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONERWORK | SLW | SLIDING WINDOW |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW |
| B | BLOCKWORK | D | DOOR | SK | SKYLIGHT |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR | RWT | RAINWATER TANK |

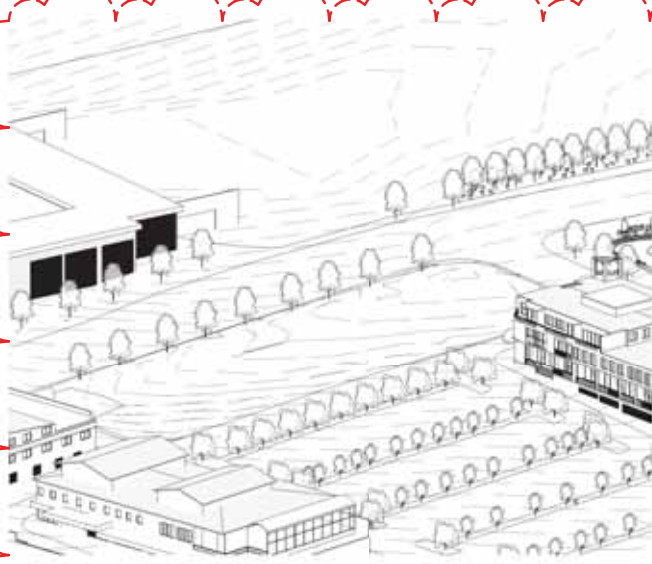


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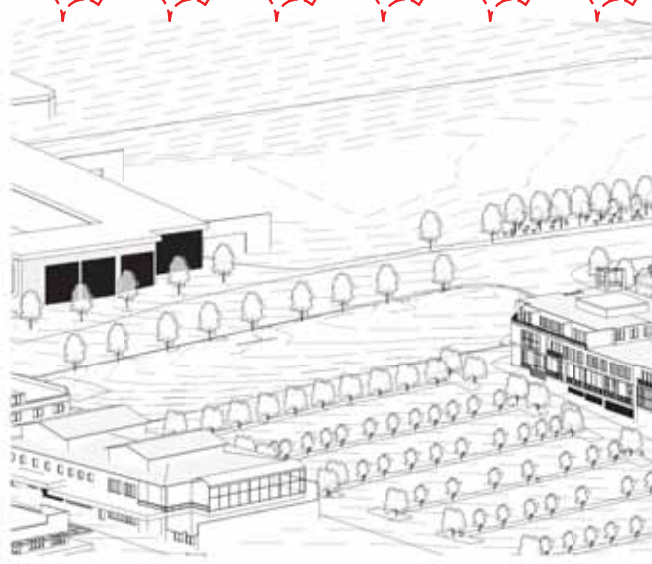
Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

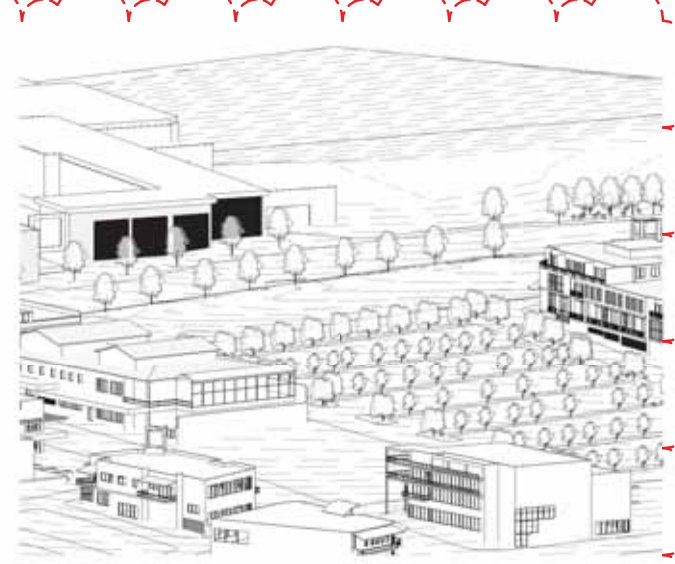
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|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 67 |
| DRAWING NAME: | VIEWS FROM THE SUN - WINTER | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



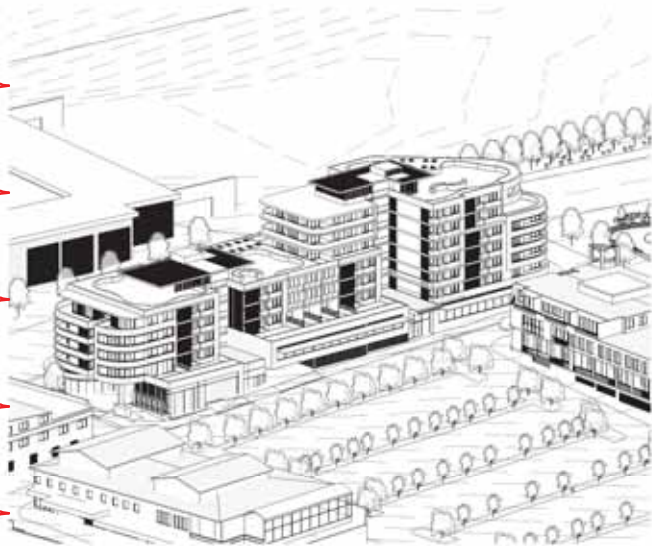
EXISTING SOLAR ACCESS - WINTER - 3.00PM



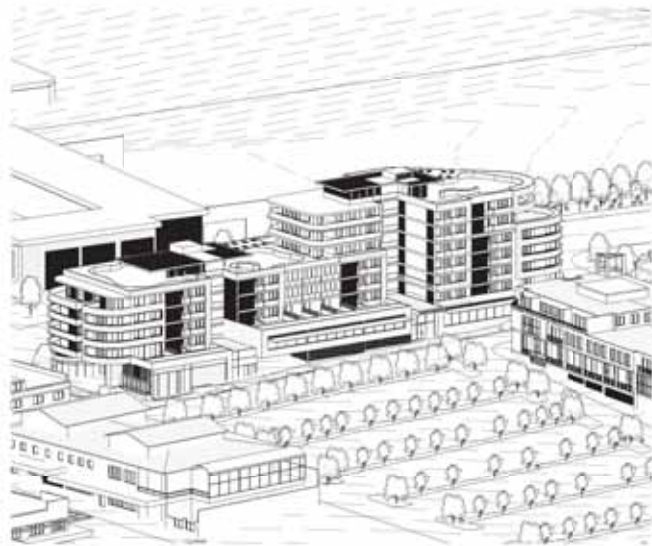
EXISTING SOLAR ACCESS - WINTER - 3.30PM



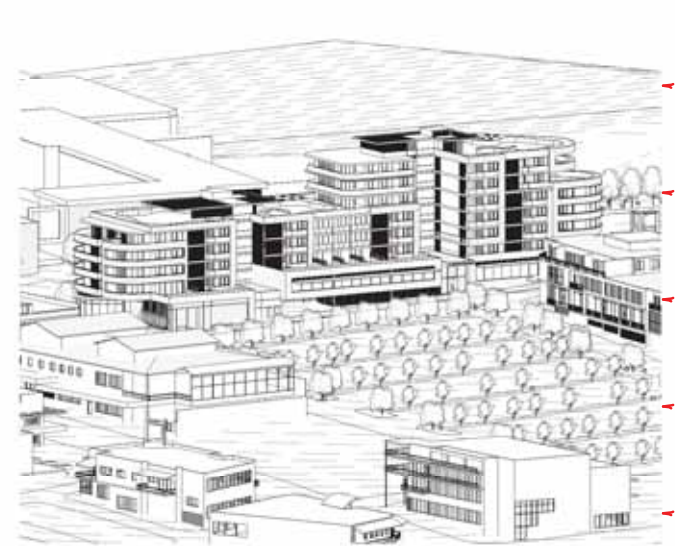
EXISTING SOLAR ACCESS - WINTER - 4.00PM



PROPOSED SOLAR ACCESS - WINTER - 3.00PM



PROPOSED SOLAR ACCESS - WINTER - 3.30PM



PROPOSED SOLAR ACCESS - WINTER - 4.00PM

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B01 | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SPLITLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |

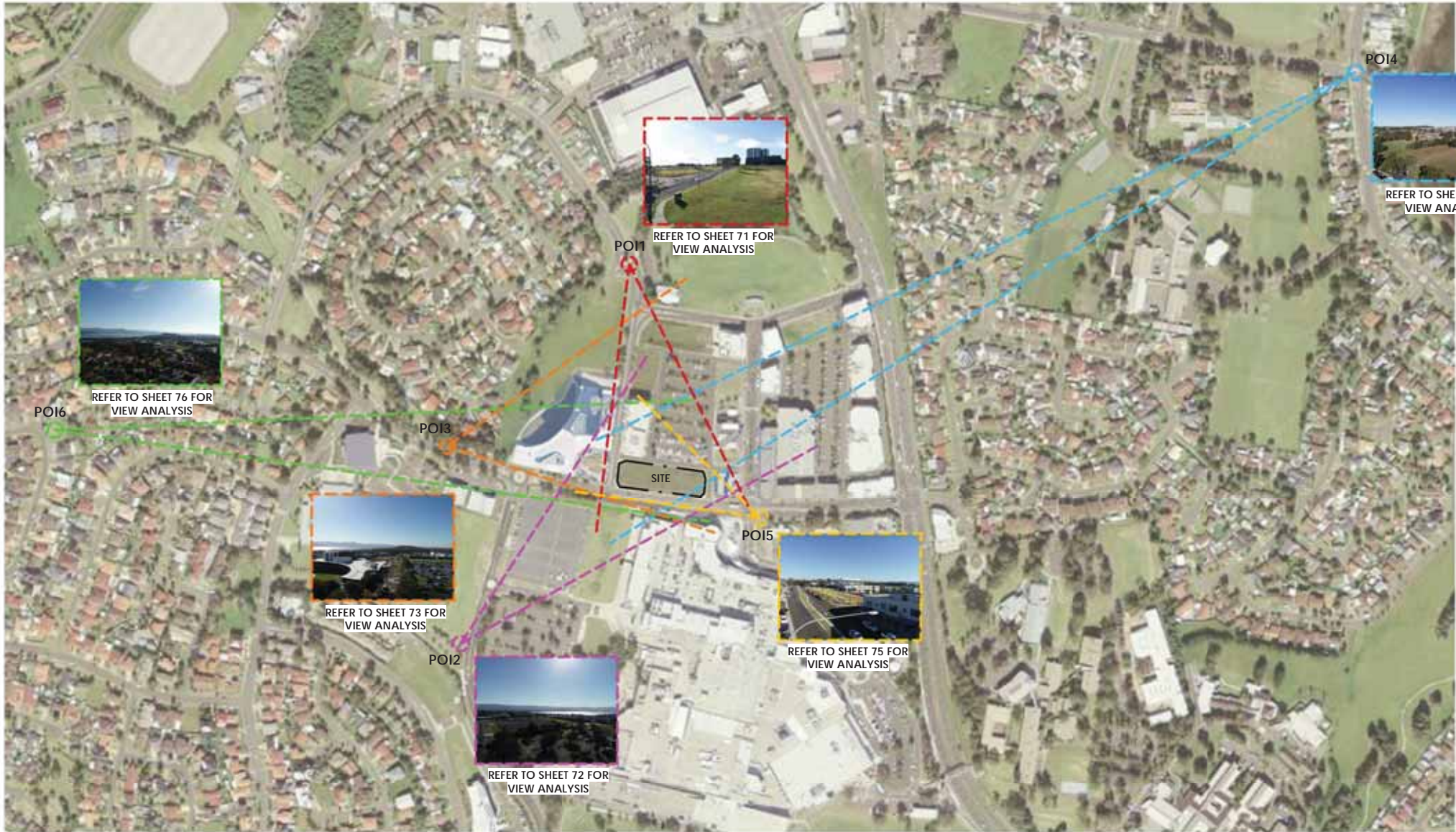


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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|-----------------------------------|--------|--------|-------------|------|
| CLIENT: | SHLOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 68 |
| DRAWING NAME: | VIEWS FROM THE SUN - WINTER | SCALE: | | Rev. | Y |
| | | QA: | RG | | |



VIEW ANALYSIS MAP
NTS

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|--|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA. | | |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| SLW | SLIDING WINDOW | FW | FIXED WINDOW |
| OB | OBSCURE WINDOW | AW | AWNING WINDOW |
| SK | SKYLIGHT | WH | WINDOW HOOD |
| LV | LOUVRES | RWT | RAINWATER TANK |



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Olympus Boulevard,
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Nominated Architect:
Robert Gizzi (Reg. 8286)



ADDITIONAL INFORMATION

| | | | | | |
|---------------|------------------------------------|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | NT | DWG No. | 70 |
| DRAWING NAME: | VIEW ANALYSIS LOCATION MAP | SCALE: | NTS | Rev. | V |
| | | QA: | RG | | |



POI 1 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 1 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 1 - RL 65.05 A.H.D
(12m ABOVE SITE BENCHMARK)



POI 1 - RL 44.05 A.H.D
(0m ABOVE SITE BENCHMARK)



POI 1 - RL 38.05 A.H.D
(-6m BELOW SITE BENCHMARK)



POI 1 - RL 32.05 A.H.D
(-12m BELOW SITE BENCHMARK)



POI 1 - RL 29.05 A.H.D
(-15m BELOW SITE BENCHMARK)



POI 1 - RL 26.05 A.H.D
(-18m BELOW SITE BENCHMARK)



POI 1 - RL 23.05 A.H.D
(-21m BELOW SITE BENCHMARK)



POI 1 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| V | 04.03.2019 | | |

Legend:

| | | | | | | | |
|------|--------------------|-----|----------------|-----|----------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONERWORK | SLW | SLIDING WINDOW | P | POST |
| RB02 | RENDERED BRICKWORK | R | ROOF | FW | FIXED WINDOW | T | TIMBER FLOORS |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | CPT | CARPET |
| BL | BLOCKWORK | D | DOOR | SK | SUNLIGHT | PC | POLISHED CONCRETE |
| CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR | RWT | RAINWATER TANK | | |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 71 |
| DRAWING NAME: | VIEW ANALYSIS - POI 1 (EXISTING PHOTOS) | SCALE: | 1:1 | Rev. | V |
| | | QA: | RG | | |



POI 1 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 1 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 1 - RL 65.05 A.H.D
(12m ABOVE SITE BENCHMARK)



POI 1 - RL 44.05 A.H.D
(0m ABOVE SITE BENCHMARK)

POI 1 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|----------------|--------------------|-----------|------------------------|
| V | 04.03.2019 | | |
| Legend: | | | |
| RB01 | RENDERED BRICKWORK | S | STONEMARK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | STW | STONEWORK |
| | | RW | ROOF |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | P | POST |
| | | T | TIMBER FLOORS |
| | | CT | CERAMIC TILES |
| | | CPT | CARPET |
| | | PC | POLISHED CONCRETE |
| | | SP | FEATURE SCREENING |



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Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 71A |
| DRAWING NAME: | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | SCALE: | 1:1 | Rev. | V |
| | | QA: | RG | | |



POI 1 - RL 38.05 A.H.D
(-6m BELOW SITE BENCHMARK)



POI 1 - RL 32.05 A.H.D
(-12m BELOW SITE BENCHMARK)



POI 1 - RL 29.05 A.H.D
(-15m BELOW SITE BENCHMARK)



POI 1 - RL 26.05 A.H.D
(-18m BELOW SITE BENCHMARK)



POI 1 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|----------------|--------------------|-----------|------------------------|
| V | 04.03.2019 | | |
| Legend: | | | |
| RB01 | RENDERED BRICKWORK | S | STONERWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| B01 | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| SLW | SLIDING WINDOW | P | POST |
| FW | FIXED WINDOW | T | TIMBER FLOORS |
| OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| AW | AWNING WINDOW | CPT | CARPET |
| SK | SKEIGHT | PC | POLISHED CONCRETE |
| WH | WINDOW HOOD | SP | FEATURE SCREENING |
| LV | LOUVRES | | |
| RWT | RAINWATER TANK | | |



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Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 71B |
| DRAWING NAME: | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 1 - RL 23.05 A.H.D
(-21m BELOW SITE BENCHMARK)



POI 1 - RL 20.05 A.H.D
(-24m BELOW SITE BENCHMARK)



POI 1 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINFALL TANK |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 71C |
| DRAWING NAME: | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | SCALE: | 1:1 | Rev. | V |
| | | QA: | RG | | |



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| | | | | | | | | | | | | | | | |
|---|--|--|--|---|--|--|--|---|--|---|--|---|--|--|--|
| REF: V DATE: 04.03.2019 AMENDMENT: ADDITIONAL INFORMATION | | Legend: RB01 RENDERED BRICKWORK S STONEWORK SLW SLIDING WINDOW P POST RB02 RENDERED BRICKWORK R ROOF FW FIXED WINDOW T TIMBER FLOORS FB01 FACE BRICKWORK DB DOWNPIPPES CB OBSOLETE WINDOW CT CURTAIN RAILS FB02 FACE BRICKWORK DP TIMBER RATTENS AW AWNING WINDOW CPT CARPET BL BLOCKWORK DO DOOR SK SKYLIGHT PC POLISHED CONCRETE CL01 CLADDING GD GARAGE DOOR WH WINDOW/HOOD SLV SLIPWIPES SP FEATURE SCREENING CL02 CLADDING SLD SLIDING WINDOW RW RETAINING WALL BFD BIFOLD DOOR RWT RAINWATER TANK | |  DWA DESIGN WORKSHOP AUSTRALIA | | Wollongong 81a Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | | Sydney Level 10, 6 Mount Wynyard Boulevard, Woll Creek NSW 2205 Nominated Architect: Robert Gizzi (Reg. 8286) | | CLIENT: SHILOH PTY LTD SHOP TOP HOUSING ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR DRAWING NAME: VIEW ANALYSIS - POI 2 (EXISTING PHOTOS) | | DATE: JAN 18 DRAWN: AK SCALE: 1 : 1 QA: RG | | PROJECT No. 1725 DWG No. Rev. 72 V | |
| DISCLAIMER All dimensions are in millimeters. Verify all dimensions on site prior to commencement of work. Copyright © DWA. | | | | | | | | | | | | | | | |



POI 2 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 2 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 72A |
| DRAWING NAME: | VIEW ANALYSIS - POI 2 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 2 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 2 - RL 59.05 A.H.D
(15m ABOVE SITE BENCHMARK)



POI 2 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)



POI 2 - RL 56.05 A.H.D
(12m ABOVE SITE BENCHMARK)



POI 2 - RL 44.05 A.H.D
(0m ABOVE SITE BENCHMARK)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: | | | | | | |
|------------|---|------------------------|-------------------------|-------------------|--------------------|----------------------|--|--|--|
| V | 04.03.2019 | ADDITIONAL INFORMATION | RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST | | | |
| | | | RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS | | | |
| | | | FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBSCURE WINDOW | CT CERAMIC TILES | | | |
| | | | FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET | | | |
| | | | BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE | | | |
| DISCLAIMER | All dimensions are in millimeters. Verify all dimensions on site prior to commencement of workwork. GROUNDWORK. | | CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | | | | |
| | | | CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | | | | |
| | | | RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | | | | |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 72B |
| DRAWING NAME: | VIEW ANALYSIS - POI 2 (PROPOSED PHOTOS) | SCALE: | 1:1 | Rev. | V |
| | | QA: | RG | | |



POI 3 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 3 - RL 71.05 A.H.D
(27m ABOVE SITE BENCHMARK)



POI 3 - RL 68.05 A.H.D
(24m ABOVE SITE BENCHMARK)



POI 3 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 3 - RL 62.05 A.H.D
(18m ABOVE SITE BENCHMARK)



POI 3 - RL 59.05 A.H.D
(15m ABOVE SITE BENCHMARK)



POI 3 - RL 56.05 A.H.D
(12m ABOVE SITE BENCHMARK)



POI 3 - RL 53.05 A.H.D
(9m ABOVE SITE BENCHMARK)



POI 3 - RL 50.05 A.H.D
(6m ABOVE SITE BENCHMARK)



POI 3 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
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| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEMARK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BB | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | LV | LOUVRES |
| | | BFD | BIFOLD DOOR |
| | | RWT | RAINWATER TANK |
| | | SW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SUNLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT:
SHILOH PTY LTD
SHOP TOP HOUSING

ADDRESS:
16 COLLEGE AVENUE, SHELLHARBOUR

DRAWING NAME:
VIEW ANALYSIS - POI 3 (EXISTING PHOTOS)

DATE: JAN 18
DRAWN: AK
SCALE: 1:1
QA: RG

PROJECT No.
1725
DWG No.
73

Rev.
V

ADDITIONAL INFORMATION



POI 3 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 3 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 3 - RL 53.05 A.H.D
(9m ABOVE SITE BENCHMARK)



POI 3 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

ADDITIONAL INFORMATION

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| | | | | | | | | | |
|--------|------------------|-----------------------------------|---|---|--|--|--|---|--|
| REF: V | DATE: 04.03.2019 | AMENDMENT: ADDITIONAL INFORMATION | Legend: RB01 RENDERED BRICKWORK RB02 RENDERED BRICKWORK FB01 FACE BRICKWORK FB02 FACE BRICKWORK BL BLOCKWORK CL01 CLADDING CL02 CLADDING RW RETAINING WALL S STONEWORK R ROOF DP DOWNPIPES TB TIMBER BATTENS D DOOR GD GARAGE DOOR SLD SLIDING DOOR BFD BI-FOLD DOOR SLW SLIDING WINDOW FW FIXED WINDOW OB OBSCURE WINDOW AW AWNING WINDOW SK SKYLIGHT WH WINDOW HOOD LV LOUVRES RWK RAINWATER TANK P POST T TIMBER FLOORS CT CERAMIC TILES CPT CARPET PC POLISHED CONCRETE SP FEATURE SCREENING | DWA DESIGN WORKSHOP AUSTRALIA | Wollongong 81a Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Wooli Creek NSW 2205 Nominated Architect: Robert Gizzi (Reg. 8286) | CLIENT: SHLOH PTY LTD SHOP TOP HOUSING ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR DRAWING NAME: VIEW ANALYSIS - POI 3 (PROPOSED PHOTOS) | DATE: JAN 18 DRAWN: AK SCALE: 1:1 QA: RG | PROJECT No. 1725 DWG No. 73A Rev. V |
|--------|------------------|-----------------------------------|---|---|--|--|--|---|--|



POI 4 - RL 56.35 A.H.D
(50m ABOVE LOCATION BENCHMARK)



POI 4 - RL 50.35 A.H.D
(44m ABOVE LOCATION BENCHMARK)



POI 4 - RL 44.35 A.H.D
(38m ABOVE LOCATION BENCHMARK)



POI 4 - RL 38.35 A.H.D
(32m ABOVE LOCATION BENCHMARK)



POI 4 - RL 32.35 A.H.D
(26m ABOVE LOCATION BENCHMARK)



POI 4 - RL 26.35 A.H.D
(20m ABOVE LOCATION BENCHMARK)



POI 4 - RL 20.35 A.H.D
(14m ABOVE LOCATION BENCHMARK)



POI 4 - RL 17.35 A.H.D
(11m ABOVE LOCATION BENCHMARK)



POI 4 - RL 8.35 A.H.D
(2m ABOVE LOCATION BENCHMARK)



POI 4 - DRONE LOCATION
LOCAL BENCHMARK USED (RL 6.35 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| V | 04.03.2019 | | |

| Legend: | | | |
|-------------------------|-------------------|--------------------|----------------------|
| RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: VIEW ANALYSIS - POI 4 (EXISTING PHOTOS)

DATE: JAN 18
DRAWN: AK
SCALE: 1:1
QA: RG

PROJECT No. 1725
DWG No. 74
Rev. V

ADDITIONAL INFORMATION



POI 4 - RL 56.35 A.H.D
(50m ABOVE LOCATION BENCHMARK)



POI 4 - RL 50.35 A.H.D
(44m ABOVE LOCATION BENCHMARK)



POI 4 - RL 44.35 A.H.D
(38m ABOVE LOCATION BENCHMARK)



POI 4 - RL 38.35 A.H.D
(32m ABOVE LOCATION BENCHMARK)



POI 4 - DRONE LOCATION
LOCAL BENCHMARK USED (RL 6.35 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | SW | SLIDING WINDOW |
| | | RW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKEW |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 74A |
| DRAWING NAME: | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 4 - RL 32.35 A.H.D
(26m ABOVE LOCATION BENCHMARK)



POI 4 - RL 26.35 A.H.D
(20m ABOVE LOCATION BENCHMARK)



POI 4 - RL 20.35 A.H.D
(14m ABOVE LOCATION BENCHMARK)



POI 4 - RL 17.35 A.H.D
(11m ABOVE LOCATION BENCHMARK)



POI 4 - DRONE LOCATION
LOCAL BENCHMARK USED (RL 6.35 A.H.D.)

DISCLAIMER
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| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BB | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BI-FOLD DOOR |
| SLW | SLIDING WINDOW | P | POST |
| FW | FIXED WINDOW | T | TIMBER FLOORS |
| OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| AW | AWNING WINDOW | CPT | CARPET |
| SK | SKYLIGHT | PC | POLISHED CONCRETE |
| WH | WINDOW HOOD | SP | FEATURE SCREENING |
| LV | LOUVRES | | |
| RWT | RAINWATER TANK | | |



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Nominated Architect:
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ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 74B |
| DRAWING NAME: | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 5 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 5 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 5 - RL 59.05 A.H.D
(15m ABOVE SITE BENCHMARK)



POI 5 - RL 50.05 A.H.D
(6m ABOVE SITE BENCHMARK)



POI 5 - RL 41.05 A.H.D
(-3m BELOW SITE BENCHMARK)



POI 5 - PEDESTRIAN EYE VIEW
(1.5m ABOVE NATURAL GRND STREET LEVEL)



POI 5 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
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| REF. | DATE | AMENDMENT | Legend: | | | |
|------|------------|------------------------|-------------------------|-------------------|--------------------|----------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION | RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| | | | RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| | | | FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| | | | BB BLOCKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| | | | CL01 CLADDING | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| | | | CL02 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| | | | RW RETAINING WALL | SLD SLIDING DOOR | LV LOUVRES | |
| | | | | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 75 |
| DRAWING NAME: | VIEW ANALYSIS - POI 5 (EXISTING PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 5 - RL 74.05 A.H.D
(30m ABOVE SITE BENCHMARK)



POI 5 - RL 65.05 A.H.D
(21m ABOVE SITE BENCHMARK)



POI 5 - RL 59.05 A.H.D
(15m ABOVE SITE BENCHMARK)



POI 5 - RL 50.05 A.H.D
(6m ABOVE SITE BENCHMARK)



POI 5 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BIFOLD DOOR |
| | | SW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 75A |
| DRAWING NAME: | VIEW ANALYSIS - POI 5 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |



POI 5 - RL 41.05 A.H.D
(-3m BELOW SITE BENCHMARK)



POI 5 - PEDESTRIAN EYE VIEW
(1.5m ABOVE NATURAL GRND STREET LEVEL)



POI 5 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

ADDITIONAL INFORMATION

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: | | | | | | | | | | Wollongong | | Sydney | | CLIENT: | SHILOH PTY LTD | DATE: | JAN 18 | PROJECT No. |
|------|------------|------------------------|---------|--------------------|-----|----------------|-----|----------------|----|-------------------|-----|-------------------|---|---|---------------------------------|--------|---------|----------------|-------|--------|-------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION | R801 | RENDERED BRICKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST | T | TIMBER FLOORS | 81a Princes Highway, Fairy Meadow NSW 2519 | Level 10, 6 Mount Olympus Boulevard, Wolli Creek NSW 2205 | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | 1725 | | | |
| | | | F801 | FACE BRICKWORK | DP | DOWNPIPES | OB | OBSCURE WINDOW | CT | CERAMIC TILES | CPT | CARPET | Tel: (02) 4227 1661 | | | SCALE: | 1 : 1 | DWG No. | Rev. | | |
| | | | F802 | FACE BRICKWORK | TB | TIMBER BATTENS | AW | AWNING WINDOW | D | DOOR | SK | SKEW | Email: info@designworkshop.com.au | Nominated Architect: Robert Gizzi (Reg. 8286) | | | | | | | |
| | | | B- | BLOCKWORK | D | DOOR | SK | SKEW | PC | POLISHED CONCRETE | SP | FEATURE SCREENING | Web: www.designworkshop.com.au | | | | | | | | |
| | | | CL01 | CLADDING | GD | GARAGE DOOR | WH | WINDOW HOOD | | | | | | | | | | | | | |
| | | | CL02 | CLADDING | SLD | SLIDING DOOR | LV | LOUVRES | | | | | | | | | | | | | |
| | | | RW | RETAINING WALL | BFD | BH-FOLD DOOR | RWT | RAINWATER TANK | | | | | | | | | | | | | |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DWA.



POI 6 - RL 124.05 A.H.D
(80m ABOVE SITE BENCHMARK)



POI 6 - RL 115.05 A.H.D
(71m ABOVE SITE BENCHMARK)



POI 6 - RL 106.05 A.H.D
(62m ABOVE SITE BENCHMARK)



POI 6 - RL 97.05 A.H.D
(53m ABOVE SITE BENCHMARK)



POI 6 - RL 94.05 A.H.D
(50m ABOVE SITE BENCHMARK)



POI 6 - RL 91.05 A.H.D
(47m ABOVE SITE BENCHMARK)



POI 6 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| V | 04.03.2019 | | |

| Legend: | | | |
|---------|--------------------|-----|----------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
| RB02 | RENDERED BRICKWORK | R | ROOF |
| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
| FB02 | FACE BRICKWORK | TB | TIMBER BATTENS |
| BL | BLOCKWORK | D | DOOR |
| CL01 | CLADDING | GD | GARAGE DOOR |
| CL02 | CLADDING | SLD | SLIDING DOOR |
| RW | RETAINING WALL | BFD | BH-FOLD DOOR |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
| | | SK | SKYLIGHT |
| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |



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Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: VIEW ANALYSIS - POI 6 (EXISTING PHOTOS)

DATE: JAN 18
DRAWN: AK
SCALE: 1 : 1
QA: RG
PROJECT No. 1725
DWG No. 76
Rev. V

ADDITIONAL INFORMATION



POI 6 - RL 124.05 A.H.D
(80m ABOVE SITE BENCHMARK)



POI 6 - RL 115.05 A.H.D
(71m ABOVE SITE BENCHMARK)



POI 6 - RL 106.05 A.H.D
(62m ABOVE SITE BENCHMARK)



POI 6 - RL 97.05 A.H.D
(53m ABOVE SITE BENCHMARK)



POI 6 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT | Legend: | | | |
|------|------------|------------------------|-------------------------|-------------------|--------------------|----------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION | RB01 RENDERED BRICKWORK | S STONEWORK | SLW SLIDING WINDOW | P POST |
| | | | RB02 RENDERED BRICKWORK | R ROOF | FW FIXED WINDOW | T TIMBER FLOORS |
| | | | FB01 FACE BRICKWORK | DP DOWNPIPES | OB OBLIQUE WINDOW | CT CERAMIC TILES |
| | | | FB02 FACE BRICKWORK | TB TIMBER BATTENS | AW AWNING WINDOW | CPT CARPET |
| | | | BL BLOCKWORK | D DOOR | SK SKYLIGHT | PC POLISHED CONCRETE |
| | | | CL01 CLADDING | GD GARAGE DOOR | WH WINDOW HOOD | SP FEATURE SCREENING |
| | | | CL02 CLADDING | SLD SLIDING DOOR | LV LOUVRES | |
| | | | RW RETAINING WALL | BFD BI-FOLD DOOR | RWT RAINWATER TANK | |



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Wooli Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

| | | | | | |
|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 76A |
| | | SCALE: | 1 : 1 | Rev. | V |
| DRAWING NAME: | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | QA: | RG | | |



POI 6 - RL 94.05 A.H.D
(50m ABOVE SITE BENCHMARK)



POI 6 - RL 91.05 A.H.D
(47m ABOVE SITE BENCHMARK)



POI 6 - RL 88.05 A.H.D
(44m ABOVE SITE BENCHMARK)



POI 6 - RL 85.05 A.H.D
(41m ABOVE SITE BENCHMARK)



POI 6 - DRONE LOCATION
SITE BENCHMARK USED (RL 44.05 A.H.D.)

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| V | 04.03.2019 | ADDITIONAL INFORMATION |

| Legend: | | | |
|---------|--------------------|-----|-------------------|
| RB01 | RENDERED BRICKWORK | S | STONEWORK |
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| FB01 | FACE BRICKWORK | DP | DOWNPIPES |
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| | | WH | WINDOW HOOD |
| | | LV | LOUVRES |
| | | RWT | RAINWATER TANK |
| | | SLW | SLIDING WINDOW |
| | | FW | FIXED WINDOW |
| | | OB | OBSCURE WINDOW |
| | | AW | AWNING WINDOW |
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Nominated Architect:
Robert Gizzi (Reg. 8286)

ADDITIONAL INFORMATION

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|---------------|---|--------|--------|-------------|------|
| CLIENT: | SHILOH PTY LTD SHOP TOP HOUSING | DATE: | JAN 18 | PROJECT No. | 1725 |
| ADDRESS: | 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: | AK | DWG No. | 76B |
| DRAWING NAME: | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | SCALE: | 1 : 1 | Rev. | V |
| | | QA: | RG | | |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| 1A Apartment Building Types | <p>Shop top apartments are mixed use residential buildings often located in established centres, along main streets or close to public transport hubs. They can be small infill or larger developments where the ground floor is occupied by retail or commercial uses. Shop top apartments typically range between two and six storeys and are best used when:</p> <ul style="list-style-type: none"> increased residential uses are desired in established retail and commercial areas the context is a traditional main street zero setbacks to side boundary walls are possible or desired active frontages such as retail tenancies are desired at street level pedestrian activity on the street is desired rear lane access is available. | <p>The proposal is located within the heart of Shellharbour City Centre, with frontage to College Avenue which is the most dominant local road.</p> <p>Apartments have been orientated to receive maximum solar access possible on site that has a more narrow northern elevation.</p> <p>The site provides street activation at all four frontages and includes a through site link. These design outcomes are consistent with the desired outcome of the site and city centre.</p> | Satisfactory |
| 1B Local Character & Context | <p>Good design responds and contributes to its context. Context is everything that has a bearing on an area and comprises its key natural and built features.</p> <p>Context also includes social, economic and environmental factors.</p> | <p>The development has been influenced by the establishment of a site specific urban design analysis, and as a result the proposal in its final form is in keeping with this section.</p> <p>Further to the above the proposal has responded well to a Design Review Panel process.</p> <p>Overall the proposal provides outstanding street activation, consideration of public domain and context along with appropriate built form that supports additional height to the southern end of the building.</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| 1C Precincts and Individual Site | <p>Precincts are characterised by large land parcels or a group of larger sites undergoing extensive change. These sites often need to be restructured to support a change of land use mix, building height and density.</p> <p>Precinct plans typically incorporate new streets and infrastructure, through-site links and public open spaces that relate in scale, location and character to the local context.</p> | The site is located within Precinct D within Shellharbour Development Control Plan – City Centre. The design elements of the Plan have been addressed primarily by the revised street activation solution as well as the through site link provided within the site. | Satisfactory |
| 2A Primary Controls | Primary development controls are the key planning tool used to manage the scale of development so that it relates to the context and desired future character of an area and manages impacts on surrounding development. | The proposal does not comply with the development standards applicable to the site however the development does respond to the objectives of the development standards and as a result has contributed to enhancing the current built form context. This proposal is seen to be in keeping with more recent developments which also have height increases different to the development standards contained within the SLEP 2013 and consistent with the design outcomes communicated within these design guidelines A more detailed response to this is found in Attachment 4. | Satisfactory |
| 2B Building Envelopes | <p>A building envelope is a three-dimensional volume that defines the outermost part of a site that the building can occupy.</p> <p>Building envelopes set the appropriate scale of future development in terms of bulk and height relative to the streetscape, public and private open spaces, and block and lot sizes in a particular location.</p> | Overall the bulk and scale of the development has been well considered and consistent with the current built form surrounding the site. | Satisfactory |
| 2C Building Height | Height controls should be informed by decisions about daylight and solar access, | By allowing for additional height at the southern end there is otherwise no significant impact to adjoining | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | roof design and use, wind protection, residential amenity and in response to landform and heritage. | properties through aspects such as overshadowing, access to solar and privacy, and is discussed in further detail at section 4A. | |
| 2D Floor Space Ratio | Floor space ratio (FSR) is the relationship of the total gross floor area (GFA) of a building relative to the total site area it is built on. | FSR proposed at 2.93:1, this has been reduced from the submitted amount of 3.18:1. The site location and orientation lends itself to a built form that allows a FSR of this scale. | Satisfactory |
| 2F Building Separation | <p>Building separation is the distance measured between building envelopes or buildings.</p> <p>Separation between buildings contributes to the urban form of an area and the amenity within apartments and open space areas.</p> <p>Minimum separation distances for buildings are:</p> <p>Up to 8 storeys – 9-18m Up to 4 storeys – 6-12m</p> | <p>The proposal stretching from the middle & northern end consists of 4 residential storeys. The setback in this area from the adjoining Mixed Use Development (MUD) to the north is greater than the required at 12.7m.</p> <p>The proposal at the southern end is 6 residential storeys, the setback in this area from the adjoining MUD to the west is appropriate at 12m.</p> <p>Internally the development provides 6m separation in 2 sections. (Refer to Attachment 2, drawings 25-30).</p> | Satisfactory |
| 2G-H Setbacks | <p>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street.</p> <p>Determine street setback controls relative to the desired streetscape and building forms.</p> | <p>The proposal has been well located on the site in terms of overall development. It has adequately designed around the uneven nature of the site which sees the northern elevation being shorter than others.</p> <p>The proposal is a not set out as a typical boundary to boundary proposal as seen with earlier developments in the city centre, rather site specific to take advantage of orientation and views along with reducing visual impact associated with development that has harsh forms of street treatment. This approach is more consistent which more recent developments including the adjoining Civic Centre proposal.</p> <p>There is no vehicle parking at street level. The basement access to the western elevation has been well incorporated into the main building</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | | design. | |
| 3A Site Analysis | <p>Site analysis is an important part of the design process and should be undertaken at the outset of a project to inform the design principles.</p> <p>Development proposals need to illustrate that design decisions are based on careful analysis of the site conditions and relationship to the surrounding context.</p> | | Satisfactory |
| 3B Orientation | <p>Buildings must be oriented to maximise northern orientation, response to desired character, promote amenity for the occupant and adjoining properties, retain trees and open spaces and respond to contextual constraints such as overshadowing and noise.</p> | <p>The site is rectangular in shape, with the shorter elevation being northern. Whilst this is somewhat restrictive, the design has been able to orientate a proportion of the apartments to the northern elevation.</p> <p>The development has attempted to address these considerations including a reasonable amount of solar access to apartments – 3hrs to >70% between 8am – 4pm & 3.68hrs average sunlight to 79% of apartment between 9am-3pm.</p> <p>Adjoining properties are not unreasonably impacted by the proposal. There is no existing vegetation.</p> <p>Common areas accessible by all apartments, have been provided at roof top level with appropriate facilities. There is great northern aspect with solar access to this area well and above the minimum requirements & overall seen as outstanding.</p> | Satisfactory |
| 3C Public Domain Interface | <p>Terraces, balconies and courtyards should have direct street entry, where appropriate</p> <p>Changes in level between private terraces etc above street level provide surveillance and improved visual privacy for ground level dwellings.</p> <p>Front fences and walls</p> | <p>There are no apartments at street level, with 7 business premises located at those levels.</p> <p>Upper level balconies and platform areas provide appropriate passive surveillance.</p> | <p>N/A</p> <p>Satisfactory</p> |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | <p>along street frontages should use visually permeable materials and treatments. The height of solid fences or walls should be limited to 1m.</p> <p>Garbage storage areas, substations, pump rooms and other service requirements should be located in basement car parks.</p> | <p>No fencing proposed</p> <p>Facilities appropriately provided in basement areas. Each element has been considered in required detail.</p> | <p>N/A</p> <p>Satisfactory</p> |
| 3D Communal And Public Open Space | <p>Communal open space (COS) minimum area equal to 25% of the site (835.25sqm)</p> <p>Minimum of 50% direct sunlight to the principal usable part of the COS for a min of 2 hours between 9am- 3pm mid- winter</p> | <p>A total of 1460.1sqm – 45.4% of COS has been provided, and is distributed throughout the development. These areas are at the roof top level of 4 & 7.</p> <p>There is significant northern aspect with solar access to this area. The minimum requirements are met and overall the area is more than appropriate.</p> | Satisfactory |
| 3E Deep Soil Zones | Site area greater than 1,500sqm- min 6m deep DSZ & equivalent to 7% of site area = 1017m ² | <p>The development provides only a small amount (11sqm) of deep soil planting which doesn't meet the minimum requirements of this control,</p> <p>The proposal rather relies on landscaping across various levels to support the application at residential levels. This includes both roof terraces that are well landscaped and support the surrounding Common Open Space.</p> | <p>Non-compliant.</p> <p>Variation supported</p> |
| 3F Visual privacy (separation distances from buildings to the side and rear boundaries) | <p><u>Up to 12m</u> (4 storeys) - 6m (habitable rooms & balconies); 3m (non – habitable rooms)</p> <p><u>Up to 25m</u> (5-8 storeys) – 9m (habitable rooms & balconies)</p> <p>4.5m (non – habitable rooms)</p> <p><u>Over 25m</u> (L8 and above)</p> <p>12m (habitable rooms & balconies)</p> <p>6m (non – habitable</p> | <p>The proposal is 6 residential storeys at southern end to a maximum height of 27.54m in height. 3-4 residential storeys, to 18m at the middle section through to the northern end.</p> <p>The apartments are either within the 12-25m (5-8 storey) section, with the others in the upto 4 storeys.</p> <p>Attachment 2, Drawing 35, Rev Y, - shows that the separation between adjoining developments is a minimum of 12.7m (Bimbala Place) & 12m</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | rooms) No separation is required between blank walls | (Moolawang Place). | |
| 3G Pedestrian Access And Entries | <p>Good pedestrian access delivers high quality, equitable, safe and pleasant walking environments along the street, into the development and to individual apartments.</p> <p>Multiple entries should be provided to activate the street edge.</p> <p>Buildings entries should be clearly identifiable and communal entries should be clearly distinguishable from private entries.</p> | <p>The development proposes multiple entries for residents through a combination of lifts & stairs access.</p> <p>The residential lobby has been appropriately separated from the business lobby areas.</p> <p>Multiple pedestrian access are provided at street level, including a generous through site link from College Avenue to Moolawang Place.</p> | Satisfactory |
| 3H Vehicle Access | <p>Car park entries should be located behind the building line</p> <p>Access point locations should avoid headlight glare to habitable rooms.</p> <p>Garbage collection, loading and service areas should be screened.</p> <p>Vehicle and pedestrian access should be clearly separated to improve safety.</p> <p>Where possible, vehicle access points should not dominate the streetscape and be limited to the minimum width possible.</p> | <p>1 clearly defined vehicle access is provided at the western elevation via Moolawang Pl. Access is inset from the street to allow for appropriate vehicle movement, including entering and leaving in a forward direction</p> <p>There are no adjoining habitable rooms at lower ground floor level or in a position to receive unreasonable light glare given that the upper ground level directly above contains only business premises.</p> <p>Garbage storage & collection locations are within basement, with 1 way in-out arrangement from Moolawang Place through to Bimbala Place.</p> <p>There is no significant pedestrian safety concerns raised.</p> <p>Overall the vehicle access points are appropriately located and not on the primary frontage & are well presented within the western/northern elevations.</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| 3J Bicycle And Car Parking | <p>Onsite parking can be located underground, above ground within a structure or at grade.</p> <p>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments (GTGD), or the car parking requirement prescribed by the relevant council, whichever is less. The car parking needs for a development must be provided off street.</p> <p>Requirement;</p> <p>1 per apartment - 77 spaces (14.2.1 -SDCP)</p> <p>0.2 per unit visitor spaces – 15.4 spaces (RMS Guide TGD)</p> <p>Bicycle parking</p> | <p>All parking is appropriately contained within 2 basement parking levels.</p> <p>Proposed;</p> <p>77 apartment spaces</p> <p>16 visitor spaces</p> <p>28 apartment & 7 visitor</p> | Satisfactory |
| 4A Solar And Daylight Access | <p>Living rooms and private open space, 3 hours direct sunlight in mid-Winter to 70% of units.</p> | <p>The development has apartments that are well orientated to the northern & eastern elevation of the building to take advantage of sunlight, however the site being of rectangular shape also results in apartments to the south & west that will receive less direct sunlight during the nominated time.</p> <p>The applicant engaged SLR Consulting to provide a detailed solar access analysis report of each apartment. The compliance table indicates that only 34 of the 77 apartments achieves 3 hour direct sun compliance – 44.15%.</p> <p>City Plan as the planning consultant on behalf of the applicant have provided a variation request to the section, outlining in detail why the 2hr direct sun, which is applicable to Sydney along with neighboring Wollongong LGA, is more appropriate for this development in the CBD of Shellharbour City Centre.</p> | Non-compliant. Variation proposed. |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | | <p>The variation states that the proposal remains consistent with the objectives of this section;</p> <p><i>When applying the Apartment Design Guide, it is important to take note that the ADG is not intended to be, and should not be applied as, a set of strict development standards (Planning Circular PS 17-001). The focus instead is on whether the relevant objective (4A-1) is satisfied, which in this case is whether the proposal has optimised the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.</i></p> <p><i>Solar access at the 3hr standard is severely constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting, at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.</i></p> <p><i>Considered on balance with the overall design excellence exhibited by the proposal, the superior and expanded public domain that will be created when the site is finally redeveloped, the proximity of good public open space and the provision of excellent communal open space with unrestricted sunlight access, we consider that the proposal comprehensively satisfies Objective 4A-1 and the nine design quality principles generally.</i></p> <p>Officer comment:</p> <p>It has been clearly demonstrated that 61, being 79.1% of the apartments receive a minimum of 2hrs sun light</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | Units receiving no direct sun light between 9am and 3pm mid-winter - 15% maximum | <p>between these times. The average across these is 3.68 hours direct sun to each of those apartments.</p> <p>When extending the time period by just 1 hour either way (8am-4pm) 60 apartments, being 77.9% receive 3 hours direct sun light, which is above the minimum 70%.</p> <p>This combined with the enormous amount of Common Open Space – 1460.10sqm, which being located on the roof top, will receive full unobstructed solar access between 9am-3pm.</p> <p>See appendix 1 below from SLR consulting detail this.</p> <p>The development is well orientated to ensure that the amount of apartments receiving no direct sun is less than 15% - 11 (14.28%)</p> | |
| 4B Natural Ventilation | <p>60% of units to be naturally cross ventilated in the first nine storeys of the building.</p> <p>Overall depth of a cross-over or cross-through apartment does not exceed 18m.</p> | <p>60% x 77 = 46 apartments should include natural cross ventilation within this project.</p> <p>26 apartments are found to benefit from natural cross-ventilation. This represents only 33.8% and the proposal is non-compliant with the requirement for natural cross-ventilation.</p> <p>SLR consultants were commissioned by the applicant to complete a Natural Ventilation Assessment. See appendix 2 below or Attachment 5 for full assessment.</p> <p>The findings of this assessment concluded that with mechanical ventilation measures 50 (64.9%) of the apartments.</p> <p><i>This analysis has been made on the basis of our best engineering judgment and on the experience gained from model scale wind tunnel testing or Computational Fluid Dynamics (CFD) analysis of a range of developments of similar magnitude to the currently proposed development.</i></p> | Satisfactory |
| 4C Ceiling Heights | Habitable rooms 2.7m | Plans show minimum ceiling heights of 2.7m for residential apartments. | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| | | Ceiling heights of the business premises meet the minimum requirement. | |
| 4D-1 Apartment Size And Layout | 1 bedroom 50m ² 2 bedroom 70m ² 3 bedroom 90m ² The minimum internal areas include only one bathroom. Additional bathrooms (AB) increase the minimum internal area by 5m ² each. | All apartment sizes have been shown on plans to be above the minimum requirements for respective sizes. The minimum size for these are as follows: 1 bed – 51.8sqm 2 bed – 70sqm 2 bed with AB - 78.1sqm 3 bed with AB - 95.7sqm | Satisfactory |
| | Every habitable room is to have a window in an external wall with a minimum glass area of 10% of the floor area of the room. | Windows Comply | Satisfactory |
| 4D-2 | Habitable room depths are limited to a maximum of 2.5 x the ceiling height. | Apartment floor plans show habitable room location and setbacks in accordance with this. | Satisfactory |
| 4E Private Open Space And Balconies | Private open spaces are outdoor spaces of the apartment, including balconies, courtyards and terraces, which enhance the amenity and indoor/outdoor lifestyle of residents. 1 bedroom apartments 8m ² 2m depth 2 bedroom apartments 10m ² 2m depth 3+ bedroom apartments 12m ² 2.4m depth. | All balconies areas are shown on plans to exceed minimum area requirements. | Satisfactory |

| Key SEPP 65 Standards | | | |
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| | Control | Comment | Complies |
| 4F Common Circulation Spaces | <p>The maximum number of apartments off a circulation core on a single level is 8 (no more than 12).</p> <p>Daylight and natural ventilation to circulation cores</p> <p>Articulate longer corridors >12m in length</p> | <p>Applicant states proposal addresses the requirements of the code by;</p> <ul style="list-style-type: none"> - <i>Providing generous and articulated circulation spaces</i> - <i>Utilising robust materials in circulation areas.</i> - <i>Circulation area are well lit with natural light</i> <p><i>Natural light has been increased in the Business lobby and through site link through the addition of skylights.</i></p> | Variation proposed |
| 4G Storage | <p>Studio apartments 4m³</p> <p>1 bedroom apartments 6m³</p> <p>2 bedroom apartments 8m³</p> <p>3+ bedroom apartments 10m³</p> | <p>Plans show storage is provided within units. Further storage (77 individual units) is provided within the parking areas in the following;</p> <ul style="list-style-type: none"> - 37 individual storage areas within the residential parking space. - 40 individual storage areas within common area of basement <p>Detailed compliance table provided showing the allocation for each apartment (refer to DWG 32-33. Rev.V Attachment 2)</p> | Satisfactory |
| 4H Acoustic Privacy | <p>Adequate building separation is required (see section 2F above).</p> <p>Noisy areas within buildings should be located next to or above each other and quieter areas next to or above quieter areas.</p> <p>Storage, circulation areas and non-habitable rooms should be located to buffer noise from external sources.</p> <p>Noise sources such as garage doors, plant rooms, active communal open spaces and circulation areas should be located at least 3m away from bedrooms.</p> | <p>Development has provided acoustic report by Harwood Acoustics detailing impacts, measures & stating compliance – Councils environmental assessment officer has reviewed the proposal in detail & is satisfied subject to conditions the proposal is consistent with the requirements.</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
|----------------------------|--|--|--------------|
| | Control | Comment | Complies |
| 4J Noise And Pollution | In noisy or hostile environments the impacts of external noise and pollution are minimised through the careful siting and layout of buildings | Development has provided acoustic report by Harwood Acoustics detailing impacts, measures & compliance. | Satisfactory |
| 4K Apartment Mix | <p>A range of apartment types and sizes is provided to cater for different household types now and into the future</p> <p>The apartment mix is distributed to suitable locations within the building</p> | <p>1 bed x 15 2 bed x 50 3 bed x 12</p> <p>64.9% are provided as 2 bedroom apartments with the remaining 33.1% mixed.</p> <p>The type of breakdown is not unreasonable in city center location.</p> | Satisfactory |
| 4L Ground Floor Apartments | Direct street access should be provided to ground floor apartments | No ground level apartments with direct street access. | N/A |
| 4M Facades | <p>To ensure that building elements are integrated into the overall building form and façade design.</p> <p>The front building facades should include a composition of varied building elements, textures, materials, detail and colour and a defined base, middle and top of building.</p> <p>Building services should be integrated within the overall façade.</p> <p>Building facades should be well resolved with an appropriate scale and proportion to the streetscape and human scale.</p> <p>To ensure that new developments have facades which define and enhance the public domain and desired street character.</p> | <p>Overall design and external materials of the development appear to be well thought-out and are appropriate in the locality.</p> <p>The façade treatment shows regard to the adjacent Civic Center building & the future desired character.</p> <p>Appropriate choice of materials and the like clearly and appropriately define certain elements of the building.</p> <p>The façade design assists with ensuring the overall bulk & scale impact on the streetscape of the current and future public domain is appropriate.</p> | Satisfactory |

| Key SEPP 65 Standards | | | |
|---------------------------|--|---|--------------|
| | Control | Comment | Complies |
| 4N Roof Design | Roof design should use materials and a pitched form complementary to the building and adjacent buildings. | Roof areas are designed to incorporate common open space including usable facilities like BBQ, community garden and landscape features. Screening of required services is provided through integration with pergolas and use of materials. | Satisfactory |
| 4O Landscape Design | Landscape design should be environmentally sustainable and can enhance environmental performance Ongoing maintenance plans should be prepared | High amount of landscaping provided across the site roof top level of both COS area. At ground level a forecourt area which includes landscaping area, is provided which mirrors the adjoining Civic Centre area including a mature Palm tree. At the northern end 11sqm of deep soil planting has been incorporated to screen the wall of the building. At the western elevation planting boxes have been included into the design as a feature. | Satisfactory |
| 4P Planting on Structures | Structures are reinforced for additional saturated soil weight | Appropriate amount of landscaping has been integrated around the proposal consistent with that outlined in this section. | Satisfactory |
| 4Q Universal Design | A universally designed apartment provides design features such as wider circulation spaces, reinforced bathroom walls and easy to reach and operate fixtures | The proposal has been designed with the required matters in mind, with multiple forms of access and the required amount of adaptable apartments being 16 (>20%). | Satisfactory |
| 4R Adaptive Reuse | Adapted buildings provide residential amenity while not precluding future adaptive reuse | N/A – Site is vacant & has not been previously developed | N/A |

| Key SEPP 65 Standards | | | |
|--------------------------------------|---|--|--------------|
| | Control | Comment | Complies |
| 4S Mixed Use | <p>Mixed use development includes multiple uses in one building. In areas zoned for mixed use development building design should allow for a range of non-residential uses.</p> <p>Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.</p> <p>Residential levels of the building are integrated within the development, safety and amenity is maximised for residents.</p> | <p>Proposal provides 7 business premises over 2 floors (Lower & Upper Ground) to street level including the required active street frontages. These vary size (121.2sqm – 360.6sqm) which will allow for variety in future tenants.</p> <p>The design has appropriate pedestrian connectivity with multiple access and a well-defined through site link.</p> | Satisfactory |
| 4T Awnings And Signage | <p>Awnings should be located along streets with high pedestrian activity and active frontages</p> <p>Signage should be integrated into the building design and respond to the scale, proportion and detailing of the development</p> | <p>Awnings are provided over entries where required within the property boundaries.</p> <p>Lighting plans have been completed by suitably consultant.</p> <p>Future signage locations have been considered on awning as shown on elevation & perspective drawings.</p> | Satisfactory |
| 4U Energy Efficiency | <p>Adequate natural light is provided to habitable rooms (see 4A Solar and daylight access)</p> <p>Provision of consolidated heating and cooling infrastructure should be located in a centralised location</p> | BASIX Assessment and Design Statement have required detail. | Satisfactory |
| 4V Water Management And Conservation | <p>Water sensitive urban design systems are designed by a suitably qualified professional</p> <p>Detention tanks should be located under paved areas, driveways or in basement car parks</p> | The BASIX assessment and Design Statement demonstrate that the proposed business / commercial space and residential units have been designed for optimal energy efficiency. | Satisfactory |

| Key SEPP 65 Standards | | | |
|-------------------------|---|--|--------------|
| | Control | Comment | Complies |
| 4W Waste Management | Common waste and recycling areas should be screened from view and well ventilated. Communal waste and recycling rooms are in convenient and accessible locations related to each vertical core | Waste Management Report provided by qualified consultant Elephant Waste addresses the required considerations in detail. Waste rooms have been evenly spread out within the basement area to ensure they are easily accessible. | Satisfactory |
| 4X Building Maintenance | Design solutions such as roof overhangs to protect walls and hoods over windows and doors to protect openings can be used. Window design enables cleaning from the inside of the Building. | Required considerations have been made by applicant for future maintenance of the development. Relevant condition applied for operation management plan of the Common Open Space areas and Commercial Premises. | Satisfactory |

Appendix 1 – (SLR Consulting) – Key findings related to 4A

EXECUTIVE SUMMARY

SLR has been engaged by Shiloh Properties Pty Ltd to conduct a detailed solar access analysis of the proposed development at 16 College Avenue, Shellharbour.

The State Environmental Planning Policy (SEPP) 65 supported by the Apartment Design Guide - Part 04 is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.

SLR has also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.

Results of solar access to 1m² of living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 8.00 am and 4.00 pm inclusive are summarised in **Table 5** of this report.

Further, SLR has found there will be solar access to more than 50% of the communal open space across the full 6 hour assessment period.

3 Solar Access to Residential Buildings

3.1 Daylighting Considerations

The State Environmental Planning Policy (SEPP) 65 supported by the Apartment Design Guide - Part 04 is relevant to the assessment of the daylight access into residential component of the proposed development in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

SLR has been instructed to assess against the ADG requirements. Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartments during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm.

Appendix 2 – Natural Ventilation Assessment (SLR Consulting) – Key Findings Related To 4B

EXECUTIVE SUMMARY

SLR Consulting Pty Ltd (SLR) has been engaged by Shiloh Properties Pty Ltd to undertake a natural ventilation assessment of the proposed mix-use development at 16 College Avenue, Shellharbour. This assessment forms part of the Development Application to Council.

The State Environmental Planning Policy (SEPP) 65 supported by the Australian Design Guide (ADG) is relevant to the assessment of the natural ventilation through residential components of proposed development. Section 4B-3 of the Australian Design Guide states that:

At least 60% of apartments are naturally cross ventilated in the first nine storeys of the building. Apartments at ten storeys or greater are deemed to be cross ventilated only if any enclosure of the balconies at these levels allows adequate natural ventilation and cannot be fully enclosed.

Developments, which seek to vary from the minimum standards, must demonstrate how natural ventilation can be satisfactorily achieved, particularly in relation to habitable rooms.

The proposed development has been provided with openings on multiple sides of the apartments for the majority of proposed floor plans, allowing it to make use of wind-induced natural ventilation throughout the year and thereby minimising energy costs.

The following conclusions have been reached based on a qualitative review of the floorplans and quantitative numerical modelling:

- 64.9% (50 of 77) of apartments will be naturally-ventilated. This meets the requirement stated above.

This analysis has been made on the basis of our best engineering judgment and on the experience gained from model scale wind tunnel testing or Computational Fluid Dynamics (CFD) analysis of a range of developments of similar magnitude to the currently proposed development.

3 Qualitative Assessment

The natural ventilation for the proposed residential development has been qualitatively assessed. Ventilation is achieved by the differential pressure between the different building facades.

The following comments are made with regard to the proposed natural ventilation system for the development:

- Operable windows are provided on all facades.
- There are balconies located on all building facades, with openings provided to all aspects. Minimal shielding is expected to upper levels; therefore the proposed development benefits from all prevailing winds, creating the potential for cross ventilation, refer to **Appendix A** for all flow assessed.
- Based on a qualitative study 33.8% (26 of 77) of the apartments within the proposed development comply with the cross ventilation requirements of the Australian Design Guide (Refer **Table 1**).

Table 1 Apartments with Openings to Support Natural Ventilation

| Level | Number of Apartments | Number of Apartments with Openings to Support Cross Ventilation (as per ADG) | Percentage |
|--------------|----------------------|--|--------------|
| UG | 5 | 2 | 40.0% |
| L1 | 15 | 3 | 20.0% |
| L2 | 21 | 9 | 42.9% |
| L3 | 14 | 3 | 21.4% |
| L4 | 8 | 3 | 37.5% |
| L5 | 7 | 3 | 42.9% |
| L6 | 7 | 3 | 42.9% |
| Total | 77 | 26 | 33.8% |

4.2 Ventilation Results

SLR modelled apartments on level two and level six to gain an understanding of apartments across all levels. Apartments on other levels are expected to perform in a similar manner to the nearest modelled apartment with Level 2 representative of Level 1, 3 and UG and Level 5 representative of Level 4 and 6.

Table 3 Apartments with Openings to Support Natural Ventilation – Combined Results

| Level | Number of Apartments | Number of Apartments with Openings to Support Cross Ventilation (as per ADG) | Additional Apartment (CFD Modelling) | Combined Total | Percentage |
|--------------|----------------------|--|--------------------------------------|----------------|--------------|
| UG | 5 | 2 | 0 | 2 | 40.0% |
| L1 | 15 | 3 | 6 | 9 | 60.0% |
| L2 | 21 | 9 | 6 | 15 | 71.4% |
| L3 | 14 | 3 | 6 | 9 | 64.3% |
| L4 | 8 | 3 | 2 | 5 | 62.5% |
| L5 | 7 | 3 | 2 | 5 | 71.4% |
| L6 | 7 | 3 | 2 | 5 | 71.4% |
| Total | 77 | 26 | 24 | 50 | 64.9% |

By adding the CFD modelling and the qualitative analysis SLR found that 64.9% of the apartments will be naturally cross ventilated meeting the ADG requirements

APARTMENT DESIGN GUIDE COMPLIANCE ANALYSIS

CLIENT: SHILOH PROPERTIES PTY LTD

ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR

PROJECT: **PROPOSED SHOP TOP HOUSING CONSISTING OF GROUND FLOOR BUSINESS PREMISES AND RESIDENTIAL UNITS (ISSUE C)**

| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|-----------------------------------|--|---|------------|
| PART 1: IDENTIFYING THE CONTEXT | | | |
| 1A Apartment Building Types | <p>Shop top apartments are mixed use residential buildings often located in established centres, along main streets or close to public transport hubs. They can be small infill or larger developments where the ground floor is occupied by retail or commercial uses. Shop top apartments typically range between two and six storeys and are best used when:</p> <ul style="list-style-type: none"> increased residential uses are desired in established retail and commercial areas the context is a traditional main street zero setbacks to side boundary walls are possible or desired active frontages such as retail tenancies are desired at street level pedestrian activity on the street is desired rear lane access is available. | <p>The development sits within the commercial and retail hub of Shellharbour City.</p> <p>The site is adjacent to ‘Shellharbour City Hub’ and forecourt and directly adjacent to the Stocklands Shellharbour Retail and Restaurant precinct.</p> <p>The proposed development comprises of 1.5 basement levels, 7 lower and upper ground floor business premises with 77 Residential Units above.</p> <p>The building activates the street through a series of residential lobby entrances and business premises to College Avenue and public domain forecourt and business lobby entrance to Moolawang Place.</p> <p>Pedestrian activity is activated at ground level. The business premises face the street and provide a direct visual link to the street front and promote activity and surveillance at street level.</p> <p>Rear lane access is provided to Moolawang Place via a business lobby at upper ground and through the carpark at lower ground.</p> <p>A through site link has been created from Moolawang Place through to College Avenue.</p> <p>A Street activation analysis is included within the architectural documentation.</p> | ✓ |

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| <p>1B Local Character + Context</p> | <p>Good design responds and contributes to its context. Context is everything that has a bearing on an area and comprises its key natural and built features. Context also includes social, economic and environmental factors.</p> <p>The desired future character can vary from preserving the existing look and feel of an area to establishing a completely new character based on different uses, street patterns, subdivisions, densities and typologies.</p> <p>The planning process establishes the appropriate location for residential apartment development by determining land use and density in proximity to transport, employment, services, land form and environmental features. Within this framework, the specific characteristics of a place or its setting will inform design decisions. Common settings for residential flat buildings include:</p> <ul style="list-style-type: none"> • strategic centres • local centres • urban neighbourhoods • suburban neighbourhoods. | <p>Site analysis and local context analysis is provided in the SEE and Site analysis plans.</p> <p>An urban analysis is also provided as part of the documentation.</p> <p>Characteristics from the surrounding area has driven the character of the proposal which will enhance the city centre of Shellharbour.</p> <p>Further analysis has been undertaken as part of the SRRPP and DRP Panel Requests:</p> <ul style="list-style-type: none"> - Contextual Relationship Analysis - Access and Circulation Analysis - Public Domain Analysis - Street Activation Analysis | <p>✓</p> |
| <p>1C Precincts and Individual Sites</p> | <p>Precincts are characterised by large land parcels or a group of larger sites undergoing extensive change. These sites often need to be restructured to support a change of land use mix, building height and density.</p> <p>Precinct plans typically incorporate new streets and infrastructure, through-site links and public open spaces that relate in scale, location and character to the local context. The subdivision of large land parcels into smaller ones assists in creating a finer urban grain and achieving greater diversity in building design.</p> <p>It can also assist with the staging of redevelopment.</p> | <p>The development sits within the commercial and retail hub of Shellharbour City.</p> <p>The area has recently undergone significant upgrades, the proposed development will form part of a larger response to the future desired character of the area.</p> <p>The proposal has been designed to incorporate and engage with the existing establishments such as Stocklands Shellharbour Retail and Restaurant Precinct and 'Shellharbour City Hub'.</p> | <p>✓</p> |

| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|---------------------------------|---|---|------------|
| PART 2: DEVELOPING THE CONTROLS | | | |
| 2A Primary Controls | Primary development controls are the key planning tool used to manage the scale of development so that it relates to the context and desired future character of an area and manages impacts on surrounding development. | <p>The building responds to the future desired character of the area and provides a precedent for future developments.</p> <p>A detailed urban analysis of the site and the surrounding areas has been included on the amended architectural documentation.</p> | √ |
| 2B Building Envelopes | <p>A building envelope is a three-dimensional volume that defines the outermost part of a site that the building can occupy.</p> <p>Building envelopes set the appropriate scale of future development in terms of bulk and height relative to the streetscape, public and private open spaces, and block and lot sizes in a particular location.</p> | <p>The bulk, scale and siting are generally compliant with the envelope controls and have been developed through urban design analysis (refer to planning report for details). The bulk and scale are a representation of the future and desired character of the area.</p> <p>The building envelope has a bulk and scale which is appropriate to the existing surrounding developments as well as future development in the area, the scale of the building provides a precedent for the location and is appropriate for such a prominent envelope.</p> <p>The bulk and scale are in general keeping with the comments and advice provided by the SRRPP and DRP Panels. Particular care has been taken in creating a landmark for the area, extensive analysis has been undertaken to ensure the building is in keeping with the existing surrounding environment, but also being a future precedent for the area.</p> | √ |
| 2C Building Height | Height controls should be informed by decisions about daylight and solar access, roof design and use, wind protection, residential amenity and in response to landform and heritage. | <p>The building height was derived from undertaking detailed site, urban and contextual analysis of the site and the surrounding areas.</p> <p>The Development has been designed to respond to the surrounding locality and desired future character.</p> <p>Building height diagram is included in the documentation.</p> | √ |

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| <p>2D Floor Space Ratio</p> | <p>Floor space ratio (FSR) is the relationship of the total gross floor area (GFA) of a building relative to the total site area it is built on.</p> <p>The GFA should fit comfortably within the building envelope as the envelope needs to also account for building elements and service areas that are not included in the GFA definition and to allow for building articulation.</p> <p>Ensure that development aligns with the optimum capacity of the site and the desired density of the local area.</p> <p>Provide opportunities for building articulation and creativity within a building envelope by carefully setting the allowable floor space.</p> | <p>There is no FSR requirement for the site.</p> <p>The FSR has been driven by the urban design analysis and appropriate building form for the existing and future character of the area.</p> <p>The building is well articulated and responsive to the context and surrounds. The activated street frontage and forecourt area provide an invaluable space for the residents and community alike.</p> | <p>✓</p> |
| <p>2E Building Depth</p> | <p>Building depth influences building circulation and configuration and has a direct relationship to internal residential amenity by determining room depths, which in turn influences access to light and air. For residential development in general, narrower building depths have a greater potential to achieve optimal natural ventilation and daylight access than deeper floor plates. Depths of mixed-use buildings transition from deeper commercial and retail uses at the lower levels to narrower building depths for the residential uses at upper levels.</p> <p>Ensure that the bulk of the development relates to the scale of the desired future context.</p> <p>Ensure building depths support apartment layouts that meet the objectives, design criteria and design guidance within the Apartment Design Guide.</p> | <p>The building bulk and scale is in keeping with the surrounding development and provides a precedent for other surrounding sites in the area.</p> <p>The scale is representative of future desired character of the area.</p> <p>A detailed solar access report has been included as part of this application.</p> | <p>✓</p> |

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| <p>2F Building Separation</p> | <p>Building separation is the distance measured between building envelopes or buildings. Separation between buildings contributes to the urban form of an area and the amenity within apartments and open space areas.</p> <p>Minimum separation distances for buildings are:</p> <p>9 storeys and above – 12-24m Up to 8 storeys – 9-18m Up to 4 storeys – 6-12m</p> | <p>Building separation requirements are in accordance with the apartment design guide.</p> <p>Dimensions are provided on the architectural documentation (refer to site plan and site elevations).</p> <p>Building is 12.7m from mixed use development to the north and 12m from mixed use development to the west.</p> | <p>✓</p> |
| <p>2G Street Setbacks</p> | <p>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street.</p> <p>Determine street setback controls relative to the desired streetscape and building forms, for example:</p> <ul style="list-style-type: none"> • Define a future streetscape with the front building line • match existing development • step back from special buildings • retain significant trees • in centres the street setback may need to be consistent to reinforce the street edge • consider articulation zones accommodating balconies, landscaping etc. within the street setback • use a setback range where the desired character is for variation within overall consistency, or where subdivision is at an angle to the street • manage corner sites and secondary road frontages | <p>The proposed building has been sited to fit the future and desired character of the surrounding area and precinct.</p> <p>The setbacks are generally compliant with council principles.</p> <p>The setbacks have been formed by review of the streetscape and the desired future character of the area.</p> <p>The shadow of the building falls into the street and surrounds and has a limited impact on adjacent properties (refer to shadow diagrams).</p> <p>Carparking on site is provided in the underground basement levels for residents, visitors and tenants for business premises.</p> | <p>✓</p> |
| <p>2H Side and Rear Setbacks</p> | <p>Side and rear setbacks govern the distance of a building from the side and rear site boundaries and are related to the height of the building.</p> <ul style="list-style-type: none"> • provide access to light, air and outlook for neighbouring properties and future buildings | <p>The setbacks have been formed by review of the streetscape and the desired future character of the area.</p> <p>The setbacks correspond to the Building separation and open space requirements, the setbacks are appropriate and sufficient area is provided in these</p> | <p>✓</p> |

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| | <ul style="list-style-type: none">• provide for adequate privacy between neighbouring apartments• retain or create a rhythm or pattern of spaces between buildings that define and add character to the streetscape achieve setbacks that maximise deep soil areas, retain existing landscaping and support mature vegetation consolidated across sites• manage a transition between sites or areas with different development controls such as height and land use | <p>areas for significant landscaping. There is a high % of landscape coverage across the site.</p> <p>The setbacks vary according to the building articulation and treatment.</p> <p>The proposed setbacks are consistent with the future desired character of the precinct.</p> <p>The project has been designed in general compliance with SEPP65.</p> | |
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| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|--------------------------------|--|---|------------|
| PART 3: SITING THE DEVELOPMENT | | | |
| 3A Site Analysis | <p>Site analysis is an important part of the design process and should be undertaken at the outset of a project to inform the design principles. Development proposals need to illustrate that design decisions are based on careful analysis of the site conditions and relationship to the surrounding context.</p> | <p>A detailed site analysis plan, survey plan and written analysis are provided as part of the architectural documentation.</p> <p>Further analysis has been undertaken as part of the SRRPP and DRP Panel Requests:</p> <ul style="list-style-type: none"> - Contextual Relationship Analysis - Access and Circulation Analysis - Public Domain Analysis - Street Activation Analysis - Future Development Analysis | ✓ |
| 3B Orientation | <p>Orientation is the position of a building and its internal spaces in relation to its site, the street, the subdivision and neighbouring buildings. Building orientation influences the urban form of the street and building address.</p> <p>Designing the site layout to maximise northern orientation is an important consideration, but it must be balanced with:</p> <ul style="list-style-type: none"> • responding to desired streetscape character • promoting amenity for both the proposed development and neighbouring properties • providing for the enjoyment of significant views • retaining trees and locating open spaces • responding to the topography and contextual constraints such as overshadowing and noise. | <p>The development has been orientated to maximise solar access to living spaces and minimise overshadowing to adjacent buildings. Refer to 'views from the sun' in architectural documentation.</p> <p>The building has been designed to respond to the surrounding streetscape and provide adequate solar access.</p> <p>Excerpt from Solar and Access Report submitted by SLR states:</p> <ul style="list-style-type: none"> • <i>From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.</i> • <i>It is also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.</i> | ✓ |

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| | | <p><i>Solar access at the 3hr standard is severely constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting, at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.</i></p> <p>Please refer to attached solar report completed by SLR Consulting for more detail.</p> | |
| 3C Public Domain Interface | <p>The public domain interface is the transition area between the apartment building, its private or communal space at the street edge and the public domain.</p> <p>The interface of the development contributes to the quality and character of the street. Subtle variations through planting and fencing can create an attractive and active public domain with a pedestrian scale.</p> | <p>The design has allowed for a forecourt area with garden and amenities to directly correspond with the adjacent forecourt provided by Shellharbour City Council.</p> <p>The forecourt area provides a quality expanse for residents, employees and or visitors to the business premises and the community. The forecourt will promote pedestrian activity and activate the street front.</p> | ✓ |
| 3D Communal and Public Open Spaces | <p>Communal open space is an important environmental resource that provides outdoor recreation opportunities for residents, connection to the natural environment and valuable 'breathing space' between apartment buildings. It also contributes to the appeal of a development and the wellbeing of residents.</p> <p>Communal open space has a minimum area equal to 25% of the site Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter).</p> | <p>Communal open space provided to is 1379.4m² (42.9%).</p> <p>As noted above, the design includes for a forecourt which is accessible to residents, customers and employees of the building. This space will also be opened to the general public</p> <p>There is also common open space to level 4 and the roof terrace which will be accessible to all residents.</p> <p>The communal and private open spaces address all relevant requirements of the Code, with appropriate landscape treatment of communal open space, terraces and private balconies.</p> <p>Excerpt from Solar and Ventilation Report submitted by SLR states:</p> <p>SLR has found there will be solar access to more than 50% of the communal open space across the full 6-hour assessment period.</p> | ✓ |

| <div>3E</div> <div>Deep Soil Zones</div> | <div>Deep soil zones are areas of soil not covered by buildings or structures within a development. They exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas.</div> <div><div>Design criteria</div><div>1. Deep soil zones are to meet the following minimum requirements:</div><table><thead><tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr></thead><tbody><tr><td>less than 650m²</td><td>-</td><td rowspan="4">7%</td></tr><tr><td>650m² - 1,500m²</td><td>3m</td></tr><tr><td>greater than 1,500m²</td><td>6m</td></tr><tr><td>greater than 1,500m² with significant existing tree cover</td><td>6m</td></tr></tbody></table></div> <td><div>The location and building typology do not allow for deep soil at ground level, however, a sufficient amount of deep soil podium planting has been provided on various levels.</div><div>The site is located within the city centre and has non-residential uses on ground floor level therefore alternative forms of planting have been provided at level 4 podium and the roof terraces.</div><div>This has allowed a high percentage of landscape site coverage.</div><div>Total deep soil zone is 11m².</div><div>Total deep soil podium planting is 142m².</div></td> <td><div>✓</div><div>Achieves Design Objective</div></td> | Site area | Minimum dimensions | Deep soil zone (% of site area) | less than 650m ² | - | 7% | 650m ² - 1,500m ² | 3m | greater than 1,500m ² | 6m | greater than 1,500m ² with significant existing tree cover | 6m | <div>The location and building typology do not allow for deep soil at ground level, however, a sufficient amount of deep soil podium planting has been provided on various levels.</div> <div>The site is located within the city centre and has non-residential uses on ground floor level therefore alternative forms of planting have been provided at level 4 podium and the roof terraces.</div> <div>This has allowed a high percentage of landscape site coverage.</div> <div>Total deep soil zone is 11m².</div> <div>Total deep soil podium planting is 142m².</div> | <div>✓</div> <div>Achieves Design Objective</div> |
|---|--|---|-------------------------------|---------------------------------|-----------------------------|----|----|---|----|----------------------------------|-----------------------|---|----|---|---|
| Site area | Minimum dimensions | Deep soil zone (% of site area) | | | | | | | | | | | | | |
| less than 650m ² | - | 7% | | | | | | | | | | | | | |
| 650m ² - 1,500m ² | 3m | | | | | | | | | | | | | | |
| greater than 1,500m ² | 6m | | | | | | | | | | | | | | |
| greater than 1,500m ² with significant existing tree cover | 6m | | | | | | | | | | | | | | |
| <div>3F</div> <div>Visual Privacy</div> | <div>Visual privacy balances site and context specific design solutions with views, outlook, ventilation and solar access. The adjacent context, site configuration, topography, the scale of the development and the apartment layout all need to be considered.</div> <div><div>Design criteria</div><div>1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:</div><table><thead><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr></thead><tbody><tr><td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></tbody></table><div>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)</div><div>Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties</div></div> <td><div>Visual privacy has been addressed through separation:</div><div><div><div></div><div>Adequate setbacks, separation and screening to adjoining properties.</div></div><div><div></div><div>Room layouts and balcony locations to minimise overlooking.</div></div></div><td></td></td> | Building height | Habitable rooms and balconies | Non-habitable rooms | up to 12m (4 storeys) | 6m | 3m | up to 25m (5-8 storeys) | 9m | 4.5m | over 25m (9+ storeys) | 12m | 6m | <div>Visual privacy has been addressed through separation:</div> <div><div><div></div><div>Adequate setbacks, separation and screening to adjoining properties.</div></div><div><div></div><div>Room layouts and balcony locations to minimise overlooking.</div></div></div> <td></td> | |
| Building height | Habitable rooms and balconies | Non-habitable rooms | | | | | | | | | | | | | |
| up to 12m (4 storeys) | 6m | 3m | | | | | | | | | | | | | |
| up to 25m (5-8 storeys) | 9m | 4.5m | | | | | | | | | | | | | |
| over 25m (9+ storeys) | 12m | 6m | | | | | | | | | | | | | |
| <div>3G</div> <div>Pedestrian Access and Entries</div> | <div>Good pedestrian access delivers high quality, equitable, safe and pleasant walking environments along the street, into the development and to individual apartments.</div> <div>Pedestrian access and entries must be priorities over vehicle access.</div> | <div>All dwellings have lift and stair access.</div> <div>Fire egress is by way of Fire isolated stairs, accessible on all levels of the building.</div> <div>The building entries have been designed to provide an appropriate, identifiable, secure, safe series of accessible entries. Residential</div> | <div>✓</div> | | | | | | | | | | | | |

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| | <p>Access, entries and pathways are accessible and easy to identify</p> <p>Building entries and pedestrian access connects to and addresses the public domain.</p> <p>Large sites provide pedestrian links for access to streets and connection to destinations</p> | <p>lobbies have been separated from business lobbies.</p> <p>Separate entries are provided for pedestrians and vehicles.</p> <p>Mailboxes are provided in appropriate, secure locations proximate to the lobby areas.</p> <p>A generously sized, secure through-site link assists to activate the site and enhance pedestrian connection between College Avenue and the mid-block parking to Moolawang Place.</p> <p>A through site link has been enhanced by the use of feature wall paneling, skylights and direct sightlines through to the lobby and concierge areas.</p> | |
| <p>3H Vehicle Access</p> | <p>The location, type and design of vehicle access points have significant impacts on the streetscape, the site layout and the building facade design. It is important that vehicle access is integrated with site planning from an early stage to balance any potential conflicts with traffic patterns, streetscape elements and safe pedestrian access.</p> <p>Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</p> | <p>There is adequate separation from the proposed driveway to surrounding intersections. Cars will enter and exit the basement parking via Moolawang Place.</p> <p>Loading vehicles and trucks will enter via Moolawang Place and exit via Bimbala Place in a forward direction.</p> <p>The driveways have been separated for in-going and out-going traffic. They have been designed to have minimum impact on the streetscape.</p> <p>Pedestrian and vehicular entries are provided for separately.</p> | ✓ |
| <p>3J Bicycle and Carparking</p> | <p>Integrating car parking within apartment buildings has a significant impact on site planning, landscape and building design. Onsite parking can be located underground, above ground within a structure or at grade.</p> <p>Design Criteria: For development in the following locations:</p> <ul style="list-style-type: none"> on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or on land zoned, and sites within 400 metres of land zoned, B3 Commercial | <p>All car, motorbike and bicycle parking are provided in the basement and lower ground of the building. Visitor business bicycle parking is provided at lower ground level.</p> <p>Carparking numbers comply with council codes.</p> <p>Refer to attached traffic report completed by TTPA.</p> | ✓ |

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| | <p>Core, B4 Mixed Use or equivalent in a nominated regional centre</p> <p>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments (GTGD), or the car parking requirement prescribed by the relevant council, whichever is less</p> <p>The car parking needs for a development must be provided off street.</p> <p>Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.</p> <p>Parking and facilities are provided for other modes of transport.</p> <p>Car park design and access is safe and secure.</p> | | |
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| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|--|---|--|--------------------------------|
| PART 4: DESIGNING THE BUILDING | | | |
| 4A Solar and Daylight Access | <p>Solar and daylight access are important for apartment buildings, reducing the reliance on artificial lighting and heating, improving energy efficiency and residential amenity through pleasant conditions to live and work.</p> <p>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.</p> <p>Daylight access is maximised where sunlight is limited.</p> <p>Design incorporates shading and glare control, particularly for warmer months.</p> | <p>The proposed development has been orientated to maximise the northern, eastern and western aspect.</p> <p>The layout of units and window location provides good daylight access.</p> <p>Daylight Access has also been considered for the surrounding neighbourhood as shown on the accompanying shadow diagrams (views from the sun) and solar analysis report undertaken by SLR Consulting:</p> <p><i>Excerpt from Solar and Ventilation Report submitted by SLR states:</i></p> <ul style="list-style-type: none"> <i>From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.</i> <i>It is also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.</i> <p><i>Solar access at the 3hr standard is severely constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting, at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.</i></p> <p>Please refer to attached solar report completed by SLR Consulting.</p> | ✓ Achieves Design Objective |

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| <p>4B Natural Ventilation</p> | <p>Natural ventilation is the movement of sufficient volumes of fresh air through an apartment to create a comfortable indoor environment. Sustainable design practice incorporates natural ventilation by responding to the local climate and reduces the need for mechanical ventilation and air conditioning.</p> <p>All habitable rooms are naturally ventilated.</p> <p>The layout and design of single aspect apartments maximises natural ventilation.</p> <p>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.</p> | <p>The natural ventilation requirements have been addressed as follows:</p> <p>Open plan unit layouts have been designed to maximise natural ventilation.</p> <p>Excerpt from Solar and Ventilation Report submitted by SLR states:</p> <p><i>64.9% (50 of 77) of apartments will be naturally-ventilated. This meets the requirement stated above.</i></p> <p><i>This analysis has been made on the basis of our best engineering judgment and on the experience gained from model scale wind tunnel testing or Computational Fluid Dynamics (CFD) analysis of a range of developments of similar magnitude to the currently proposed development.</i></p> | <p>✓</p> |
| <p>4C Ceiling Heights</p> | <p>Ceiling height is measured internally from finished floor level to finished ceiling level. The height of a ceiling contributes to amenity within an apartment and the perception of space. Well designed and appropriately defined ceilings can create spatial interest and hierarchy in apartments.</p> <p>Ceiling height achieves sufficient natural ventilation and daylight access.</p> <p>Ceiling height increases the sense of space in apartments and provides for well proportioned rooms.</p> <p>Ceiling heights contribute to the flexibility of building use over the life of the building.</p> | <p>Minimum floor to ceiling height of 2.7m is provided to the main living areas and habitable rooms of each unit.</p> <p>Business premises ceiling heights achieve compliance. Ceiling heights are noted on all architectural documentation.</p> | <p>✓</p> |
| <p>4D Apartment Size and Layout</p> | <p>The layout of an apartment establishes the way rooms of different functions are arranged and located, the size of the rooms, the circulation between rooms and the degree of privacy for each room.</p> <p>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.</p> | <p>The development provides a range of 1, 2 and 3-bedroom units which is considered appropriate for the local market.</p> <p>More than 20% of the units are provided as adaptable units and are a combination of 1- & 2-bedroom units.</p> <p>The units are an appropriate mix for the local market and allow for modifications over time.</p> | <p>✓</p> |

| | <div><p>Design criteria</p><p>1. Apartments are required to have the following minimum internal areas:</p><table><thead><tr><th>Apartment type</th><th>Minimum internal area</th></tr></thead><tbody><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></tbody></table><p>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each</p><p>A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each</p><p>2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms</p></div> <p>Environmental performance of the apartment is maximised.</p> <p>Apartment layouts are designed to accommodate a variety of household activities and needs.</p> | Apartment type | Minimum internal area | Studio | 35m ² | 1 bedroom | 50m ² | 2 bedroom | 70m ² | 3 bedroom | 90m ² | <p>All units provide appropriate kitchen and storage facilities (refer to storage schedule).</p> <p>Units allow for adequate solar access and natural ventilation and have living rooms with within 8m of a window.</p> | |
|--|---|---|-----------------------|--------|------------------|-----------|------------------|-----------|------------------|-----------|------------------|---|--|
| Apartment type | Minimum internal area | | | | | | | | | | | | |
| Studio | 35m ² | | | | | | | | | | | | |
| 1 bedroom | 50m ² | | | | | | | | | | | | |
| 2 bedroom | 70m ² | | | | | | | | | | | | |
| 3 bedroom | 90m ² | | | | | | | | | | | | |
| <p>4E</p> <p>Private Open Space and Balconies</p> | <p>Private open spaces are outdoor spaces of the apartment, including balconies, courtyards and terraces, which enhance the amenity and indoor/outdoor lifestyle of residents. They capitalise on New South Wales' temperate climate, providing an area for external activities and an extension of living spaces.</p> <p>Apartments provide appropriately sized private open space and balconies to enhance residential amenity.</p> <p>Primary private open space and balconies are appropriately located to enhance liveability for residents.</p> <p>Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.</p> <p>Private open space and balcony design maximises safety.</p> | <p>Each unit has access to at least one private balcony or courtyard and common open space.</p> <p>Generous balconies are provided adjacent to the living areas in all units and designed to be an extension of the living areas.</p> | <p>✓</p> | | | | | | | | | | |

| <div>4F</div> <div>Common Circulation and Spaces</div> | <p>Common circulation and spaces within a building are shared communally by residents. They include lobbies, internal corridors and external galleries, vertical circulation such as lifts and stairs, as well as community rooms and other spaces.</p> <p>Common circulation spaces achieve good amenity and properly service the number of apartments.</p> <p>Common circulation spaces promote safety and provide for social interaction between residents.</p> | <p>The proposed internal circulation addresses the requirement of the Code by:</p> <ul style="list-style-type: none">• Providing generous and articulated circulation spaces with visual interest and outlook to outdoor spaces and or street.• Utilising robust materials in circulation areas.• Circulation areas are well lit with natural light (both east and west facing glazing to street). <p>Natural light has been increased in the Business lobby and through site link through the addition of skylights.</p> <p>Refer to SEE for justification on the minimum number of units accessible from a corridor.</p> | <div>✓</div> <div>Achieves Design Objective</div> | | | | | | | | | | |
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| <div>4G</div> <div>Storage</div> | <p>Adequate storage is an important component of apartment design. It is calculated by volume as opposed to floor area and should be provided proportionally to the size of the apartment.</p> <p>Adequate, well designed storage is provided in each apartment.</p> <p>Additional storage is conveniently located, accessible and nominated for individual apartments.</p> <div><div>Objective 4G-1</div><div>Adequate, well designed storage is provided in each apartment</div><div>Design criteria</div><div>1. In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:</div><table><tr><th>Dwelling type</th><th>Storage size volume</th></tr><tr><td>Studio apartments</td><td>4m³</td></tr><tr><td>1 bedroom apartments</td><td>6m³</td></tr><tr><td>2 bedroom apartments</td><td>8m³</td></tr><tr><td>3+ bedroom apartments</td><td>10m³</td></tr></table><div>At least 50% of the required storage is to be located within the apartment</div><div>Design guidance</div><div>Storage is accessible from either circulation or living areas</div><div>Storage provided on balconies (in addition to the minimum balcony size) is integrated into the balcony design, weather proof and screened from view from the street</div><div>Left over space such as under stairs is used for storage</div></div> | Dwelling type | Storage size volume | Studio apartments | 4m³ | 1 bedroom apartments | 6m³ | 2 bedroom apartments | 8m³ | 3+ bedroom apartments | 10m³ | <p>Storage has been provided in accordance with ADG requirements within apartments and garage areas which provides secure storage for individual use (refer to storage schedule in architectural documentation).</p> | <div>✓</div> |
| Dwelling type | Storage size volume | | | | | | | | | | | | |
| Studio apartments | 4m³ | | | | | | | | | | | | |
| 1 bedroom apartments | 6m³ | | | | | | | | | | | | |
| 2 bedroom apartments | 8m³ | | | | | | | | | | | | |
| 3+ bedroom apartments | 10m³ | | | | | | | | | | | | |

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| <p>4H Acoustic Privacy</p> | <p>Acoustic privacy is about protecting sound transmission between external and internal spaces, between apartments and communal areas and between apartments within a building.</p> <p>Noise transfer is minimised through the siting of buildings and building layout Noise impacts are mitigated within apartments through layout and acoustic treatments.</p> | <p>The proposed development complies with the requirements of the BCA.</p> <p>Party walls have been designed with the minimum RW rating according to BCA.</p> <p>The majority of the apartment layouts provide similar rooms adjoining each other where possible.</p> <p>Noise from external sources will be treated to ensure compliance with Council's requirements.</p> <p>Acoustic Report has been provided by Harwood Acoustics.</p> | <p>✓</p> |
| <p>4J Noise and Pollution</p> | <p>Properties located near major roads, rail lines and beneath flight paths can be subject to noise and poor air quality. Similarly, hostile and noisy environments such as industrial areas, substations or sports stadiums can have impacts on residential amenity.</p> <p>Careful design solutions can help to improve quality of life in affected apartments by minimising potential noise and pollution impacts.</p> <p>In noisy or hostile environments, the impacts of external noise and pollution are minimised through the careful siting and layout of buildings</p> <p>Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.</p> | <p>Shutters and appropriate glazing are provided to the external facade.</p> <p>Acoustic Report has been provided by Harwood Acoustics.</p> | <p>✓</p> |
| <p>CONFIGURATION</p> | | | |
| <p>4K Apartment Mix</p> | <p>Apartment mix refers to the percentage of apartments with different numbers of bedrooms in a development. The number of bedrooms is directly related to floor area which in turn determines the yield that can be generated on the site.</p> | <p>The development provides a range of 1, 2 and 3-bedroom units which is considered appropriate for the local market.</p> <p>More than 20% are provided as adaptable units.</p> | <p>✓</p> |

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| | <p>A range of apartment types and sizes is provided to cater for different household types now and into the future.</p> <p>The apartment mix is distributed to suitable locations within the building.</p> | | |
| <p>4L Ground Floor Apartments</p> | <p>Ground floor apartments offer the potential for at-grade landscaped private open spaces and direct access from the street. They also provide opportunities for the apartment building and its landscape to respond to the human scale of the streetscape. On steep sites they may be located over different floors of the building stepping down the site.</p> <p>Street frontage activity is maximised where ground floor apartments are located.</p> <p>Design of ground floor apartments delivers amenity and safety for residents.</p> | <p>There are no ground floor units.</p> <p>Business premises are located along the upper and lower ground floors.</p> <p>Street frontage is activated by the pedestrian activity to the business premises, residential and business lobbies and forecourt area.</p> | ✓ |
| <p>4M Facades</p> | <p>The design of facades contributes greatly to the visual interest of the building and the character of the local area. Facades that face the street have an impact on the public domain, while side and rear facades often influence the amenity of neighbouring buildings and communal and private open spaces.</p> <p>Building facades provide visual interest along the street while respecting the character of the local area.</p> <p>Building functions are expressed by the facade.</p> | <p>The building elements have been designed with regard to the elements, textures, materials and colours of the locality.</p> <p>The façade is intended to reduce the visual bulk of the building and offers an interesting range of colours, materials and textures which are inspired to create a modern building.</p> <p>The façade materials and colours are gathered from the surrounding environment and buildings such as Stocklands Shellharbour and 'Shellharbour City Hub'</p> <p>A schedule of materials and finishes has been submitted.</p> | ✓ |
| <p>4N Roof Design</p> | <p>The roof is an important element in the overall composition and design of a building. Quality roof design provides a positive addition to the character of an area and can form an important part of the skyline. Roofs also provide opportunities for open space where appropriate and can add to the sustainability performance of a building.</p> | <p>The roofs have been designed to be a common open area with an extensive garden and amenities for the residents.</p> <p>The roof incorporates BBQ areas, sculptural planting and paving, community gardens, various communal activities. The rooftops serve as an oasis for the residents of the building with a high percentage of landscaped site coverage.</p> | ✓ |

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| | <p>Roof treatments are integrated into the building design and positively respond to the street.</p> <p>Opportunities to use roof space for residential accommodation and open space are maximised</p> <p>Roof design incorporates sustainability features.</p> | <p>Refer to landscape drawings completed by Taylor Brammer Landscape Design for further detail.</p> | |
| <p>4O</p> <p>Landscape Design</p> | <p>Landscape design includes the planning, design, construction and maintenance of all external spaces.</p> <p>Landscape design is viable and sustainable.</p> <p>Landscape design contributes to the streetscape and amenity.</p> | <p>The development will consist of numerous landscaped areas.</p> <p>The landscaped areas contribute to the streetscape in the form of a public domain and forecourt, consisting of sculptural planting and paving features.</p> <p>The landscape design reinforces the established character of trees and landscaping in the immediate locality and forecourt area.</p> <p>The landscaping provides a connection to Shellharbour City Hub building and the Stocklands Shellharbour restaurants and shopping precinct.</p> | <p>✓</p> |
| <p>4P</p> <p>Planting on Structures</p> | <p>Planting on structures is where plants are on top of built structures such as basement car parks, podiums, roofs and walls. Planting on structures can provide amenity, improve air quality and microclimate, and reduce direct energy use and stormwater runoff. It can also supplement deep soil planting on sites where opportunities for this are limited or restricted, e.g. in high density areas.</p> <p>Common ways of planting on structures include green roofs, green walls, raised planters and roof top gardens. Plants grown in these situations are subject to a range of environmental stressors that affect both the health and vigor of the plants.</p> <p>Appropriate soil profiles are provided</p> <p>Plant growth is optimised with appropriate selection and maintenance.</p> | <p>Appropriate planting is provided and integrated with landscaped area around the development.</p> <p>There is extensive planting to the forecourt, level 1 podium, level 4 podium level and roof top common areas.</p> <p>The podium planting is designed to spill over onto the building to soften the street elevations.</p> <p>The extensive planting and sculptural landscaping in the forecourt, podium and rooftop all add to the amenity of the residents and the general public using the street.</p> | <p>✓</p> |

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| | Planting on structures contributes to the quality and amenity of communal and public open spaces. | | |
| 4Q Universal Design | <p>Universally designed apartments are safer and easier to enter, move around and live in. They benefit all members of the community, from young families to older people, their visitors, as well as those with permanent or temporary disabilities.</p> <p>Universal design features are included in apartment design to promote flexible housing for all community members</p> <p>A variety of apartments with adaptable designs are provided.</p> <p>Apartment layouts are flexible and accommodate a range of lifestyle needs.</p> | <p>Multiple entries are provided to the building components, including main street entries and lift and stair access from the basement parking levels.</p> <p>Stair and lift access are provided to all units.</p> <p>Fire egress is provided via stairs and are accessible on all levels, designed to comply with BCA requirements.</p> <p>20% of the units are adaptable.</p> | ✓ |
| 4S Mixed Use | <p>Mixed use development includes multiple uses in one building.</p> <p>In areas zoned for mixed use development building design should allow for a range of non-residential uses. Where the location or site constraints are not suited for retail uses, the design should accommodate other uses such as commercial offices.</p> <p>Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.</p> <p>Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.</p> | The development meets the requirement of mixed use with business and residential uses. | ✓ |
| 4T Awnings and Signage | <p>Awnings are prominent streetscape elements requiring considerable design attention.</p> <p>Continuous awnings encourage pedestrian activity along streets and in conjunction with active frontages, support and enhance the vitality of the local area.</p> <p>Awnings are well located and complement and integrate with the building design.</p> <p>Signage responds to the context and desired streetscape character.</p> | <p>Appropriate awnings and lighting are provided to the building entries.</p> <p>Awning shape responds to the building and the surrounding streetscape character and are well integrated into the building design.</p> | ✓ |

| PERFORMANCE | | | |
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| 4U Energy Efficiency | <p>Passive environmental and energy efficient design is about the ability of an apartment to manage thermal performance (thermal comfort) and daylight access, providing increased amenity to occupants and reducing energy costs.</p> <p>Development incorporates passive environmental design.</p> <p>Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer.</p> <p>Adequate natural ventilation minimises the need for mechanical ventilation.</p> | <p>The proposed business/ commercial space and residential units have been designed for optimal energy efficiency.</p> <p>Refer amended Basix Assessment lodged with application.</p> | ✓ |
| 4V Water Management and Conservation | <p>Water sensitive urban design is the integrated management of water in urban areas. It takes into account all of the elements of the urban water cycle including potable (drinking quality) water, rainwater, wastewater, stormwater and groundwater.</p> <p>Potable water use is minimised.</p> <p>Urban stormwater is treated on site before being discharged to receiving waters.</p> <p>Flood management systems are integrated into site design.</p> | <p>The proposed business/ commercial space and residential units have been designed for optimal energy efficiency.</p> <p>Refer to Water Sensitive Urban Design prepared by ATB Engineers.</p> | ✓ |
| 4W Waste Management | <p>The minimisation and effective management of domestic waste from apartments contributes to the visual and physical amenity of the building as well as limiting potentially harmful impacts on the environment.</p> <p>Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents.</p> <p>Domestic waste is minimised by providing safe and convenient source separation and recycling.</p> | <p>Waste management report has been carried out by Elephants Foot Consulting.</p> | ✓ |

| | | | |
|--------------------------------------|--|--|---|
| 4X Building Maintenance | <p>Careful design and material selection can reduce the long-term maintenance obligations of apartment development. In addition, effective maintenance of the development ensures the longevity of buildings, sustaining the value of the property and reducing the life-cycle cost to owners.</p> <p>Building design detail provides protection from weathering.</p> <p>Systems and access enable ease of maintenance.</p> <p>Material selection reduces ongoing maintenance costs.</p> | <p>Maintenance has been addressed as follows:</p> <p>The roof is accessible for maintenance only with the provision of service ladders to comply with Australian Standards and OH&S.</p> <p>Materials will be durable and cleanable. Landscape elements are appropriate for the site condition, with the selection of hardy, low maintenance plantings and paving.</p> <p>Refer to landscape management and maintenance plan from Taylor Brammer Landscape Architects.</p> | ✓ |
|--------------------------------------|--|--|---|

The background of the page features a grayscale photograph of a city skyline with several tall buildings. Overlaid on this image are numerous white, 3D wireframe outlines of rectangular blocks of varying heights, creating a layered, architectural effect.

Clause 4.6 Variation Request

Height of Buildings (Clause 4.3)
Shellharbour LEP 2013

16 College Avenue

Submitted to Shellharbour City Council
On behalf of Shiloh Pty Ltd

March 2019

REPORT REVISION HISTORY

| Revision | Date Issued | Revision Description | |
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| | | Lucy Broadwell <i>Project Planner</i> | Stephen Kerr <i>Executive Director</i> |
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| | | Lucy Broadwell <i>Project Planner</i> | Stephen Kerr <i>Executive Director</i> |
| 03 | 06/03/19 | Final amended | |
| | | Prepared by | Verified by |
| | | Lucy Broadwell <i>Project Planner</i> | Stephen Kerr <i>Executive Director</i> |

Certification

This report has been authorised by City Plan Strategy & Development P/L, with input from a number of other expert consultants. To the best of our knowledge the accuracy of the information contained herein is neither false nor misleading. The comments have been based upon information and facts that were correct at the time of writing.

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|----------|--------------|---------------------------|
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1. INTRODUCTION

This is a request prepared in accordance with Clause 4.6 of the Shellharbour Local Environmental Plan 2013 to support a development application submitted to Shellharbour City Council for earthworks and construction of a mixed-use development comprising seven (7) storeys of shop top housing for seventy-seven (77) dwellings, and street level commercial space comprising of 2257.4m² gross floor area (GFA) at 16 College Avenue, Shellharbour ("the site").

The purpose of this Clause 4.6 variation request is to address a variation to *Clause 4.3 Height of Buildings* under the Shellharbour Local Environmental Plan 2013.

The objectives of Clause 4.6 are to provide an appropriate degree of flexibility in applying development standards to achieve better outcomes for, and from, development.

This request has been prepared having regard to the Department of Planning and Environment's Guidelines to Varying Development Standards (August 2011) and relevant decisions in the New South Wales Land and Environment Court and New South Wales Court of Appeal ¹.

In Sections 3 and 4 of this request, we have explained how flexibility is justified in this case in terms of the matters explicitly required by Clause 4.6 to be addressed in a written request from the applicant. In Sections 4, 5, 6 and 7 we address additional matters that the consent authority is required to be satisfied of when exercising either the discretion afforded by Clause 4.6 or the assumed concurrence of the Secretary.

As the following request demonstrates, a better planning outcome would be achieved by exercising the flexibility afforded by Clause 4.6 in the particular circumstances of this application.

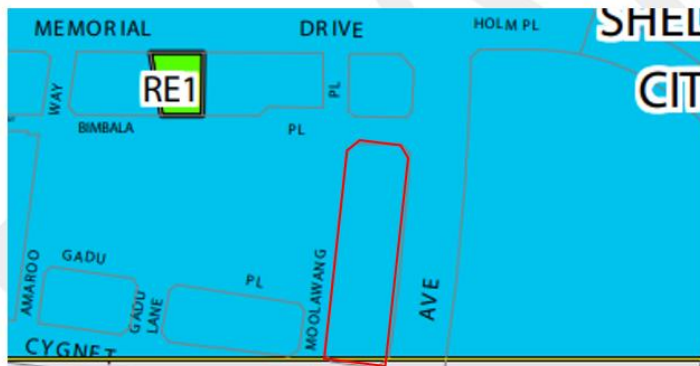
1.1. What is the Environmental Planning Instrument (EPI) that applies to the land?

The Environmental Planning Instrument (EPI) to which this variation relates is the Shellharbour Local Environmental Plan 2013 (SLEP).

1.2. What is the zoning of the land?

The site is zoned B3 - Commercial Core pursuant to the SLEP. Refer to Figure 1.

¹ Relevant decisions include: *Winten Property Group Limited v North Sydney Council* [2001] NSWLEC 46; *Wehbe v Pittwater Council* [2007] NSWLEC 827; *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 1009; *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 90; *Four2Five Pty Ltd v Ashfield Council* [2015] NSWCA 248; *Moskovich v Waverley Council* [2016] NSWLEC 1015 and *Preston J in Initial Action Pty Ltd v Woollahra Council* [2018] NSWLEC 2018.



B3 Commercial Core

Figure 1: Map of SLEP zoning, site outlined red. (Source NSW Legislation)

1.3. What are the objectives of the zone?

The objectives for the B3 zone are as follows: -

- To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.
- To encourage appropriate employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To strengthen the role of the Shellharbour City Centre to ensure that it continues to develop as a major regional centre with retail, entertainment, commercial, cultural and residential uses.
- To allow for a limited range of residential accommodation while maintaining retail, business or other non-residential active uses at street level.

1.4. What is the development standard being varied?

The subject development standard is specified under *Clause 4.3 Height of buildings* of the SLEP. This clause applies to specific land in a commercial zone to which a maximum building height of 18 metres applies as shown on the 'Height of Buildings Map'. Refer to Figure 2 below.

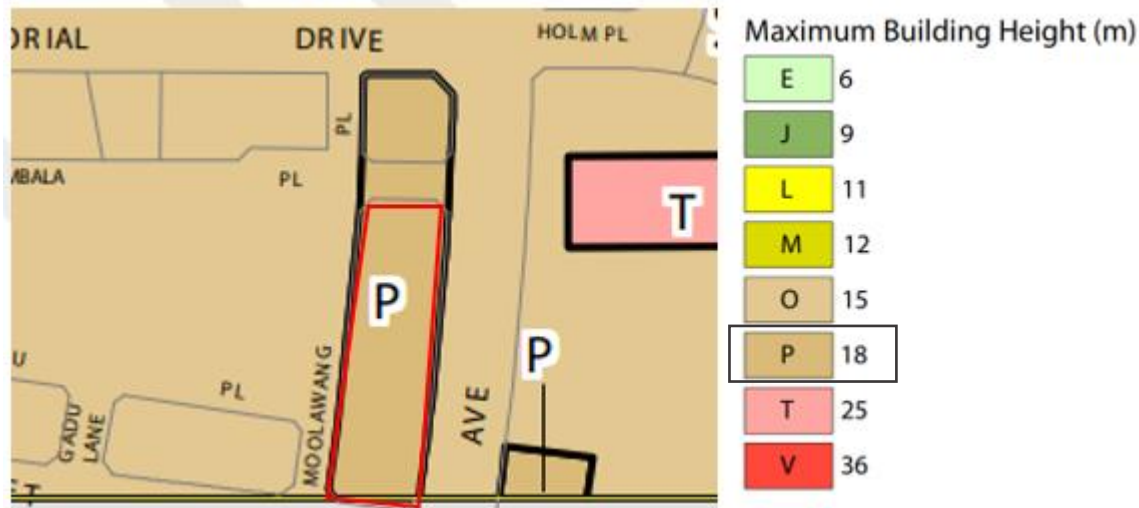


Figure 2: Extract of the height of buildings map, site outlined in red (Source: NSW Legislation)

1.5. What are the objectives of the development standard?

The relevant objectives of Clause 4.3 of the SLEP are:

- (1) *The objectives of this clause are as follows:*
 - (a) *to ensure the height of buildings complements the streetscape, rural or natural scenic character of the area in which the buildings are located,*
 - (b) *to ensure the height of buildings protects the amenity of neighbouring properties in terms of visual bulk, access to sunlight, privacy and views,*
 - (c) *to protect areas of scenic or visual importance.*
- (2) *The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.*

1.6. Is the development standard excluded from the operation of Clause 4.6 of the EPI?

The development standard is not specifically excluded from the operation of Clause 4.6 of SLEP.

2. EXTENT OF VARIATION

2.1. What is the proposed numeric value of the development standard in the DA?

The subject site has a maximum building height standard of 18m (refer to Figure 2). The proposal has a maximum building height, as measured from the natural ground level, of (27.54m) (at RL 73.00) as confirmed by Design Workshop Australia (DWA) Architects. Therefore, the proposal exceeds the development standard by (9.54m). Specifically, the portion of the building above the 18m height limit includes part Level 4, part Level 5, Level 6, the lift overruns and the communal landscaped areas on the roof. Refer to Figures 3, 4 and 5 below.



Figure 3: Extract of eastern elevation drawing with the portions above the 18m height standard circled in blue. (Source: DWA Architects)

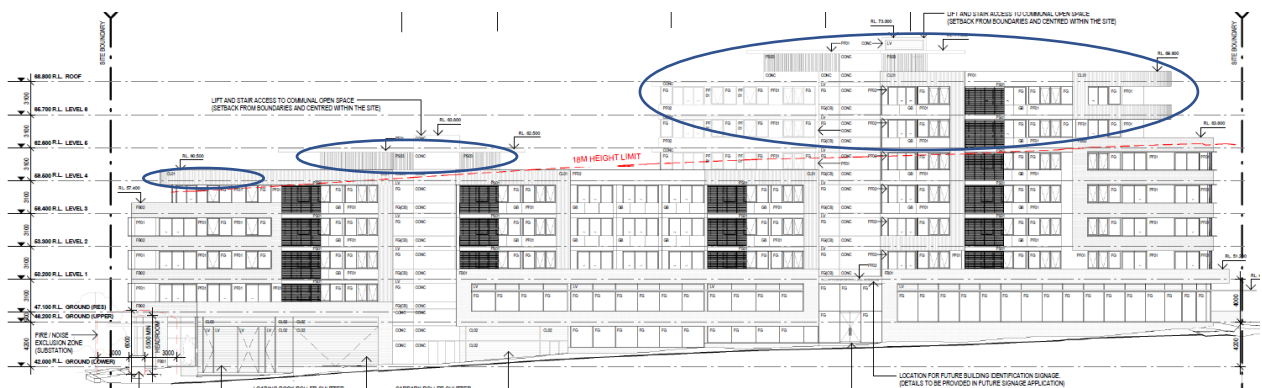


Figure 4: Extract of western elevation drawing with the portions above the 18m height standard circled in blue. (Source: DWA Architects)

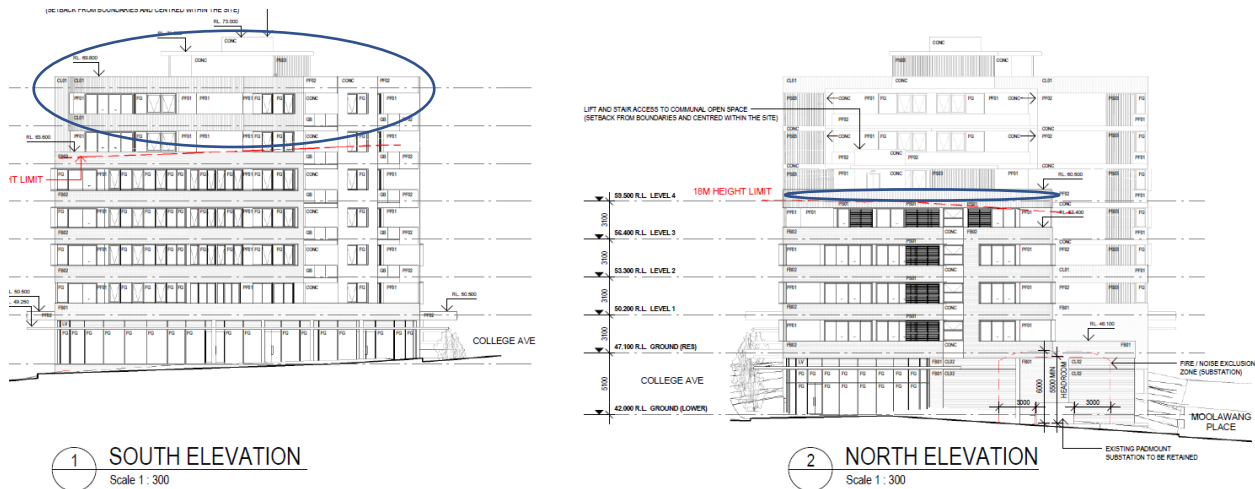


Figure 5: Extract of southern and northern elevation drawings with the portions above the 18m height standard circled in blue. (Source: DWA Architects)

3. COMPLIANCE WITH THE DEVELOPMENT STANDARD IS UNREASONABLE OR UNNECESSARY IN THE CIRCUMSTANCES OF THIS CASE. [cl.4.6 (3)(a)]

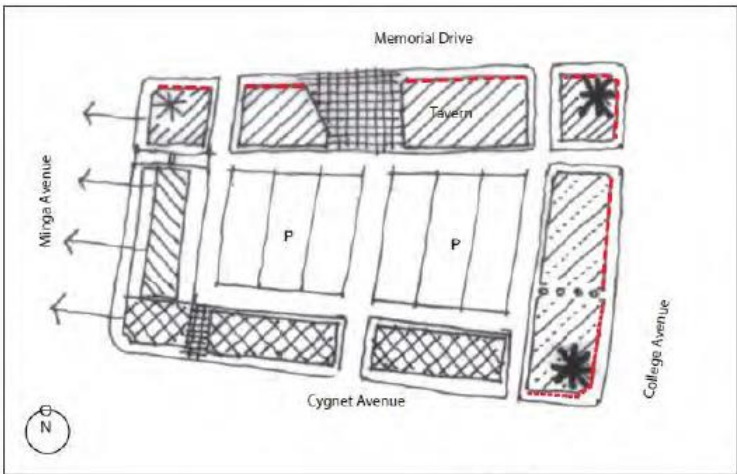
3.1. Achieves the objectives of the standard

Compliance with the maximum building height standard is unreasonable or unnecessary in the circumstances of this case because the objectives of the development standard are achieved, notwithstanding non-compliance with the standard,² as demonstrated in Table 1:


Table 1: Achievement of Development Standard Objectives.

| Objective | Discussion |
|--|---|
| (a) to ensure the height of buildings complements the streetscape, | The streetscape character of the area envisaged by the Shellharbour Development Control Plan (SDCP) and Masterplan Precincts contained within the SDCP, is for mixed use development with wide footpaths and public space that encourages high levels of pedestrian activity, enlivening the public streetscape. The site is located within Precinct D of the Shellharbour City Centre Masterplan. Figure 7.10 within the SDCP displays a |

² In *Wehbe v Pittwater Council* [2007] NSWLEC 827 Preston CJ identified 5 ways in which an applicant might establish that compliance with a development standard is unreasonable or unnecessary and that it is sufficient for only one of these ways to be established. Although the decision concerned SEPP 1, it remains relevant to requests under clause 4.6 as confirmed by Pain J in *Four2Five Pty Ltd v Ashfield Council* [2015] NSWLEC 90, notwithstanding that if the first and most commonly applied way is used, it must also be considered in 4.6(4)(a)(ii). The 5 ways in *Wehbe* are: 1. The objectives of the development standard are achieved notwithstanding non-compliance with the standard; 2. The underlying objective or purpose is not relevant to the development with the consequence that compliance is unnecessary; 3. The objective would be defeated or thwarted if compliance was required with the consequence that compliance is unreasonable; 4. The development standard has been virtually abandoned or destroyed by the Council's own actions in granting consents departing from the standard and hence the standard is unreasonable and unnecessary; or 5. The zoning of the land is unreasonable or inappropriate.

| Objective | Discussion |
|---|--|
| rural or natural scenic character of the area in which the buildings are located, | <p>desire for a focal point to the corner of Cygnet Avenue and College Avenue (see Figure 6 below).</p> <p>Figure 7.10 - Precinct D</p>  <p>LEGEND</p> <ul style="list-style-type: none"> Focal Point Predominantly Retail/Entertainment Predominantly Residential Residential / Mixed Use Public Place Retail/Showroom/Commercial/Residential Parking (incl. future multi level parking) Active Frontage <p>Figure 6: Figure 7.10 - Precinct D from the Shellharbour Masterplan within the SDCP 2013. (Source: SDCP 2013)</p> <p>The proposal complements the existing and envisaged established streetscape. A predominant feature in the streetscape is the existing Civic Plaza located to the south of the site and at the junction of Cygnet Avenue and College Avenue. This includes a seven storey building currently in use as the Shellharbour City Council building.</p> <p>The Civic Plaza is located within Precinct E of the Shellharbour City Centre Masterplan and this outlines key objectives for the precinct. Given the proximity of the subject site to the Civic Plaza, located immediately south of the subject site, many of the objectives are relative to this proposal.</p> <p>Turning to these objectives, Objective 6 for Precinct E is to "Create a small civic square at the corner of Cygnet and College Avenues" and Objective 7 for Precinct E is to "Address buildings to Cygnet and College Avenues." While the subject site is located</p> |

Page | 10

| Objective | Discussion |
|-----------|--|
| | <p>Avenue while the seven (7) storey element achieves the objectives of the Shellharbour DCP by creating a focal point through the development.</p> <p>The proposal is of comparable height to the council building and the design and massing of the proposed building, together with the proposed public forecourt at the intersection of Cygnet Avenue and College Avenue, complements the character of the streetscape and the Civic Plaza, reinforcing a sense of place. As stated in the Shellharbour City Council Design Review Panel (DRP) comments from the meeting held 29 June 2018, "<i>a taller building form to the corner of Cygnet Avenue and College Avenue with a reduced height of four storeys to the northern end of the building is encouraged.</i>" The proposal is consistent with these design principle comments; the increased built height creates a strong focal corner of the development which aids in framing the civic space provided at the Civic Plaza and the proposed public forecourt to the southern end of the building, as demonstrated in Figure 7 below.</p> <p>Furthermore, the proposal supports the objectives for Precinct H of the Shellharbour Masterplan, applicable to the land located south east of the subject site and surrounded by College Avenue, Lamerton Crescent/Main Street and Benson Avenue. This precinct, similar to Precinct D where the subject site is located, is to provide a mix of development including residential, retail and commercial uses. Objectives for Precinct H include "<i>Emphasis (height and detail) of building corners</i>" (Objective 4) and for buildings to provide a "<i>sense of enclosure and definition to the surrounding streets and public spaces to contain the space and add to the urban experience</i>" (Objective 6). The proposed building on the subject site would complement these objectives; the height and design of the building would provide definition and help frame the urban environment to the intersection of Cygnet Avenue and College Avenue.</p>  <p><i>Figure 8: Extract of 3D view plan South-East (College Avenue & Cygnet Avenue) (Source: DWA Architects)</i></p> <p>The provision of the public forecourt to the corner of Cygnet Avenue and College Avenue will contribute to the town centre public domain, as acknowledged in the design principle comments received from the DRP meeting held 29 June 2018; "<i>Introduction of the forecourt to the corner of Cygnet Avenue and College Avenue provides a positive contribution to the town centre's public domain.</i>" The height of the southern part of the proposed building together with the proposed public forecourt area, presents an urban design that will successfully frame the civic space creating an important focal point within</p> |

| Objective | Discussion |
|---|--|
| | <p>the streetscape. The height variation is considered to be appropriate when considered within the context of the overall streetscape with its primary frontage to College Avenue and Cygnet Avenue. Furthermore, the proposal sensitively responds to the topography of the site; the building gradually steps down the natural slope of the site when viewed from College Avenue in particular, presenting as four (4) storeys in height to the northern end of the building.</p> <p>It is considered the variation of the standard is consistent with the objective. Moreover, the variation of the standard in this case helps to achieve the objective of the standard because of the above-mentioned reasons.</p> |
| <p><i>(b) to ensure the height of buildings protects the amenity of neighbouring properties in terms of visual bulk, access to sunlight, privacy and views,</i></p> | <p>DWA Architects have prepared detailed shadow diagrams for the proposal which are provided at Appendix 1 of the SEE. The shadow diagrams illustrate the proposed development would protect the amenity of neighbouring properties in relation to sunlight, despite noncompliance with the height standard. The orientation and design of the building is such that its highest part would be at the southern end of the site. The adjacent building, 75 Cygnet Avenue, is a mixed-use building consisting of commercial units at lower levels and six (6) residential dwellings at second floor level only. This building would only be overshadowed between 9am and 10am in winter and would continue to receive uninterrupted sunlight between 10am and 3pm in winter. As demonstrated in Figure 9, a building with compliant height would continue to overshadow the adjacent mixed-use building, 75 Cygnet Avenue, between 9am and 10am in winter. Similarly, a compliant building would overshadow part of the Shellharbour City Council building between 9am and 10am in winter. Therefore, despite the noncompliance, the variation in height will result in only negligible additional adverse overshadowing impacts on these buildings, as shown in Figure 9.</p> <p>The proposed building would result in shadowing of parts of the Civic Plaza landscaped area in front of the Civic Buildings, between 9am and 1pm in winter. However, as demonstrated in Figure 9, the additional shadowing is negligible and regardless, a compliant building would result in an element of overshadowing of the Civic Plaza. The majority of the Civic Plaza would not be overshadowed ensuring access to sunlight and the proposal would not result in unreasonable amenity impacts.</p> |

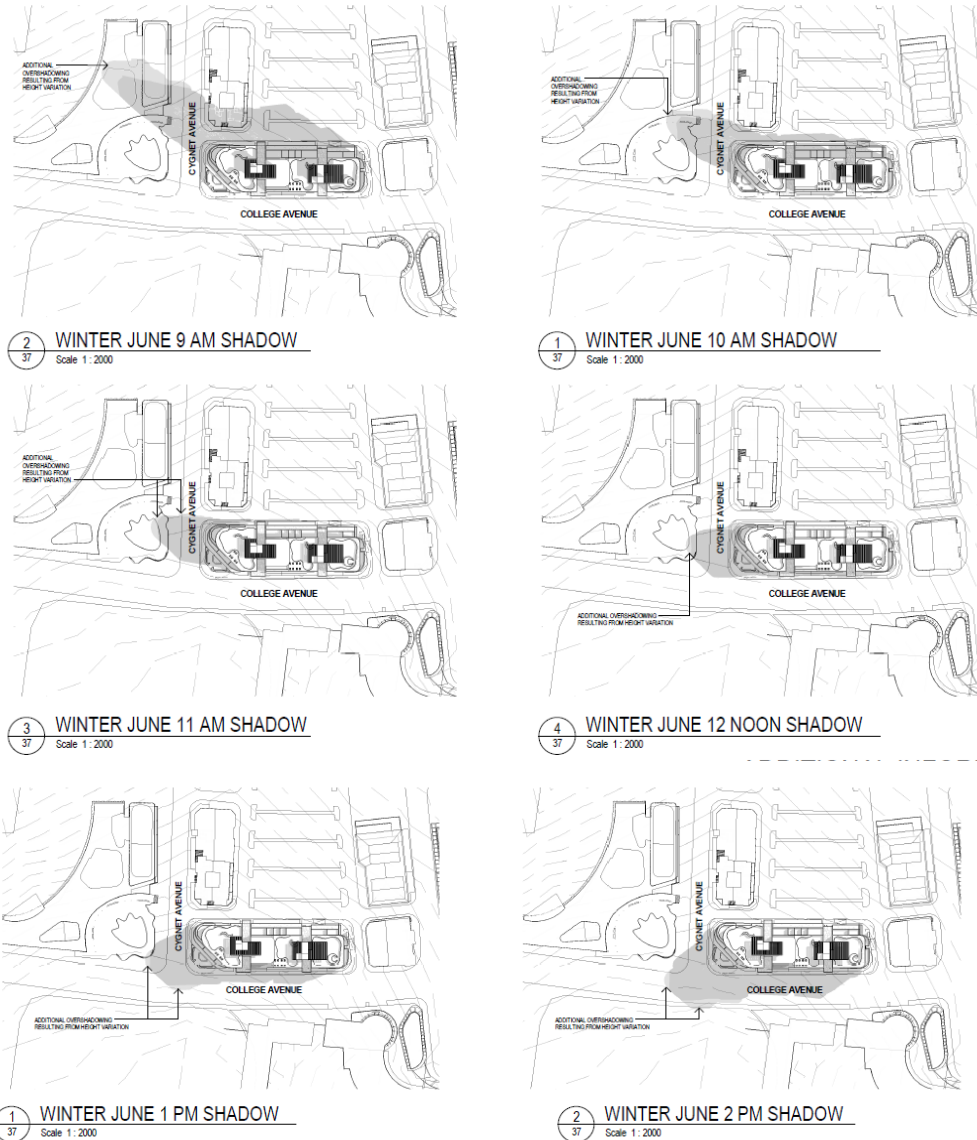
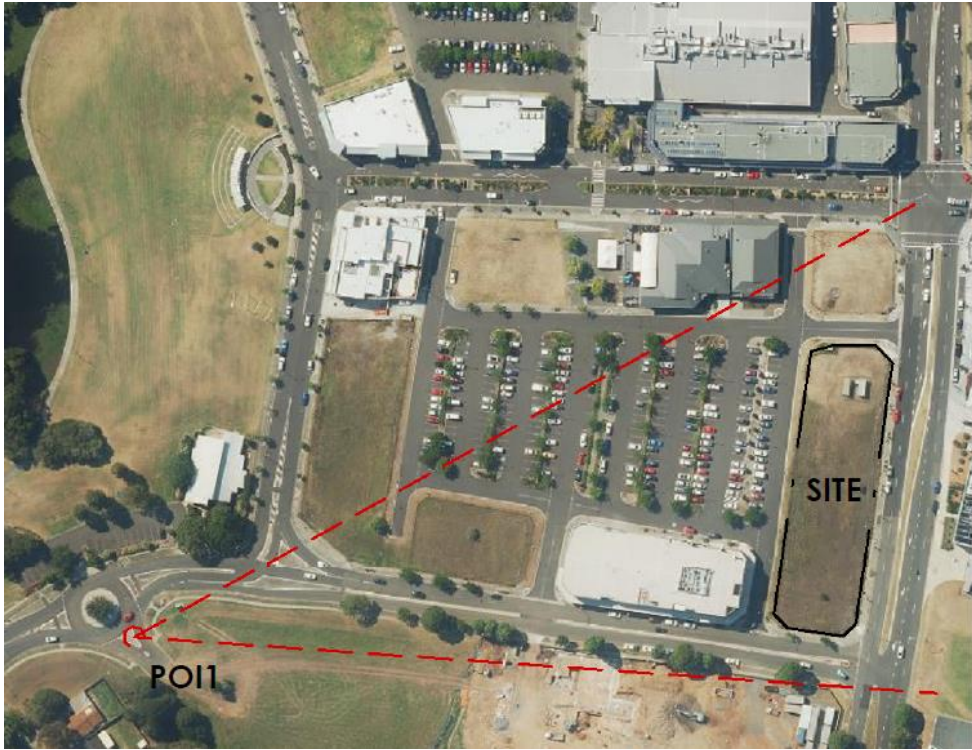


Figure 9: Extract of winter shadows plan 9am-2pm. Light grey demonstrates the additional shadow as a result of noncompliance (Source: DWA Architects)

The only residential dwellings located close to the site are second-floor level dwellings located at 75 Cygnet Avenue, to the south west of the site, and to the north of the site, where there is a mixed-use building comprising of residential dwellings. There are no nearby residential dwellings located to the south or east of the site. Therefore, there is no development to the south or east of the site affected by the height.

| Objective | Discussion |
|-----------|--|
| | <p>To the north of the site is a mixed-use building comprising of residential dwellings. The proposal complies with ADG setbacks in this regard and would protect the amenity of occupants of this neighbouring building. In relation to the residential dwellings located at 75 Cygnet Avenue, as demonstrated in Figure 9, these dwellings would receive 2 hours of sunlight between 9am and midday in winter and there would be no further overshadowing to these dwellings as a result of the contravention of the height of buildings standard. Therefore, despite the noncompliance, the variation in height will not result in any additional overshadowing impacts on these dwellings, as shown in Figure 9. The variation of the height standard does not result in any additional overlooking of neighbouring properties.</p> <p>Detailed view analysis drawings have been prepared by DWA Architects and are provided at Appendix 1 of the SEE. These demonstrate the proposal will have a positive impact upon views. As shown below in Figures 10, 11 and 12, the proposed building blends positively with the existing buildings and the Civic Plaza when viewed from beside the nearby public park, Harrison Park, located to the west of the site.</p>  <p>Figure 10: Extract of view analysis POI1 showing the location of where the view is taken from, next to Harrison Park located South West of the site (Source: DWA Architects)</p> |

| Objective | Discussion |
|-----------|--|
| |  <p><i>Figure 11: Existing photo view analysis POI1 (Source: DWA Architects)</i></p>  <p><i>Figure 12: Proposed photo view analysis POI1 (Source: DWA Architects)</i></p> |

| Objective | Discussion |
|-----------|---|
| | <p>Furthermore, when viewed from the south, looking north along College Avenue, Figures 13, 14 and 15 demonstrate the proposed building and additional height will result in a positive focal point to the intersection of Cygnet Avenue and College Avenue, as desired by Figure 7.10 within the SDCP.</p>  <p>Figure 13: Extract of view analysis POI3 showing the location of where the view is taken from, south of the site, looking North on College Avenue (Source: DWA Architects)</p> |

| Objective | Discussion |
|-----------|--|
| |  <p><i>Figure 14: Existing photo view analysis POI3 (Source: DWA Architects)</i></p>  <p><i>Figure 15: Proposed photo view analysis POI3 (Source: DWA Architects)</i></p> |

| Objective | Discussion |
|---|---|
| | The provision of both communal and private open space and landscaped areas on the building's rooftop will enhance the amenity for future residents and integrate the proposed development into the existing setting with the provision of significant landscaping. |
| <i>(c) to protect areas of scenic or visual importance.</i> | <p>Detailed site analysis drawings have been prepared by DWA Architects and are provided at Appendix 1 of the SEE. These clearly demonstrate the proposal will ensure the proposal provides views of key scenic features. Existing views looking south towards the Civic Plaza will be maintained as a result of the proposal and reinforced with the introduction of the proposed public forecourt to the site, adjacent to the intersection of Cygnet Avenue and College Avenue.</p> <p>The variation of the standard does not affect consistency with this objective</p> |

Compliance with the maximum height development standard is unreasonable or unnecessary in the circumstances of this case because the objective of the standard is achieved notwithstanding the non-compliance.

4. THERE ARE SUFFICIENT ENVIRONMENTAL PLANNING GROUNDS TO JUSTIFY CONTRAVENING THE STANDARD. [cl. 4.6(3)(b)]

In *Initial Action Pty Ltd v Woollahra Council* [2018] NSWLEC 2018, Preston J observed that in order for there to be 'sufficient' environmental planning grounds to justify a written request under clause 4.6, the focus must be on the aspect or element of the development that contravenes the development standard and the environmental planning grounds advanced in the written request must justify contravening the development standard, not simply promote the benefits of carrying out the development as a whole.

As discussed earlier, the aspect or element of the development that contravenes the development standard is the portion of the building above the 18m height limit which includes part Level 4, part Level 5, Level 6, the lift overruns and the communal landscaped areas on the roof. The majority of the building mass would be sitting below that height limit. In this regard the environmental impacts are negligible, as explained earlier in the discussion regarding privacy, overshadowing and visual impacts in Section 3. There are no unreasonable adverse environmental impacts associated with additional overshadowing or overlooking as a result of the proposed variation of the standard.

The proposal facilitates the provision of a public forecourt to the intersection of Cygnet Avenue and College Avenue, relating to and providing an extension to the Civic Plaza located opposite the site. The additional height to the building enables the creation of a focal point, as desired by the SDCP. The five (5) storey street wall to the southernmost part of the building frames the streetscape and scenic character at the intersection of College Avenue and Cygnet Avenue while the seven (7) storey element achieves the objectives of the Shellharbour DCP by creating a desired focal point on this key city centre site.

The visual impact of the variation on the principal adjacent roads, Cygnet Avenue and College Avenue, will be ameliorated for by the setback from the road way as a result of the proposed public forecourt and landscaping. The variation facilitates the redevelopment of the vacant site and provides dedicated public pathways and street activation to all boundaries of the site, which is presently not available. The proposal would result in a better planning outcome than if compliance were to be achieved, as it provides a development that meets the objective of the standard, while providing an extension to the Civic Plaza and a focal point for the site, as desired by the SDCP.

In terms of the objects (Section 1.3) of the Environmental Planning & Assessment Act, the provision of a public forecourt to the intersection of Cygnet Avenue and College Avenue, the provision of continuous commercial active ground floor frontage and the provision of a diverse housing mix in a sustainable city centre location is highly desirable. It promotes the orderly and economic use and development of land (s.1.3(c)) and good design and amenity of the built environment (s.1.3(g)). The environmental benefits of the public forecourt and focal design and height of the building, which is facilitated by the variation of the building height standard, greatly outweighs the negligible environmental harm resulting from the variation. In this regard we submit that there are sufficient environmental planning grounds to justify contravening the height of buildings development standard to the extent proposed in this application.

5. THE PROPOSAL WILL BE IN THE PUBLIC INTEREST BECAUSE IT IS CONSISTENT WITH THE OBJECTIVES OF THE STANDARD AND THE OBJECTIVES OF THE ZONE. [cl.4.6(4)(a)(ii)]

In section 3 (above), it was demonstrated that the proposal is consistent³ with the objectives of the development standard. The proposal is also consistent with the objectives of the zone as explained in **Table 2** (below).

Table 2: Consistency with Zone Objectives.

| Objective | Discussion |
|--|---|
| <i>To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.</i> | <p>The proposed development is for a seven-storey mixed use development on the site containing street level commercial floorspace and a total of seventy-seven (77) dwellings. The variation of the development standard does not result in an inconsistency with this objective. The proposal contributes to providing compatible land uses that will serve the needs of the local and wider community.</p> <p>The proposal includes seven (7) commercial units at lower ground and ground floor level. The size of the commercial units varies in floorspace, including large, flexible floor plates. As such the development will attract a mix of tenures and commercial businesses to serve the needs of local residents and the wider community.</p> <p>The provision of commercial units across the entire ground floor level will result in a continuous active ground floor frontage on College Avenue and Cygnet Avenue. This ensures the building positively engages with, and activates, the street. To the rear of the development, along Moolawang Place, the development continues to step with the natural fall of the site, as it does along College Avenue, and high-quality contrasting but complementary materials together with recessed elements and high-level windows, provide important activation to this elevation of the building.</p> <p>With a wholly commercial street level to the building, the proposal facilitates a connection and encourages pedestrians between Stocklands Shopping</p> |

³ In *Dem Gillespies v Warringah Council* [2002] LGERA 147 and *Addenbrooke Pty Ltd v Woollahra Municipal Council* [2008] NSWLEC the term 'consistent' was interpreted to mean 'compatible' or 'capable of existing together in harmony'

| | |
|--|---|
| | Centre, the main retail precinct within the city centre, and the Civic Plaza complex. |
| <i>To encourage appropriate employment opportunities in accessible locations.</i> | The subject site is located within the Shellharbour City Centre, which predominantly features commercial uses in accessible locations. These uses create employment opportunities and the proposal will positively contribute to this existing employment offering. A total of 2257.4m2 (GFA) of street level commercial space is proposed, creating opportunities for future employment. |
| <i>To maximise public transport patronage and encourage walking and cycling.</i> | <p>The proposal facilitates a medium density mixed use development on an appropriate site in close proximity to public transport accessible within the Shellharbour City Centre. New dwellings are proposed in walking distance to shops and services and the new commercial units proposed at street level will add to the current retail offering in the city centre. The proposed new shopfronts will create a pleasant environment to connect the Civic Plaza to the main centre. For these reasons, the proposal is consistent with this objective. The proposed exceedance of the height standard does not diminish consistency with this objective.</p> <p>As shown on the architectural plans prepared by DWA Architects and provided at Appendix 1 of the SEE, cycling is encouraged through the provision of bicycle parking spaces (28 residents spaces, 7 visitor spaces and 14 business spaces).</p> |
| <i>To strengthen the role of the Shellharbour City Centre to ensure that it continues to develop as a major regional centre with retail, entertainment, commercial, cultural and residential uses.</i> | The proposed development is for commercial and residential uses, comprising a total of seventy-seven (77) dwellings and 2257.4m2 (GFA) of commercial space at street level. The proposed development will positively contribute to the diversity and variety of commercial and residential development within Shellharbour City Centre. The proposed residential shop top housing provides an urban living form that is not common in the area. The proposal contributes to housing choice and variety in Shellharbour City Centre, helping the city to develop as a major regional centre. |
| <i>To allow for a limited range of residential accommodation while maintaining retail, business or other non-residential active uses at street level.</i> | As detailed in the architectural plans prepared by DWA Architects and provided at Appendix 1 of the SEE, commercial premises will be provided at street level along College Avenue and Cygnet Avenue, the principal street elevations to the building. Residential accommodation will be provided above street level only. The proposal provides a form of urban living not common in the area. Therefore, the proposal creates housing diversity and choice. The mix of residential offering including one (1) bed, two (2) bed and three (3) bed dwellings will ensure a variety of housing choice in a centrally positioned sustainable location in Shellharbour city Centre. The future occupants of the residential dwellings will support the commercial premises and contribute to the vibrancy of the city centre. |

As can be seen from **Table 1** and **Table 2**, the proposal is consistent with the objectives of the standard and the objectives of the zone and is therefore considered to be in the public interest.

6. CONTRAVENTION OF THE DEVELOPMENT STANDARD DOES NOT RAISE ANY MATTER OF SIGNIFICANCE FOR STATE OR REGIONAL ENVIRONMENTAL PLANNING. [cl. 4.6(5)(a)]

There is no identified outcome which would be prejudicial to planning matters of state or regional significance resulting from varying the development standard as proposed by this application.

7. THERE IS NO PUBLIC BENEFIT OF MAINTAINING THE STANDARD. [cl. 4.6(5)(b)]

There is no public benefit in maintaining strict compliance with the development standard. Variation of the development standard facilitates a contemporary development which promotes the aims and objectives of the SDCP and is of an appropriate massing, bulk and scale on the site and those in the vicinity, whilst retaining significant views and not having any unreasonable environmental impacts. The variation is limited to only portions of the building at upper levels, namely part Level 4, part Level 5, Level 6, the lift overruns and the communal landscaped areas on the roof. The extent of the contravention relates to approximately 14.25% of the buildings GFA above the height standard. The lift provides equitable access to the proposed building, and communal space roof top area.

Accordingly, there is no public benefit⁴ in maintaining strict compliance with the development standard given that there are no unreasonable impacts that will result from the variation to the Height of Buildings standard.

8. CONCLUSION

This Clause 4.6 variation request demonstrates, as required by Clause 4.6 of the Shellharbour Local Environmental Plan 2013, that:

- Compliance with the development standard would be unreasonable and unnecessary in the circumstances of this development;
- There are sufficient environmental planning grounds to justify the contravention;
- The development meets the objectives of the development standard and is consistent with the objectives of the B3 Commercial Core Zone;
- The proposed development, notwithstanding the variation, is in the public interest and there is no public benefit in maintaining the standard; and
- The variation does not raise any matter of State or Regional Significance.

On this basis, therefore, it is considered appropriate to exercise the flexibility provided by Clause 4.6 in the circumstances of this application.

⁴ *Ex Gratia P/L v Dungog Council* (NSWLEC 148) established that the question that needs to be answered to establish whether there is a public benefit is "whether the public advantages of the proposed development outweigh the public disadvantages of the proposed development"



Statement of Environmental Effects

Proposed Mixed Use
Development at 16 College
Avenue, Shellharbour City
Centre

Submitted to Shellharbour City Council
On Behalf of Shiloh Pty Ltd

March 2019

REPORT REVISION HISTORY

| Revision | Date Issued | Revision Description | |
|----------|-------------|--|---|
| 01 Draft | 28/02/19 | Revision tracking notes | |
| | | Prepared by | Verified by |
| | | Lucy Broadwell <i>Project Planner</i> | Stephen Kerr <i>Executive Director</i> |
| 02 Final | 05/03/19 | Prepared by | Verified by |
| | | Lucy Broadwell <i>Project Planner</i> | Stephen Kerr <i>Executive Director</i> |

Certification

This report has been authorised by City Plan Strategy & Development P/L, with input from a number of other expert consultants. To the best of our knowledge the accuracy of the information contained herein is neither false nor misleading. The comments have been based upon information and facts that were correct at the time of writing.

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APPENDICES

| Appendix | Document | Prepared by |
|----------|--|---|
| 1 | Architectural Plans & Survey | Design Workshop Australia |
| 2 | Landscape Plan | Taylor Brammer |
| 3 | Cost of Works | Mitchell Brandtman |
| 4 | DCP Compliance Table | CPSD |
| 5 | Clause 4.6 Variation Request | CPSD |
| 6 | ADG Compliance Table | Design Workshop Australia |
| 7 | SEPP 65 & Design Verification Statement | Design Workshop Australia |
| 8 | Basix Certificate | Planning Principles |
| 9 | Drainage plans | ATB Consulting Engineers |
| 10 | Water Sensitive Urban Design Report | ATB Consulting Engineers |
| 11 | Geotechnical Investigation Report | Aargus Pty Ltd |
| 12 | Detail Site Investigation Report | Aargus Pty Ltd |
| 13 | Traffic Impact Assessment | Transport and Traffic Planning Associates |
| 14 | Construction Management Plan (Preliminary) | ATB Consulting Engineers |
| 15 | Access Report | Accessible Building Solutions |
| 16 | BCA Report | Building Code Assistance |
| 17 | Acoustic Report | Harwood Acoustics |
| 18 | Waste Management Plan | Elephants Foot |
| 19 | Solar Access Report | SLR |
| 20 | Cross Ventilation Report | SLR |
| 21 | Electrical Lighting Plans and Schedule | Arrow |
| 22 | Social Impact Assessment | Judith Stubbs & Associates |
| 23 | Preliminary Aboriginal Cultural Heritage Investigation (Level 1) | Dominic Steele Consulting Archaeology |
| 24 | Soil and Sedimentation Plans | ATB Consulting Engineers |

1. EXECUTIVE SUMMARY

1.1. Brief Introduction

City Plan Strategy & Development Pty Ltd (CPSD) has prepared this Statement of Environmental Effects (SEE) to accompany an amended Development Application (ref: DA0262/2018) to Shellharbour City Council (SCC).

The Development Application (DA) relates to land at 16 College Avenue, Shellharbour (the subject site). The proponent for the DA is Shiloh Pty Ltd (the proponent). A description of the proposal is provided below as well as **Section 4** of this SEE.

This SEE has been prepared pursuant to Section 4.12 of the Environmental Planning and Assessment Act, 1979 and Clause 50 of the Environmental Planning and Assessment Regulation, 2000. As sought by the relevant legislation, this SEE:

- describes the proposed development and its context;
- assesses the proposal against the applicable planning controls and guidelines; and
- assesses the potential environmental impacts and mitigation measures.

The proposal achieves a Capital Investment Value (CIV) of \$34,427,595.00. In this case, the proposal represents 'regionally significant development' as referred to in State Environmental Planning Policy (State & Regional Development) 2011 as a development that has a capital investment of more than \$30 million.

1.2. Brief Proposal Description

This SEE relates to the development proposal comprising of:

- Excavation for the purpose of one (1) basement and one (1) lower ground floor level of car parking, accessible from Bimbala Place, accommodating a total of 95 car parking spaces;
- An overall above ground-built form of seven (7) storeys, which equates to a maximum RL of 73.000;
- 2257.4m² of ground floor gross floor area (GFA), for the purpose of commercial premises; and
- Shop top housing at ground floor and above, inclusive of 77 dwellings, roof top communal space, and the like.

1.3. Background Information

Following Pre-Lodgement Advice issued by the SCC in May 2018, Development Application DA0262/2018 was lodged with SCC on the 1st June 2018. Since lodgement the DA has been initially reviewed by Council Officers and considered by the Shellharbour City Council Design Review Panel (SCCDRP). Following receipt of comments received from the SCCDRP, amended architectural plans were submitted to the council late 2018. These amended plans have since been considered by the Southern Regional Planning Panel (SRPP) at a meeting on Tuesday 30th October 2018.

This SEE is submitted alongside accompanying amended and additional plans. These have taken into consideration all matters raised by the SCCDRP and SRPP.

1.4. Summary of Environmental Assessment

In assessing the proposal, this SEE has considered the relevant legislation, environmental planning instruments, strategic plans, as well as the existing and/or likely future context of the subject locality. In particular, it considers State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development (SEPP 65), State Environmental Planning Policy No 55 - Remediation of Land (SEPP 55), The Shellharbour LEP (SLEP) 2013, as well as the Shellharbour DCP.

The proposal is substantially compliant with the development standards and objectives of the SLEP 2013, although, as discussed below, the proposal breaches the Height of Building development standard by 9.54m. Specifically, the proposal is for a mixed-use development comprising of 'shop top housing' with street level 'commercial premises' as defined under the SLEP 2013. Both land uses are permissible, with consent, within the subject B3 Commercial Core zone. The proposed development is consistent with the zone objectives, comprising of shop top housing and commercial premises, therefore providing a mixture of compatible land uses and integrating residential and commercial uses in an accessible location, as well as maximising public transport patronage.

Further, the proposal generates 9407.6m² of Gross Floor Area (GFA). With a site area of 3213m², the proposed Floor Space Ratio (FSR) is 2.93:1.

As indicated above, a maximum RL of 73.00 is proposed, which is to the top of the tallest lift overrun. This equates to a maximum height of 27.54m, which exceeds the 18m height of building development standard prescribed by the SLEP 2013. **Appendix 5** of this SEE seeks an exception to the strict application of the Height of Building development standard, pursuant to Clause 4.6 of the SLEP 2013. In summary, the exception is warranted when there is no public benefit in maintaining strict compliance with the development standard given that there are no unreasonable impacts that will result from the variation.

The SEE concludes that this proposal is of an appropriate scale and mass for the subject site. In particular, its scale, mass and land use character are consistent with that established by the Shellharbour City Centre Masterplan contained within the Shellharbour DCP and the SLEP 2013. Subsequently, it will assist with establishing the long-term vision of the subject locality. It is also concluded that the proposal's environmental impacts are reasonable.

In light of the above, this SEE finds that the proposal is suitable for the subject site and worthy of Development Consent.

2. INTRODUCTION

2.1. General Introduction

This SEE relates to a DA proposing earthworks and construction of a mixed-use development comprising seven (7) storeys of shop top housing for seventy-seven (77) dwellings, one (1) basement level and one (1) lower ground floor level of car parking, comprising ninety-five (95) car park spaces, street level commercial space of 1910.2m², as well as roof top level communal open space at 16 College Avenue, Shellharbour City Centre. The Proponent for the DA is Shiloh Pty Ltd. A detailed description of the proposal is provided in **Section 4** of this SEE.

2.2. Supporting Information

This SEE has been prepared with information from the following specialist services:

- Architectural Plans by Design Workshop Australia;
- Survey Plan by Landteam Australia Pty Ltd;
- Landscape Plans by Taylor Brammer;
- Value of Assessment by Mitchell Brandtman;
- DCP Compliance Table by CPSD;
- ADG Compliance Table by Design Workshop Australia;
- SEPP 65 Design Verification Statement by Design Workshop Australia;
- Basix Report by Planning Principles;
- Drainage Plans by ATB Consulting Engineers;
- Construction Management Plan by ATB Consulting Engineers;
- Soil and Sedimentation Plans by ATB Consulting Engineers;
- Geotechnical Investigation Report by Aargus Pty Ltd;
- Detailed Site Investigation Report by Aargus Pty Ltd;
- Acoustic Report by Hardwood Acoustics;
- Traffic Impact Assessment by TTPA;
- Access Report by ABS Access;
- BCA Report by Building Code Assistance;
- Preliminary Aboriginal Cultural Heritage Investigation (Level 1) by Dominic Steele Consulting Archaeology;
- Solar Access Analysis by SLR;
- Ventilation Report by SLR;
- Waste Management Plan by Elephants Foot; and,

CPSD have relied on the information in these reports, prepared by professionals in their field, for the preparation of this SEE.

3. SITE AND CONTEXT DESCRIPTION

3.1. Site Identification

The subject site is legally described as Lot 3 in DP1072916. It is more commonly referred to as 16 College Avenue, Shellharbour. An aerial view of the subject site is provided in **Figure 1** below.



Figure 1: Aerial view of site, outlined in red shaded yellow (Source: Six Maps)

3.2. Site Shape, Boundaries, Area & Gradient

The subject site is rectangular in shape. As detailed in the Survey Plan prepared by Landteam Australia Pty Ltd (**Appendix 1**) the approximate area of the site is 3,213m². The site slopes, by approximately 4m, from the southern boundary to the northern (Bimbala Street) boundary.

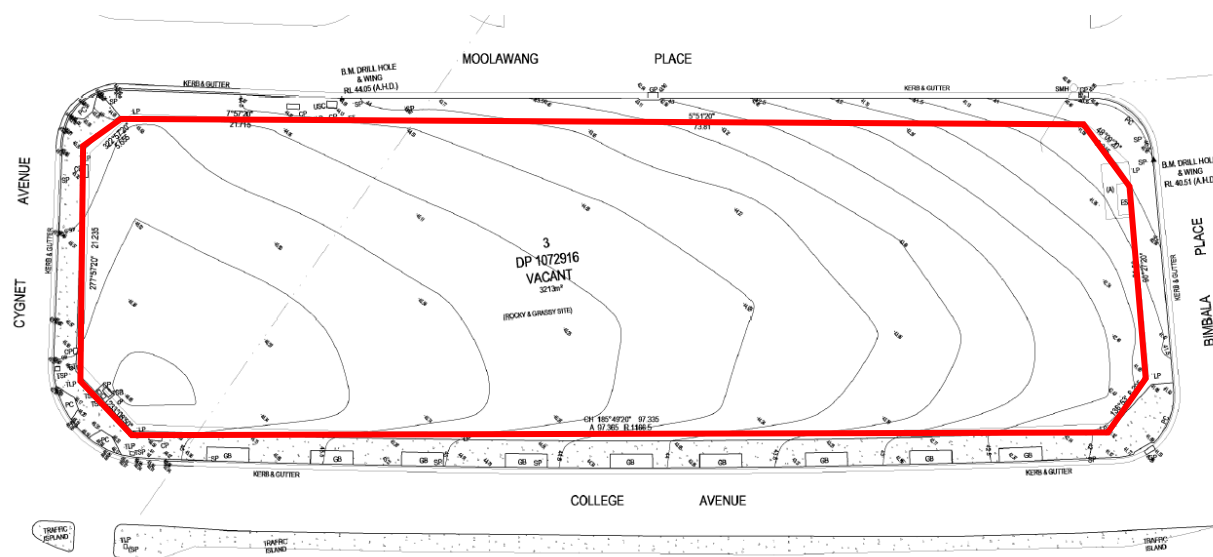


Figure 2: Extract from Site Survey, subject site outlined in red (Source: Landteam Australia Pty Ltd)

The dimensions of the site are as follows:

Table 1: Site Dimensions

| Boundary | Frontage or Boundary | Dimension (m) |
|-------------------|-------------------------------|---------------|
| North | Bimbala Place | 21.6m |
| North East corner | Bimbala Place/College Avenue | 6.2m |
| East | College Avenue | 97.9m |
| South East corner | College Avenue/Cygnet Avenue | 7.3m |
| South | Cygnet Avenue | 21.2m |
| South West corner | Cygnet Avenue/Moolawang Place | 5.7m |
| West | Moolawang Place | 95.6m |
| North West corner | Moolawang Place/Bimbala Place | 5.9m |

3.3. Existing Development

The site is a vacant lot consisting of a grassed area with no existing buildings. There is a metal wire fence to the perimeter. There are no trees and limited vegetation, comprising mostly self-sown weed species.

The site sits between Shellharbour Council's Civic Centre (including library and museum) located to the south and Stocklands Shellharbour Shopping Centre located to the north east of the site. The entire perimeter of the site is surrounded by roads.



Figure 3: Existing site frontage to corner of Cygnet Avenue and Moolawang Place (Source: Google Maps)



Figure 4: Existing site frontage to College Avenue looking north from the corner of Cygnet Avenue and College Avenue (Source: Google Maps)



Figure 5: Existing site frontage to College Avenue looking south (Source: Google Maps)



Figure 6: Existing site frontage to College Avenue showing proximity to Stocklands Shellharbour Shopping Centre, located to the east of the site (Source: Google Maps)



Figure 7: Existing site frontage to Moolawang Place (Source: Google Maps)

3.4. Immediately Surrounding Development

Immediately to the north of the subject site is a recently constructed (2) two to four (4) storey mixed use building with frontages to Memorial Drive, Moolawang Place, Bimbala Place and College Avenue.

Immediately to the east of the subject site is the Stockland Shellharbour Shopping Centre, a substantial, retail complex with 220 speciality stores and associated car parking and servicing facilities. A key pedestrian entrance to the shopping centre is located to the north east of the subject site, on the corner with Memorial Drive and College Avenue.

To the south of the subject site, is the Shellharbour Council Civic Centre, including library and museum with a substantial civic plaza providing landscaped public open space area to the corner of College Avenue and Cygnet Avenue.

Immediately to the west of the site is Moolawang Place. This road provides direct access to car parking spaces within a central public car park. Also, on this road, opposite the south western end of the subject site, is a three-storey commercial use building.

3.5. Context Description

Shellharbour City Centre is the central business district of the City of Shellharbour, located in the Illawarra region. It is located in the local government area of Shellharbour City Council. The city of Wollongong is located 25km from Shellharbour and Sydney is located approximately 115km from Shellharbour city centre. The city centre provides views of Lake Illawarra and the surrounding Illawarra Escarpment hills beyond.

It contains a number of land uses, including low rise residential suburbs as well as more medium-density mixed-use developments, educational establishments, places of public worship, rail transport inclusive of a station at Shellharbour Junction together with plentiful passive and active public open spaces. An aerial of the subject locality is provided below.

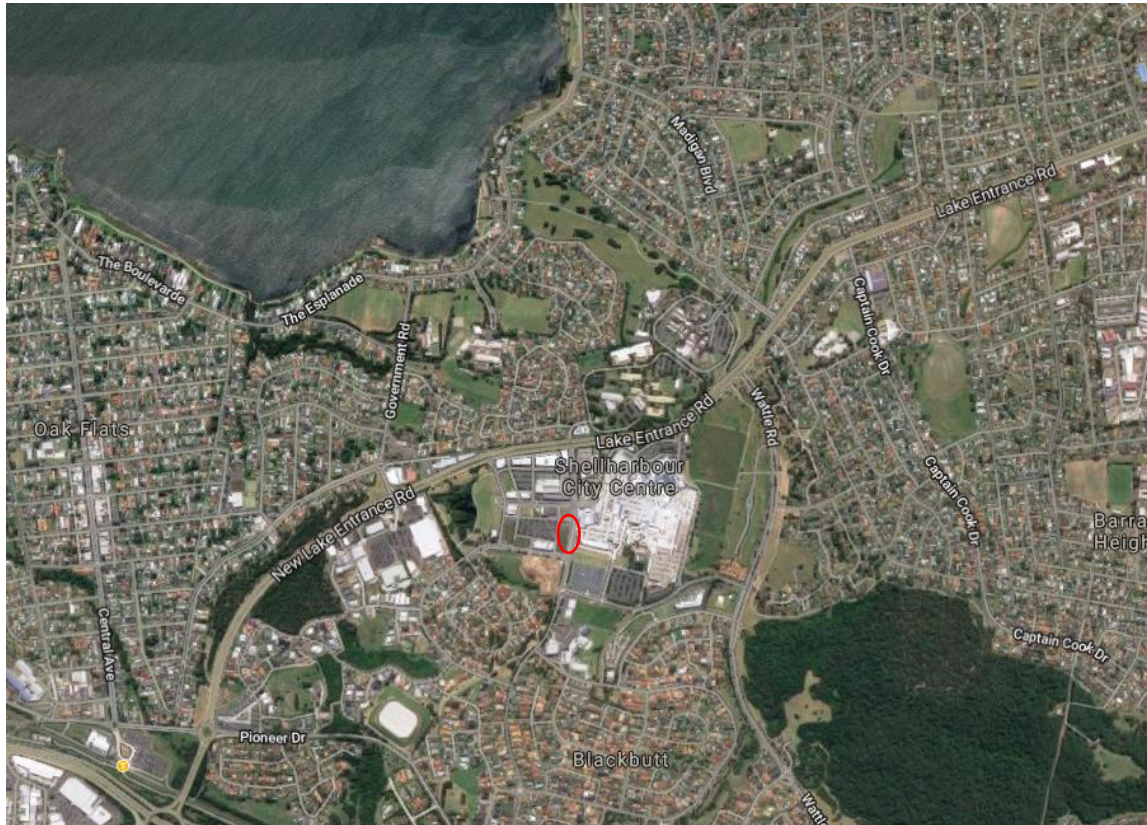


Figure 8: Contextual aerial view with subject site's location circled red (Source: Google Maps)

Figure 8 above shows an aerial image identifying the site within its contextual location.

4. DESCRIPTION OF DEVELOPMENT

4.1. General Description

This SEE relates to a DA proposing earthworks and construction of a mixed-use development comprising seven (7) storeys of shop top housing for seventy-seven (77) dwellings, one (1) basement level and one (1) lower ground floor level of car parking comprising ninety-five (95) car park spaces, street level commercial space of 1910.2m², as well as roof top communal open space at 16 College Avenue, Shellharbour City Centre. A detailed description of the proposal is provided below.

4.2. Detailed Proposal Description

4.2.1. Excavation, Civil Works & Remediation

Excavation primarily for the purpose of the basement level proposed.

4.2.2. Construction

The following table provides a level by level summary of the proposed building:

Table 2: Summary of Proposal

| Level | Use | Details |
|--------------|----------|---|
| Basement B1 | Car Park | <p>A total of 63 car parking spaces, comprising of:</p> <ul style="list-style-type: none"> 63 for residents inclusive of 16 accessible car parking spaces; <p>Also proposed are:</p> <ul style="list-style-type: none"> Access to 2 lifts; and Vehicular ramp to lower ground floor level. |
| Lower Ground | Car Park | <p>A total of 35 car parking spaces, comprising of:</p> <ul style="list-style-type: none"> 14 for residents; 16 for visitors inclusive of (1) accessible car parking space; 2 for commercial; 4 motor bike parking spaces for residents; and 1 car wash bay for residents; <p>Also proposed are:</p> <ul style="list-style-type: none"> 28 bicycle parking spaces for residents. 7 bicycle parking spaces for visitors; 14 bicycle parking spaces for commercial; Access to 2 lifts. Services rooms |

| | | |
|--------------|-------------|--|
| | Commercial | <ul style="list-style-type: none"> ▪ Vehicular ramp/access to Moolawang Place and down to basement level. ▪ Vehicular ramp/access to loading area from Bimbala Place. ▪ Commercial space comprising of 179.8m2. |
| Upper Ground | Residential | <p>A total of 5 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ One (1) 1-Bed; and ▪ Four (4) 2-Beds. |
| | Commercial | <ul style="list-style-type: none"> ▪ Commercial space comprising of 1730.4m2. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 2 lifts ▪ Pedestrian link from Moolawang Place to College Avenue; and ▪ Access to 2 stairs. |
| Level 1 | Residential | <p>A total of 18 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Three (3) 1-Beds; ▪ Fourteen (14) 2-Beds inclusive of three (3) split level units over Levels 1 and 2; and ▪ One (1) 3-Bed. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 2 lifts; ▪ Access to 2 stairs. |
| Level 2 | Residential | <p>A total of 18 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Three (3) 1-Beds; ▪ Fourteen (14) 2-Beds inclusive of three (3) split level units over Levels 2 and 3; and ▪ One (1) 3-Bed. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 2 lifts; ▪ Access to 2 stairs. |
| Level 3 | Residential | <p>A total of 17 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Two (2) 1-Beds; ▪ Fourteen (14) 2-Beds; and ▪ One (1) 3-Bed. <p>Also proposed are:</p> |

| | | |
|---------|---|--|
| | | <ul style="list-style-type: none"> ▪ Access to 2 lifts; ▪ Access to 2 stairs. |
| Level 4 | Residential | <p>A total of 8 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Two (2) 1-Beds; ▪ Three (3) 2-Beds; and ▪ Three (3) 3-Bed. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 1 lift; ▪ Access to 1 stair. ▪ Access to 865.6m2 communal open space. |
| Level 5 | Residential | <p>A total of 7 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Two (2) 1-Beds; ▪ Two (2) 2-Beds; and ▪ Three (3) 3-Bed. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 1 lift; ▪ Access to 1 stair. |
| Level 6 | Residential | <p>A total of 7 dwellings, comprising of:</p> <ul style="list-style-type: none"> ▪ Two (2) 1-Beds; ▪ Two (2) 2-Beds; and ▪ Three (3) 3-Bed. <p>Also proposed are:</p> <ul style="list-style-type: none"> ▪ Access to 1 lift; ▪ Access to 1 stair. |
| Rooftop | Rooftop Terrace | <ul style="list-style-type: none"> ▪ Rooftop Terrace providing 594.5m2 of Communal Open Space. ▪ Access to 1 lift; ▪ Access to 1 stair. |
| Total | <p>77 residential units 95 car parking spaces 4 motorcycle spaces 49 bicycle spaces</p> | |

Refer to the Architectural Plans prepared by Design Workshop Australia at **Appendix 1** for further detail.

4.3. Development Statistics

The key statistics and elements of the proposal are shown in the table below:

Table 3: Development Statistics.

| Element | Proposal |
|---------------------------|--|
| Site Area | 3,213m ² |
| Gross Floor Area | 9407.6m ² |
| Retail / Commercial GFA | 2257.4m ² |
| Residential GFA | 7150.2m ² |
| FSR | 2.93:1 |
| Maximum Height | RL73.000 |
| Total Apartments | 77 dwellings over seven (7) levels comprising: <ul style="list-style-type: none"> 15 x one (1) bed; 50 x two (2) beds; and 12 x three (3) beds. |
| Total Parking | 95 onsite car parking spaces comprising: <ul style="list-style-type: none"> 77 car spaces for residents, including 16 accessible spaces; 16 car spaces for visitors; 2 spaces for commercial; and 4 motorbike spaces for residents. 28 bicycle spaces for residents 7 bicycle spaces for visitors 14 bicycle spaces for commercial |
| Total Communal Open Space | 1460.1m ² including 865.6m ² at Level 4 and 594.5m ² on the roof top. |

4.4. Capital Investment Value

The Capital Investment Value (CIV) of the project is estimated at \$34,427,595.00. Refer to the QS Report prepared by Mitchell Brandtman provided at **Appendix 3**.

4.5. Pre-Lodgement Consultation

4.5.1. Shellharbour City Council Pre-Lodgement Advice

A meeting was held on Tuesday, 20 March 2018 between council officers and the applicant to discuss the proposed development at the site. Written Pre-Lodgement Advice was received from Council on Friday, 25 May 2018. This detailed the key development standards, objectives and performance controls of the environmental planning framework relevant to the site and proposal. As such these are addressed in this SEE report.

4.6. Post-Lodgement Consultation

4.6.1. Shellharbour City Council Design Review Panel

A meeting was held on Friday, 29 June 2018 at Shellharbour City Council - Administration Offices with the Shellharbour City Council Design Review Panel (SDRP).

The revised proposal has taken into account the design principle comments raised in this meeting, as follows:

| Design Principle Comments | Response |
|---|---|
| Context and Neighbourhood Character <ul style="list-style-type: none"> <i>The site sits between two prominent focal points of the town centre, namely the Shellharbour Council's Civic Centre and Stocklands Shopping Centre.</i> <i>The site will be viewed in the round, with its perimeter surrounded by roads</i> <i>Essential the proposal provides a high-quality building that connects to the public domain and not consolidate the poor urban design approach/lack of street engagement taken by the Shopping Centre</i> <i>Proposal should sensitively respond to:</i> <ul style="list-style-type: none"> <i>- the topography of the site and adjoining streetscapes;</i> <i>- to the developments relationship to the Civic Plaza;</i> <i>- integration with pedestrian facilities of the public domain; and</i> <i>- provision of access from the various street frontages.</i> | <p>The context and neighbourhood character has been addressed in this SEE and the DCP Compliance Table provided at Appendix 4.</p> <p>The building now proposes direct access to commercial premises from the street, along College Avenue, and the public forecourt located at the corner of College Avenue and Cygnet Avenue. This will ensure the building engages with the street and relates positively to the Civic Plaza opposite. Furthermore, the proposal sensitively responds to the topography of the site; the building gradually steps down the natural slope of the site when viewed from College Avenue in particular.</p> <p>Access to the building, for either pedestrian or vehicular, is</p> |

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| | provided from all elevations of the building. |
| <p>Built Form and Scale</p> <ul style="list-style-type: none"> ▪ <i>Introduction of the forecourt to the corner of Cygnet Avenue and College Avenue provides a positive contribution to the town centre's public domain.</i> ▪ <i>Rational of providing a taller building to the major road intersection of Cygnet Avenue and College Avenue is reasonable. Further supporting information to support the increase in height is required though, particularly its relationship to the top RL's of existing neighbouring buildings.</i> ▪ <i>Further justification required for the additional height at the northern end of the building.</i> ▪ <i>Commercial units on College Avenue would be isolated from the street due to retail podium elevated above the street. An active vibrant streetscape should be provided with access to commercial units from the street.</i> ▪ <i>Access to commercial units from Moolawang Place should be considered. This would aid street activation on this elevation. Quality materials and finishes should be proposed along this elevation.</i> ▪ <i>A taller building form to the corner of Cygnet Avenue and College Avenue with a reduce height of four storeys to the northern end of the building is encouraged.</i> | <p>As shown in the Architectural Plans provided at Appendix 1, the proposal now includes provision of a public forecourt to the corner of the building overlooking the intersection of Cygnet Avenue and College Avenue. This helps the development engage positively with the streetscape on this prominent corner. It relates the developments to the Civic Plaza located opposite and together with the increased built height, creates a strong focal corner of the development.</p> <p>The northern end of the development to Bimbala Place has been reduced significantly with this amended scheme. It is now only four (4) storeys with a fifth (5) storey set back above. The proposal is now close to complying with the height control; only the roof element of the fifth floor encroaches the 18m height limit. The northern end of the building will read as comparable in height with the recently constructed mixed use building located immediately opposite.</p> <p>As already discussed, the building now proposes direct access to commercial premises from the street. This ensures the building positively engages with, and activates, the street.</p> <p>The use of high-quality contrasting but complementary materials and provision of recessed elements will assist in activating the elevations of the building. To provide activation</p> |

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| | along Moolawang Place, high level windows to the car ramp are proposed as opposed to blank elevation at this level. |
| Density <ul style="list-style-type: none"> <i>The proposal represents an overdevelopment of the site that fails to fully engage with the street.</i> | <p>The building has been amended and reduced in scale substantially since the proposal was reviewed by the SDRP. As discussed in Section 7 of this report, the proposal represents an appropriate scale and massing for the site.</p> |
| Sustainability <ul style="list-style-type: none"> <i>Lightwells are not an appropriate form of primary air source for habitable rooms.</i> <i>Rainwater harvesting, water minimisation mechanisms and use of photovoltaic cells and solar panels are encouraged.</i> | <p>Lightwells are no longer proposed in this amended scheme and other sustainability comments are noted.</p> |
| Landscape <ul style="list-style-type: none"> <i>Public Domain - street trees are encouraged and the use of planter boxes as barriers between the buildings external spaces and public domain should be avoided.</i> <i>Communal Open Space (COS) - important the COS provides for the needs of residents and supports the development of a sense of community. Analysis of facilities offered by nearby public open spaces is required and COS should be well laid out spaces that support communal activities.</i> <i>Private Open Space (POS) - privacy of POS from balconies above should be addressed and use of planters to be affected balconies is not sufficient.</i> | <p>Refer to the landscape plans prepared by Taylor Brammer provided with this SEE at Appendix 2.</p> <p>The landscaping proposed at ground level, fourth floor level and at the rooftop is of high quality and provides improved amenity. Street trees are proposed along College Avenue and the forecourt to the corner of Cygnet Avenue. The site is located in good proximity to existing Public Open Space. Harrison Park is located approximately 100m west of the site, with paved walkways through landscaped parklands set around a lake. While there would be a degree of overlooking from the balconies on upper levels to units below at the southern end of the development, this is unlikely to result in a detrimental impact to the POS of future occupants. The balconies have been</p> |

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| | reconfigured and planter proposed will provide a pleasant landscaped feature to the prominent corner of this building, complementing the landscaped forecourt below. |
| Amenity <ul style="list-style-type: none"> ▪ <i>Entrance to south of building should be generously proportioned.</i> ▪ <i>Room sizes should be documented on all plans & compliant with ADG</i> ▪ <i>Circulation corridors greater than 12m in length</i> ▪ <i>Amenity of balconies and their size should be reviewed</i> | <p>Double doors are proposed to the ground floor commercial units at the southern end of the building. The provision of three business units on this prominent corner will positively contribute to the streetscape, providing variety and activating the ground floor elevation.</p> <p>Rooms sizes are shown on all plans.</p> |
| Safety <ul style="list-style-type: none"> ▪ <i>Proposal should provide active connection to College Avenue</i> ▪ <i>Areas of concealment should be eliminated from street interface to avoid antisocial behaviour</i> | <p>The proposal provides a pedestrian connection centrally through the site, with access from Moolawang Place to College Avenue provided through the southern end of the building. This through connection will assist in directing pedestrians to the existing key services within the city centre and the services to be provided along College Avenue. Pedestrians from the adjacent public car park to the west of the building will either traverse around the building to access the two prominent focal points of the town centre, namely the Shellharbour Council's Civic Centre and Stocklands Shopping Centre, or they will be able to pass through the building via the pedestrian lobby proposed.</p> <p>Directly opposite the building on College Avenue is only vehicular access to the Stocklands shopping centre car parks and a servicing area. As such the proposed commercial premises</p> |

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| | at street level along the eastern elevation of the building will provide an active street frontage to this section College Avenue. |
| Housing Diversity and Social Interaction <ul style="list-style-type: none"> <i>Proposal would contribute appropriate mix of uses.</i> | Noted. |
| Aesthetics <ul style="list-style-type: none"> <i>Quality of materials important.</i> <i>Details of services for building should be considered.</i> <i>Curved aesthetic developed in a reasonable manner.</i> | The use of high-quality contrasting but complementary materials will assist in activating the elevations of the building and ensure a high-quality development. |
| Further comments <ul style="list-style-type: none"> <i>Lack of compliance with ADG cross ventilation control.</i> <i>Concern proposal does not respond appropriately to its context with poor interface with College Avenue.</i> Reduce height to northern end of building to more closely align with the 18m height control. Design should provide simple wayfinding to the residential and commercial components of each building. Develop clear vision for COS Address issues with POS in relation to functionality, amenity and privacy impacts. | <p>Over 60% of the dwellings would benefit from cross ventilation, compliant with the ADG.</p> <p>As discussed previously, the proposal has been amended and the College Avenue interface improved with street level access to commercial premises that activate the streetscape.</p> <p>This is now proposed, as discussed previously.</p> <p>The building has been designed with clear access points for both the residential and commercial elements.</p> <p>As previously discussed,</p> <p>The landscaping proposed at ground level, level four and at the rooftop is of high quality and supplements the POS provided for each apartment. The COS proposed will foster community spirit through provision of shared facilities such as BBQ areas and decked seating areas.</p> |

4.6.2. Southern Regional Planning Panel

A meeting was held on Tuesday, 30 October 2018 at Shellharbour City Council - Administration Offices with the Southern Regional Planning Panel (SRPP). Amended plans were presented to the SRPP following receipt of the SDRP comments.

The amended proposal, subject of this SEE, has taken into account the comments raised in this meeting, as follows:

| Key Issues Discussed | Response |
|--|---|
| 1) The plans discussed are amended concept plans following Design Review Panel. DA Submitted plans are also part of set (2 tower concept). | This SEE is submitted with a set of amended architectural plans, provided at Appendix 1 , that take into consideration comments received at the SRPP. |
| 2) The building is very internalised – separation/circulation is needed through the design improvements to satisfy required matters | The proposal provides a pedestrian connection centrally through the site, with access from Moolawang Place to College Avenue provided through the southern end of the building. The number of dwellings has been reduced from the previous proposal and the proposed building would positively relate to and address its context through its careful design, scale and massing. |
| 3) Needs further activation of Cygnet/College Avenues and also a storey about the context it will sit in. | Cygnet/College Avenues will benefit from the recessed design features, together with balconies and street level access to commercial premises which all assist in activating these elevations. Furthermore, high quality materials will provide a quality finish to the building. |
| 4) Need to justify design excellence to offset height through detailed Context Analysis. Height important as there is no FSR or site coverage controls. 30% footprint non-compliance over the site. Urban Design response which includes DCP – City Centre control | The Architectural Plans provided at Appendix 1 include detailed site analysis and contextual relationship drawings. These, together with the supporting |

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| analysis. SoEE & Clause 4.6 should be based from this & not just a based numerical variation. | documentation of this DA, demonstrate the proposal would result in a scheme of high quality and a building of appropriate scale and massing for its city centre location. |
| 5) Improved internal design if the building is split, consideration of corner apartments, internal light wells, ventilation, podium green space for business units. This will provide better outcomes to ventilation and reduce overall 'internalisation' of building. Both which were fundamental concerns raised by Panel. | The amended proposal results in a building form and articulation that contributes positively to its context. The number of units has been reduced, allowing for changes internally within the building that improve amenity and layout inside the building. |
| 6) Needs further review from Design Review Panel. Amended plans following DRP improved street activation to College/Cygnnet Avenue, however reduced ADG compliance & increased visual bulk/scale. Revised concept should be a combination of the 2 previous versions for complete ADG compliance. | The amended scheme subject of this SEE achieves this. The number of dwellings has been reduced and significant amendments have been made to the design to improve street activation and compliance with the ADG. |
| 7) Opportunities to explore the installation of the link between the city centre carpark and College Avenue should be explored. Any variation to the link must be supported with a variation statement that justifies the loss of the link between the subject building a loading dock. | The proposal provides a pedestrian connection through the site, with access provided from Moolawang Place to College Avenue via the lobby to the commercial premises. |
| 8) Must demonstrate ADG compliance in further detail – Please provide detailed analysis & key ADG items to be addressed. | An ADG compliance table prepared by Design Workshop Australia is provided with this DA at Appendix 6 . A summary is also provided in Section 6 of this SEE. |
| 9) Basement to ensure compliance for all vehicle movements, including turning circles/height for waste vehicles. | A Traffic Impact Assessment by TTPA is provided with this DA at Appendix 13 . This addresses access, internal circulation and servicing. |

5. ENVIRONMENTAL PLANNING FRAMEWORK

The environmental planning framework applicable to the site is listed below. The framework includes legislation, environmental planning instruments, as well as non-statutory policies and the like such as development control plans, strategic plans, planning proposals and developer contribution plans.

Section 6 of this SEE demonstrates the proposal's compliance, or otherwise, with the relevant framework.

5.1. Overview

The relevant statutory framework considered in the preparation of this report comprises:

- Environmental Planning and Assessment Act, 1979;
- Environmental Planning and Assessment Regulation 2000;
- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy (Coastal Management) 2018;
- State Environmental Planning Policy No. 55-Remediation of Land;
- State Environmental Planning Policy No. 65-Design Quality of Residential Flat Development;
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004;
- Shellharbour Local Environmental Plan 2013;
- The Apartment Design Guide; and
- Shellharbour Development Control Plan 2013 inclusive of Shellharbour City Centre Master Plan.

6. ENVIRONMENTAL PLANNING ASSESSMENT

This section provides assessment of the proposal against the development standards, objectives and performance controls of the environmental planning framework listed in Section 5 of this SEE.

6.1. Environmental Planning and Assessment Act 1979

6.1.1. Section 1.3 – Objects

The Environmental Planning and Assessment Act, 1979 (the Act) is the principle planning and development legislation in New South Wales. In accordance with Section 1.3, the objectives of the Act are:

1.3 Objects of Act

The objects of this Act are as follows:

- (a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,*
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,*

- (c) to promote the orderly and economic use and development of land,
- (d) to promote the delivery and maintenance of affordable housing,
- (e) to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,
- (f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),
- (g) to promote good design and amenity of the built environment,
- (h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,
- (i) to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,
- (j) to provide increased opportunity for community participation in environmental planning and assessment.

For the reasons set out below, it is considered that the proposed development satisfies the above stated objects of the Act:

- The proposed development will promote the social and economic welfare of the local community through the provision of high-quality mixed-use development;
- Creation of additional jobs during the construction and operational phases;
- The proposal will result in the orderly and economic use and development of land as the site is of an appropriate size, location and land use zoning to enable the development;
- Appropriate utility services are to be provided;
- There will be no unreasonable adverse impacts on the environment; and
- The design also satisfies relevant amenity controls such as those within the Apartment Design Guide (ADG).

In light of the above, it is considered that the proposal would satisfy the relevant objectives of the Act.

6.1.2. Section 4.15 of EP&A Act 1979

Section 4.15(1) of the Act as amended specifies the matters which a consent authority must consider when determining a development application. The relevant matters for consideration under Section 4.15 of the Act are addressed in the Table below.

Table 4: Section 4.15 of EP&A Act 1979.

| Section 4.15(1)(a)(i) Any environmental planning instrument | Consideration of relevant instruments is discussed in Section 6. |
|---|---|
| Section 4.15(1)(a)(ii) Any draft environmental planning instrument | Not relevant to this application. |
| Section 4.15(1)(a)(iii) | Consideration of relevant the development control plan is discussed in Section 6. |

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|---|--|
| Any development control plan | |
| Section 4.15(1)(a)(iia) Any planning agreement | N/A |
| Section 4.15(1)(a)(iv) Matters prescribed by the regulations | Consideration of relevant matters in the regulations is discussed in Section 6. |
| Section 4.15(1)(a)(v) Any coastal zone management plan | Not relevant to this application |
| Section 4.15(1)(b) - (e) | Refer to Section 7 of this SEE for consideration of (b), (c) and (e). Matter (d) relates to submissions and is a matter for the consent authority. |

6.1.3. Section 4.46 – Integrated Development

This section of the Act defines integrated development as matters which require consent from Council and one or more approvals under related legislation. In these circumstances, prior to granting consent Council must obtain from each relevant approval body their General Terms of Approval (GTA) in relation to the development.

The proposal is not considered to represent integrated development.

6.2. Environmental Planning and Assessment Regulation 2000

6.2.1. Clause 50 – How must a development application be made

Clause 50 (1A) of the Environmental Planning and Assessment Regulation 2000 (the Regulation) requires that a DA for a residential apartment building must be accompanied by a design verification statement from a qualified designer, which confirms:

- (a) *that he or she designed, or directed the design, of the development, and*
- (b) *provide an explanation that verifies how the development:*
 - (i) *addresses how the design quality principles are achieved, and*
 - (ii) *demonstrates, in terms of the Apartment Design Guide, how the objectives in parts 3 and 4 of the guide have been achieved.*

This Verification Statement as well as an Apartment Design Guide (ADG) compliance table has been prepared by DWA Architects and accompanies this SEE at **Appendix 7**.

In addition, Clause 50 calls up Schedule 1 of the Regulation, which provides that any DA for residential apartment development to which SEPP 65 applies, must also be accompanied by certain information.

SEPP 65 has also been evaluated in Section 6.4.2 of this SEE.

6.2.2. Clause 98 – Compliance with the BCA

Pursuant to the prescribed conditions under Clause 98 of the Regulation, any building work "must be carried out in accordance with the requirements of the Building Code of Australia". The BCA Report prepared by Building Code Assistance (**Appendix 16**) concludes that the proposal is capable of complying with the requirements of the Building Code of Australia and relevant adopted standards without undue modification to the design or appearance of the building.

6.3. Illawarra-Shoalhaven Region Plan

The Illawarra-Shoalhaven Region Plan (ISRP) was released by the NSW Government in November 2015. Its primary objective is to deliver a vision and direction for land use planning priorities and decisions addressing future needs for housing, jobs and infrastructure and a healthy environment.

Direction 2.2 of the ISRP is to support housing opportunities close to existing services, jobs and infrastructure in the regions centres and Direction 3.1 of the plan is to support opportunities for investment and activity in the region's centres.

The proposal is consistent with the ISRP and the above Directions in particular, in that it provides additional housing opportunities in a city centre location and the commercial premises will create jobs, as well as those created during construction. The commercial premises will provide additional retail or other business activity helping to grow the economic centre of Shellharbour.

6.4. State Environmental Planning Policies

6.4.1. State Environmental Planning Policy No 55 - Remediation of Land

Clause 2 - Object of this Policy

In summary, SEPP 55 aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment.

Clause 7 - Contamination and remediation to be considered in determining development application

This clause requires that a consent authority must not grant consent to a development unless it has considered whether a site is contaminated, and if it is, that it is satisfied that the land is suitable (or will be after undergoing remediation) for the proposed use.

A Contamination assessment is provided as **Appendix 12** to this SEE. In summary, the assessment considers the risks to human health and the environment associated with soil contamination are negligible at the site and as such the site is considered suitable for the proposed use.

In this case, Council can be satisfied that the site will be suitable for the proposal and the obligations of SEPP 55 are addressed.

6.4.2. State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development

Clause 2 - Aims, objectives etc

SEPP 65 relates primarily to residential apartment developments. In summary, it seeks to achieve development which is socially and environmentally sustainable and is of high quality internal and external design.

It will be demonstrated that the proposal strictly complies with most of the recommended controls of the related Apartment Design Guide (ADG), and, therefore, the proposal satisfies the objectives of the SEPP. Generally, however, it is worth noting that the proposal achieves a good internal amenity, provides diverse housing, as well as a high standard of communal open space.

Whilst the proposal achieves a high degree of compliance with the ADG's controls and guidelines, it is acknowledged that minor non-compliances occurs in relation to communal circulation at Level 2, deep soil provision at ground floor level and ceiling heights at first floor level. As discussed below, these are considered to be minor noncompliance's and the proposal is generally compliant with the controls and guidelines of the ADG.

Clause 28 - Determination of development applications

Prior to determining a DA, sub clause 2 prescribes that a consent authority must evaluate whether the proposal satisfies the nine (9) design principles prescribed in Schedule 1 of the SEPP 65. The consent authority must also evaluate the proposal with respect to the ADG.

The proposal has been designed by DWA Architects. They have prepared a SEPP 65 Design Statement (refer to separate **Appendix 7**) demonstrating how the proposal satisfies the design quality principles, as well as the relevant design criteria of the ADG. The following, however, demonstrates the proposal's compliance with the ADG's key design criteria:

- The following table demonstrates the proposal's relationship with the setback and separation design criteria of Objective 3F. For further detail refer to the architectural plans prepared by DWA Architects (**Appendix 1**):

| | Northern Boundary (Bimbala Place) | Eastern Boundary (College Avenue) |
|--------------------------------------|-----------------------------------|-----------------------------------|
| Up to 4 storeys | | |
| Min 6m habitable rooms and balconies | In excess of 10m | In excess of 15m |
| Min 3m non-habitable rooms | In excess of 10m | In excess of 10m |
| Up to 5 and 8 storeys | | |
| Min 9m habitable rooms and balconies | N/A | N/A |
| Min 4.5m non-habitable rooms | N/A | N/A |

- Objective 4D2 prescribes a maximum of 8m from a window. All apartments comply in this regard.
- The total proposed communal open space area is 1460.1m², which equates to 45.4% of the site area. Objective 3D-1 of the ADG recommends at least 25% of the site area. For information purposes, 865.6m² of communal open space is provided at level 4, which is accessible by all residents of the proposal and 594.5m² is located at roof level.
- Objective 3E of the ADG recommends a minimum of 7% of the site area for deep soil purposes, although it also notes that it may not be possible to achieve this design criteria in town centre locations. Due to the location of the site in the city centre and the provision of basement parking it is not possible to provide deep soil zones at ground floor level to the building. However, a comprehensive landscape scheme is proposed with communal space to be provided at Level 4 and roof level. This comprises of extensive deep soil podium planters. Additionally, street trees are proposed along College Avenue and to the southern forecourt together with screen planting along Moolawang Place.
- 3.1m above ground for all residential floor to ceiling clearances for the are provided. This satisfies the design criteria of 2.7m for habitable rooms. The only minor non-compliance is the 1st floor, pursuant to Objective 4C -1, developments located in mixed use areas should have ground level floor to ceiling clearances of 3.3m for ground and first floor to promote future flexibility of use. The non-compliance is minor and would not be sufficient to preclude a commercially oriented land use in the first floor, although, this is expected to be an unlikely outcome given demand for residential floor space. Furthermore, the commercial units at ground floor level have floor ceiling to heights between 4m to 5.1m
- The proposed development incorporates 2 residential lift and stairs cores. Objective 4F-1 of the ADG recommends a maximum 8 units from a single circulation core. All levels apart from one, Level 2, comply with this ADG recommended maximum. Level 2 proposes 21 apartments in total. The southern core of the building would comply however there is a minor non-compliance for the northern end of this floor, where technically 13 units would be accessed from one circulation core. The non-compliance is not considered to be significant in this case as the circulation space would appear to be visibly divided by the lift core and the corridor width and height would allow for comfortable movement and access. Windows are proposed to the corridor, adjacent to the lift core, as recommended by the ADG.

The proposal includes:

- 1-bedroom dwellings with a minimum area of 50m² (ADG recommended minimum is 50m² or 55m² if an additional bathroom is provided). In the case of the proposal, 1-bedroom dwellings include a single bathroom only.
- 2-bedroom dwellings inclusive of an ensuite have a minimum area of 75m², and those without an additional bathroom have a minimum area of 70m². The ADG recommended minimum area for 2-bedroom dwellings is 70m² or 75m² if a bathroom is provided.
- 3-bedroom dwellings with a minimum area of 95.7m², inclusive of ensuites. The ADG recommended minimum is 90m² or 95m² if an additional bathroom is required. All twelve (12) of the 3-bedroom dwellings are above the ADG recommended minimum.

The proposal includes:

- 1-bedroom dwellings with a minimum Private Open Space (POS) area of 13.6m² (ADG recommended minimum is 8m²).
- 2-bedroom dwellings with a minimum POS area of 10.5m² (ADG recommended minimum is 10m²).

- 3-bedroom dwellings with a minimum POS area of 13.7m² (ADG recommended minimum is 12m²).

6.4.3. State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

The aim of this Policy is to establish a scheme to encourage sustainable residential development (the BASIX scheme). The BASIX SEPP, together Schedule 1 of the EP&A Regulations 2000, require the submission of a BASIX certificate for any BASIX affected building/s, which is defined in the EP&A Regulations 2000 as any building that contains one or more dwellings, but does not include a hotel or motel.

The proposal is regarded as a BASIX affected building given it includes 77 dwellings. The DA includes BASIX certification number 923791M_05, as provided in **Appendix 8** of this SEE. The certificate confirms that the proposal achieves the minimum efficiency targets. As such, the proposal satisfies BASIX requirements as prescribed by the BASIX SEPP and the EP&A Regulations 2000.

6.4.4. State Environmental Planning Policy (State and Regional Development) 2011

The aims of this Policy are to identify development that is classified as State significant development, State significant infrastructure, and development, whereby determinations of DAs are to be made by joint regional planning panels.

The proposed development is identified as being regionally significant development. The development is general development over \$30 million, Clause 2 of Schedule 7.

To this end, the determining authority for this application will be the Southern Region Joint Regional Planning Panel.

6.4.5. State Environmental Planning Policy (Coastal Management) 2018

State Environmental Planning Policy (Coastal Management) 2018 gives effect to the objectives of the Coastal Management Act 2016 from a land use planning perspective.

The site is not identified as being within a coastal management area.

6.5. Shellharbour Local Environmental Plan 2013

Zoning and Permissibility

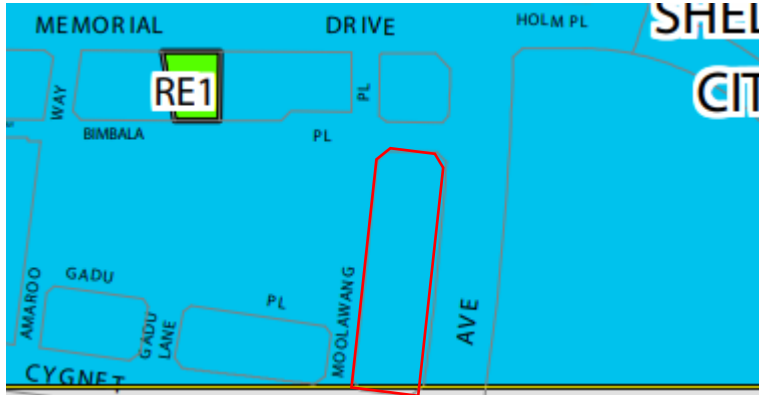


Figure 9: Extract of Land Zoning Map, subject site outlined in red (Source: NSW Legislation)

The zoning of the subject site is B3 Commercial Core pursuant to the Shellharbour Local Environmental Plan 2013 as shown in Figure 9 above.

The proposal is for 'shop top housing' and the ground floor is for use as 'commercial premises'. Therefore, the following definitions from the Dictionary of the SLEP 2013 are relevant:

shop top housing means one or more dwellings located above ground floor retail premises or business premises.

commercial premises means any of the following:

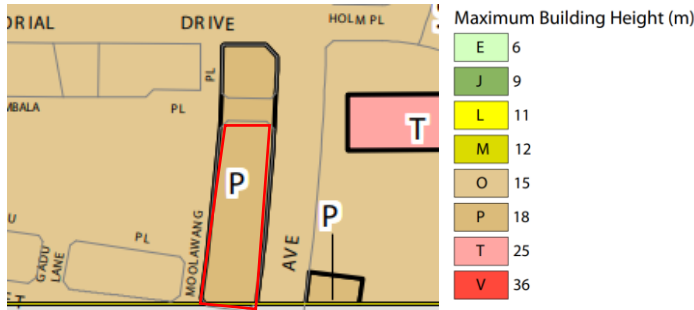

- (a) business premises,
- (b) office premises,
- (c) retail premises.


Under the SLEP, "shop top housing" and "commercial premises" are permissible with consent in the B3 zone. The zone objectives of the B3 zone are extracted below:

- To provide a wide range of retail, business, office, entertainment, community and other suitable land uses that serve the needs of the local and wider community.
- To encourage appropriate employment opportunities in accessible locations.
- To maximise public transport patronage and encourage walking and cycling.
- To strengthen the role of the Shellharbour City Centre to ensure that it continues to develop as a major regional centre with retail, entertainment, commercial, cultural and residential uses.
- To allow for a limited range of residential accommodation while maintaining retail, business or other non-residential active uses at street level.

The proposed development is consistent with the above objectives given it comprises of shop top housing and commercial premises at street level, therefore providing a mixture of compatible land uses. As the subject site is in close proximity to a main vehicular thoroughfare and services provided in the city centre, it also integrates residential and commercial uses in an accessible location, encouraging the use of public transport, walking and cycling.

Remaining SLEP 2013 Provisions

| Relevant Clause | Comment | Comply |
|---|--|---|
| Part 4 Principal development standards | | |
| Clause 4.3 Height of Buildings | <p>The maximum building height is shown as 18m on the Building Heights Map as seen below:</p>  <p>The proposed development has a maximum height of 27.54m. Therefore, a Clause 4.6 variation has been provided.</p> | No, but justifiable. Refer to Clause 4.6 Variation Request. |
| Clause 4.4 Floor Space Ratio | The site is not subject to a Floor Space Ratio (FSR). | N/A |
| Part 5 Miscellaneous provisions | | |
| Clause 5.10 Heritage Conservation | <p>The subject site is not located within a heritage conservation area and is not a listed heritage item.</p>  <p>The proposal will not have any impact on heritage conservation.</p> | Yes |

| Part 6 Additional Local provisions | | |
|--|---|-----|
| Clause 6.1 Acid Sulfate Soils (ASS) | <p>The objective of this clause is to ensure that development does not disturb, expose or drain acid sulfate soils.</p> <p>The site is not subject to acid sulfate soils.</p> | N/A |
| Clause 6.2 Earthworks | <p>This clause seeks to ensure earthworks would not have a detrimental impact on any environmental functions or existing built environments. It also prescribes that consent is required for most earthworks.</p> <p>The proposal relies on typical construction methods which are not expected to significantly affect existing environmental functions or surround structures. The objective would be satisfied in this case. The application also seeks consent for earthworks described in this SEE and as demonstrated in the architectural plans.</p> | Yes |
| Clause 6.4 Stormwater Management | <p>The overriding objective of this clause is to minimise impacts of urban stormwater on land the subject of a DA, as well as adjoining land whether such land contains existing development or natural features,</p> <p>The application is accompanied by drainage plans (Appendix 9) prepared to ensure the proposal, as well as adjoining sites, will be appropriately managed in response to proposed stormwater generation or any other existing stormwater/drainage features.</p> | Yes |
| Clause 6.6 Active street frontages | <p>The site is identified on the Active Street Frontages Map.</p>  <p>Active Street Frontages</p> <p>— Active Street Frontage</p> <p>The proposal creates appropriate activity by providing commercial space on the ground floor along College Avenue and Cygnet Avenue. A total of 2257.4m² (GFA) commercial floorspace is proposed,</p> | Yes |

| | | |
|--|---|-----|
| Clause 6.7 Airspace Operations | The acoustic report prepared by Harwood Acoustics (Appendix 17) confirms the site is located a considerable distance from the Illawarra Regional Airport and therefore no assessment of aircraft noise intrusion is therefore required. | Yes |
| Clause 6.8 Development in areas subject to aircraft noise | The site is outside the ANEF 20 contour for the Illawarra Regional Airport. The acoustic report prepared by Harwood Acoustics (Appendix 17) confirms no assessment of aircraft noise intrusion is required. | Yes |
| Clause 6.9 Essential services | Before determining a DA, this clause requires the consent authority to be satisfied that essential utilities would be available to the proposal. The subject site is capable of being serviced by water, electricity, sewer as well as direct vehicular and pedestrian access services, as required by the clause. | Yes |

6.6. The Apartment Design Guide

The ADG supports SEPP 65 by providing further detailed explanation of its objectives as well as specific design criteria. The proposal's consistency with the ADG is addressed in Section 6.4.2 of this SEE, as well as the SEPP 65 Verification Statement prepared by DWA Architects in **Appendix 7** of this SEE.

In summary the proposal is substantially compliant with most of the recommended design criteria of the ADG. Any non-compliances are minor, in response to specific circumstances, and without any unreasonable impact. In this instance, it is worth noting Planning Circular 17-001, issued on 29 June 2017, which states that "the ADG is not intended to be and should not be applied as a set of strict development standards".


6.7. Shellharbour Development Control Plan

This SEE provides an assessment of the proposal against the SDCP, in particular Chapter 7 Shellharbour City Centre Commercial Development, given they are specifically relevant to the proposal.

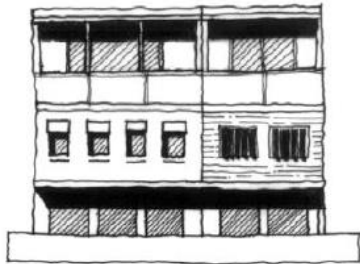
| SDCP | Comment | Comply |
|--|--|--------|
| Chapter 7 Shellharbour City Centre Commercial Development | | |
| 7.1 Façade Treatments | | |
| 7.1.1 Refer to Figure 7.1 below for examples for appropriate treatments for various building types. 7.1.2 Buildings should generally be of masonry appearance with generous shop windows to the street. | The proposal includes generous shop windows at ground level. Despite the building's length, the building gives the impression of a | Yes |





| SDCP | Comment | Comply |
|---|--|--------|
| <p>7.1.3 Windows above street level should be of vertical appearance or framed to emphasise verticality.</p> <p>7.1.4 Building facades should be articulated to establish a strong vertical rhythm.</p> <p>7.1.5 Buildings should provide a diversity and variety of form in long facades.</p> <p>7.1.6 Building frontages are to be articulated into separate building frontages and bays, using shop front separations, attached columns and steps in the façade.</p> <p>7.1.7 A balance of horizontal and vertical façade elements should be provided and relate to adjacent facades in the street.</p> <p>7.1.8 Long facades should be subdivided with windows and other façade elements to provide a balanced composition.</p> <p>7.1.9 Simple façade designs containing only horizontal or vertical elements are not supported.</p> <p>7.1.10 Excessive lengths or heights of blank walls which are highly visible to any area of public domain (including streets, lanes and car courts) will not be permitted.</p> <p>7.1.11 Excessive areas of curtain walled reflective glazing will not be permitted.</p> <p>7.1.12 Air conditioning facilities must not be visible from the street.</p> | <p>vertical emphasis through the use of fenestration, articulation, materials and the stepping nature of the building from south to north. Recessed elements along both College Avenue and Moolawang Place articulate the facades.</p> | |
| 7.2 Pedestrian Arcades and service access | | |
| <p>7.2.1 Pedestrian arcades are not permitted except where identified and approved on the Master Plan or Block/Precinct Development Strategy.</p> <p>7.2.2 Service access is only permitted from service lanes.</p> | <p>Access to the loading area for the commercial premises is from Moolawang Place and exit via Bimbala Place. This ensures the main facades of the building are not impacted, and unlike the other facades, these elevations have more restricted views.</p> | Yes |
| 7.3 Roofs and roofscape | | |
| <p>7.3.1 Pitched roofs are desirable on small scale buildings. The pitch should be 25° minimum.</p> <p>7.3.2 For larger buildings flat and low pitched roofs may be more appropriate. In this case the roof should be obscured from the street by a parapet.</p> | <p>The building has a flat roof design. Lift towers and plant at roof level are located centrally thus minimising views from street level.</p> | Yes |

| SDCP | Comment | Comply |
|--|--|--------|
| 7.3.3 Roofs must be silver or pale grey metal decking. Any type or profile is acceptable. | | |
| 7.3.4 Lift tower, stair towers, air conditioning plants etc. are to be integrated into the design of the buildings. | | |
| 7.4 Building materials | | |
| <p>7.4.1 Refer to Figure 7.2 below with the materials palette, considered appropriate for different building types and locations. Other materials and colours may well be acceptable, and alternatives will be considered.</p> <p>7.4.2 Large areas of glass or reflective surfaces are to be avoided.</p> <p>7.4.3 Building materials used are to be of a high standard and quality.</p> <p>7.4.4 A colour and materials palette based on the following should be submitted with development applications and advice sought from Council on materials and colours proposed for adjacent sites.</p> <p>a. Retail and mixed use</p> <p>i. Walls: painted or rendered masonry such as brickwork, blockwork, per cast panels.</p> <p>ii. Roofs: grey metal deck, grey colorbond or similar. No tiles.</p> <p>iii. Windows: upper floor aluminium or timber with a strong profile.</p> <p>iv. Shop front: aluminium, steel or timber – refer to signage and verandah guidelines.</p> <p>b. Bulky goods and secondary retail</p> <p>i. Walls: painted or rendered masonry, tilt-up panels. No large curtain walled glazing areas.</p> <p>ii. Roofs: grey metal deck grey colorbond or similar.</p> <p>iii. Windows: aluminium or timber.</p> <p>c. Residential and mixed use</p> <p>i. Walls: mix of painted, rendered, face brickwork. (hardipanel, hardiplank or similar for upper floors/gable infills etc.)</p> <p>ii. Roofs: grey to mushroom tiles or colorbond/metal roof.</p> | <p>High quality materials are proposed to be used in the construction of the building. Full details of the materials are shown on the Architectural Plans prepared by DWA Architects at Appendix 1.</p> | Yes |

| SDCP | Comment | Comply |
|--|--|--------|
| <p>iii. Windows: aluminium or timber with a strong profile</p> <p>d. Commercial</p> <p>i. Walls: painted or rendered masonry, lightweight panels. No large curtain walled glazing areas.</p> <p>ii. Roofs: grey metal deck, grey colorbond or similar</p> <p>iii. Windows: aluminium or steel.</p> <p>e. Icon buildings</p> <p>i. Walls: painted and rendered masonry, lightweight and tilt up panels. No large curtain walled glazing areas.</p> <p>ii. Roofs: grey metal deck, grey colorbond or similar</p> <p>iii. Windows: aluminium or steel.</p> | | |
| 7.5 Solar access | | |
| <p>7.5.1 Design of buildings should minimise the effect of overshadowing on the following (see Figure 7.3 below):</p> <p>a. Public open spaces.</p> <p>b. Residential private open space.</p> <p>c. Adjacent residential dwellings requiring solar access to windows and collector panels.</p> <p>Figure 7.3 - Solar Access to public space - building height / setback controlled to maximise solar access</p>  <p>7.5.2 The shadow diagram provisions in the residential Section 3.9, regarding solar access apply to commercial development.</p> <p>7.5.3 The following provisions are suggestions which can contribute to BASIX compliance.</p> | <p>DWA Architects have prepared detailed shadow diagrams for the proposal which are provided at Appendix 1 of the SEE. The shadow diagrams illustrate the proposed development would protect the amenity of neighbouring properties in relation to sunlight. The proposed building has been appropriately designed to for its context and orientation, maximising access to sunlight.</p> | Yes |

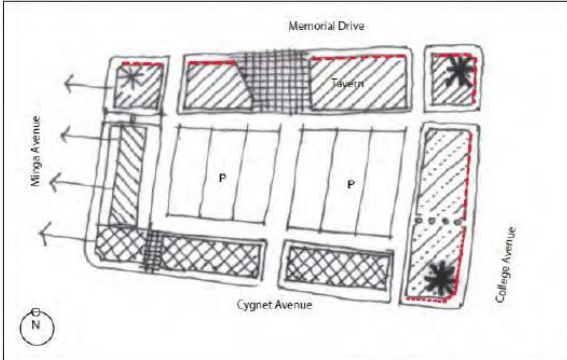








| SDCP | Comment | Comply |
|--|---------|--------|
| <p>a. Design of window areas of building facades should take into consideration the façade orientation. Refer to Figure 7.4 below.</p> <p>b. North and west faces of the buildings should have appropriate shading devices.</p> <p>c. North façade treatment should optimise winter solar gain opportunities.</p> <p>d. West and east facades should protect window areas from direct summer solar gain.</p> <p>e. Window areas should not generally exceed 50% for the east and west facades and 75% for the north and south facades.</p> <p>f. Maximum window areas for upper floors should not exceed 50%.</p> <p>g. Design dwellings so that main living areas are north facing, or oriented toward the primary outlook and aspect, for example street frontage or courtyards.</p> <p>h. Locate living spaces and open spaces to maximise access to sunlight.</p> <p>i. Provide south facing units with alternative orientation to ensure the provision of solar access.</p> <p>j. Locate non-habitable rooms such as laundries, bathrooms and kitchens in the southern parts of the buildings, unless the primary outlook and / or aspect is in a southerly direction.</p> <p>k. Provide adjustable shading devices for shading and glare control.</p> <p>l. Ensure windows are of adequate size and proportion to maximise access to natural daylight.</p> <p>m. Use reflected light from light coloured walls and ceilings.</p> | | |

| SDCP | Comment | Comply |
|--|--|---|
| <p>Figure 7.4 - Maximum window areas for upper floors must not exceed 50% - glazed areas should be protected from direct sun</p>  | | |
| 7.6 Building Height | | |
| <p>7.6.1 Building heights need to comply with the relevant LEP provisions.</p> <p>7.6.2 Any parapet or parapeted gable needs to be within the LEP height limit unless it can be demonstrated it meets the LEP criteria for an architectural roof feature.</p> <p>7.6.3 This Section illustrates general building heights for the city centre, see Figure 7.5 below. Principal features of this plan are:</p> <ul style="list-style-type: none"> a. a general height limit of 3 storeys b. potential for an extra floor in significant locations and where the urban form of the city may be celebrated c. potential for a landmark building to 6 storeys immediately south of the city square and the civic precinct. <p>7.6.4 Corner elements can be higher than buildings except in precinct E and/ or where shadowing is unacceptable.</p> <div style="background-color: #0056b3; color: white; padding: 5px; margin-top: 20px;"> <p>NOTE: Building height will also be limited by excavation cost for basement parking and demand.</p> </div> <div style="background-color: #0056b3; color: white; padding: 5px; margin-top: 10px;"> <p>NOTE: Precise heights and envelopes will need to be justified in Precinct Development Strategies or DAs.</p> </div> <div style="background-color: #0056b3; color: white; padding: 5px; margin-top: 10px;"> <p>NOTE: Building heights should be a little flexible where steep slopes occur in order that basement and semi basement levels are not counted as floors. This particularly so on Minga Avenue and College Avenue west near Cygnet Avenue.</p> </div> | <p>The proposal is of comparable height to the council building and the design and massing of the building, together with the proposed public forecourt at the intersection of Cygnet Avenue and College Avenue, complements the character of the streetscape and the Civic Plaza, reinforcing a sense of place. the proposal sensitively responds to the topography of the site; the building gradually steps down the natural slope of the site when viewed from College Avenue in particular. The increased built height creates a strong focal corner of the development and the height variation is considered to be appropriate when considered within the context of the overall streetscape with its primary frontage to College Avenue and Cygnet Avenue.</p> | <p>No, but justifiable.</p> <p>Refer to Clause 4.6 Variation Request.</p> |

| SDCP | Comment | Comply |
|---|--|------------|
| <p>Figure 7.5 - Building height</p>  <p>  3 storeys  4 storeys  6 storeys </p> | | |
| 7.7 Public Domain implementation | | |
| <p>7.7.1 As part of development consents for subdivision or other development involving the creation of new road(s) or lane(s), the developer will construct public lanes, roads, footpath paving, pedestrian weather protection.</p> <p>7.7.2 As part of development consent for subdivision or other development the developer will:</p> <ol style="list-style-type: none"> construct footpath paving to the development's lane or road frontage and construct pedestrian weather protection negotiate with the consent authority, construction of other public domain elements, including works on the carriageway. <p>Note: Public domain elements include but are not limited to:</p> <ul style="list-style-type: none"> entry or gateway features landscaping/street trees squares, plazas (including those in private ownership), areas in front of building setbacks | <p>The proposal includes a public forecourt to the southern corner frontage of the site and extensive landscaping, within and around the site, including street trees and pedestrian paving to all boundaries of the site.</p> | <p>Yes</p> |

| SDCP | Comment | Comply |
|--|--|---------------|
| <ul style="list-style-type: none"> ▪ footpaths - street furniture, weather protection, paving ▪ carriageways and lanes ▪ traffic control measures ▪ public parking areas and large private parking areas ▪ pedestrian amenity measures ▪ signage for non-commercial purposes e.g. speed limit, transport/directional information and any commercial signage in the public domain (this will require licensing by Council) ▪ bike routes and facilities ▪ parks, open space and their embellishments ▪ sidewalk eating areas ▪ bus and taxi facilities ▪ public art ▪ lighting <p>Concepts/principles/provisions for public domain will be derived from this DCP and the Shellharbour City Centre Masterplan. Public domain provisions may apply to private domain.</p> | | |
| 7.8 Master Plan Precincts | | |
| <p>The Shellharbour City Centre comprises a number of sites or precincts which each have their own development pattern and function within the Master Plan. It is important to recognise and differentiate between each of these sites/precincts in terms of their existing development form and the proposed structure under the Master Plan and to identify the objectives and development strategies/principles for each of the sites. Note that some precincts overlap. See Figure 7.6 below.</p> <p>The City Centre has been divided into 14 precincts:</p> <ul style="list-style-type: none"> ▪ Precinct A: Stoney Range bulky goods site ▪ Precinct B: City Park ▪ Precinct C: Lake Entrance Rd & Main St ▪ <i>Precinct D: Central - Main St & Cygnet Ave</i> ▪ Precinct E: Future Civic Precinct - Shellharbour City Hub ▪ Precinct F: Shellharbour Square northern car park, Aldi & KFC | <p>The site is located within Precinct D - Central (Main Street & Cygnet Avenue)</p> | <p>Noted.</p> |

| SDCP | Comment | Comply |
|--|--|--------|
| <ul style="list-style-type: none"> Precinct G Main Street - Memorial Dr & Lamerton Cres. Precinct H: The Hilltop - College Ave & Lamerton Cres. (vacant) Precinct I: College Ave and Benson Ave Precinct J: Existing Shopping Centre Precinct K: Existing Council Administration Offices and car parking Precinct L: Benson Basin Precinct M: Eastern Residential - Wattle Road Precinct N: School and aged care site <p>For each precinct, a strategy for future development is required which addresses the existing development on the site and the development potential and design objectives stated in this Section.</p> | | |
| 7.12 Precinct D: Central - Memorial Drive/Cygnnet Avenue | | |
| <p>Objectives</p> <ol style="list-style-type: none"> Memorial Drive to support a mix of retail, commercial and entertainment uses which generate high levels of pedestrian activity. College Avenue to support a mix of, showroom, secondary retail and commercial uses which will enliven the street. Mixed use and residential development along the Minga Avenue frontage. Central block car parking areas. Wide footpaths with awnings and verandahs. Café/restaurants spilling out onto Memorial Drive footpaths. A mix of retail, commercial, secondary retail, showroom and uses to Cygnnet Avenue. Building height generally 2-3 storey to the street (except on Minga Avenue where steep slope may allow for apparently taller buildings but still 3 storeys to rear lane, and College Avenue where buildings to 4 storeys are | <p>The proposal is for a mixed-use development with shop top housing and commercial premises at street level along College Avenue and Cygnnet Avenue.</p> <p>The proposal has a total height of seven (7) storeys to the southern end of the building and five (5) storeys to the northern end. The proposal facilitates a high-density mixed-use development, positively contributing to existing employment offering with 2257.4m² (GFA) of commercial street level floorspace.</p> <p>A Clause 4.6 Request is submitted with the DA.</p> | Yes |

| SDCP | Comment | Comply |
|--|---------|--------|
| <p>appropriate to accommodate the uneven slopes on either side of the street).</p> <p>9. Ensure development (especially residential) accounts for future mid-block multi-level parking.</p> <p>Figure 7.10 - Precinct D</p>  <p>LEGEND</p> <ul style="list-style-type: none">  Focal Point  Predominantly Retail/Entertainment  Predominantly Residential  Residential / Mixed Use  Public Place  Retail/Showroom/Commercial/Residential  Parking (incl. future multi-level parking)  Active Frontage | | |

A full assessment is provided at **Appendix 4**. In summary, it demonstrates that the proposal is substantially compliant with the provisions of the SDCP 2013.

7. ENVIRONMENTAL IMPACT ASSESSMENT

7.1. Overview

This section identifies and assesses the impacts of the development with specific reference to the heads of consideration under Section 4.15 of the Act.

7.2. Context and Setting

The context and setting of the development site are described in Section 2 of this SEE.

The proposal is compatible within the context and built form of the existing mixed-use character of Shellharbour City Centre. It is considered the proposed built form and massing positively contributes to the

quality of the built environment and the character and appearance of the precinct. The proposal is consistent with the objectives and vision outlined within the *Shellharbour City Centre Masterplan for Precinct D: Central - Memorial Drive /Cygnet Avenue*, detailed within the Shellharbour Development Control Plan.



Figure 10: Aerial CGI context image of the proposal (Source: Ivolve Studios)



Figure 11: CGI image of the development at the intersection of Cygnet Avenue and College Avenue (Source: Ivolve Studios)



Figure 12: CGI image of the development, looking South along College Avenue (Source: DWA Architects)

7.3. Built Environment

7.3.1. Built Form Character

A compliance assessment is provided against the Shellharbour Development Control Plan 2013 (**Appendix 4**). The assessment demonstrates that the proposal is substantially compliant with the DCP provisions.

7.3.2. Private Amenity Impacts

The proposal would have no discernible impacts on the amenity of adjoining properties, given the orientation and location of the proposed building. A high degree of compliance is achieved with the ADG's recommended design guidelines.

Shadows diagrams prepared by DWA Architects (**Appendix 1**) illustrate the proposed development protects the amenity of neighbouring properties in relation to sunlight, despite noncompliance with the height of buildings standard. The adjacent commercial building, 75 Cygnet Avenue, would only be partly overshadowed between 9am and 10am in winter and would continue to receive uninterrupted sunlight between 10am and 3pm in winter. There are no nearby residential dwellings located to the south, east or west of the site. The nearest existing residential building to the site is a mixed-use building located immediately opposite the northern boundary to the site across Bimbala Place. The proposal complies with the ADG in this regard and would protect the amenity of occupants of this neighbouring building.

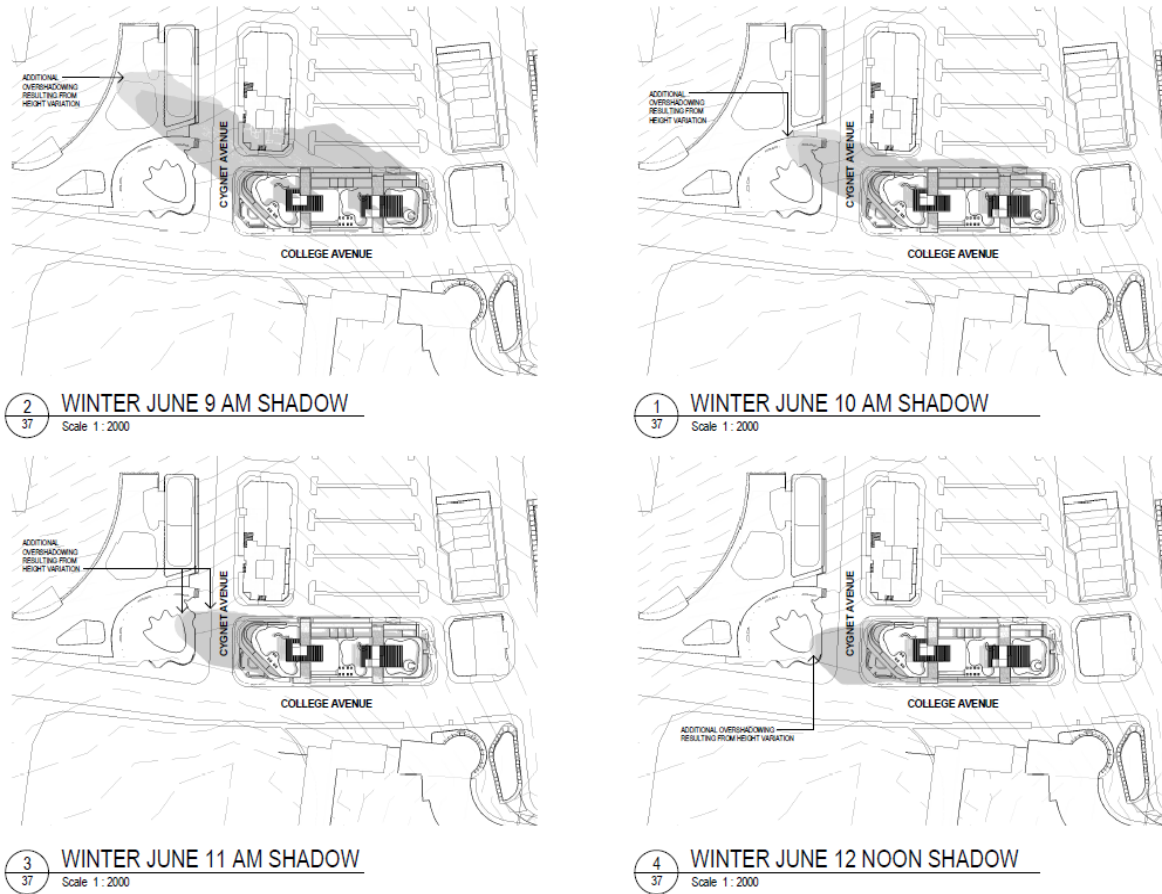


Figure 13: Extract from Shadow Plans (Source: DWA Architects)

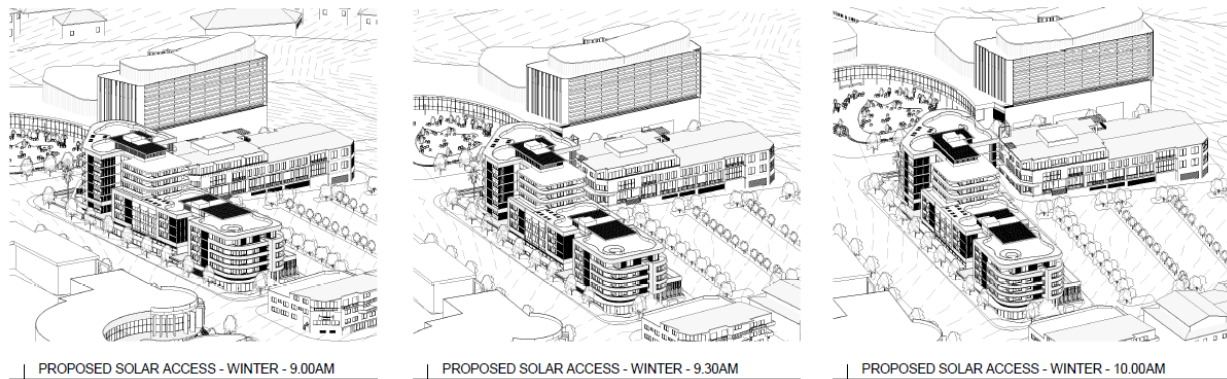


Figure 14: Extract from Sun Views Plans mid-winter 9am to 10am (Source: DWA Architects)

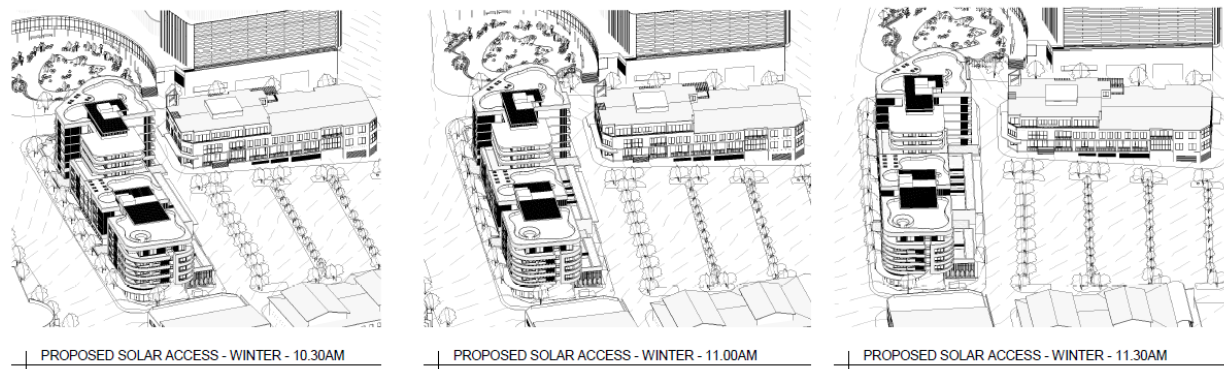


Figure 15: Extract from Sun Views Plans mid-winter 10.30am to 11.30am (Source: DWA Architects)

7.3.3. Internal Amenity

A Natural Ventilation Assessment prepared by SLR is provided with this DA at **Appendix 20**. In the assessment, SLR demonstrates that 64.9% of apartments will be naturally-ventilated when assessing the scheme against Computational Fluid Dynamics (CFD) modelling and qualitative analysis. The recesses and articulations on the building create pressure and velocity differences across the various facades, encouraging cross ventilation through an increased number of apartments. The proposal is considered to achieve the control recommended in the ADG, being at least 60% of all apartments to be cross ventilated in the first nine storeys.

The proposed development provides private open space & balconies of varying sizes which satisfy the requirements of the ADG.

The proposal provides sixteen (16) adaptable units, allowing a mix of different users to have access to and/or live in the building. This is compliant with the SDCP and the ADG.

As outlined in Section 6.4.2 of this report, all units meet the minimum internal area requirements.

A Solar Access Analysis Report prepared by SLR is provided with this DA at **Appendix 19**. In the assessment, SLR demonstrates that at least 2 hours of direct sunlight will reach sixty-one (61) of the seventy-seven (77) apartments, therefore 79.2% of the apartments, between 9am and 3pm at mid-winter. Furthermore, only 14.3% of the apartments, therefore eleven (11) of the apartments, will achieve no direct sunlight between 9am and 3pm mid-winter. As such, the proposal achieves the controls recommended in the ADG.

7.3.4. Materials, finishes and public domain

The proposal's materials and finishes are of a high quality and durable. They are particularly successful in visually breaking up the massing of the building and providing articulation. Furthermore, they assist with defining the public domain with full height glazing to the street level commercial premises generating a positive human scale relationship between the building and the streetscape.



Figure 16: Extract of 3D Image South-East view from College Avenue (Source: DWA Architects)



Figure 17: Extract of materials proposed (Source: DWA Architects)

7.3.5. Heritage

The site is not a listed heritage item and is not located in a heritage conservation area or located in close proximity to any heritage items. The site is however located within an area subject to Aboriginal Heritage.

Dominic Steele Consulting Archaeology have prepared a Preliminary Aboriginal Cultural Heritage Investigation. This identifies that the site is located within an urban landscape and the potential for Aboriginal archaeological sites to survive in this form of landscape zone is generally low. It confirms no Aboriginal sites or objects have been recorded on or within 1,000 meters of the study area and concludes that the proposal will not result in any adverse impact upon the Aboriginal archaeological values of the place or heritage related impacts. Should Aboriginal objects or human skeletal remains be unearthed during construction, the report recommends all works cease and the relevant authorities notified.

7.3.6. Construction Related Impacts

A range of impacts including dust, noise, erosion, waste material and traffic are associated with most developments. It is expected that good building practice will be adopted to minimise such impacts in line with typical expectations. This aside, a final Construction Management Plan (CMP) will be prepared by the appointed contractor, once the terms of any approval granted by Council are known. CMPs typically regulate noise and such generation, erosion waste management as well as construction related traffic

movements. Accordingly, it is anticipated that Council will include appropriate conditions with any consent notice requiring the preparation and approval of a final CMP prior to works commencing. Nevertheless, a preliminary CMP prepared by ATB Consulting Engineers is submitted with this DA at **Appendix 14**.

7.4. Natural Environment Impacts

7.4.1. Flora and Fauna

The existing physical condition of the site is such that it does not have any ecological attributes which, if lost, would impact upon any threatened species, population, ecological community or habitat.

7.4.2. Trees and Landscaping

As indicated earlier in this SEE, the subject site does not contain any trees and/or vegetation. In this case, no adverse impacts are associated with removing any trees or landscaping at the subject site.

Proposed landscaping is of a high quality and is expected to be durable. In particular, it includes visually appealing street trees, together with generously sized and landscaped communal areas on ground floor as well as at fourth floor level and the roof top. An extract of the proposed landscape plan is provided on the following page.

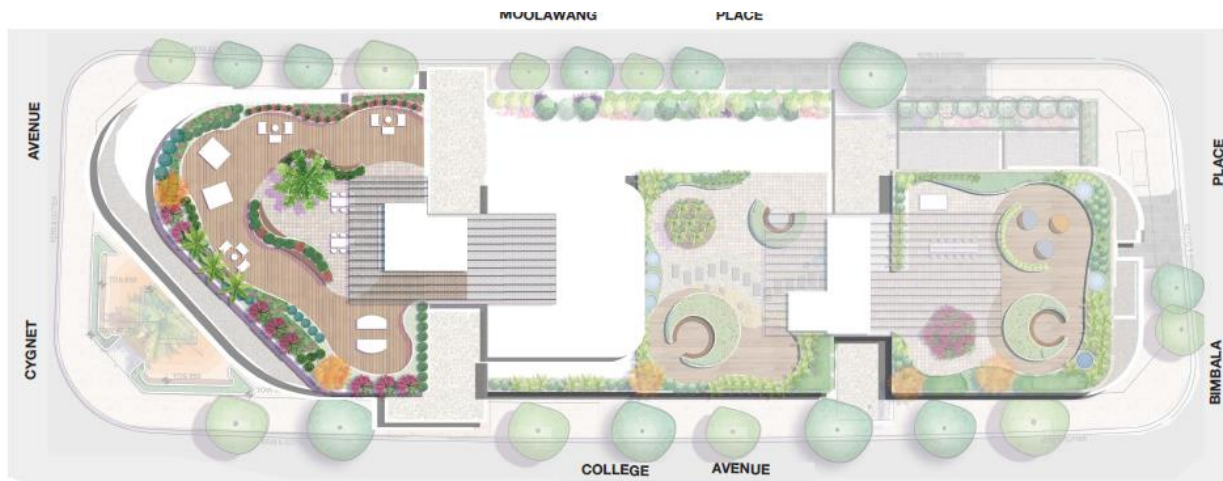


Figure 18: Extract of proposed overall plan of landscaping (Source: Taylor Brammer)

The landscaping design proposed reinforces the established character of trees and landscaping in the immediate locality and forecourt area. The extensive planting and sculptural landscaping in the forecourt, podium and rooftop will add to the quality amenity that will be enjoyed by the future residents, and the general public at street level.

7.4.3. Water Management

Technical Drainage Plans for the proposal (refer to separate **Appendix 9**) have been prepared by ATB Consulting Engineers together with a Water Sensitive Urban Design Report (**Appendix 10**)

7.4.4. Soil Contamination

As discussed earlier in this SEE, the site can be made suitable for the proposed use, with respect to potential contamination impacts. A Detailed Site Investigation prepared by Aargus is provided at **Appendix 12** to this SEE. In summary, the assessment considers the risks to human health and the environment associated with soil contamination are negligible at the site and as such the site is considered suitable for the proposed use.

7.4.5. Acoustic Impacts

An acoustic report prepared by Harwood Acoustics (**Appendix 17**) is submitted with this SEE. This provides an assessment of the internal and external noise levels. It states noise levels across the site are predominantly affected by mechanical plant noise emissions from plant within the Shellharbour Shopping Centre and passing traffic. Noise from neighbouring premises is also considered.

The report concludes that the proposal can comply with all applicable regulations provided the recommendations are fully complied with. The proposed glazing, roof, external walls and entry doors all comply or are capable of complying to the relevant acoustic requirements. Furthermore, it concludes that the site is located outside of any Australian Noise Exposure Forecast (ANEF) and therefore would not be impacted by aircraft noise intrusion from the Illawarra Regional Airport.

7.4.6. Air and Microclimate

Some dust is anticipated during the construction period, particularly given excavation is involved. This impact can be managed through measures such as wetting down work areas/stockpiles, stabilising exposed areas, preventing material tracking out onto public roadways, covering loads on all departing trucks and working to weather conditions. The proposal is otherwise not expected to give rise to any long term or adverse impacts on local or regional air quality.

7.5. Movement and Access

7.5.1. Accessibility

Unreasonable accessibility related impacts are not anticipated as part of the proposal. This is because the site has direct vehicular access to several public roads, providing connectivity to a range of destinations. Furthermore, the site is located in close proximity to public transport in the form of bus services from Stockland Shellharbour even further connectivity to services and other destinations.

Building Code Assistance were engaged to determine whether the proposal would comply with the Building Code of Australia (BCA), including its internal accessibility standards. Their assessment concludes that the proposal is capable of complying with the requirements of the Building Code of Australia and relevant adopted standards without undue modification to the design or appearance of the building.

7.5.2. Parking

Transport and Traffic Planning Associates were engaged to confirm the required number of spaces, their assessment is provided as **Appendix 13** to this SEE.

Transport and Traffic Planning Associates confirms that parking spaces, manoeuvring areas, ramp grades and driveway grades comply with the relevant standards, in particular the ADG and Australian Standards.

7.5.3. Traffic Impact

The Traffic and Parking Report by Transport and Traffic Planning Associates (**Appendix 13**) has assessed the proposal's impacts on the operation of the surrounding road network. Overall, their assessment finds that the traffic implications are expected to be negligible, with the development supportable on traffic planning grounds having regard for the minimal increase in traffic volumes expected over existing conditions.

7.5.4. Servicing / Waste

A Waste Management Plan (WMP) has been prepared by Elephants Foot, provided at **Appendix 18** of this SEE. The WMP includes a wide range of measures for the purpose of effective waste management. It is recommended the plan is implemented as a condition of any consent.

7.5.5. Soil Conditions

A Geotechnical Investigation Report was undertaken by Aargus (**Appendix 11**). In summary, the assessment confirms that the subject site and immediate surrounds are suitable for the proposed works, subject to a range of measures which are typical for proposals of this nature.

7.6. Social & Economic Impacts

7.6.1. Employment Opportunities

Overall, the proposal's built form, character and land use is consistent with the Council's long-term vision for the locality. That is, that it is consistent with, the Shellharbour Masterplan with the proposal providing commercial uses at street level, generating pedestrian activity and enlivening the street. The proposal would provide employment and service opportunities offered by the proposal's seven (7) street level commercial tenancies (2257.4m² GFA).

The proposal's construction phase would provide substantial ongoing employment opportunities for the construction sector.

7.6.2. Housing Supply and Diversity

By increasing housing supply, the proposal assists with promoting further housing affordability. Further, the proposal includes a variety of dwelling types, which will satisfy the increasingly diverse nature of households.

7.6.3. Local Identity

Its overall design and proposed finishes are considered to be of a high standard. The proposal would, therefore, be a visually interesting addition to the streetscape.

7.7. Site Suitability

This SEE demonstrates that the proposal is suitable for the subject site, primarily for the following reasons:

- The proposal is a permissible land use, with consent.
- The proposal is consistent with the relevant B3 - Commercial Core land use objectives.
- The subject site does not pose any prohibitive natural or artificial constraints.
- The proposal does not result in any unreasonable environmental impacts.
- This SEE demonstrates that the proposal is substantially compliant with the relevant development standards and/or prescriptive controls. Any non-compliances referenced in this SEE, would not render the proposal inconsistent with the intent of the relevant controls.

7.8. Public interest

The proposal is considered to be in the public interest for the following reasons:

- The proposal represents permissible development pursuant to the Shellharbour Local Environmental Plan 2013.
- The proposal is consistent with the zone objectives.
- The proposal, in conjunction with any mitigation measures as referenced in this SEE, does not result in any unreasonable environmental impacts.
- The subject development site has been found to be suitable for the proposal.
- In demand services such as housing will be provided as part of the proposal.
- The proposal is consistent with Council's long term, vision for the subject locality.

8. CONCLUSION

This DA seeks approval for a mixed-use development comprising a seven (7) storey residential flat building for seventy-seven (77) dwellings, one (1) basement level and one (1) lower ground floor level comprising 95 car park spaces, ground floor commercial space of 2257.4m² (GFA), and communal open space at 16 College Avenue, Shellharbour.

This SEE has undertaken an environmental assessment against the relevant environmental planning framework. The framework in this case includes the Shellharbour Local Environmental Plan 2013, State Environmental Planning Policy No 65 - Design Quality of Residential Apartment Development, the Apartment Design Guide, as well as the Shellharbour Development Control Plan 2013.

The assessment finds that the proposal is generally consistent with the outcomes sought by the relevant framework. In particular, the proposal is consistent with the design principles prescribed by SEPP 65, and is substantially compliant with the ADG. Importantly, it is consistent with intent of the Shellharbour Masterplan.



16 College Avenue, Shellharbour
19-014
SEE
March 2019

In light of the above, the proposal will deliver a suitable and appropriate development and is worthy of approvals



Shellharbour City Council Design Review Panel - 2
Meeting minutes and recommendations DA0226/2018

Disclaimer: The advice in these notes is from Council's Design Review Panel (DRP). The DRP is responsible for providing independent advice to Council and applicants on the architectural quality of the development and to provide technical feedback and resolve complex issues to achieve the best possible design outcome. The advice from the DRP does not form a comprehensive assessment of the application and are not necessarily the view of Council officers. Council will take the advice of the DRP in account when undertaking a comprehensive assessment of the DA, as well as the relevant statutory requirements and other relevant issues required under the provisions of the *Environmental Planning & Assessment Act 1979*, as amended.

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| Meeting Date | 26th March 2019 |
| Meeting location | <p>Shellharbour City Council Administration Offices</p> <p>Revised documentation and a briefing were provided by council officers:</p> <p>Bryce Koop and Nancy Sample</p> |
| Property address | 16 College Avenue |
| Proposal | Mixed use development |
| Background | <p>The proposal was previously reviewed by Shellharbour Design Review Panel in June 2018. Revised documentation was provided by the applicant in response to issues raised by the design review panel and council.</p> <p>This report outlines how revised documents have addressed issues previously raised.</p> |
| Design quality principals SEPP65 | |
| Context and Neighbourhood Character | <p>The proposal is located on a currently vacant lot that sits between Shellharbour Council's Civic Centre (including library and museum) and Stocklands shopping centre. The site's College Road frontage will form the pedestrian link between these two prominent focal points of the town centre.</p> <p>The entire perimeter of the site is surrounded by roads and a lane, making the proposal a building that will very much be viewed in the round.</p> <p>Recent developments in the town centre have been undertaken with varying levels of design quality. The recent Stocklands shopping centre development appears to largely internalise the town's retail and provides some very poor interfaces with the street. In contrast the recent council building provides a generous landscape forecourt and a high-quality building which provides a positive contribution to the public domain. It is essential that the proposed development seeks to consolidate the approach taken by council, by developing a high-quality building that connects to the public domain and does not consolidate the poor urban</p> |

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| | <p>design approach / lack of street engagement, taken by the shopping centre.</p> <p>This context will require a sensitive response to the sloping topography of the site and adjoining streetscapes, to the development's relationship to the Civic Plaza, to integration with pedestrian facilities of the public domain, and to the provision of access from the various street frontages.</p> <p>A more detailed contextual analysis has now been provided to better describe the context of the site. Contextual information has been provided, showing the proposal from different vantage points around the town centre and exploring the proposal within its potential future context.</p> |
| Built Form and Scale | <p>In response to the Shellharbour Design Review Panels comments significant developments have been made to the building form. The proposal now consists of a single tower (7 storeys) located on the corner of College and Cygnet Avenue and a five storey building creating a continuous street wall to College Avenue. The revised proposal now responds more appropriately to its immediate context and also provides a more active connection to the public domain. However, further consideration / detail refinement of the following issues is recommended:</p> <ul style="list-style-type: none"> - A forecourt has been proposed on the corner of Cygnet Avenue and College Avenue to relate / contribute to public forecourt across the road. The forecourt will provide a positive contribution to the town center's public domain. Detail treatment of the retaining structures for planting should ensure that a strong visual connection is maintained between the street and ground floor business premises. - In response to SDRP comments the building height on the northern portion of the site has been reduced to 5 storeys. This is higher than the four storey height recommended by the panel and remains none compliant with the 18m height limit. The none compliant height combined with the proposal's proximity to the neighbour to the north (1/2 Memorial Drive) remains a concern. From the information provided there appears to be approximately 12m separation provided between the northern façade of the proposal and the southern façade of 1/2 Memorial Drive. This should be confirmed and captured in the applicant's DA documentation, to demonstrate compliance with the building separation requirements of the ADG. - The none compliant height on the northern edge of the building can largely be attributed to the pronounce timber clad parapet that forms a planter to the communal terrace above. Further detail development is required, the parapet could be push back further south to align with bedroom 2 of units B3.02 and B3.03. A lower roof form could sit below the parapet to enclose the living areas and a larger portion of the private open space of units B3.02 and B3.03. This will assist in reducing the perceived bulk of the northern façade and potentially create a more usable areas of private open space. - In response to the SDRP comments a more active interface has been provided to College Avenue. Business premises now step with the topography of the street to create an active retail strip and residential lobbies are now clearly identifiable |

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| | <p>within the College Avenue Façade. However, the location of the steps within northern ground floor lobby create an awkward unnecessarily cramped space, further development is recommended. Perhaps the steps could be located further north to create a more generous lobby, by slightly reducing the size of the business premises on the corner of College Avenue and Bimbala Place.</p> <ul style="list-style-type: none"> - Ground floor business premises and the business entry lobby are orientated towards Moolawang Place, helping to activate the lane. However, the use of fixed glazing to the lower ground level parking does not contribute to creating an active lane. Vehicle parking should be screened rather than highlighted if the lane is to present as more than a back of house servicing area. Consideration should be given to using a more robust material in this location (such as face brick) which would ideally be set back from the site boundary to allow room for a planter, to soften the buildings interface with the lane. - The configuration of the upper ground floor business lobby should be developed to provide a more generous link between Moolawang Place and College Avenue. The ramp located in the College Avenue entry is particularly awkward. The pinch point between the two entries should be increased in width to allow a stronger visual connection from the Lane to the Avenue. The ramp should be relocated to avoid creating a deep dead end within the College Avenue entry lobby. Ideally this link should be a generous two storey high space that is full of natural light. Consideration should be given to providing sky lights in the pebbled roofs above the lobby and raising the height of these roofs to maximise the volume of the space. <p>The corner of Moolawang Place and Bimbala Place is dominated by a one directional loading area which services the business tenancies. Whilst it is acknowledged that this will provide practical servicing solution, its impact on the street is not desirable. A preferable solution would be to limit the servicing access to a single point of entry and exit, to allow more of the street frontage to be dedicated to an active use. The applicant is encouraged to develop an alternative solution with council's engineers that will provide adequate servicing whilst activating more of the ground level.</p> |
| Density | <p>The revised building form now responds to the immediate context of the site in a more reasonable manner. Further detail refinement as outlined above (built form and scale) will ensure that the proposal does not read as an over development of the site.</p> |
| Sustainability | <p>Natural ventilation assessment provided by SLR consulting states that 33.8% of units meet ADG cross ventilation definition. But 65% of units will be naturally cross ventilated. The report goes further to show modeling of the building form to demonstrate how natural ventilation is achieved.</p> <p>It is evident that the building form has been developed to accommodate a variety of unit types (crossover and cross through units) and appropriately proportioned recesses to accommodate natural ventilation.</p> <p>A solar access assessment has been provided by SLR</p> |

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| | <p>consulting. The report summaries that 79.2% of units receive in excess of 2 hours solar access. The ADG requirement for the Shellharbour area is 3 hours solar access.</p> <p>Suns eye view diagrams have been provided as requested by the SDRP. When assessing if west facing units are receiving a minimum of 3 hours solar access (between 9am and 3pm, mid-winter) it must be clearly demonstrated that solar access to balconies and living rooms is being achieved at 12pm and beyond. The diagrams provided do not clearly demonstrate this.</p> <p>It has not been demonstrated that this proposal meets the minimum solar access requirements for this location. It does meet the lesser requirements permissible in Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.</p> <p>Opportunities to harvest rainwater for use in maintaining any plantings established on the building or the site should be explored. Other water minimization measures should be considered and reuse of rainwater for toilet flushing and washing machines could also be implement for a site of this size.</p> <p>The use of photovoltaic cells and solar panels is also encouraged.</p> |
| Landscape | <p>Public Domain</p> <p>The proposals interface with the adjoining streets has improved. However, further development of the buildings interface with Moolawang Place (as outlined above, built form and scale) is recommended.</p> <p>Communal Open Space (COS)</p> <p>Roof terraces have been developed to provide a variety of spaces / facilities for residents. All spaces are serviced by accessible toilets, have good outlook, excellent solar access and are provided with covered areas for shade and shelter.</p> <p>Private Open Space (POS)</p> <p>Modest balconies have been provided to all units that appear to comply with the minimum requirements of the ADG.</p> <p>Through site link</p> <p>The through site link depicted in Taylor Brammer sheet 5 issue B does not provide a clearly defined connection between Moolawang Place and College Avenue (see comments above, built form and scale). Further detail development is required.</p> |
| Amenity | <p>Unit layouts have been developed to provide a reasonable level of amenity.</p> <p>Room sizes have been documented to demonstrate compliance with the minimum dimensional requirements of the ADG.</p> <p>Egress distances within upper level lobbies appear to be in excess of BCA requirements. The applicant is encouraged to discuss this issue with his building certifier.</p> |
| Safety | <p>The proposals interface with the street has significantly improved, many of the issues created by the previous proposal have now been addressed.</p> |

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| Housing Diversity and Social Interaction | Pending further refinement, the proposal could contribute an appropriate mix of uses to this important town centre location. It is however essential that the building engages with the street and laneway. |
| Aesthetics | <p>The selection and quality of materials will play an important role in the eventual success of this proposal. A 1:50 section documenting materials, types of and rails drainage, lighting has now been provided.</p> <p>Servicing of the building must be considered at this stage of the design process. The location of service risers, car park exhausts, AC condensers, down pipes, substation and fire hydrant boosters should be accommodated.</p> <p>The curved aesthetic of the building forms has been developed in a reasonable manner. A competent aesthetic has been developed, utilising an appropriate pallet of materials.</p> |
| Key issues, further Comments & Recommendations | <p>Significant and positive developments have been made to the proposal, which now responds more appropriately to its immediate context and provides a more active connection to the public domain. However, further refinements are recommended to provide a better relationship with the immediate context of the site, improve amenity and demonstrate compliance with the minimum requirements of the ADG:</p> <ul style="list-style-type: none"> - Refine northern edge of building to reduce visual bulk. - Further development of northern residential lobby. - Further development of through site link. - Further refinement of the buildings interface with Moolawang Place. - Explore the potential to reduce vehicle service access to a single point of access. - Demonstrate ADG building separation compliance with existing neighboring buildings. - Further information to be provided to demonstrate compliance with ADG solar access requirements. |



**Shellharbour City Council Design Review Panel
Meeting minutes and recommendations DA0226/2018**

Disclaimer: The advice in these notes is from Council's Design Review Panel (DRP). The DRP is responsible for providing independent advice to Council and applicants on the architectural quality of the development and to provide technical feedback and resolve complex issues to achieve the best possible design outcome. The advice from the DRP does not form a comprehensive assessment of the application and are not necessarily the view of Council officers. Council will take the advice of the DRP in account when undertaking a comprehensive assessment of the DA, as well as the relevant statutory requirements and other relevant issues required under the provisions of the *Environmental Planning & Assessment Act 1979*, as amended.

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| Date | 29 June 2018 |
| Meeting location | Shellharbour City Council Administration Offices |
| Panel members | David Jarvis Susan Hobley Tony Quin |
| Apologies | Nil |
| Council staff | Bryce Koop Jasmina Micevski Nancy Sample |
| Guests/ representatives of the applicant | Robert Gizzi – Design Warehouse Australia Amanda Kostovski – Design Warehouse Australia Nathan Tyerman – Design Warehouse Australia Barry Cotton – Planning Principles |
| Declarations of Interest | Nil |
| Reasons for consideration by DRP | Shop Top Housing Consisting Of Eight Business Premises And 84 Residential Apartments And Basement Parking |
| Item number | 3 |
| DA number | DA0262/2018 |
| Determination pathway | JRPP |
| Property address | 16 College Avenue |
| Proposal | Shop Top Housing Consisting of 8 Business Premises & 84 Residential Apartments And Basement Parking |
| Applicant or applicant's representative address to the design review panel | Robert Gizzi |
| Background | The site was Inspected by the Panel on 29 th June 2018 |
| Design quality principals SEPP65 | |
| Context and Neighbourhood Character | <p>The proposal is located on a currently vacant lot that sits between Shellharbour Council's Civic Centre (including library and museum) and Stocklands shopping centre. The site's College Road frontage will form the pedestrian link between these two prominent focal points of the town centre,</p> <p>The entire perimeter of the site is surrounded by roads and a lane, making the proposal a building that will very much be viewed in the round.</p> <p>Recent developments in the town centre have been undertaken with varying levels of design quality. The recent Stocklands</p> |

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| | <p>shopping center development appears to largely internalise the town's retail and provides some very poor interfaces with the street. In contrast the recent council building provides a generous landscape forecourt and a high-quality building which provides a positive contribution to the public domain. It is essential that the proposed development seeks to consolidate the approach taken by council, by developing a high-quality building that connects to the public domain and not consolidate the poor urban design approach / lack of street engagement, taken by the shopping centre.</p> <p>This context will require a sensitive response to the sloping topography of the site and adjoining streetscapes, to the development's relationship to the Civic Plaza, to integration with pedestrian facilities of the public domain, and to the provision of access from the various street frontages.</p> |
| Built Form and Scale | <p>A forecourt has been proposed on the corner of Cygnet Avenue and College Avenue to relate / contribute to public forecourt across the road. This is seen as a sound initiative which, with further development, will provide a positive contribution to the town centre's public domain.</p> <p>The current proposal seeks to vary the permissible height control (18m), by approximately 2-3 storeys. The rational of providing a taller building form on the major road intersection of Cygnet Avenue and College Avenue seems reasonable, particularly given that it will be adjacent to generous areas of public open space. However, this rational must be tested and presented in a convincing manner by relating it to the top RL of neighboring buildings and demonstrating how the proposal will read from more distant vantage points when approaching the town centre.</p> <p>No convincing justification has been provided for the proposed increase to the building height on the northern portion of the site. This area does not relate to a major road intersection, is not surrounded by generous areas of public open space and is located next to a recently developed four storey building, which appears to be largely compliant with council's height control. All neighboring buildings need to be properly modelled in order to justify arguments for increased height. Drawings 58K and 59K are inadequate and only emphasise the bulk and scale problem of the proposal.</p> <p>The proposal consists of two curved tower forms linked by a single level of retail podium, which is elevated above the street to accommodate the carpark. The carpark is concealed by a series of planters and stone walls, fronting College Avenue, with access via steps at the northern end. This approach results in the majority of the College Avenue commercial being isolated from the street. Universal access is highly problematic. The addresses and entrances to the commercial and residential components of the two buildings are mostly unclear and poorly resolved. An active vibrant streetscape that provides a positive contribution to the town centre has not been provided.</p> <p>The commercial units must be stepped to relate to the topography of College Avenue, allowing direct access to the street. This may require the car park to be pushed further below ground. It is not acceptable to provide at-grade parking within a main street of a town centre with a nil boundary setback. The proposal must be developed to allow College Avenue to become an active street frontage that contributes towards the quality of the town centre.</p> |

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| | <p>It should also be noted that, if the carpark is pushed deeper into the ground, the northern building form may only need to be reduced by 1 storey to come close to complying with council's height control.</p> <p>As previously stated the proposal will be experienced as building in the round. The western lane elevation (Moolawang Place) will be very visible from the public domain. Consideration must be given to the quality of finishes to this elevation. The provision of access into each individual commercial unit should also be considered as a strategy to activate the lane and provide more flexibility to future uses of the commercial space. This elevation is accessible from the public carpark that links across the Civic Plaza providing access through to Memorial Drive. Improving this access will therefore not only be of benefit to the commercial tenancies but also support the activation of the town centre to the west and north-west.</p> <p>The panel is not convinced that the proposed built form strategy of two separate towers of similar height and proportion is the most appropriate way to address the immediate context of the site and provide the best level of amenity to future residents. The applicant is encouraged to develop alternative built form strategies that reduce the height of the building in the northern portion of the site and engage with the streets. This may take the form of a 4 storey street wall and a taller building form located on the corner of Cygnet Avenue and College Avenue.</p> |
| Density | <p>The current proposal presents as an over development of the site that does not fully engage with the street. Further development is required, as outlined above.</p> |
| Sustainability | <p>The ADG (Objective 4B-1) states:</p> <p><i>"Light wells are not primary air source for habitable rooms"</i></p> <p>Once this factor is taken into account the current proposal provides cross ventilation to less than 40% of its units. This is significantly below the required 60%. This is not acceptable on a site with 4 street frontages and such a form and dimensions. An alternative built form and circulation strategy must be developed to comply with the minimum requirements of the ADG. Consideration could be given to providing more circulation cores / points of entry, to allow cross through units to be introduced. Note this strategy would be suited to developing a more linear building form.</p> <p>The proposal looks capable of complying with the minimum solar access requirements of the ADG. Once the proposal is developed to address issues raised in this report it should be remodeled and tested with suns eye views at hourly intervals, taken mid-winter, between 9am and 3pm.</p> <p>Opportunities to harvest rainwater for use in maintaining any plantings established on the building or the site should be explored. Other water minimization measures should be considered and reuse of rainwater for toilet flushing and washing machines could also be implement for a site of this size.</p> |

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| | The use of photovoltaic cells and solar panels is also encouraged. |
| Landscape | <p>1. Public Domain</p> <p>As discussed in other parts of this report, the proposal reviewed by the panel needs considerable reworking of the street level interfaces. The option to include street tree plantings should be explored in consultation with council. The use of planter boxes and plantings as barriers between the building's external spaces and the public domain should be avoided. Plantings should help integrate and provide amenity to both domains.</p> <p>2. Communal Open Space (COS)</p> <p>Three areas are designated as COS with the intent being that a large COS be provided on level 1 to serve the residents (but not commercial tenants) of both buildings and rooftop COS provided on each of the buildings to serve the residents of the particular buildings. The panel supports this approach but raised concerns about the functionality of the spaces. It is important that the COS provides for the particular needs of the residents and supports the development of a sense of community among them. This will require:</p> <ul style="list-style-type: none"> - an analysis of the facilities offered by the nearby public open spaces to avoid duplication - an appreciation of the likely future demographic of the residents to ensure a good fit between their needs/preferences and the functions provided in the COS - well-laid out spaces that support communal activities such as barbecues, community gardens, special celebrations, etc. These spaces should not be broken up into small intimate spaces for private use by individuals or small groups (by such elements as raised gardens with screen plantings or screens). Plantings and fixtures should add amenity to the spaces and support their socialising functionality. - roof top COS on each building should supplement/complement the functions of the level 1 COS, not duplicate them. <p>3. Private Open Space (POS)</p> <p>The proposal is problematic in terms of overlooking of POS from balconies on higher levels. This is unacceptable and should not be dealt with solely by including planter boxes to the edges of the affecting balconies.</p> <p>The shape and dimensions of some balconies and planter boxes needs to be better resolved to provide better functionality. It is unclear that the north-western corner planter box on level 1 will be suitably accessible for maintenance.</p> |
| Amenity | <p>The entrance to the southern building should be more generously proportioned and relate to the level of the street.</p> <p>Room sizes should be documented on all DA plans to confirm compliance with the minimum dimensional requirements of the ADG.</p> |

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| | <p>The ADG also requires circulation corridors greater than 12 metres in length be articulated.</p> <p>The amenity of the balconies of the 3 bedroom apartments in the northwest corner of the southern tower measuring 14.2 sqm is questionable especially as the bottom corner 1 bed apartment has a balcony of 22 sqm. This is perplexing.</p> <p>Fine views of the escarpment to the north-west and west are available to this site but the design of the units with this outlook does not always take advantage of this opportunity in several cases (e.g. level 1 unit A1.06 has a solid wall on its north-western corner and unit B1.06 has bedrooms along its western frontage).</p> |
| Safety | <p>The proposal must provide an active connection to College Avenue, if a vibrant and safe town centre is to be created.</p> <p>Areas of potential concealment, that facilitate antisocial behavior must be also be eliminated from the street interface.</p> |
| Housing Diversity and Social Interaction | <p>Pending further development, the proposal could contribute an appropriate mix of uses to this important town centre location. It is however essential that the building engages with the street.</p> |
| Aesthetics | <p>The selection and quality of materials will play an important role in the eventual success of this proposal. A 1:50 section documenting materials, types of and rails drainage, lighting etc. should be provided.</p> <p>Servicing of the building must be considered at this stage of the design process. The location of service risers, car park exhausts, AC condensers, down pipes, substation and fire hydrant boosters should be accommodated.</p> <p>The curved aesthetic of the building forms has been developed in a reasonable manner. However, it is anticipated that in responding to the issues outlined in this report the building aesthetic will be further developed. This applies also to the landscape design and plantings associated with the public domain interface; they will need to be treated in a more pro-active fashion to assist with the integration of the building with the streetscape.</p> |
| Key issues, further Comments & Recommendations | <p>The panel is concerned that the current proposal does not respond appropriately to its context and provides a particularly poor interface with College Avenue. Along with the lack of compliance with the ADG cross ventilation control. Further development is required to provide a building form that responds to this site and provides an acceptable level of amenity to its future residents. The proposal should be developed to:</p> <ul style="list-style-type: none"> - Reduce building height in the northern portion of the site to more closely comply with the 18m height limit. - Provide an active, well-integrated frontage to College Avenue. |

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| | <ul style="list-style-type: none">- Develop an approach to access and circulation that provides strong, clear separate addresses and simple wayfinding to the residential and commercial components of each building (at College Avenue and Cygnet Avenue) and supports activation of Moolawang Place.- Comply with the minimum amenity standards of the ADG- Develop a clear vision for the COS to provide the basis for detailed designs.- Address problems with POS in relation to functionality, amenity and privacy impacts. |
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City Plan Strategy & Development P/L
ABN 58 133 501 774

15 May 2019

Our Ref: [19-014]

General Manager

Shellharbour City Council
Locked Bay 155
SHELLHARBOUR CITY CENTRE NSW 2529
council@shellharbour.nsw.gov.au

Dear Sir,

**RE: RESPONSE TO SHELLHARBOUR CITY COUNCIL DESIGN REVIEW PANEL (2) COMMENTS:
DA0226/2018**

Shellharbour City Council (Council) on 26 March 2019 held a meeting of the Design Review Panel (DRP) in relation to DA0226/2018. The proposal was previously reviewed by the DRP in June 2018. Revised documentation was provided by the applicant in March 2019 in response to issues raised by the initial June 2018 DRP comments.

This letter provides a revised architectural scheme (**Annexure 1**) in response to the comments raised in the more recent DRP meeting. A schedule of all the drawing amendments has been provided in **Annexure 2**.

In the following table we have reproduced the comments from the March 2019 DRP (**Annexure 5**) and have provided comments against each with the benefit of the amended plans and details.

| DRP comment | City Plan comment |
|--|---|
| Design quality principles SEPP65 | |
| Context and Neighbourhood Character | |
| The proposal is located on a currently vacant lot that sits between Shellharbour Council's Civic Centre (including library and museum) and Stocklands shopping centre. The site's College Road frontage will form the pedestrian link between these two prominent focal points of the town centre. | Noted. The proposal responds to its context by providing an active frontage along College Avenue and a forecourt on its south-eastern corner. |
| The entire perimeter of the site is surrounded by roads and a lane, making the proposal a building that will very much be viewed in the round. | Noted and agreed with this observation. |

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M:\Projects\CP2019\19-014 16 College Ave, Shellharbour\6. Post Lodgement\DRP\DRP Response\190515 Letter DRP response (sent to DWA).docx

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| <p>Recent developments in the town centre have been undertaken with varying levels of design quality. The recent Stocklands shopping centre development appears to largely internalise the town's retail and provides some very poor interfaces with the street. In contrast the recent council building provides a generous landscape forecourt and a high-quality building which provides a positive contribution to the public domain. It is essential that the proposed development seeks to consolidate the approach taken by council, by developing a high-quality building that connects to the public domain and does not consolidate the poor urban design approach / lack of street engagement, taken by the shopping centre.</p> | <p>Noted. The proposal supports the adjacent Council building by providing a landscape forecourt and active frontages, linking the Stocklands shopping Centre with Council's civic Centre.</p> <p>The proposal continues to be compatible within the context and built form of the existing mixed-use character of Shellharbour City Centre. It is considered the proposed built form and massing positively contributes to the quality of the built environment and the character and appearance of the precinct. The proposal is consistent with the objectives and vision outlined within the Shellharbour City Centre Masterplan for Precinct D: Central - Memorial Drive /Cygnet Avenue, detailed within the Shellharbour Development Control Plan.</p> <p>The proposed amendments improve the amenity of the through site link by providing a more congruent link and layout of the upper ground floor level. The provision of skylights allow for natural light to reach into this through site link which also enhances the useability of the space.</p> |
| <p>This context will require a sensitive response to the sloping topography of the site and adjoining streetscapes, to the development's relationship to the Civic Plaza, to integration with pedestrian facilities of the public domain, and to the provision of access from the various street frontages.</p> | <p>Noted. The proposed amendments respond sensitively to the topography of the site.</p> |
| <p>A more detailed contextual analysis has now been provided to better describe the context of the site. Contextual information has been provided, showing the proposal from different vantage points around the town centre and exploring the proposal within its potential future context.</p> | <p>Noted.</p> |
| <p>Built Form and Scale</p> | |
| <p>In response to the Shellharbour Design Review Panels comments significant developments have been made to the building form.</p> <p>The proposal now consists of a single tower (7 storeys) located on the corner of College and Cygnet Avenue and a five storey building creating a continuous street wall to College Avenue. The revised proposal now responds more appropriately to its immediate context and also provides a more</p> | <p>Noted.</p> |

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| <p>active connection to the public domain. However, further consideration / detail refinement of the following issues is recommended:</p> | |
| <p>- A forecourt has been proposed on the corner of Cygnet Avenue and College Avenue to relate / contribute to public forecourt across the road. The forecourt will provide a positive contribution to the town center's public domain.</p> <p>Detail treatment of the retaining structures for planting should ensure that a strong visual connection is maintained between the street and ground floor business premises.</p> | <p>A forecourt has been provided at the north western corner of Cygnet Avenue and College Avenue and contributes to the public forecourt across the road. This enhances the public domain of the town centre and complements the character of the streetscape and the Civic Plaza, reinforcing a sense of place.</p> <p>Details of treatment and planting is now provided on the landscape plans provided by Taylor Brammer Landscape Architects in Annexure 3.</p> |
| <p>In response to SDRP comments the building height on the northern portion of the site has been reduced to 5 storeys. This is higher than the four storey height recommended by the panel and remains none compliant with the 18m height limit. The none compliant height combined with the proposal's proximity to the neighbour to the north (1/2 Memorial Drive) remains a concern. From the information provided there appears to be approximately 12m separation provided between the northern façade of the proposal and the southern façade of 1/2 Memorial Drive. This should be confirmed and captured in the applicant's DA documentation, to demonstrate compliance with the building separation requirements of the ADG.</p> | <p>Noted. Compliance with the building separation requirements of the ADG have been confirmed in the Site Plan (drawing PN1725-AI-19).</p> <p>It should be noted that the building separation is 12.7m, which exceeds the design criteria of 12m as prescribed in Objective 3E-1 of the ADG.</p> <p>It is further noted that the proposal carries a greater proportion of building separation of 7.1m when measured of the centre line of Bimbala Place.</p> |
| <p>The non compliant height on the northern edge of the building can largely be attributed to the pronounce timber clad parapet that forms a planter to the communal terrace above. Further detail development is required, the parapet could be push back further south to align with bedroom 2 of units B3.02 and B3.03. A lower roof form could sit below the parapet to enclose the living areas and a larger portion of the private open space of units B3.02 and B3.03. This will assist in reducing the perceived bulk of the northern façade and potentially create a more usable areas of private open space.</p> | <p>There has been further design development of the northern elevation. The timber clad parapet has now been set back further to create a more 'stepped' appearance. This contributes in reducing the perceived bulk of the northern façade when viewed from the public domain and contributes to a more usable area of communal open space (COS) on Level 4. It also reduces the extent of the height variation in this location.</p> <p>It is noted that the amended proposal provides 400.6m² of COS in the northern section on Level 4, which is suggesting an increase in COS (from 320.3m²) despite the reduction in area. This has been acknowledged from DWA to be an error in the original plans, which should have correctly shown a COS area of 472.7m². As such, the amended</p> |

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| | <p>plans and parapet result in a reduction of Level 4 COS by 72.1m².</p> <p>It should be noted that the overall area of the COS will be equal to 42.9% of site area, which exceeds the 25% criteria prescribed by the ADG.</p> |
| <p>In response to the SDRP comments a more active interface has been provided to College Avenue. Business premises now step with the topography of the street to create an active retail strip and residential lobbies are now clearly identifiable within the College Avenue Façade. However, the location of the steps within northern ground floor lobby create an awkward unnecessarily cramped space, further development is recommended. Perhaps the steps could be located further north to create a more generous lobby, by slightly reducing the size of the business premises on the corner of College Avenue and Bimbala Place.</p> | <p>The door between Res Lobby B & Business Lobby shifted west to create more room in front of the existing lift.</p> <p>It is noted that the lobby is of a sufficient size and incorporates mailboxes for residents.</p> |
| <p>Ground floor business premises and the business entry lobby are orientated towards Moolawang Place, helping to activate the lane. However, the use of fixed glazing to the lower ground level parking does not contribute to creating an active lane. Vehicle parking should be screened rather than highlighted if the lane is to present as more than a back of house servicing area. Consideration should be given to using a more robust material in this location (such as face brick) which would ideally be set back from the site boundary to allow room for a planter, to soften the buildings interface with the lane.</p> | <p>The ground floor of the western elevation has been altered with the replacement of the fixed glazing to Moolawang Place. Vehicle parking and access is now provided with metal louvres and screens to improve the presentation to Moolawang Place. It is noted that there is no available space for planters as recommended by Council due to the design of the basement and subsequent ground floor setbacks.</p> |
| <p>The configuration of the upper ground floor business lobby should be developed to provide a more generous link between Moolawang Place and College Avenue. The ramp located in the College Avenue entry is particularly awkward. The pinch point between the two entries should be increased in width to allow a stronger visual connection from the Lane to the Avenue. The ramp should be relocated to avoid creating a deep dead end within the College Avenue entry lobby. Ideally this link should be a generous two storey high space that is full of natural light. Consideration should be given to providing sky lights in the pebbled roofs above</p> | <p>Noted. The design of the upper ground floor business lobby has been amended and widened to provide a more logical and coherent layout. This included the reorientation and widening of the access ramp as requested by Council. Although raised ceiling heights are not possible, amenity has been further improved with the provision of skylights and a feature wall to the through site link.</p> |

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| the lobby and raising the height of these roofs to maximise the volume of the space. | |
| The corner of Moolawang Place and Bimbala Place is dominated by a one directional loading area which services the business tenancies. Whilst it is acknowledged that this will provide practical servicing solution, its impact on the street is not desirable. A preferable solution would be to limit the servicing access to a single point of entry and exit, to allow more of the street frontage to be dedicated to an active use. The applicant is encouraged to develop an alternative solution with council's engineers that will provide adequate servicing whilst activating more of the ground level. | Council's traffic engineers have confirmed that the proposed loading arrangement is their preferred solution for the site. |
| Density | |
| The revised building form now responds to the immediate context of the site in a more reasonable manner. Further detail refinement as outlined above (built form and scale) will ensure that the proposal does not read as an over development of the site. | Noted. Please refer to design amendments and comments above regarding the relocation of the wood clad parapet to the north. |
| Sustainability | |
| Natural ventilation assessment provided by SLR Consulting states that 33.8% of units meet ADG cross ventilation definition. But 65% of units will be naturally cross ventilated. The report goes further to show modeling of the building form to demonstrate how natural ventilation is achieved. | Noted. |
| It is evident that the building form has been developed to accommodate a variety of unit types (crossover and cross through units) and appropriately proportioned recesses to accommodate natural ventilation. | Noted. |
| A solar access assessment has been provided by SLR Consulting. The report summaries that 79.2% of units receive in excess of 2 hours solar access. The ADG requirement for the Shellharbour area is 3 hours solar access. | This information has been confirmed in the SLR solar access report, which states that <i>"SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments"</i> . Further detail to this has been provided below. |
| Suns eye view diagrams have been provided as requested by the SDRP. When assessing if west facing units are receiving a minimum of 3 hours | Sun eye view diagrams have been provided in the SLR solar access report, which states that <i>"AutoCAD 3D sun's eye view diagrams were</i> |

solar access (between 9am and 3pm, mid-winter) it must be clearly demonstrated that solar access to balconies and living rooms is being achieved at 12pm and beyond. The diagrams provided do not clearly demonstrate this.

It has not been demonstrated that this proposal meets the minimum solar access requirements for this location. It does meet the lesser requirements permissible in Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.

generated for each 30 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21st June)".

It is noted that this proposal meets the solar access requirements for the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas. It is considered that the proposed non-compliance is acceptable for the following reasons:

- The proposal is located in the suburb of Shellharbour City Centre, which is approximately 3km from the Wollongong LGA boundary.
- The proposal still provides a high degree of amenity for residents as it meets the requirements for the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- Solar access at the 3hr standard is constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting (**Annexure 4**), at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.
- According to the above analysis, 35% of the proposed apartment units will achieve between 2-3 hours of direct sunlight, in addition to 44.2% of apartments that achieve 3 hours of direct sunlight.
- From 8am to 4pm, 77.9% of the apartments will achieve 3 hours of direct sunlight. The number of apartments without direct sunlight is 6.5%. The latter figure is a distinctive improvement from the ADG standard of 15%, demonstrating that a high degree of amenity is provided to a large proportion of units and is an acceptable outcome given the constraint placed on the development through the orientation of the site.

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| | <ul style="list-style-type: none"> In addition to the above, SLR has demonstrated there will be solar access to more than 50% of the communal open space across the full 6 hour assessment period. |
| Opportunities to harvest rainwater for use in maintaining any plantings established on the building or the site should be explored. Other water minimization measures should be considered and reuse of rainwater for toilet flushing and washing machines could also be implement for a site of this size. | Noted. A 50,000 L rainwater tank has been provided to facilitate the proposed plantings and irrigation. |
| The use of photovoltaic cells and solar panels is also encouraged. | Noted, however all roof areas are currently being used to provide common open space. |
| Landscaping | |
| <p>Public Domain</p> <p>The proposals interface with the adjoining streets has improved. However, further development of the buildings interface with Moolawang Place (as outlined above, built form and scale) is recommended.</p> | The proposal has been amended to provide louvres in lieu of glass to front onto Moolawang Place. |
| <p>Communal Open Space (COS)</p> <p>Roof terraces have been developed to provide a variety of spaces / facilities for residents. All spaces are serviced by accessible toilets, have good outlook, excellent solar access and are provided with covered areas for shade and shelter.</p> | Noted. The proposed amendments do not change the quality of the COS and facilities provided, with the exception of a decrease in 72m ² in area as otherwise noted above. |
| <p>Private Open Space (POS)</p> <p>Modest balconies have been provided to all units that appear to comply with the minimum requirements of the ADG.</p> | Compliance noted. |
| <p>Through site link</p> <p>The through site link depicted in Taylor Brammer sheet 5 issue B does not provide a clearly defined connection between Moolawang Place and College Avenue (see comments above, built form and scale). Further detail development is required.</p> | As noted above, the through site link has been improved to provide greater amenity and legibility to the space. Taylor Brammer Landscape Architects have provided an amended landscape concept for the through site link as shown in Annexure 3 . |
| Amenity | |

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| Unit layouts have been developed to provide a reasonable level of amenity. | Noted. |
| Room sizes have been documented to demonstrate compliance with the minimum dimensional requirements of the ADG. | Noted. |
| Egress distances within upper level lobbies appear to be in excess of BCA requirements. The applicant is encouraged to discuss this issue with his building certifier. | This has been addressed in the original BCA report. A performance issue solution was proposed. |
| Safety | |
| The proposals interface with the street has significantly improved, many of the issues created by the previous proposal have now been addressed. | Noted. |
| Housing Diversity and Social Interaction | |
| Pending further refinement, the proposal could contribute an appropriate mix of uses to this important town centre location. It is however essential that the building engages with the street and laneway. | Noted. |
| Aesthetics | |
| The selection and quality of materials will play an important role in the eventual success of this proposal. A 1:50 section documenting materials, types of and rails drainage, lighting has now been provided. | Noted. |
| Servicing of the building must be considered at this stage of the design process. The location of service risers, car park exhausts, AC condensers, down pipes, substation and fire hydrant boosters should be accommodated. The curved aesthetic of the building forms has been developed in a reasonable manner. A competent aesthetic has been developed, utilising an appropriate pallet of materials. | Noted. Servicing has been considered at this stage of the design process and has been incorporated in the architectural drawings. |
| Key issues, further Comments & Recommendations | |
| Significant and positive developments have been made to the proposal, which now responds more appropriately to its immediate context and provides a more active connection to the public domain. | Noted. |

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| However, further refinements are recommended to provide a better relationship with the immediate context of the site, improve amenity and demonstrate compliance with the minimum requirements of the ADG: | |
| - Refine northern edge of building to reduce visual bulk. | Please refer to above comments in relation to the relocation of the northern parapet. |
| - Further development of northern residential lobby. | Please refer to above comments in relation to the amendment of the northern residential lobby on the lower ground floor. |
| - Further development of through site link. | The through site link has been widened, layout amended and skylights have been provided to facilitate the useability and amenity of the space. Please refer to comments in relation to the through site link above. |
| - Further refinement of the buildings interface with Moolawang Place. | Please refer to above comments in relation to the replacement of glazing to louvres on the western interface with Moolawang Place. |
| - Explore the potential to reduce vehicle service access to a single point of access. | Noted. Council prefer to existing access arrangement as detailed above. |
| - Demonstrate ADG building separation compliance with existing neighboring buildings. | Complies. The amended plans demonstrate ADG building separation. |
| - Further information to be provided to demonstrate compliance with ADG solar access requirements. | See earlier discussion. |

The Applicant is firmly committed to working with Shellharbour City Council to address any concerns and is happy to meet if any of the matters raised in the DRP meeting and amended plans require further discussion. Should you have any queries or require clarification on any matter discussed within this letter, please do not hesitate to contact the undersigned on (02) 8270 3500.

Yours Faithfully,



Stephen Kerr
Executive Director



City Plan Strategy & Development P/L
ABN 58 133 501 774



Annexure 1

Amended architectural plans

DRAWING LIST

| SHEET NO. | SHEET NAME | REV. |
|-----------|--|------|
| 00 | COVERSHEET | Y |
| 01 | DGP ANALYSIS & LOCATION PLAN | Y |
| 02 | REGIONAL CONTEXT & URBAN ANALYSIS | Y |
| 03 | LOCAL CONTEXT | Y |
| 04 | DESIGN OPPORTUNITIES | Y |
| 05 | SITE ANALYSIS - CONTEXTUAL RELATIONSHIP | Y |
| 06 | SITE ANALYSIS - ACCESS & CIRCULATION | Y |
| 07 | SITE ANALYSIS - PUBLIC DOMAIN | Y |
| 08 | SITE ANALYSIS - STREET ACTIVATION | Y |
| 10 | 3D FUTURE DEVELOPMENTS | Y |
| 15 | PRECEDENCE | Y |
| 18 | EXISTING SURVEY | Y |
| 19 | SITE PLAN | Y |
| 20 | GFA PLANS | Y |
| 21 | BASEMENT 1 FLOOR PLAN | Y |
| 22 | LOWER GROUND FLOOR PLAN | Y |
| 23 | UPPER GROUND FLOOR PLAN | Y |
| 24 | LEVEL 1 FLOOR PLAN | Y |
| 25 | LEVEL 2 FLOOR PLAN | Y |
| 26 | LEVEL 3 FLOOR PLAN | Y |
| 27 | LEVEL 4 FLOOR PLAN | Y |
| 28 | LEVEL 5 FLOOR PLAN | Y |
| 29 | LEVEL 6 FLOOR PLAN | Y |
| 30 | ROOF PLAN | Y |
| 31 | POST ADAPTABLE LAYOUTS | Y |
| 32 | STORAGE CALCULATIONS | Y |
| 33 | STORAGE CALCULATIONS | Y |
| 35 | EAST & WEST SITE ELEVATIONS | Y |
| 36 | NORTH & SOUTH SITE ELEVATIONS | Y |
| 37 | EAST ELEVATION | Y |
| 38 | WEST ELEVATION | Y |
| 39 | NORTH & SOUTH ELEVATION | Y |
| 40 | SITE SECTIONS | Y |
| 41 | BUILDING SECTIONS | Y |
| 42 | BUILDING SECTIONS | Y |
| 43 | BUILDING SECTIONS | Y |
| 44 | DETAILED BUILDING SECTION | Y |
| 50 | 3D VIEWS | Y |
| 51 | 3D VIEW - NORTH (FROM COLLEGE AVENUE) | Y |
| 52 | 3D VIEW - NORTH-EAST (FROM COLLEGE AVENUE) | Y |
| 53 | 3D VIEW - EAST (FROM COLLEGE AVENUE) | Y |
| 54 | 3D VIEW - SOUTHEAST (FROM COLLEGE AVENUE) | Y |
| 55 | 3D VIEW - SOUTH (FROM COUNCIL FORECOURT) | Y |
| 56 | 3D VIEW - WEST (FROM CARPARK) | Y |
| 57 | 3D VIEW - NORTHWEST (FROM CARPARK) | Y |
| 58 | 3D VIEWS - URBAN CONTEXT | Y |
| 59 | 3D VIEWS - URBAN CONTEXT | Y |
| 60 | WINTER SHADOWS - JUNE 9 AM - 12 NOON | Y |
| 61 | WINTER SHADOWS - JUNE 1 PM - 3 PM | Y |
| 62 | SUMMER SHADOWS - DECEMBER | Y |
| 63 | VIEWS FROM THE SUN - WINTER | Y |
| 64 | VIEWS FROM THE SUN - WINTER | Y |
| 65 | VIEWS FROM THE SUN - WINTER | Y |
| 66 | VIEWS FROM THE SUN - WINTER | Y |
| 67 | VIEWS FROM THE SUN - WINTER | Y |
| 68 | VIEWS FROM THE SUN - WINTER | Y |
| 69 | VIEW ANALYSIS LOCATION MAP | Y |
| 70 | VIEW ANALYSIS - POI 1 (EXISTING PHOTOS) | Y |
| 71 | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | Y |
| 71A | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | Y |
| 71B | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | Y |
| 71C | VIEW ANALYSIS - POI 1 (PROPOSED PHOTOS) | Y |
| 72 | VIEW ANALYSIS - POI 2 (EXISTING PHOTOS) | Y |
| 72A | VIEW ANALYSIS - POI 2 (PROPOSED PHOTOS) | Y |
| 72B | VIEW ANALYSIS - POI 3 (EXISTING PHOTOS) | Y |
| 73 | VIEW ANALYSIS - POI 3 (PROPOSED PHOTOS) | Y |
| 73A | VIEW ANALYSIS - POI 4 (EXISTING PHOTOS) | Y |
| 74 | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | Y |
| 74A | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | Y |
| 74B | VIEW ANALYSIS - POI 4 (PROPOSED PHOTOS) | Y |
| 75 | VIEW ANALYSIS - POI 5 (EXISTING PHOTOS) | Y |
| 75A | VIEW ANALYSIS - POI 5 (PROPOSED PHOTOS) | Y |
| 75B | VIEW ANALYSIS - POI 5 (PROPOSED PHOTOS) | Y |
| 76 | VIEW ANALYSIS - POI 6 (EXISTING PHOTOS) | Y |
| 76A | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | Y |
| 76B | VIEW ANALYSIS - POI 6 (PROPOSED PHOTOS) | Y |

SITE ADDRESS

16 COLLEGE AVENUE, SHELLHARBOUR
LOT 3 D.P. 1072916

SITE AREA

3213 sqm TOTAL

SUMMARY

GFA TOTAL ALLOWABLE
TOTAL PROPOSED

FSR ALLOWABLE
PROPOSED

COMMON OPEN SPACE AREA

CARPARKING REQUIRED

CARPARKING PROVIDED

MOTORBIKE SPACES PROVIDED

BICYCLE SPACES PROVIDED

N/A
9407.6 sqm

N/A
2.93 : 1

REQUIRED 803.25 sqm (25%)
PROPOSED 1379.4 sqm (42.9%)

77 RESIDENTIAL
(1 SPACE PER UNIT)
VISITORS
(0.2 SPACES PER UNIT)
BUSINESS

77 RESIDENTIAL
VISITORS
2 BUSINESS

4 RESIDENTIAL

28 RESIDENTIAL
VISITOR
14 BUSINESS

SITE ADDRESS

16 COLLEGE AVENUE, SHELLHARBOUR
LOT 3 D.P. 1072916

SITE AREA

3213 sqm TOTAL

SUMMARY

GFA TOTAL ALLOWABLE
TOTAL PROPOSED

FSR ALLOWABLE
PROPOSED

COMMON OPEN SPACE AREA

CARPARKING REQUIRED

CARPARKING PROVIDED

MOTORBIKE SPACES PROVIDED

BICYCLE SPACES PROVIDED

N/A
9407.6 sqm

N/A
2.93 : 1

REQUIRED 803.25 sqm (25%)
PROPOSED 1379.4 sqm (42.9%)

77 RESIDENTIAL
(1 SPACE PER UNIT)
VISITORS
(0.2 SPACES PER UNIT)
BUSINESS

77 RESIDENTIAL
VISITORS
2 BUSINESS

4 RESIDENTIAL

28 RESIDENTIAL
VISITOR
14 BUSINESS

SHOP TOP HOUSING

16 COLLEGE AVENUE, SHELLHARBOUR

SHILOH PTY LTD

UNIT TYPE SCHEDULE

| UNIT TYPE | NO. |
|-------------|-----|
| 1 BED | 15 |
| 2 BED | 50 |
| 3 BED | 12 |
| Grand total | 77 |

NOTES:

20% REQUIREMENT FOR ADAPTABLE UNITS (SDCP)
20% REQUIREMENT FOR LIVABLE HOUSING (ADG)

TOTAL NUMBER REQUIRED 16 UNITS
TOTAL NUMBER PROVIDED 16 UNITS

GFA SCHEDULE

| LEVEL | BUSINESS | AREA |
|----------------|------------------|-----------------------|
| GROUND (LOWER) | BUSINESS | 179.8 m ² |
| GROUND (LOWER) | BUSINESS | 68.6 m ² |
| GROUND (UPPER) | BUSINESS | 1760.6 m ² |
| GROUND (UPPER) | RESIDENTIAL - G | 437.9 m ² |
| LEVEL 1 | RESIDENTIAL - L1 | 1615.8 m ² |
| LEVEL 2 | RESIDENTIAL - L2 | 1641.6 m ² |
| LEVEL 3 | RESIDENTIAL - L3 | 1583.5 m ² |
| LEVEL 4 | RESIDENTIAL - L4 | 779.6 m ² |
| LEVEL 5 | RESIDENTIAL - L5 | 670.1 m ² |
| LEVEL 6 | RESIDENTIAL - L6 | 670.1 m ² |
| Grand total | | 9407.6 m ² |

| DISCIPLINE | CONSULTANTS | CONTACT | PH. | EMAIL. |
|---------------------------|---|--------------------------------|----------------|---|
| ARCHITECT | DESIGN WORKSHOP AUSTRALIA | ROBERT GIZZI | (02) 4227 1661 | robert@designworkshop.com.au |
| PROJECT COORDINATOR | DESIGN WORKSHOP AUSTRALIA | AMANDA KOSTOVSKI | (02) 4227 1661 | amanda@designworkshop.com.au |
| PLANNING | CITY PLAN | STEPHEN KERR / CARLO DI GIULIO | (02) 8270 3500 | stephenk@cityplan.com.au |
| SURVEYOR | LANDTEAM AUSTRALIA PTY LTD | - | (02) 4296 7055 | wollongong@landteam.com.au |
| BASIX | PLANNING PRINCIPLES | BARRY COTTEN | 0437 804 079 | admin@planningprinciples.net.au |
| DRAINAGE CONSULTANT | ATB CONSULTING ENGINEERS | GORAN UGRINOVSKI | (02) 4226 6646 | goran@atbconsulting.com.au |
| GEOTECHNICAL | AARGUS PTY LTD | KENNETH BURGESS | 1300 137 038 | Kenneth@aargus.net |
| LANDSCAPE | TAYLOR BRAMMER | MATTHEW TAYLOR | (02) 9387 8855 | dmtaylor@taylorbrammer.com.au |
| TRAFFIC CONSULTANT | TRANSPORT & TRAFFIC PLANNING ASSOCIATES | ROSS NETTLE | (02) 9411 5660 | ross@tpa.com.au |
| BCA CONSULTANT | BUILDING CODE ASSISTANCE | PETER DIX | 0407 270 908 | peter@buildingcodeassistance.com.au |
| ACCESS CONSULTANT | ACCESSIBLE BUILDING SOLUTIONS | HOWARD MOUTRIE | (02) 9528 0276 | howard@absaccess.com.au |
| WASTE MANAGEMENT | ELEPHANTS FOOT RECYCLING SOLUTIONS | ASHLEIGH ARMSTRONG | 0437 150 164 | ashleigh.armstrong@elephantsfoot.com.au |
| ACOUSTIC CONSULTANT | HARDWOOD ACOUSTICS | MATTHEW HARWOOD | 0414 315 775 | matthew@hardwoodacoustics.com.au |
| SOLAR / CROSS VENTILATION | SLR CONSULTING | HORATIO CAI | 0433 692 251 | hcai@slrconsulting.com |
| MECH / ELEC / HYD / FIRE | ARROW CONSULTING ENGINEERS | JEREMY MONTGOMERY | 0414 013 987 | jmontgomery@arrowce.com.au |

ADDITIONAL INFORMATION

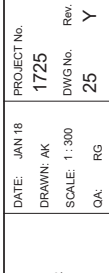
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| Legend: REB1 REINFORCED BROOKWORK REB2 REINFORCED BROOKWORK REB3 REINFORCED BROOKWORK REB4 REINFORCED BROOKWORK REB5 REINFORCED BROOKWORK REB6 REINFORCED BROOKWORK REB7 REINFORCED BROOKWORK REB8 REINFORCED BROOKWORK REB9 REINFORCED BROOKWORK REB10 REINFORCED BROOKWORK REB11 REINFORCED BROOKWORK REB12 REINFORCED BROOKWORK REB13 REINFORCED BROOKWORK REB14 REINFORCED BROOKWORK REB15 REINFORCED BROOKWORK REB16 REINFORCED BROOKWORK REB17 REINFORCED BROOKWORK REB18 REINFORCED BROOKWORK REB19 REINFORCED BROOKWORK REB20 REINFORCED BROOKWORK REB21 REINFORCED BROOKWORK REB22 REINFORCED BROOKWORK REB23 REINFORCED BROOKWORK REB24 REINFORCED BROOKWORK REB25 REINFORCED BROOKWORK REB26 REINFORCED BROOKWORK REB27 REINFORCED BROOKWORK REB28 REINFORCED BROOKWORK REB29 REINFORCED BROOKWORK REB30 REINFORCED BROOKWORK REB31 REINFORCED BROOKWORK REB32 REINFORCED BROOKWORK REB33 REINFORCED BROOKWORK REB34 REINFORCED BROOKWORK REB35 REINFORCED BROOKWORK REB36 REINFORCED BROOKWORK REB37 REINFORCED BROOKWORK 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DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

[illegible]

A3






| REF. | DATE | AMENDMENT |
|------|------------|------------------------|
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright of DNA.

[illegible]

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Email: info@designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Woll Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

| | |
|---|---|
|  | <p>CLIENT: SHILOH PTY LTD SHOP TOP HOUSING</p> |
|  | <p>ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR</p> |
|  | <p>DRAWING NAME: LEVEL 2 FLOOR PLAN</p> |

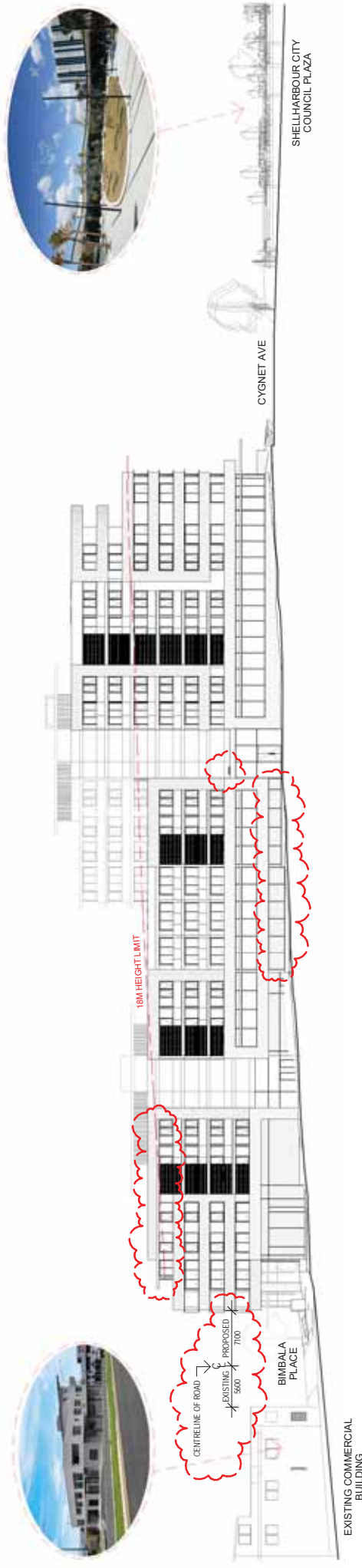
| | |
|----------------|-------------|
| DATE: JAN 18 | PROJECT No. |
| DRAWN: AK | 1725 |
| SCALE: 1 : 300 | DWG No. |
| QA: RG | 25 |
| | Rev. Y |

A3



DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

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| REF: Y | DATE 13.05.2019 | AMENDMENT ADDITIONAL INFORMATION | Legend: RB01 REINFORCED BROOKROOK RB02 REINFORCED BROOKROOK RB03 REINFORCED BROOKROOK FB01 FACE BROOKROOK FB02 FACE BROOKROOK BL01 BLOODWORK BL02 BLOODWORK CL02 CLADDING RW RETAINMENT WALL S STOREWORK DP DOWNPIPES TB TIMBER BATTENS DOOR DOOR DOOR DOOR SLO SLOPING DOOR BFD BFD DOOR RW RETAINMENT WALL S STOREWORK DP DOWNPIPES TB TIMBER BATTENS DOOR DOOR DOOR DOOR SLO SLOPING DOOR BFD BFD DOOR RW RETAINMENT WALL | DWA DESIGN WORKSHOP AUSTRALIA www.designworkshop.com.au | Wollongong 81a Princes Highway, Fairfield NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Wool Creek NSW 2205 Non-Notated Architect Robert Gizzi (Reg. 8286) |  | CLIENT: SHILOH PTY LTD SHOP TOP HOUSING 16 COLLEGE AVENUE, SHELLHARBOUR | DATE: JAN 18 DRAWN: AK SCALE: 1 : 300 QA: RG | PROJECT No. 1725 DWG No. Rev. 27 Y |
| | | | | | | | | | | |



EAST ELEVATION (COLLEGE AVENUE)

Scale 1 : 500

WEST ELEVATION (MOOLAWANG PLACE)

Scale 1 : 500

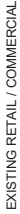
DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

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ADDITIONAL INFORMATION



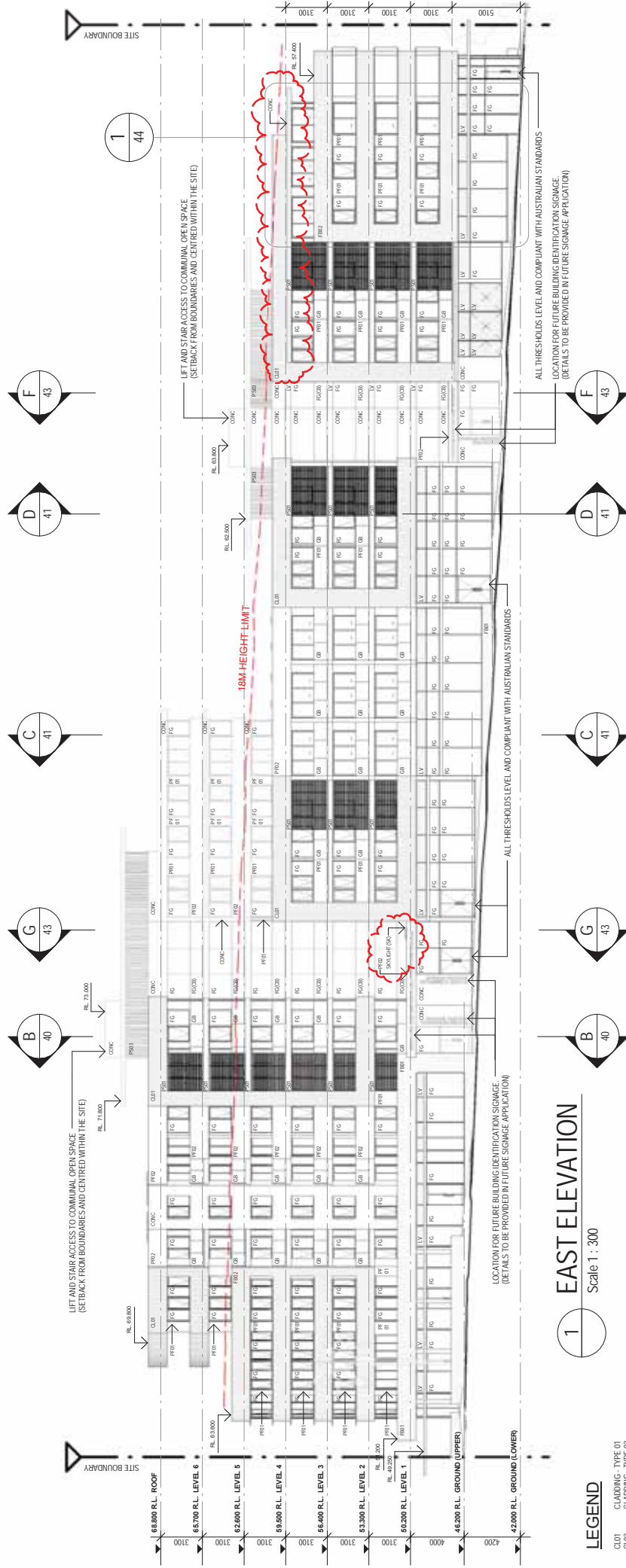


Scale 1 : 500

Scale 1 : 500

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

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EAST ELEVATION

Scale 1 : 300

LEGEND

- | | |
|------|------------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| | (O) = OBTURATE / (CB) = COLOURBACK |
| | GLAZED BALUSTRADE |
| GB | METAL LOUVRES |
| LV | PAINT FINISH 01 |
| PF01 | PAINT FINISH 02 |
| PF02 | PAINT FINISH 03 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

- | REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION | Legend: | S | STONEWORK | SLW | SLASH WINDOW | P | POST |
|------|------|----------------------|------------------------|---------|----------------------|----------------------|----------------------|----------------------|----|---------------|
| R001 | | REINFORCED BROOKWORK | | | REINFORCED BROOKWORK | REINFORCED BROOKWORK | REINFORCED BROOKWORK | REINFORCED BROOKWORK | CT | CERAMIC TILES |
| R002 | | FACE BROOKWORK | | | FACE BROOKWORK | FACE BROOKWORK | FACE BROOKWORK | FACE BROOKWORK | CT | CERAMIC TILES |
| R003 | | TIMBER BATTENS | | | TIMBER BATTENS | TIMBER BATTENS | TIMBER BATTENS | TIMBER BATTENS | CT | CERAMIC TILES |
| R004 | | DOOR | | | DOOR | DOOR | DOOR | DOOR | CT | CERAMIC TILES |
| R005 | | SKYLIGHT | | | SKYLIGHT | SKYLIGHT | SKYLIGHT | SKYLIGHT | CT | CERAMIC TILES |
| R006 | | CONCRETE | | | CONCRETE | CONCRETE | CONCRETE | CONCRETE | CT | CERAMIC TILES |
| R007 | | CLADDING | | | CLADDING | CLADDING | CLADDING | CLADDING | CT | CERAMIC TILES |
| R008 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R009 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R010 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R011 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R012 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R013 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R014 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R015 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R016 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R017 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R018 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R019 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R020 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R021 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R022 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R023 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R024 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R025 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R026 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R027 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R028 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R029 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R030 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R031 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R032 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R033 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R034 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R035 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R036 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R037 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R038 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R039 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R040 | | BLIND DOOR | | | BLIND DOOR | BLIND DOOR | BLIND DOOR | BLIND DOOR | CT | CERAMIC TILES |
| R041 | | BLIND DOOR | | | | | | | | |

DISCLAIMER
Subject: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

ADDITIONAL INFORMATION

| | | | |
|--|---|---|---|
| <p>Sydney</p> <p>Level 10, 6 Mount Olympus Boulevard, Wool Creek NSW 2205</p> <p>Nominated Architect: Robert Gazi (Reg. 5286)</p> | <p>CLIENT: SHILOH PTY LTD SHOP TOP HOUSING</p> <p>ADDRESS: 16 COLLEGE AVENUE, SHELL HARBOUR</p> | <p>DATE: JAN 18</p> <p>DRAWN: AK</p> <p>SCALE: 1: 300</p> <p>OA: RG</p> | <p>PROJECT No. 1725</p> <p>DWG No. 37</p> <p>Rev. Y</p> |
|--|---|---|---|

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A3



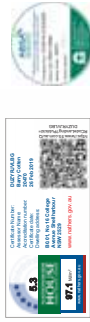


1 WEST ELEVATION

Scale 1 : 300

LEGEND

- CL01 CLADDING - TYPE 01
- CL02 CLADDING - TYPE 02
- CONC CONCRETE FINISH
- FB01 FACE BRICK - TYPE 01
- FB02 FACE BRICK - TYPE 02
- FG FIXED GLASS
- GB GLAZED BALUSTRADE
- LV METAL LOUVERES
- PR01 PAINT FINISH 01
- PR02 PAINT FINISH 02
- PR03 PAINT FINISH 03
- PR04 PRIVACY SCREEN - TYPE 01
- PR05 PRIVACY SCREEN - TYPE 02
- PR06 PRIVACY SCREEN - TYPE 03



DISCLAIMER
Subject to full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| AMENDMENT | | ADDITIONAL INFORMATION | | Legend: | | Legend: | |
|-----------|------------|------------------------|-------------|---------|--------------------|---------|--------------------|
| REF. | DATE | DATE | DESCRIPTION | REF. | DATE | DATE | DESCRIPTION |
| Y | 13.05.2019 | 13.05.2019 | | CL01 | RENDERED BROOKWORK | CL02 | RENDERED BROOKWORK |
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ADDITIONAL INFORMATION

| | | | |
|-------------|------|--------------|--------|
| PROJECT No. | 1725 | DATE | JAN 18 |
| DWG No. | 38 | DRAWN: AK | |
| Rev. | Y | SCALE: 1:300 | |
| | | O/A: RG | |

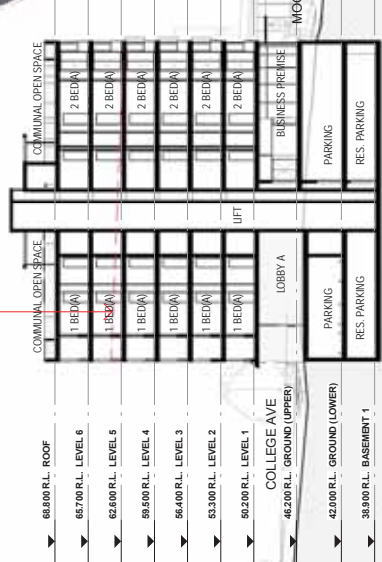
| | | | |
|---------------|--------------------------------|----------------------|--|
| CLIENT: | SHILOH PTY LTD | Sydney | Level 10, 6 Mount Olympus Boulevard, Woll Creek NSW 2205 |
| ADDRESS: | 16 COLLEGE AVENUE SHELLHARBOUR | Nominated Architect: | Robert Gizz (Reg. 8286) |
| DRAWING NAME: | WEST ELEVATION | | |



| | | | |
|--------------------------------|---|---|---|
| Wollongong | 81a Prince Highway, Fairy Meadow NSW 2519 | 81a Prince Highway, Fairy Meadow NSW 2519 | 81a Prince Highway, Fairy Meadow NSW 2519 |
| Tel: (02) 4227 1861 | Email: info@designworkshop.com.au | Tel: (02) 4227 1861 | Email: info@designworkshop.com.au |
| Web: www.designworkshop.com.au | | Web: www.designworkshop.com.au | |



A SITE SECTION A
21 Scale 1:500



B SITE SECTION B
21 Scale 1:500

DISCLAIMER
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| REF. | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| Y | 13.05.2019 | | |

DISCLAIMER
All dimensions are in millimetres. Verify all dimensions on site prior to commencement of any work. Copyright © DWA.

| | | | | | | | |
|--------------------|-----|-------------------|-----|----------------|-----|-------------------|----------------|
| RENDERED BROCKWORK | S | STONEWORK | SLW | BLIND WINDOW | P | POST | BLIND WINDOW |
| FACE BROCKWORK | DP | DOWNPIES | OB | OBSCURE WINDOW | CT | CERAMIC TILES | OBSCURE WINDOW |
| FACE BROCKWORK | DP | TRIMMER BATTERIES | AW | AWNING WINDOW | CT | CERAMIC TILES | AWNING WINDOW |
| CLADDING | CLD | CLADDING | WH | WINDOW HOOD | SP | FEATURE SCREENING | WINDOW HOOD |
| CLADDING | CLD | CLADDING | LV | LOUVER | SP | FEATURE SCREENING | LOUVER |
| CLADDING | CLD | CLADDING | BP | BRICK DOOR | PNT | PAINTWORK TASK | BRICK DOOR |



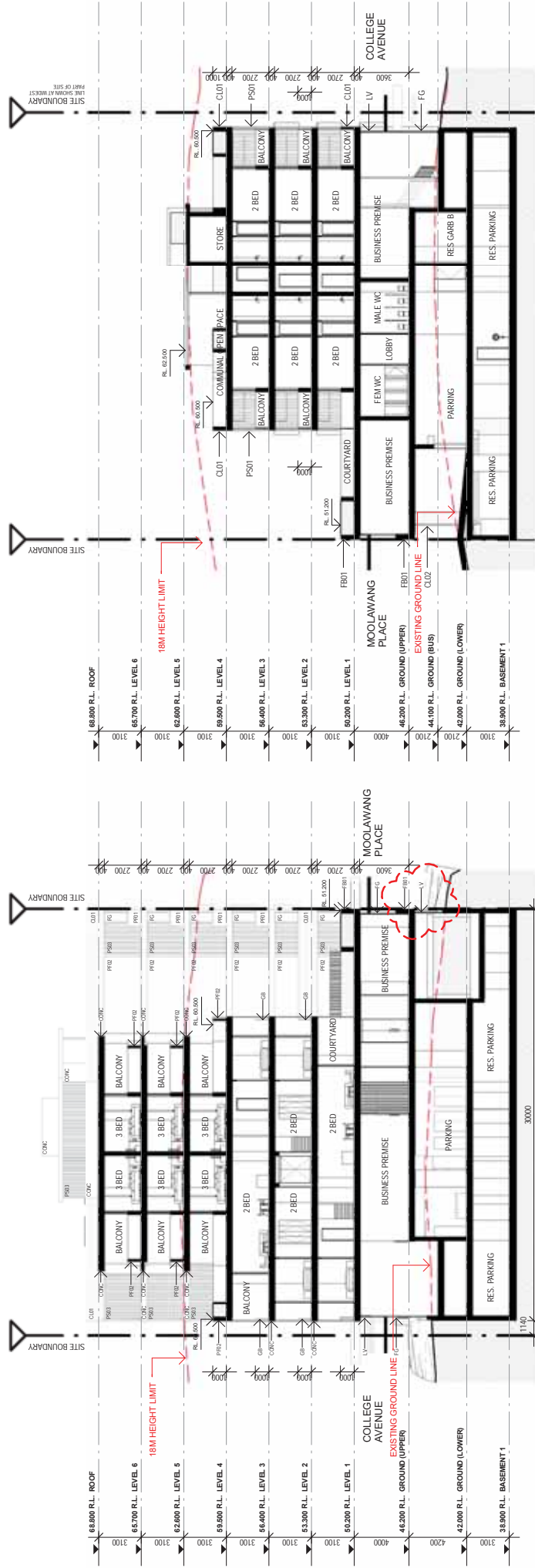
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Level 10, 6 Mount
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Nominated Architect:
Robert Gizz (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE SHELLHARBOUR

PROJECT No. 1725
DWG No. 40
DATE: JAN 18
DRAWN: AK
SCALE: 1:500
Rev. Y
QA: RG
SITE SECTIONS

ADDITIONAL INFORMATION



SECTION D
Scale 1 : 300

SECTION C
Scale 1 : 300

LEGEND

- | | |
|------|------------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| | (0) = OBSOLETE / (CB) = COLOURBACK |
| GB | GLAZED BALUSTRADE |
| LV | METAL LOUVRES |
| PH01 | PAINT FINISH 01 |
| PH02 | PAINT FINISH 02 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility compiled based on information provided by client.
All parking and ramps to traffic engineers details.

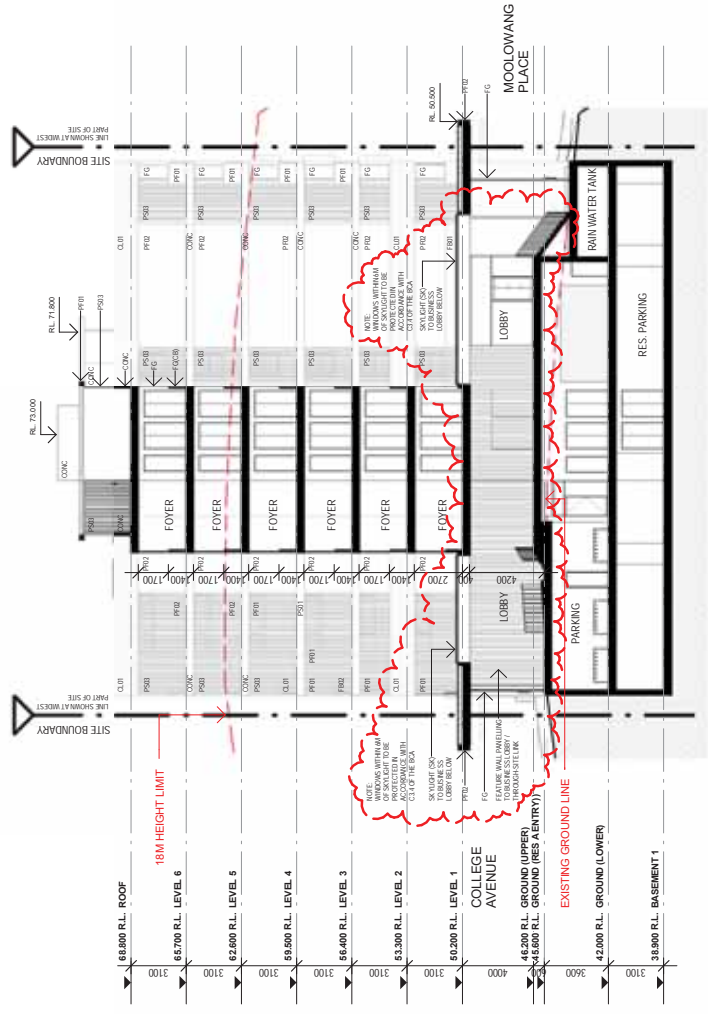
ADDITIONAL INFORMATION

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Email: info@designworkshopp.com.au
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| | |
|--|---|
| <p>Sydney Level 10, 6 Mount Olympus Boulevard, Woolli Creek NSW 2205</p> | <p>CLIENT: SHILOH PTY LTD SHOP TOP HOUSING</p> <p>ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR</p> |
|--|---|

| | |
|----------------|-------------|
| DATE: JAN 18 | PROJECT No. |
| DRAWN: AK | 1725 |
| SCALE: 1 : 300 | DWG No. |
| QA: RG | 41 |
| | Rev. |
| | Y |



LEGEND

- | | |
|-------|---------------------------------|
| CL01 | CLADDING - TYPE 01 |
| CL02 | CLADDING - TYPE 02 |
| CONC | CONCRETE FINISH |
| FB01 | FACE BRICK - TYPE 01 |
| FB02 | FACE BRICK - TYPE 02 |
| FG | FIXED GLASS |
| | (C) = GLAZED ((CB) = COLOURBACK |
| GB | OBSCURE BALUSTRADE |
| LV | METAL LOUVRES |
| PF 01 | PAINT FINISH 01 |
| PF 02 | PAINT FINISH 02 |
| PS01 | PRIVACY SCREEN - TYPE 01 |
| PS02 | PRIVACY SCREEN - TYPE 02 |
| PS03 | PRIVACY SCREEN - TYPE 03 |

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All parking and ramps to traffic engineers details.

| | | |
|------|------------|------------------------|
| REF. | DATE | AMENDMENT |
| Y | 13.05.2019 | ADDITIONAL INFORMATION |

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of

[illegible]

DWA
DESIGN WORKSHOP AUSTRALIA

ADDITIONAL INFORMATION

| | | | | |
|--|--|--|--|--|
| <p>Wollongong 81a Prince Highway, Fairfield NSW 2519</p> <p>Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au</p> | <p>Sydney Level 10, 6 Mount Olympus Boulevard, Wool Creek NSW 2205</p> <p>Nominated Architect: Robert Gizzi (Reg. 2286)</p> | <p>CLIENT: SHILOH PTY LTD SHOP TOP HOUSING</p> <p>ADDRESS: 16 COLLEGE AVENUE, SHELL HARBOUR</p> | <p>DATE: JAN 18</p> <p>DRAWN: AK</p> <p>SCALE: 1:300</p> <p>QA: RG</p> | <p>PROJECT No. 1725</p> <p>DWG No. 43</p> <p>Rev. Y</p> |
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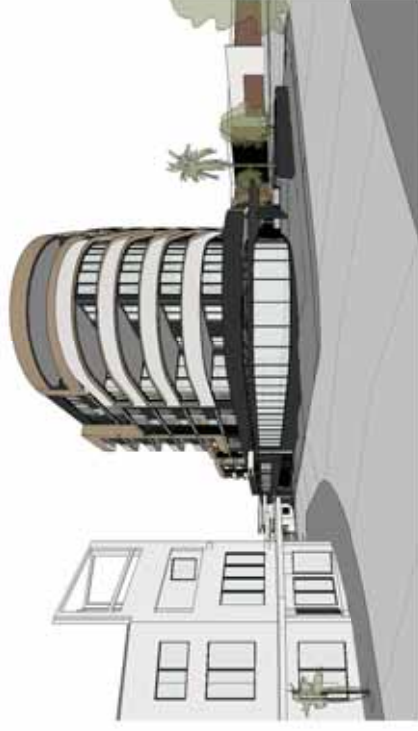
DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DX requirements. Feasibility completed based on information provided by client
All parking and ramps to traffic engineers details.

[illegible]



1 3D VIEW - NORTH-WEST (MOOLLAWANG PLACE & BIMBALA PLACE)

Scale



2 3D VIEW - SOUTH-WEST (CYGNET AVE)

Scale



3 3D VIEW - SOUTH-EAST (COLLEGE AVE & CYGNET AVE)

Scale



4 3D VIEW - NORTH-EAST (COLLEGE AVE)

Scale



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| REF: | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|------|------------|-----------|------------------------|
| Y | 13.05.2019 | | |

Legend:

| | | | | | | | |
|-------|----------------------|----|----------------|-----|----------------|----|-------------------|
| REB01 | REINFORCED BROOKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST |
| REB02 | FACE BROOKWORK | OB | DOWNPIERS | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| CL01 | CLADDING | WH | WINDING WINDOW | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | LV | LOUVER DOOR | LV | LOUVER | FW | FOAM WATER TANK |
| FW | RETAINING WALL | BP | BRICK DOOR | | | | |

| | | | | | | | |
|-------|----------------------|----|----------------|-----|----------------|----|-------------------|
| REB01 | REINFORCED BROOKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST |
| REB02 | FACE BROOKWORK | OB | DOWNPIERS | OB | OBSCURE WINDOW | CT | CERAMIC TILES |
| CL01 | CLADDING | WH | WINDING WINDOW | WH | WINDOW HOOD | SP | FEATURE SCREENING |
| CL02 | CLADDING | LV | LOUVER DOOR | LV | LOUVER | FW | FOAM WATER TANK |
| FW | RETAINING WALL | BP | BRICK DOOR | | | | |



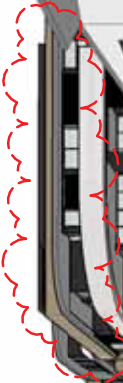
Wollongong
81a Prince Highway,
Fairly Meadows NSW 2519
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Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wool Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR

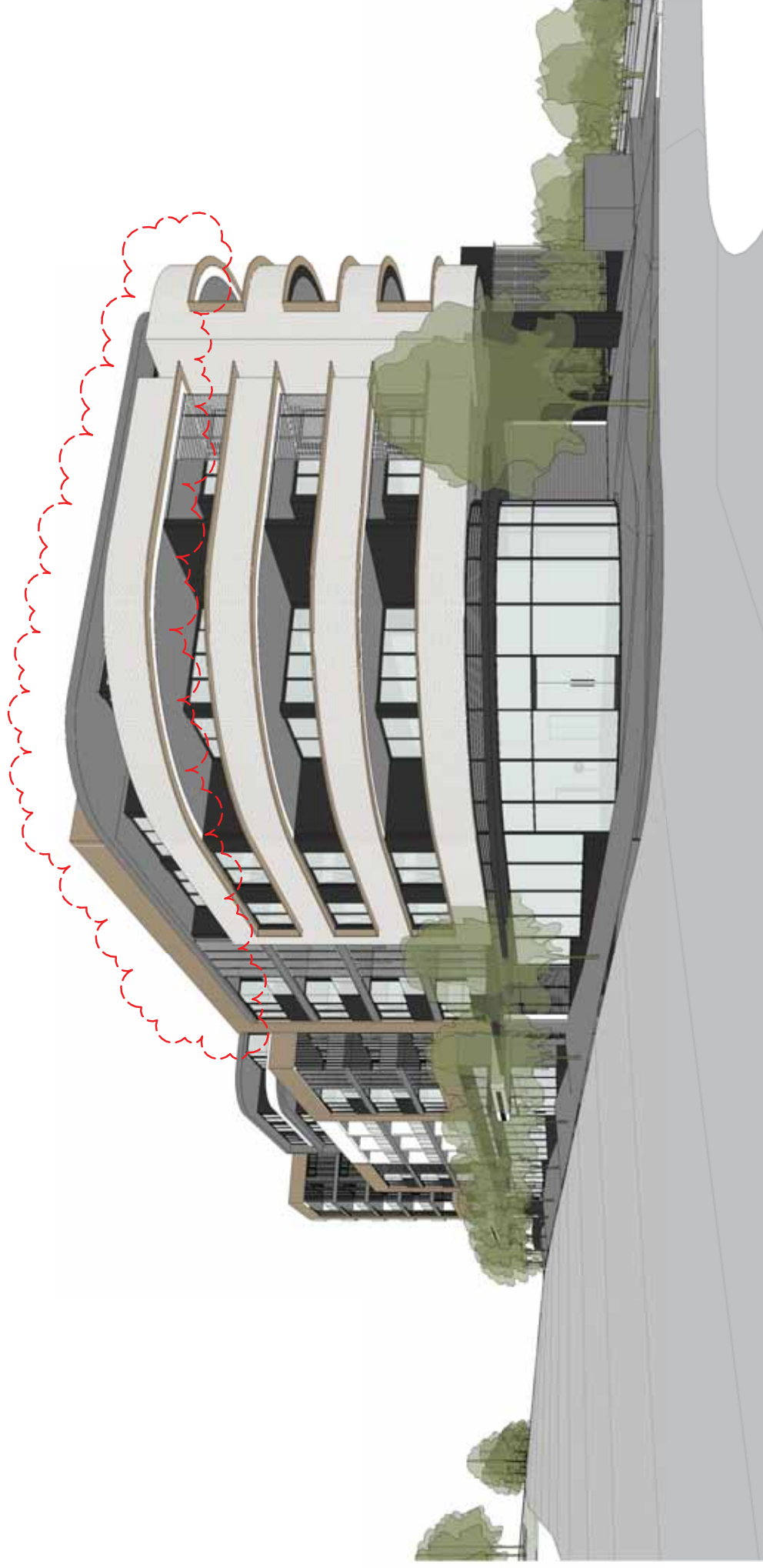
DATE: JAN 18
DRAWN: AK
SCALE: O/A: R/G
PROJECT No. 1725
DWG No. 50
Rev. Y

ADDITIONAL INFORMATION




DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

A3



ADDITIONAL INFORMATION

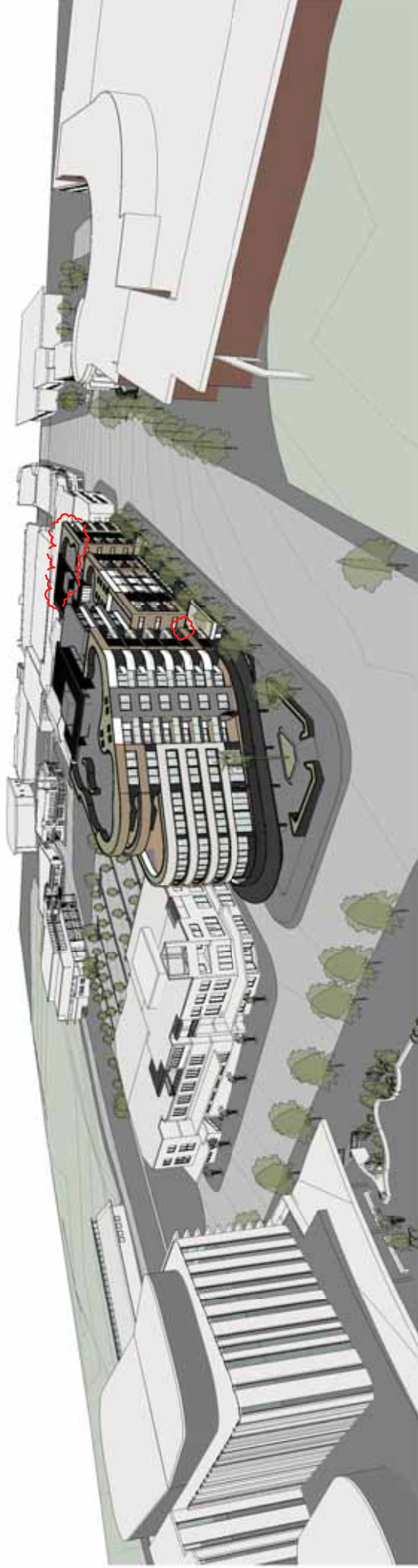
DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council IDA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| | | | | | | | | | | | | | |
|---|------------------|-----------|------------------------|--|---|--|--|--|--|--|--|--------------|-------------|
| REF: Y | DATE: 13.05.2019 | AMENDMENT | ADDITIONAL INFORMATION | Legend: RB01 REINFORCED BROOKWORK RB02 REINFORCED BROOKWORK FB02 FACE BROOKWORK BL BROOKWORK CL01 CLADDING CL02 CLADDING RW REINFORCING WALL REINFORCING WALL | S STONEWORK R ROOF T TILES TB TAMER ATTENS DOOR GD GARAGE DOOR W WINDOW WY WINDOW YARK RWT RAINWATER TANK | SLW SLIDING WINDOW FW FIXED WINDOW WY WINDOW YARK AW AROUND WINDOW SK SKYLIGHT WH WINDOW WY WINDOW RWT RAINWATER TANK | P PAVEMENT T TIMBER FLOORS TIL TILES OP CARPET PC POLISHED CONCRETE SP FEATURE SCHEMING |  | Wollongong 814 Princes Highway, Fairy Meadow NSW 2519 Tel: (02) 4227 1661 Email: info@designworkshop.com.au Web: www.designworkshop.com.au | Sydney Level 10, 6 Mount Olympus Boulevard, Wall Creek NSW 2205 Nominated Architect: Robert Gziz (RG 8296) | CLIENT: SHILOH PTY LTD SHOP TOP HOUSING | DATE: JAN 18 | PROJECT No. |
| | | | | | | | | | | | ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR | DRAWN: AK | 1725 |
| DISCLAIMER All dimensions are in millimetres. Verify all dimensions on the prior to commencement of work. Drawing is valid until 12/01/2020 | | | | DRAWING NAME: 3D VIEW - NORTH/EAST (FROM COLLEGE AVENUE) | | SCALE: | DWG No. 52 | Rev. Y | | | | | |



ADDITIONAL INFORMATION

[illegible]



1 3D VIEW - SOUTH-EAST (URBAN CONTEXT)

Scale



2 3D VIEW - NORTH-EAST (URBAN CONTEXT)

Scale

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities.
Relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client.
All parking and ramps to traffic engineers details.

| REF | DATE | AMENDMENT | ADDITIONAL INFORMATION |
|-----|------------|-----------|------------------------|
| Y | 13.05.2019 | | |

Legend:

| | | | | | | | |
|-------|--------------------|----|------------|-----|----------------|----|-------------------|
| REB01 | RENDERED BROOKWORK | S | STONEWORK | SLW | SLIDING WINDOW | P | POST |
| REB02 | FACE BROOKWORK | DP | DOWNPIPES | OW | OBSCURE WINDOW | CT | CERAMIC TILES |
| REB03 | FACE BROOKWORK | DP | DOWNPIPES | AW | AWNING WINDOW | CT | CERAMIC TILES |
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Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wool Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: 3D VIEWS - URBAN CONTEXT

DATE: JAN 18
DRAWN: AK
SCALE: RG

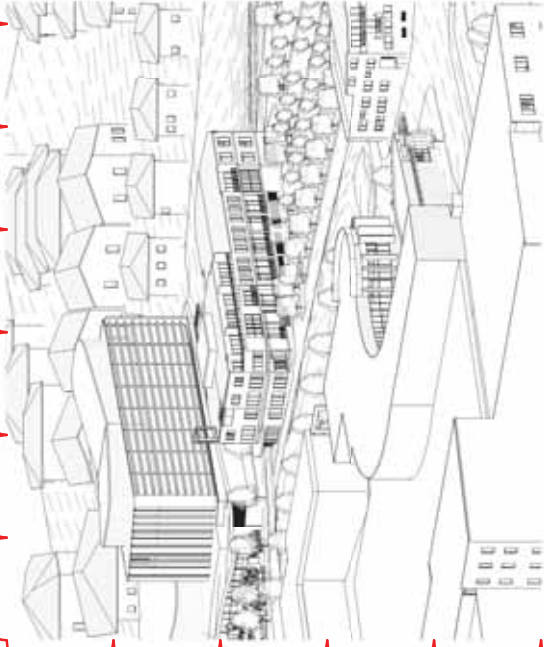
PROJECT No.
1725
DWG No.
58
REV.
Y

ADDITIONAL INFORMATION

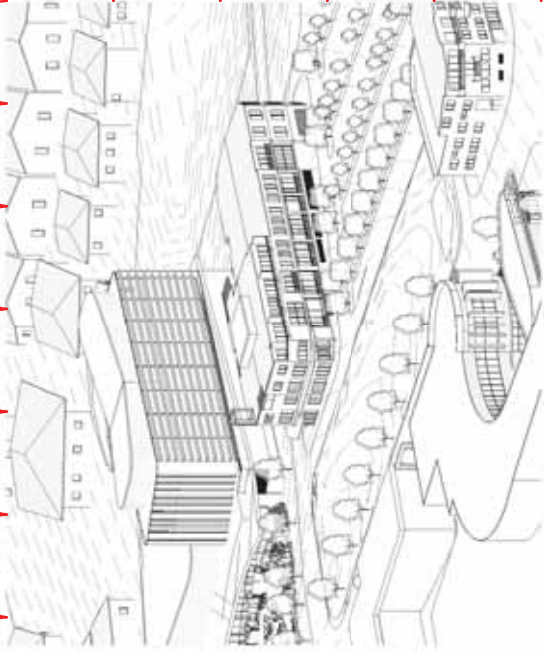


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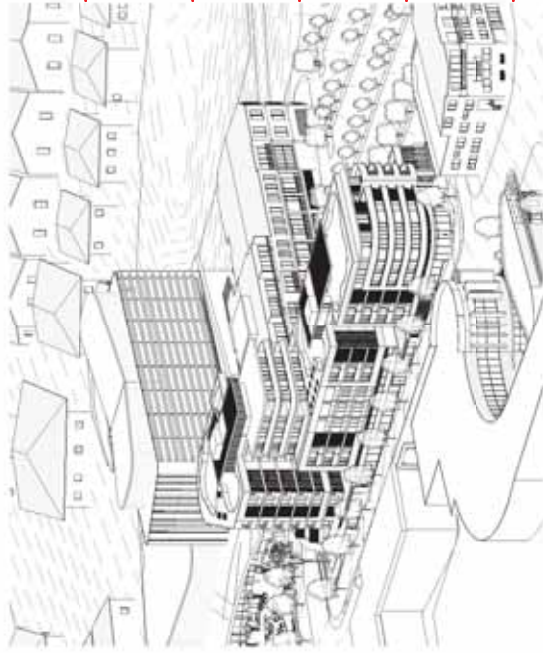
EXISTING SOLAR ACCESS - WINTER - 8.00AM



EXISTING SOLAR ACCESS - WINTER - 8.30AM



PROPOSED SOLAR ACCESS - WINTER - 8.00AM



PROPOSED SOLAR ACCESS - WINTER - 8.30AM

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DATE: 13.05.2019
AMENDMENT: 1

ADDITIONAL INFORMATION

DISCLAIMER
All dimensions are in millimeters. Verify all dimensions on site prior to commencement of any work. Copyright © DWA.

Legend:

- REB01 RENDERED BROOKWORK
- REB02 FACE BROOKWORK
- REB03 FACE BROOKWORK
- CL01 CLADDING
- CL02 CLADDING
- CL03 CLADDING
- CL04 CLADDING
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- REB01 RENDERED BROOKWORK
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DWA
DESIGN WORKSHOP AUSTRALIA

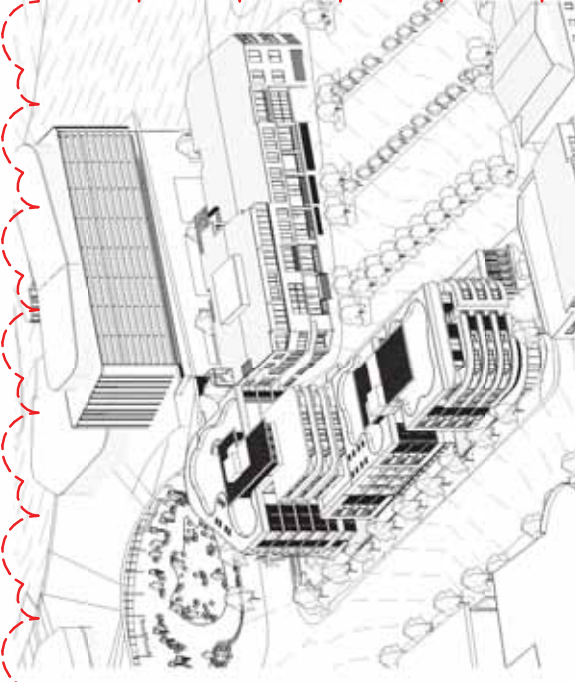
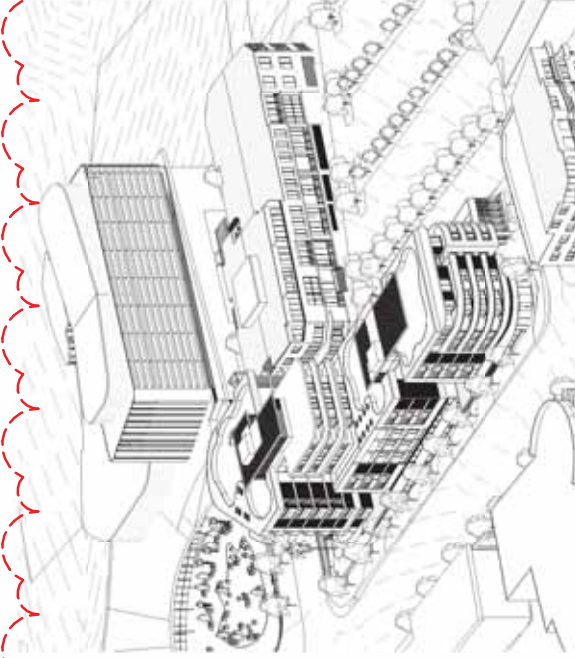
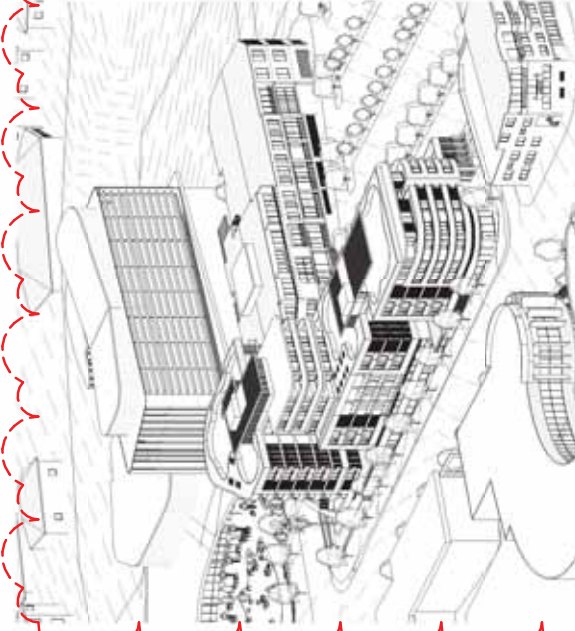
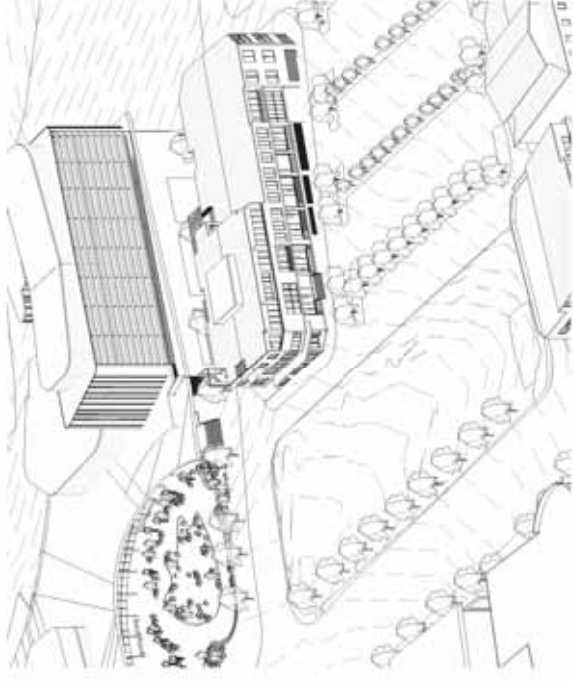
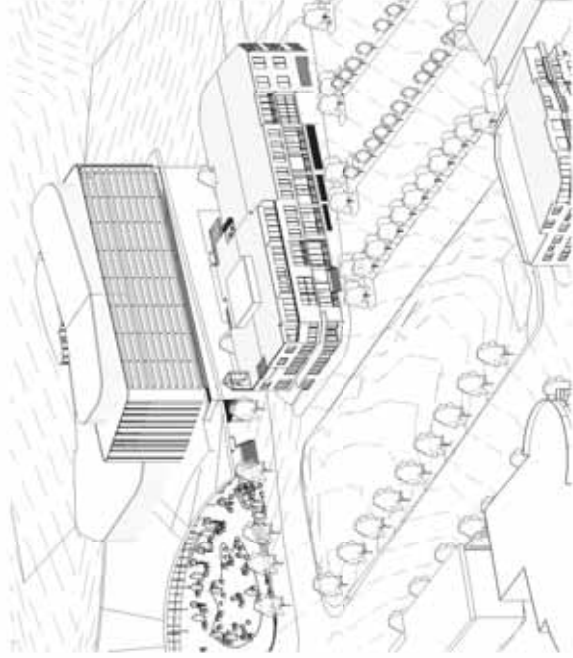
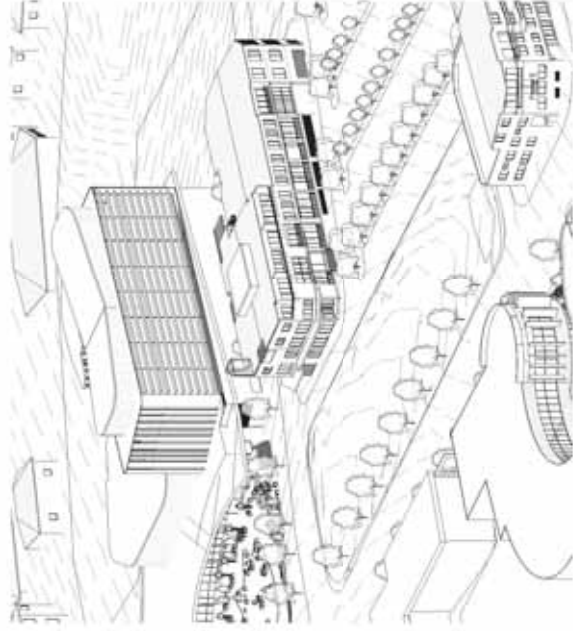
Wollongong
81a Princes Highway,
Fairly Meadows NSW 2519
Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wool Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: VIEWS FROM THE SUN - WINTER

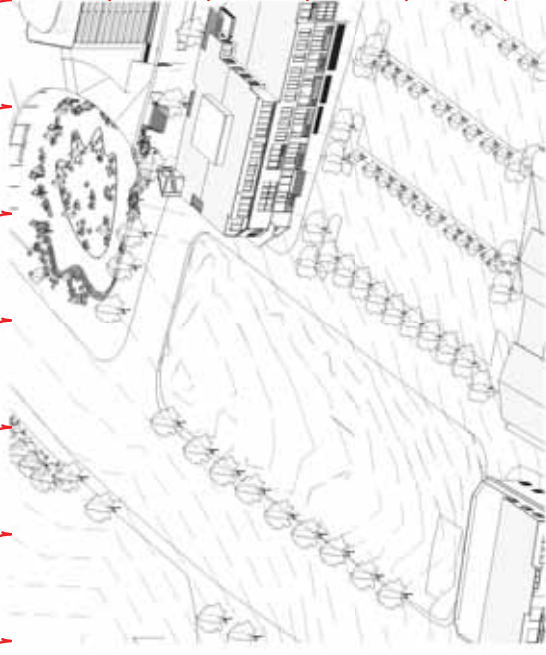
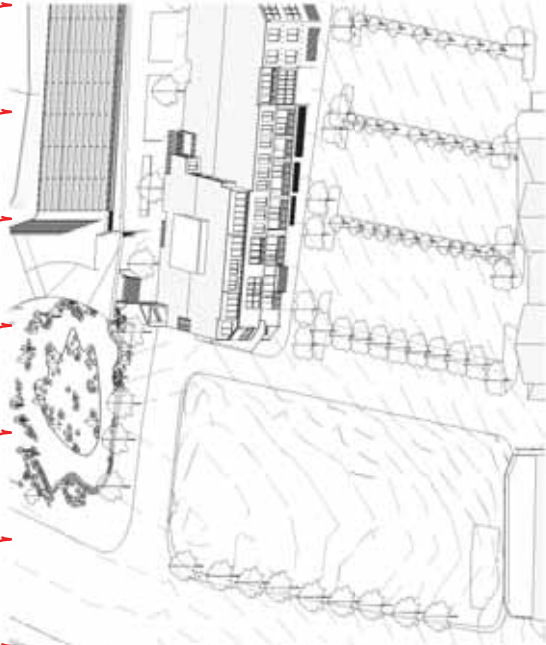
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DRAWN: AK
SCALE: OA: RG
PROJECT No. 1725
DWG No. 63
Rev. Y

ADDITIONAL INFORMATION



ADDITIONAL INFORMATION

[illegible]



ADDITIONAL INFORMATION

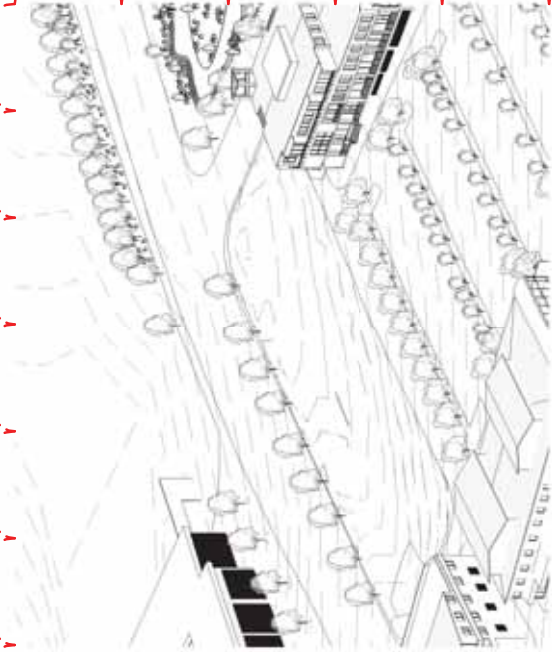
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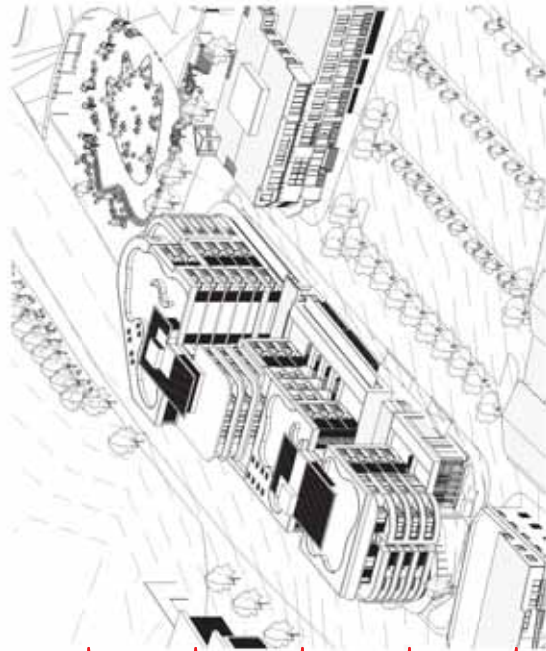
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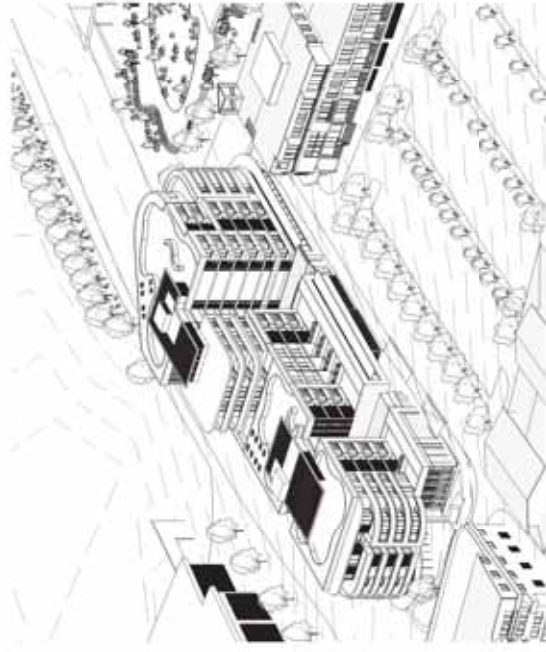
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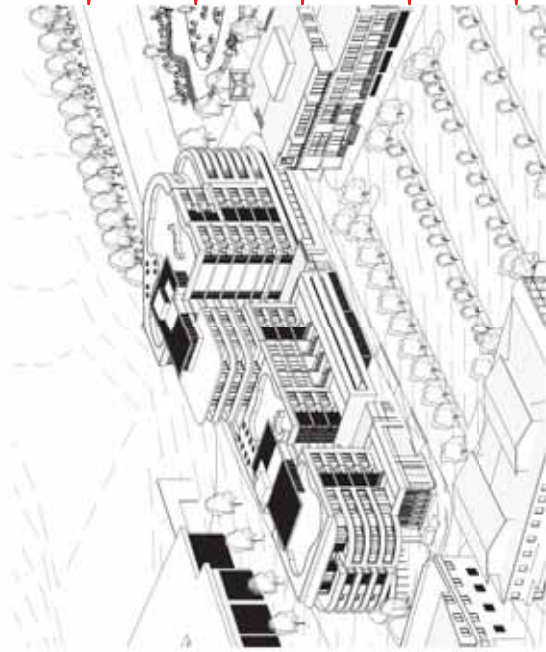
EXISTING SOLAR ACCESS - WINTER - 2.30PM



PROPOSED SOLAR ACCESS - WINTER - 1.30PM



PROPOSED SOLAR ACCESS - WINTER - 2.00PM



PROPOSED SOLAR ACCESS - WINTER - 2.30PM

DISCLAIMER
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| REF: | DATE: | AMENDMENT: | ADDITIONAL INFORMATION: |
|----------------|--------------------|------------|-------------------------|
| Y | 13.05.2019 | | |
| Legend: | | | |
| REB1 | RENDERED BROOKWORK | S | STONEWORK |
| REB2 | RENDERED BROOKWORK | DP | DOWNPIPES |
| FB01 | FACE BROOKWORK | DP | DOWNPIPES |
| FB02 | FACE BROOKWORK | DP | DOWNPIPES |
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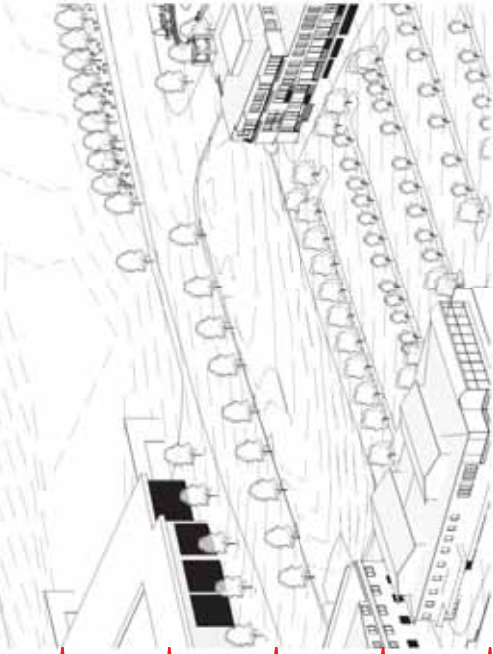
Wollongong
81a Prince Highway,
Fairly Meadows NSW 2519
Tel: (02) 4227 1661
Email: info@designworkshop.com.au
Web: www.designworkshop.com.au

Sydney
Level 10, 6 Mount
Olympus Boulevard,
Wool Creek NSW 2205
Nominated Architect:
Robert Gizzi (Reg. 8286)

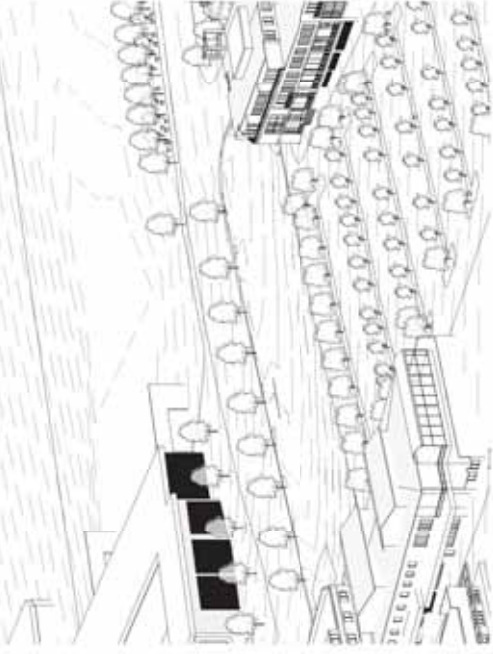
CLIENT: SHILOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: VIEWS FROM THE SUN - WINTER

DATE: JAN 18
DRAWN: AK
SCALE: RG
PROJECT No. 1725
DWG No. 67
Rev. Y

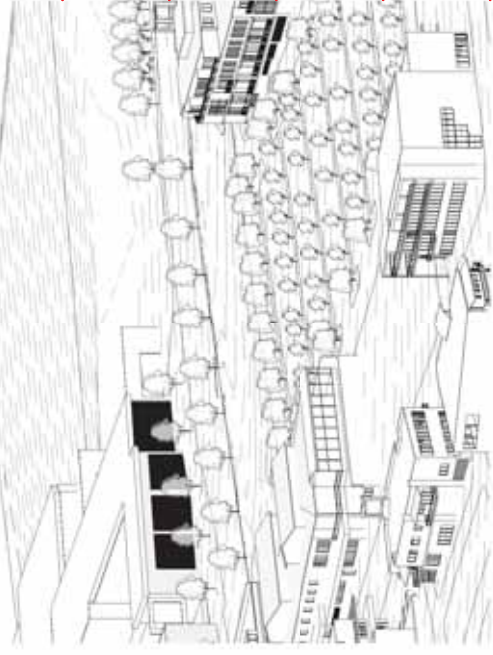
ADDITIONAL INFORMATION



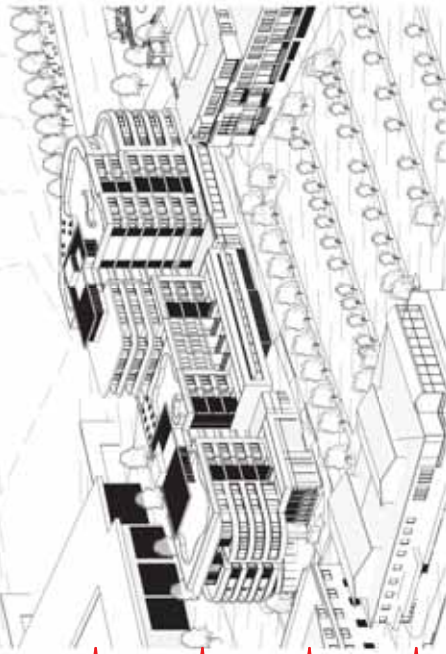
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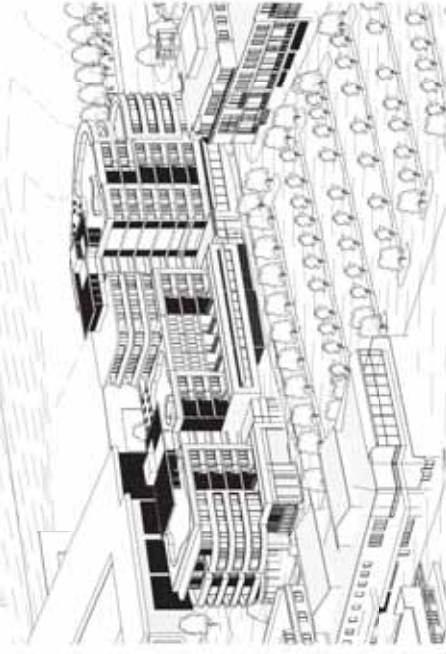
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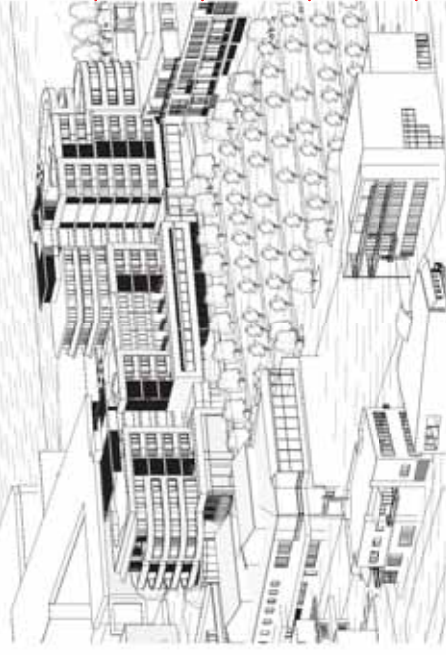
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PROPOSED SOLAR ACCESS - WINTER - 3.00PM



PROPOSED SOLAR ACCESS - WINTER - 3.30PM



PROPOSED SOLAR ACCESS - WINTER - 4.00PM

DISCLAIMER
Subject to: full site survey, measurements are preliminary, discussions and meetings with authorities, approval from authorities, relevant consultant information as per council DA requirements. Feasibility completed based on information provided by client. All parking and ramps to traffic engineers details.

| REF: | DATE: | AMENDMENT: | ADDITIONAL INFORMATION: |
|--------|--------------------|------------|-------------------------|
| Y | 13.05.2019 | | |
| REB01 | RENDERED BROOKWORK | | |
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Nominated Architect:
Robert Gizzi (Reg. 8286)

CLIENT: SHLOH PTY LTD
SHOP TOP HOUSING
ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR
DRAWING NAME: VIEWS FROM THE SUN - WINTER

DATE: JAN 18
DRAWN: AK
SCALE: RG
O/A: RG

PROJECT No.
1725
DWG No.
68
REV.
Y

ADDITIONAL INFORMATION



City Plan Strategy & Development P/L
ABN 58 133 501 774



Annexure 2

Schedule of amendments

| DWG NO: | AMENDMENTS TO DRAWINGS |
|--------------|--|
| PN1725-AI-00 | Coversheet - Drawing list updated & COS recalculated |
| PN1725-AI-01 | - |
| PN1725-AI-02 | - |
| PN1725-AI-03 | - |
| PN1725-AI-04 | - |
| PN1725-AI-05 | - |
| PN1725-AI-06 | - |
| PN1725-AI-07 | - |
| PN1725-AI-08 | - |
| PN1725-AI-10 | - |
| PN1725-AI-15 | - |
| PN1725-AI-18 | - |
| PN1725-AI-19 | Skylights added above commercial entrances Dimensions added to adjacent buildings to demonstrate ADG compliance Parapet to north adjusted and COS amended |
| PN1725-AI-20 | - |
| PN1725-AI-21 | - |
| PN1725-AI-22 | Lower Ground Floor Plan - Glass removed from carpark level and louvres/screens added Door between Res Lobby B & Business Lobby shifted west to create more room in front of lift. |
| PN1725-AI-23 | Upper Ground Floor Plan - Commercial Lobby / Through Site link widened and amended Skylights added above commercial entrances |
| PN1725-AI-24 | Level 1 Floor Plan - Windows to be protected in accordance with C3.4 of BCA (Due to addition of skylights over commercial lobby below) |
| PN1725-AI-25 | Level 2 Floor Plan - Windows to be protected in accordance with C3.4 of BCA (Due to addition of skylights over commercial lobby below) |
| PN1725-AI-26 | - |
| PN1725-AI-27 | Level 4 Floor Plan - Parapet to north adjusted and COS amended |
| PN1725-AI-28 | - |
| PN1725-AI-29 | - |
| PN1725-AI-30 | - |
| PN1725-AI-31 | - |
| PN1725-AI-32 | - |
| PN1725-AI-33 | - |
| PN1725-AI-35 | West Elevation - Glass removed from carpark level and louvres/screens added East & West Elevations - Skylights added above commercial entrances & Parapet to north adjusted Dimensions added to adjacent buildings to demonstrate ADG compliance |
| PN1725-AI-36 | North Elevation - Parapet to north adjusted |
| PN1725-AI-37 | East Elevation - Skylight added above commercial entrance Parapet to north adjusted |
| PN1725-AI-38 | West Elevation - Glass removed from carpark level and louvres/screens added & Skylight added above commercial entrance Parapet to north adjusted |
| PN1725-AI-39 | North Elevation - Parapet to north adjusted |
| PN1725-AI-40 | Parapet to north adjusted |
| PN1725-AI-41 | Section C - Glass removed from carpark and louvres/screens added |
| PN1725-AI-42 | Section E - Glass removed from carpark and louvres/screens added Note: overhead clearances already indicated to loading dock area Parapet to north adjusted |
| PN1725-AI-43 | Section G - Skylights added to commercial lobby & through site link amended (feature wall panelling added to business lobby) |
| PN1725-AI-44 | Parapet to north adjusted (detail revised) |

| | |
|---------------|--|
| PN1725-AI-50 | Glass removed from carpark level and louvres/screens added Parapet to north adjusted |
| PN1725-AI-51 | Parapet to north adjusted |
| PN1725-AI-52 | Parapet to north adjusted |
| PN1725-AI-53 | - |
| PN1725-AI-54 | - |
| PN1725-AI-55 | - |
| PN1725-AI-56 | Glass removed from carpark level and louvres/screens added Parapet to north adjusted |
| PN1725-AI-57 | Glass removed from carpark level and louvres/screens added Parapet to north adjusted |
| PN1725-AI-58 | Parapet to north adjusted Skylight added above commercial entrance |
| PN1725-AI-59 | Parapet to north adjusted |
| PN1725-AI-60 | - |
| PN1725-AI-61 | - |
| PN1725-AI-62 | - |
| PN1725-AI-63 | NEW DRAWING ADDED - Views from the sun (Winter) 8am-8:30am |
| PN1725-AI-64 | Views Updated - To show Skylights added above commercial entrances and Parapet to north adjusted Sheet previously numbered PN1725-AI-63 |
| PN1725-AI-65 | Views Updated - To show Skylights added above commercial entrances and Parapet to north adjusted Sheet previously numbered PN1725-AI-64 |
| PN1725-AI-66 | NEW DRAWING ADDED - Views from the sun (Winter) 12pm - 1pm |
| PN1725-AI-67 | NEW DRAWING ADDED - Views from the sun (Winter) 1:30pm - 2:30pm |
| PN1725-AI-68 | NEW DRAWING ADDED - Views from the sun (Winter) 3pm - 4pm |
| PN1725-AI-70 | - |
| PN1725-AI-71 | - |
| PN1725-AI-71A | - |
| PN1725-AI-71B | - |
| PN1725-AI-71C | - |
| PN1725-AI-72 | - |
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| PN1725-AI-72B | - |
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| PN1725-AI-73A | - |
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| PN1725-AI-75B | - |
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| PN1725-AI-76B | - |



City Plan Strategy & Development P/L
ABN 58 133 501 774



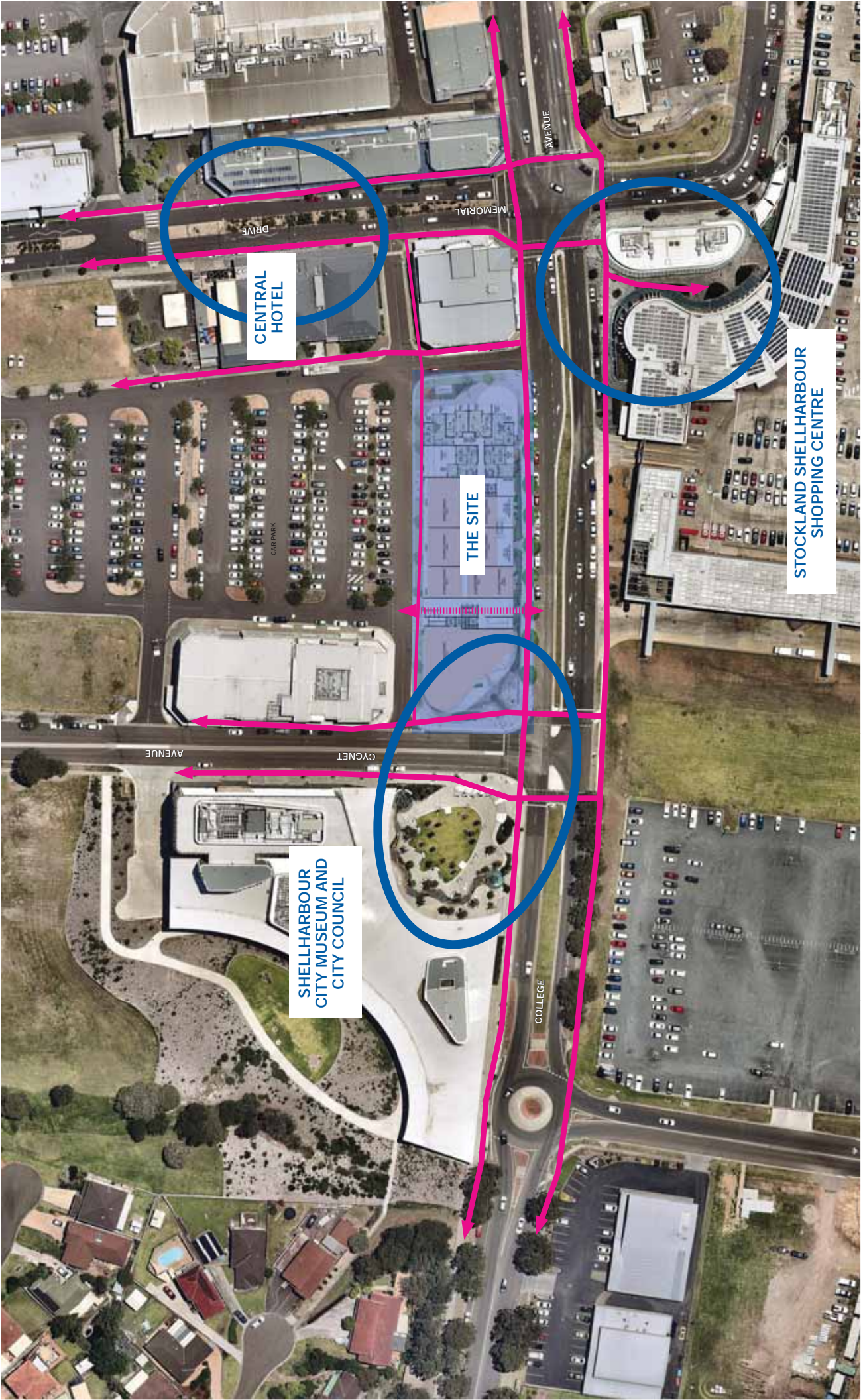
Annexure 3

Landscape Plan



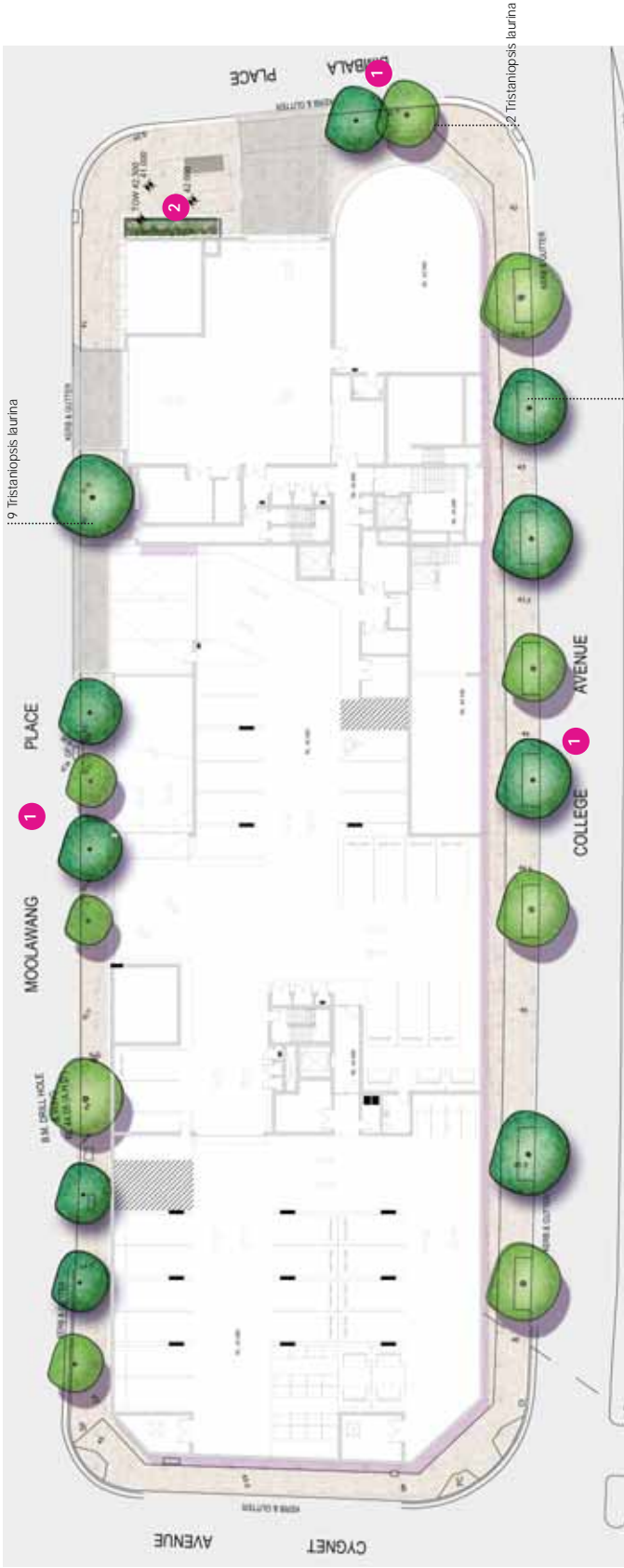
16 College Ave, Shellharbour

Landscape Development Application





SCALE 1:200@ A1



DESIGN NOTES

1 Street trees to council requirements



2 Green Facade



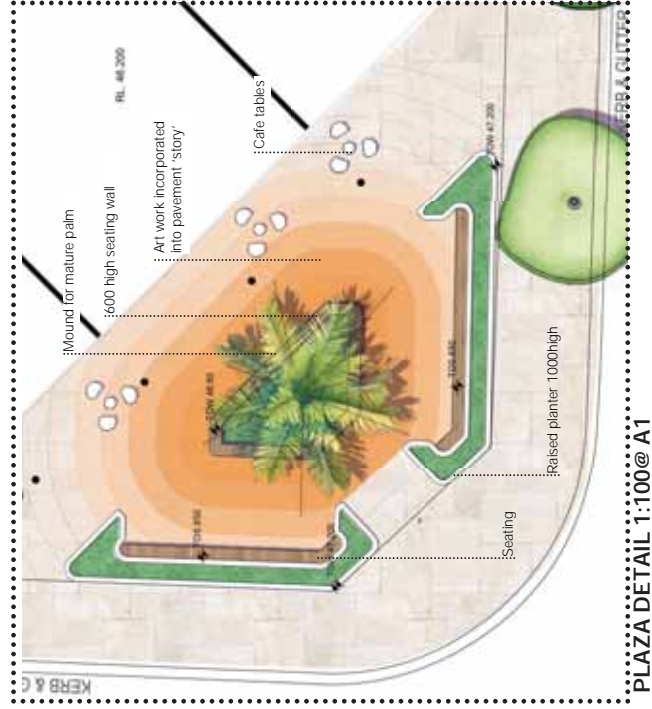
Wire structure to the green facade



Jasmine trachelispermum to the green facade


Stephanotis floribunda to the green facade

Green facade feeling



DESIGN NOTES

- 1 Plaza



Planter and seating forms to plaza


- ## 2 Feature palm



Mature specimen palm to plaza

- 4 Through site link

- 5 Roof Garden and Pebble Trim

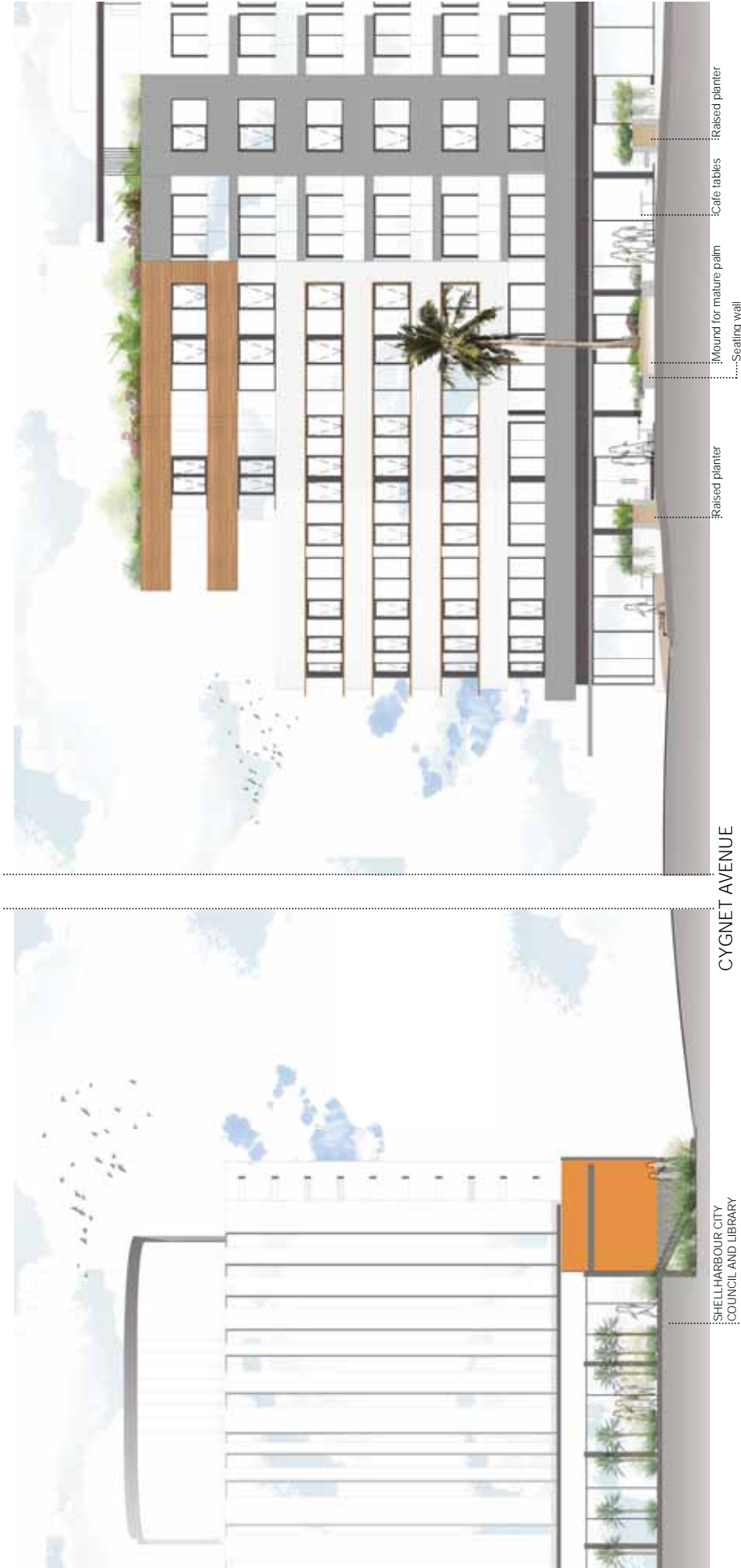


Pebble garden feeling

- ## 7 Pebble roof



Screen planting to building





DESIGN NOTES

1 Roof Garden and Pebble Trim



Pebble garden feeling

2 Screen Planting



Screen and feature planting

3 Pebble Roof



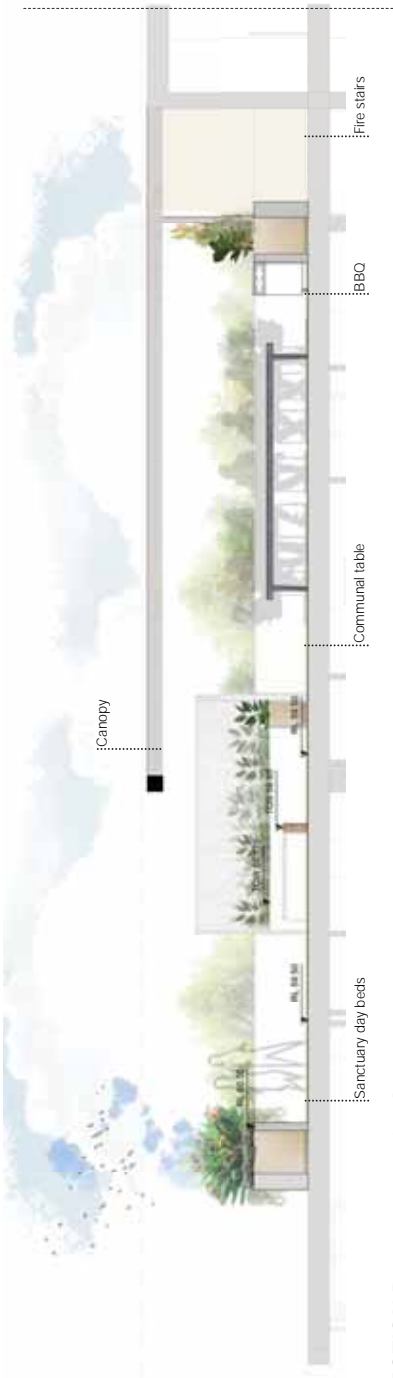
Screen and feature planting

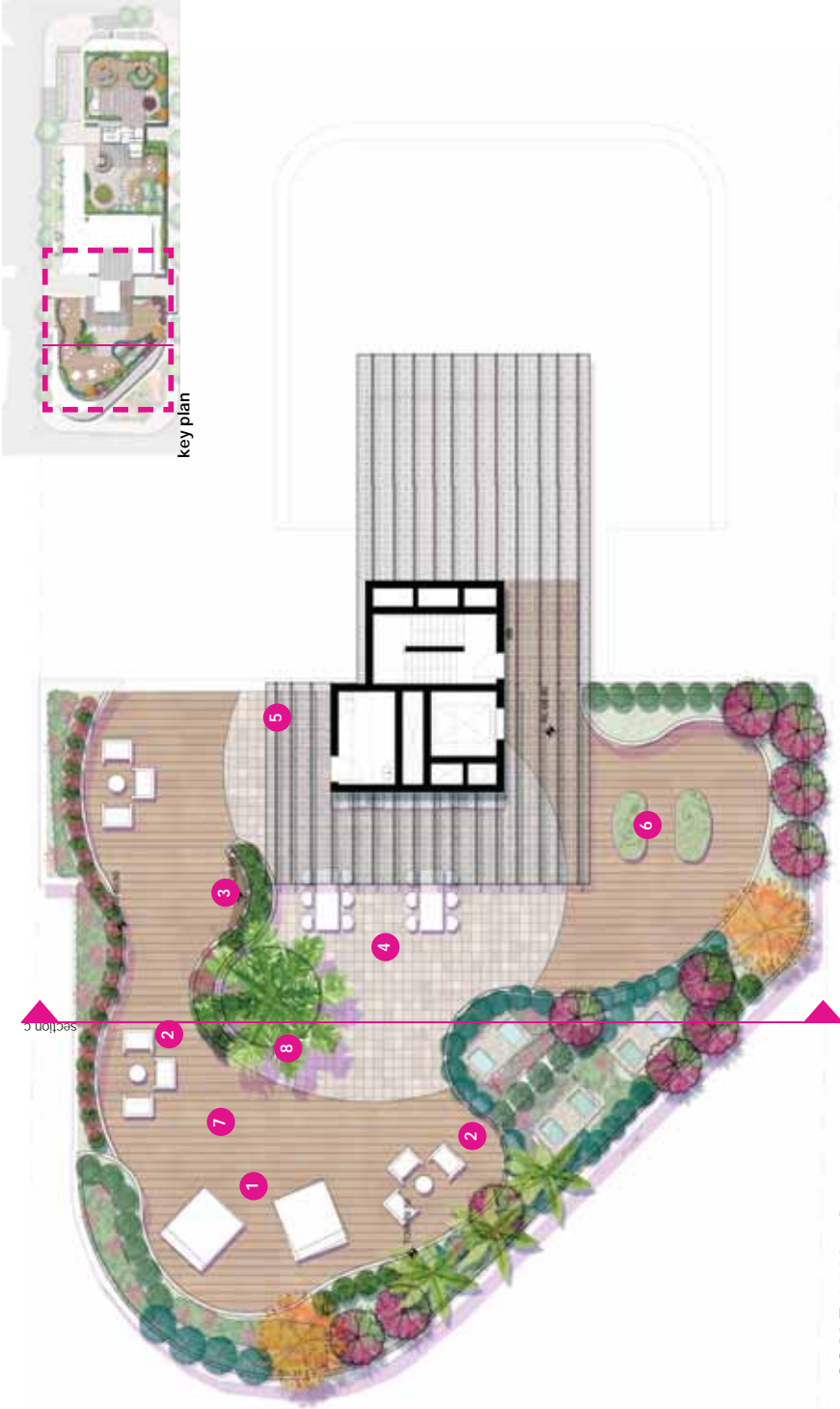


Live roof pattern



SECTION A 1:50@ A1





SCALE 1:100@ A1

DESIGN NOTES

1 Day beds



Day bed character

2 Casual seating

3 Seating zone



Seating and planter style

7 Planting character



Texture diversity

7 Timber finish



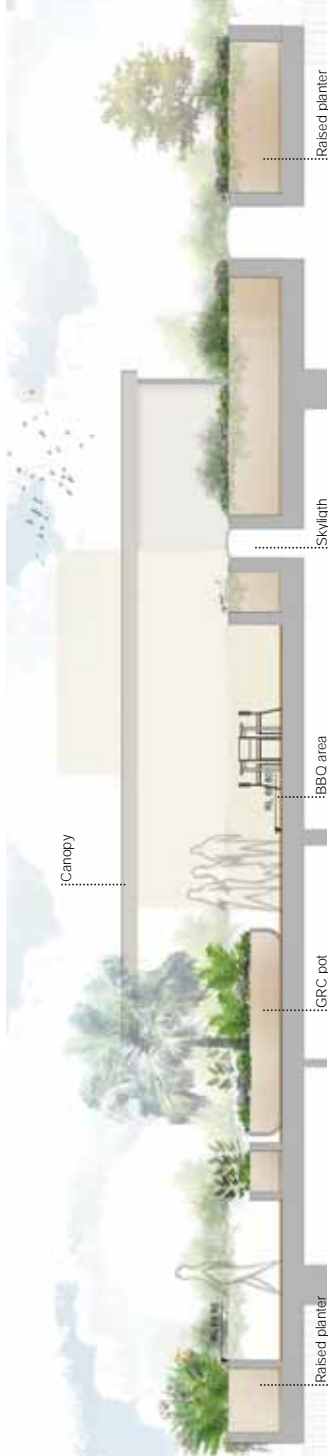
Timber decking

4 BBQ

5 Canopy



Canopy style



SECTION C - 1:50@ A1



Alcantarea imperialis



Alcasia micholitziana 'Callidora'



Aloe Ferox 'Eager Beaver'



Alphila caerulea 'Red Back'



Alpinia zerumbet 'Dwarf variegata'



Arachniodes-standishii



Banksia robur



Calathea crocata



Calathea insignis



Cordyline negra



Cordyline rubra



Elaeocarpus reticulatis



Grevillea 'Robyn Gordon'



Hardenbergia 'Meema'



Hymenosporum flavum



Livistona australis



Lomandra 'Tanika'



Macrozamia communis



Nandina 'LimeLight'



Pachysandra terminalis



Philodendron 'Xanadu'



Raphis excelsa



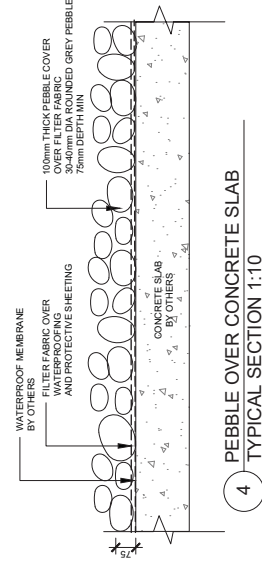
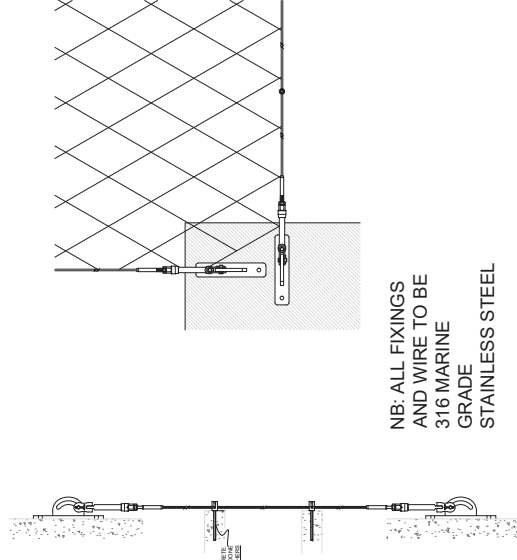
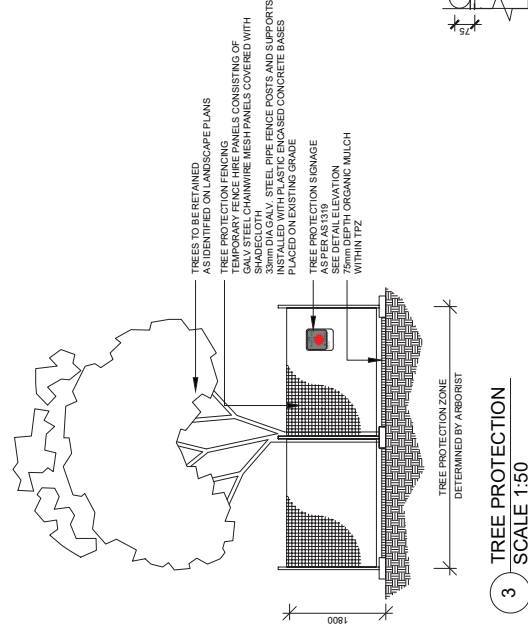
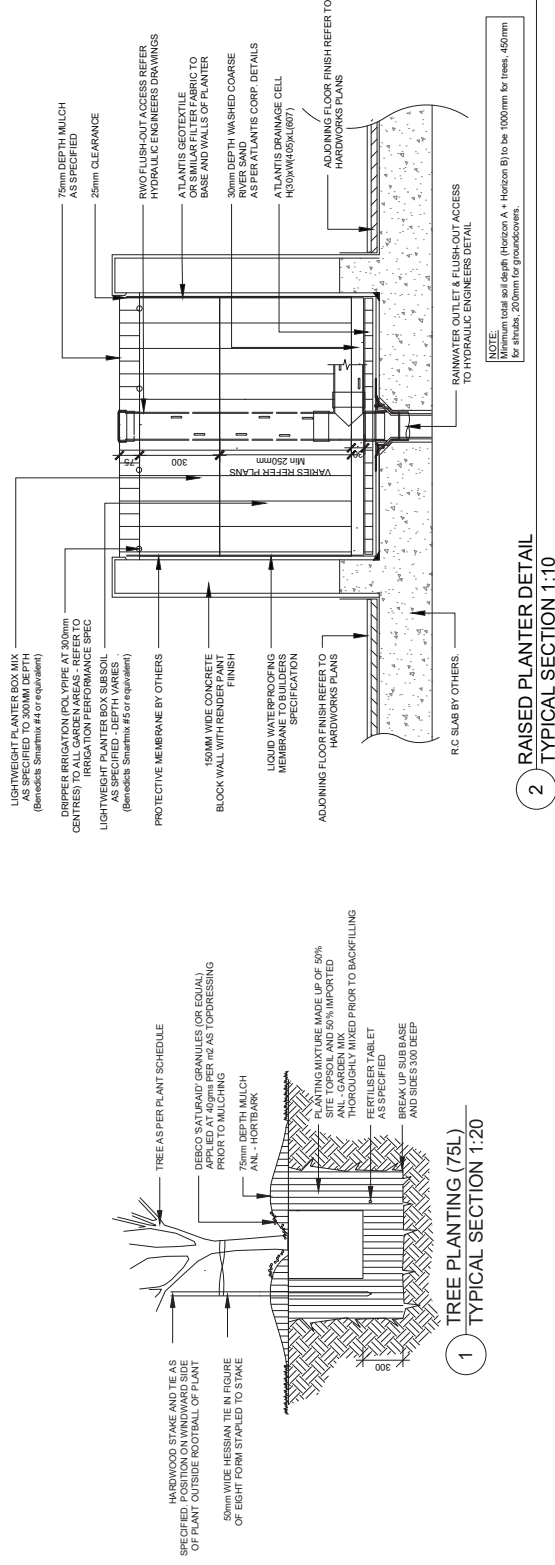
Senecio 'chalk sticks'

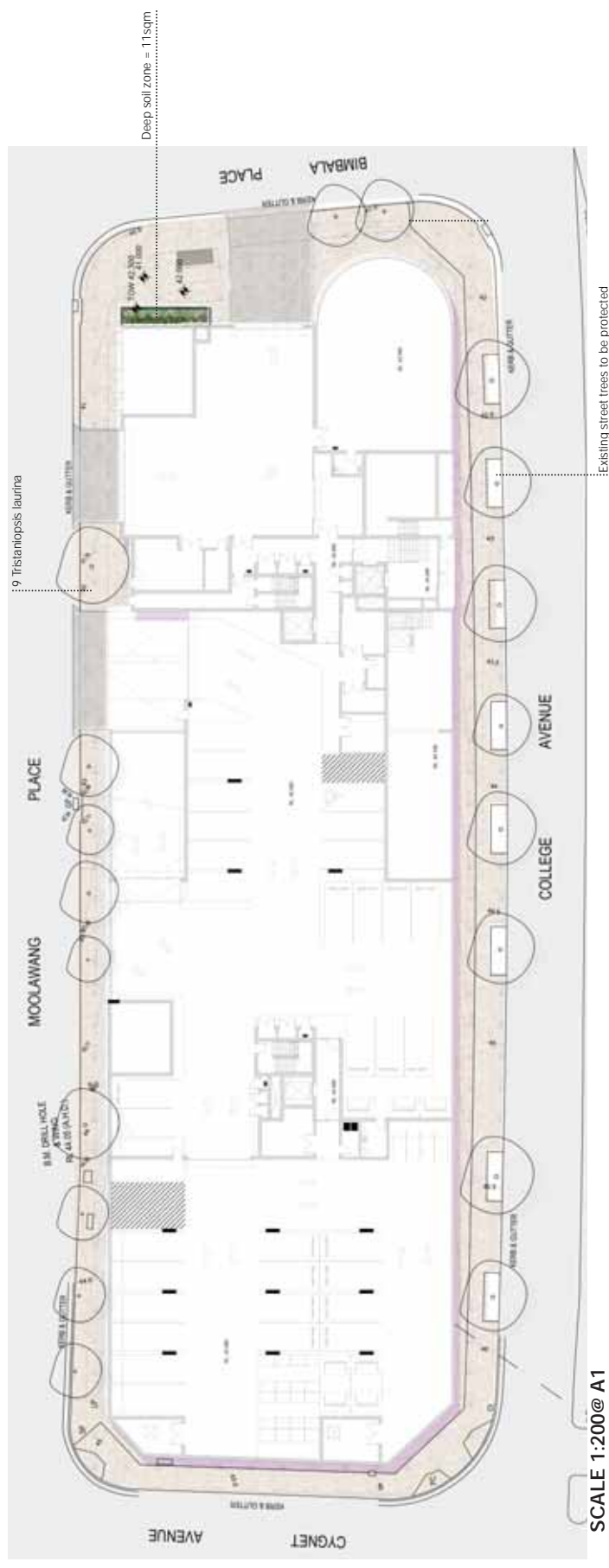


Spathiphyllum 'Sensation'



Sphaeropteris cooperi







City Plan Strategy & Development P/L
ABN 58 133 501 774



Annexure 4

Solar Access Report

16 COLLEGE AVENUE, SHELLHARBOUR

Solar Access Analysis

Prepared for:

Shiloh Properties Pty Ltd
c/- Design Workshop Australia
81A Princes Highway
FAIRY MEADOW NSW 2519

PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Grd Floor, 2 Lincoln Street
Lane Cove NSW 2066 Australia
(PO Box 176 Lane Cove NSW 1595 Australia)
T: +61 2 9427 8100
E: sydney@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Shiloh Properties Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

| Reference | Date | Prepared | Checked | Authorised |
|--------------------|------------------|-------------|-------------------|-------------------|
| 610.18626-R02-v3.0 | 10 May 2019 | James Clear | Horatio Cai | Horatio Cai |
| 610.18626-R02-v2.0 | 28 February 2019 | Horatio Cai | Neihad Al-Khalidy | Neihad Al-Khalidy |
| 610.18626-R02-v1.0 | 8 February 2019 | Horatio Cai | Neihad Al-Khalidy | Neihad Al-Khalidy |
| | | | | |
| | | | | |

EXECUTIVE SUMMARY

SLR has been engaged by Shiloh Properties Pty Ltd to conduct a detailed solar access analysis of the proposed development at 16 College Avenue, Shellharbour.

The State Environmental Planning Policy (SEPP) 65 supported by the Apartment Design Guide - Part 04 is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.

SLR has also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.

Results of solar access to 1m² of living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 8.00 am and 4.00 pm inclusive are summarised in Table 5 of this report.

Further, SLR has found there will be solar access to more than 50% of the communal open space across the full 6 hour assessment period.

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DOCUMENT REFERENCES

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APPENDICES

Appendix A Sun Eye Views

1 Introduction

SLR has been engaged by Shiloh Properties Pty Ltd to conduct a detailed solar access analysis of the proposed development at 16 College Avenue, Shellharbour. Site location is shown in **Figure 1**. This assessment forms part of the Development Application to Council.

The proposed site is to be located to the west of College Avenue and to the north of Cygnet Avenue. North clockwise around to the southeast has predominantly retail shopping centre and car parks to the surrounds, with some low to medium level development to the south and north. From the west is currently open car park.

Figure 1 Site Location



Image: Nearmap 30 December 2018

1.1 Proposed Development Description

The proposed 06 storey development consists of the following:

- Two levels of car parking from basement to lower ground floor;
- Business premises from lower to upper ground floor;
- Residential apartments from upper ground floor to level 06;
- Communal open spaces on roof levels.

Figure 2 below shows the perspective view of the proposed development.

Figure 2 Perspective view of the proposed development



2 Modelling

The 3D CAD file provided from the Design Workshop Australia was utilised to conduct the solar analysis. SLR used architectural plans received on 06/05/2019 to review the internal layout of the proposed development.

Figure 3 3D Modelling in AutoCAD 3D



3 Solar Access to Residential Buildings

3.1 Daylighting Considerations

The State Environmental Planning Policy (SEPP) 65 supported by the Apartment Design Guide - Part 04 is relevant to the assessment of the daylight access into residential component of the proposed development in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

SLR has been instructed to assess against the ADG requirements. Specific interest therefore lies in the solar access through the living areas windows and balconies of residential apartments during the winter solstice, June 21 between the hours of 9.00 am and 3.00 pm.

3.2 9.00 am – 3.00 pm on the Winter Solstice 21st June

Using AutoCAD 3D sun's eye view diagrams were generated for each 30 minute interval between 9.00 am and 3.00 pm on the Winter Solstice (21st June). These can be seen in **Appendix A**.

Results of solar access to the living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 9.00 am and 3.00 pm inclusive are summarised in the table below.

Table 1 Solar Access Summary using 2 hour criterion between 9.00am to 3.00pm on June 21st

| Block | Number of Apartments | Number of Apartments with at least 2hr of direct sunlight | Percentage of Apartments with at least 2hr of direct sunlight |
|-------|----------------------|---|---|
| Main | 77 | 61 | 79.2% |

Table 2 Solar Access Summary using 3 hour criterion between 9.00am to 3.00pm on June 21st

| Block | Number of Apartments | Number of Apartments with at least 3hr of direct sunlight | Percentage of Apartments with at least 3hr of direct sunlight |
|-------|----------------------|---|---|
| Main | 77 | 34 | 44.2% |

Table 3 Residential apartments without direct solar access

| Block | Number of Apartments | Number of Single aspect apartments with a southerly aspect | Percentage of Single aspect apartments with a southerly aspect |
|-------|----------------------|--|--|
| Main | 77 | 5 | 6.5% |

3.3 8.00 am – 4.00 pm on the Winter Solstice 21st June

Results of solar access to the living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 8.00 am and 4.00 pm inclusive are summarised in the tables below.

Table 4 Solar Access Summary using 2 hour criterion between 8.00am to 4.00pm on June 21st

| Block | Number of Apartments | Number of Apartments with at least 2hr of direct sunlight | Percentage of Apartments with at least 2hr of direct sunlight |
|-------|----------------------|---|---|
| Main | 77 | 66 | 85.7% |

Table 5 Solar Access Summary using 3 hour criterion between 8.00am to 4.00pm on June 21st

| Block | Number of Apartments | Number of Apartments with at least 3hr of direct sunlight | Percentage of Apartments with at least 3hr of direct sunlight |
|-------|----------------------|---|---|
| Main | 77 | 60 | 77.9% |

Table 6 Residential apartments without direct solar access

| Block | Number of Apartments | Number of Single aspect apartments with a southerly aspect | Percentage of Single aspect apartments with a southerly aspect |
|-------|----------------------|--|--|
| Main | 77 | 5 | 6.5% |

3.4 Solar Access to 1m² on the Winter Solstice 21st June

Results of solar access to 1m² of living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 8.00 am and 4.00 pm inclusive are summarised in the table below.

Table 7 Solar Access Summary using 15 mins criterion to 1m²

| Time Window | Total Number of Apartments | Number of Apartments* | Percentage of Apartments* |
|--------------|----------------------------|-----------------------|---------------------------|
| 9.00 – 15.00 | 77 | 53 | 68.8% |
| 8.00 – 16.00 | 77 | 62 | 80.5% |

* Achieve a minimum of 1m² of direct sunlight within living rooms and private open spaces measured at 1m above floor level for at least 15 minutes.

3.5 Solar Access to Communal Open Space Winter Solstice 21st June

Results of solar access to communal open space of the assessed development on June 21st (winter solstice) between the hours of 9.00 am and 3.00 pm inclusive were calculated, with SLR finding that there would be direct solar access to more than 50% of the communal open space across the full 6 hour assessment period.

4 Conclusions

SLR has been engaged by Shiloh Properties Pty Ltd to conduct a detailed solar access analysis of the proposed development at 16 College Avenue, Shellharbour.

The State Environmental Planning Policy (SEPP) 65 supported by the Apartment Design Guide - Part 04 is relevant to the assessment of the daylight access into residential components of the developments in question. The above regulation states that:

- Living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 2 hours direct sunlight between 9 am and 3 pm at mid-winter in the Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.
- In all other areas, living rooms and private open spaces of at least 70% of the apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid-winter.
- A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid-winter.

From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.

SLR has also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.

Results of solar access to 1m² of living rooms and private open spaces of apartments in the assessed buildings on June 21st (winter solstice) between the hours of 8.00 am and 4.00 pm inclusive are summarised in **Table 5** of this report.

Further, SLR has found there will be solar access to more than 50% of the communal open space across the full 6 hour assessment period.

APPENDIX A

Sun Eye Views

8:00



8:30



9:00



9:30



10:00



10:30



11:00



11:30



12:00



12:30



13:00



13:30



14:00



14:30



15:00



15:30



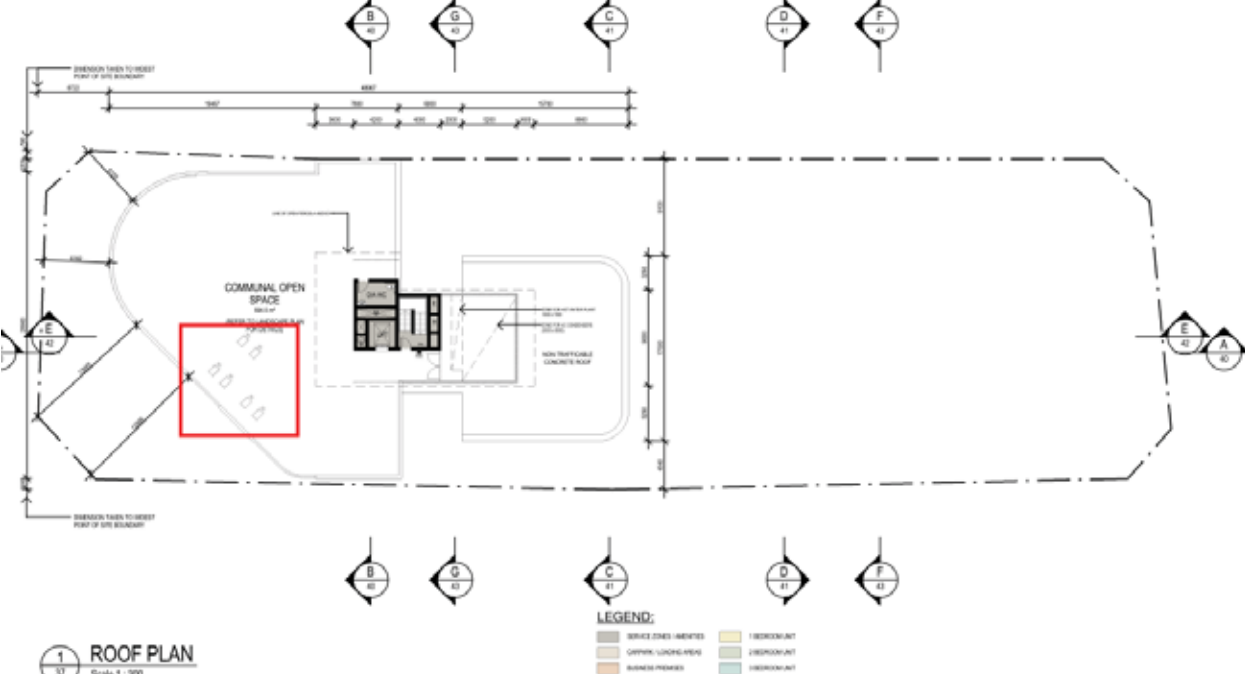
16:00



Roof Plans To Show Units With Skylights



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Solar Access to Apartments (2hrs)

| Unit | 8:00 | 8:30 | 9:00 | 9:30 | 10:00 | 10:30 | 11:00 | 11:30 | 12:00 | 12:30 | 13:00 | 13:30 | 14:00 | 14:30 | 15:00 | 15:30 | 16:00 | Total hr of sunlight betw 9am- 3pm | Total hr of sunlight betw 8am- 4pm | 2hr sunlight betw 9.00- 15.00 | 2hr sunlight betw 8.00- 16.00 |
|--------------------------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|--|--|
| B0.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B0.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B0.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B0.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B0.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 2.00 | 3.00 | 1 | 1 |
| A1.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | 1.50 | 2.50 | 0 | 1 |
| A1.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A1.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A1.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | 2.00 | 2.50 | 1 | 1 |
| A1.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A1.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A1.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A1.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B1.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B1.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B1.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B1.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B1.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 2.00 | 3.00 | 1 | 1 |
| B1.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B1.07 | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A2.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | 1.50 | 2.50 | 0 | 1 |
| A2.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A2.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A2.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A2.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B2.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B2.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B2.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B2.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B2.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B2.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B2.07 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 1 |
| B2.08 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 1 |
| B2.09 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 1 |
| B2.10 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B2.11 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B2.12 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| B2.13 | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A3.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| A3.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A3.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A3.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A2.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B3.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B3.02 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B3.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| B3.06 | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A4.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| A4.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A4.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A4.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.06 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A4.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A4.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| A5.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A5.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A5.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A5.05 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A5.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 1 | 1 |
| A6.02 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 4.50 | 5.50 | 1 | 1 |
| A6.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 4.50 | 5.50 | 1 | 1 |
| A6.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A6.05 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A6.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| <div>61</div> <div>79.2%</div> | | | | | | | | | | | | | | | | | | | | | <div>66</div> <div>85.7%</div> |

Solar Access to Apartments (3hrs)

| | | | | | | | | | | | | | | | | | | Total hr of sunlight betw 9am- 3pm | Total hr of sunlight betw 8am- 4pm | 3hr sunlight betw 9.00- 15.00 | 3hr sunlight betw 8.00- 16.00 |
|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|--|--|
| Unit | 8:00 | 8:30 | 9:00 | 9:30 | 10:00 | 10:30 | 11:00 | 11:30 | 12:00 | 12:30 | 13:00 | 13:30 | 14:00 | 14:30 | 15:00 | 15:30 | 16:00 | | | | |
| B0.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B0.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B0.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B0.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B0.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| A1.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | 1.50 | 2.50 | 0 | 0 |
| A1.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A1.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A1.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | 2.00 | 2.50 | 0 | 0 |
| A1.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A1.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A1.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A1.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B1.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B1.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B1.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B1.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B1.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B1.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B1.07 | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A2.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | 1.50 | 2.50 | 0 | 0 |
| A2.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A2.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A2.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A2.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A2.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A2.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A2.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B2.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B2.02 | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 7.00 | 1 | 1 |
| B2.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B2.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | 5.50 | 6.50 | 1 | 1 |
| B2.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B2.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B2.07 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 0 |
| B2.08 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 0 |
| B2.09 | | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 2.00 | 0 | 0 |
| B2.10 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B2.11 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B2.12 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| B2.13 | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A3.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| A3.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A3.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A3.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A3.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A3.06 | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 4.50 | 5.50 | 1 | 1 |
| A2.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A3.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B3.01 | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.00 | 4.00 | 1 | 1 |
| B3.02 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.04 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B3.05 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| B3.06 | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| A4.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| A4.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A4.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A4.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A4.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A4.06 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A4.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A4.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| A5.02 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 0 |
| A5.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A5.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A5.05 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A5.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.01 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | | | | | | 2.00 | 3.00 | 0 | 1 |
| A6.02 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 4.50 | 5.50 | 1 | 1 |
| A6.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 4.50 | 5.50 | 1 | 1 |
| A6.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 0 | 1 |
| A6.05 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 5.00 | 6.00 | 1 | 1 |
| A6.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| | | | | | | | | | | | | | | | | | | | | 34 | 60 |
| | | | | | | | | | | | | | | | | | | | | 44.2% | 77.9% |

| Unit | 8:00 | 8:30 | 9:00 | 9:30 | 10:00 | 10:30 | 11:00 | 11:30 | 12:00 | 12:30 | 13:00 | 13:30 | 14:00 | 14:30 | 15:00 | 15:30 | 16:00 | Total hr of sunlight betw 9am- 3pm | Total hr of sunlight betw 8am- 4pm | 15 mins sunlight betw 9.00- 15.00 | 15mins sunlight betw 8.00- 16.00 |
|-------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---|---|--|---|
| B0.01 | | | | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| B0.02 | | | | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| B0.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | | | | 3.00 | 4.00 | 1 | 1 |
| B0.04 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B0.05 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| A1.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A1.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A1.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A1.04 | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | | 1.50 | 2.00 | 1 | 1 |
| A1.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A1.06 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A1.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A1.08 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B1.01 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| B1.02 | | | | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| B1.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | | | | 3.00 | 4.00 | 1 | 1 |
| B1.04 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B1.05 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B1.06 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B1.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A2.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A2.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A2.04 | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 1.50 | 2.50 | 1 | 1 |
| A2.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.06 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A2.08 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B2.01 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| B2.02 | | | | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 3.50 | 4.50 | 1 | 1 |
| B2.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | | | | | | 0.50 | 0.50 | 0.50 | | | | 3.00 | 4.00 | 1 | 1 |
| B2.04 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B2.05 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B2.06 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B2.07 | | | | | | | | | | | | | | | | 0.50 | | 0.00 | 0.50 | 0 | 1 |
| B2.08 | | | | | | | | | | | | 0.50 | | | | | 0.50 | 0.00 | 0.50 | 0 | 1 |
| B2.09 | | | | | | | | | | | | | | | | 0.50 | | 0.00 | 0.50 | 0 | 1 |
| B2.10 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| B2.11 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| B2.12 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| B2.13 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A3.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A3.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A3.04 | | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 1.50 | 2.50 | 1 | 1 |
| A3.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.06 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.07 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A3.08 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B3.01 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| B3.02 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.03 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| B3.04 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B3.05 | | 0.50 | 0.50 | 0.50 | | | | | | | | | | | | | | 0.50 | 1.50 | 1 | 1 |
| B3.06 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A4.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A4.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A4.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.06 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A4.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A4.08 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A5.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A5.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A5.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A5.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A5.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A5.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.01 | | 0.50 | 0.50 | | | | | | | | | | | | | | | 0.00 | 1.00 | 0 | 1 |
| A6.02 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A6.03 | | | | | | | | | | | | | | | | | | 0.00 | 0.00 | 0 | 0 |
| A6.04 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A6.05 | | | | | | | | | | | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 2.00 | 3.00 | 1 | 1 |
| A6.06 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| A6.07 | | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 6.00 | 8.00 | 1 | 1 |
| | | | | | | | | | | | | | | | | | | | | 53 | 62 |
| | | | | | | | | | | | | | | | | | | | | 68.8% | 80.5% |

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Annexure 5

DRP Meeting Minutes and Recommendations dated 26 March 2019



Shellharbour City Council Design Review Panel - 2
Meeting minutes and recommendations DA0226/2018

Disclaimer: The advice in these notes is from Council's Design Review Panel (DRP). The DRP is responsible for providing independent advice to Council and applicants on the architectural quality of the development and to provide technical feedback and resolve complex issues to achieve the best possible design outcome. The advice from the DRP does not form a comprehensive assessment of the application and are not necessarily the view of Council officers. Council will take the advice of the DRP in account when undertaking a comprehensive assessment of the DA, as well as the relevant statutory requirements and other relevant issues required under the provisions of the *Environmental Planning & Assessment Act 1979*, as amended.

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| Meeting Date | 26th March 2019 |
| Meeting location | <p>Shellharbour City Council Administration Offices</p> <p>Revised documentation and a briefing were provided by council officers:</p> <p>Bryce Koop and Nancy Sample</p> |
| Property address | 16 College Avenue |
| Proposal | Mixed use development |
| Background | <p>The proposal was previously reviewed by Shellharbour Design Review Panel in June 2018. Revised documentation was provided by the applicant in response to issues raised by the design review panel and council.</p> <p>This report outlines how revised documents have addressed issues previously raised.</p> |
| Design quality principals SEPP65 | |
| Context and Neighbourhood Character | <p>The proposal is located on a currently vacant lot that sits between Shellharbour Council's Civic Centre (including library and museum) and Stocklands shopping centre. The site's College Road frontage will form the pedestrian link between these two prominent focal points of the town centre.</p> <p>The entire perimeter of the site is surrounded by roads and a lane, making the proposal a building that will very much be viewed in the round.</p> <p>Recent developments in the town centre have been undertaken with varying levels of design quality. The recent Stocklands shopping centre development appears to largely internalise the town's retail and provides some very poor interfaces with the street. In contrast the recent council building provides a generous landscape forecourt and a high-quality building which provides a positive contribution to the public domain. It is essential that the proposed development seeks to consolidate the approach taken by council, by developing a high-quality building that connects to the public domain and does not consolidate the poor urban</p> |

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| | <p>design approach / lack of street engagement, taken by the shopping centre.</p> <p>This context will require a sensitive response to the sloping topography of the site and adjoining streetscapes, to the development's relationship to the Civic Plaza, to integration with pedestrian facilities of the public domain, and to the provision of access from the various street frontages.</p> <p>A more detailed contextual analysis has now been provided to better describe the context of the site. Contextual information has been provided, showing the proposal from different vantage points around the town centre and exploring the proposal within its potential future context.</p> |
| <p>Built Form and Scale</p> | <p>In response to the Shellharbour Design Review Panels comments significant developments have been made to the building form. The proposal now consists of a single tower (7 storeys) located on the corner of College and Cygnet Avenue and a five storey building creating a continuous street wall to College Avenue. The revised proposal now responds more appropriately to its immediate context and also provides a more active connection to the public domain. However, further consideration / detail refinement of the following issues is recommended:</p> <ul style="list-style-type: none"> - A forecourt has been proposed on the corner of Cygnet Avenue and College Avenue to relate / contribute to public forecourt across the road. The forecourt will provide a positive contribution to the town center's public domain. Detail treatment of the retaining structures for planting should ensure that a strong visual connection is maintained between the street and ground floor business premises. - In response to SDRP comments the building height on the northern portion of the site has been reduced to 5 storeys. This is higher than the four storey height recommended by the panel and remains none compliant with the 18m height limit. The none compliant height combined with the proposal's proximity to the neighbour to the north (1/2 Memorial Drive) remains a concern. From the information provided there appears to be approximately 12m separation provided between the northern façade of the proposal and the southern façade of 1/2 Memorial Drive. This should be confirmed and captured in the applicant's DA documentation, to demonstrate compliance with the building separation requirements of the ADG. - The none compliant height on the northern edge of the building can largely be attributed to the pronounce timber clad parapet that forms a planter to the communal terrace above. Further detail development is required, the parapet could be push back further south to align with bedroom 2 of units B3.02 and B3.03. A lower roof form could sit below the parapet to enclose the living areas and a larger portion of the private open space of units B3.02 and B3.03. This will assist in reducing the perceived bulk of the northern façade and potentially create a more usable areas of private open space. - In response to the SDRP comments a more active interface has been provided to College Avenue. Business premises now step with the topography of the street to create an active retail strip and residential lobbies are now clearly identifiable |

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| | <p>within the College Avenue Façade. However, the location of the steps within northern ground floor lobby create an awkward unnecessarily cramped space, further development is recommended. Perhaps the steps could be located further north to create a more generous lobby, by slightly reducing the size of the business premises on the corner of College Avenue and Bimbala Place.</p> <ul style="list-style-type: none"> - Ground floor business premises and the business entry lobby are orientated towards Moolawang Place, helping to activate the lane. However, the use of fixed glazing to the lower ground level parking does not contribute to creating an active lane. Vehicle parking should be screened rather than highlighted if the lane is to present as more than a back of house servicing area. Consideration should be given to using a more robust material in this location (such as face brick) which would ideally be set back from the site boundary to allow room for a planter, to soften the buildings interface with the lane. - The configuration of the upper ground floor business lobby should be developed to provide a more generous link between Moolawang Place and College Avenue. The ramp located in the College Avenue entry is particularly awkward. The pinch point between the two entries should be increased in width to allow a stronger visual connection from the Lane to the Avenue. The ramp should be relocated to avoid creating a deep dead end within the College Avenue entry lobby. Ideally this link should be a generous two storey high space that is full of natural light. Consideration should be given to providing sky lights in the pebbled roofs above the lobby and raising the height of these roofs to maximise the volume of the space. <p>The corner of Moolawang Place and Bimbala Place is dominated by a one directional loading area which services the business tenancies. Whilst it is acknowledged that this will provide practical servicing solution, its impact on the street is not desirable. A preferable solution would be to limit the servicing access to a single point of entry and exit, to allow more of the street frontage to be dedicated to an active use. The applicant is encouraged to develop an alternative solution with council's engineers that will provide adequate servicing whilst activating more of the ground level.</p> |
| Density | <p>The revised building form now responds to the immediate context of the site in a more reasonable manner. Further detail refinement as outlined above (built form and scale) will ensure that the proposal does not read as an over development of the site.</p> |
| Sustainability | <p>Natural ventilation assessment provided by SLR consulting states that 33.8% of units meet ADG cross ventilation definition. But 65% of units will be naturally cross ventilated. The report goes further to show modeling of the building form to demonstrate how natural ventilation is achieved.</p> <p>It is evident that the building form has been developed to accommodate a variety of unit types (crossover and cross through units) and appropriately proportioned recesses to accommodate natural ventilation.</p> <p>A solar access assessment has been provided by SLR</p> |

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| | <p>consulting. The report summaries that 79.2% of units receive in excess of 2 hours solar access. The ADG requirement for the Shellharbour area is 3 hours solar access.</p> <p>Suns eye view diagrams have been provided as requested by the SDRP. When assessing if west facing units are receiving a minimum of 3 hours solar access (between 9am and 3pm, mid-winter) it must be clearly demonstrated that solar access to balconies and living rooms is being achieved at 12pm and beyond. The diagrams provided do not clearly demonstrate this.</p> <p>It has not been demonstrated that this proposal meets the minimum solar access requirements for this location. It does meet the lesser requirements permissible in Sydney Metropolitan Area and in the Newcastle and Wollongong local government areas.</p> <p>Opportunities to harvest rainwater for use in maintaining any plantings established on the building or the site should be explored. Other water minimization measures should be considered and reuse of rainwater for toilet flushing and washing machines could also be implement for a site of this size.</p> <p>The use of photovoltaic cells and solar panels is also encouraged.</p> |
| Landscape | <p>Public Domain</p> <p>The proposals interface with the adjoining streets has improved. However, further development of the buildings interface with Moolawang Place (as outlined above, built form and scale) is recommended.</p> <p>Communal Open Space (COS)</p> <p>Roof terraces have been developed to provide a variety of spaces / facilities for residents. All spaces are serviced by accessible toilets, have good outlook, excellent solar access and are provided with covered areas for shade and shelter.</p> <p>Private Open Space (POS)</p> <p>Modest balconies have been provided to all units that appear to comply with the minimum requirements of the ADG.</p> <p>Through site link</p> <p>The through site link depicted in Taylor Brammer sheet 5 issue B does not provide a clearly defined connection between Moolawang Place and College Avenue (see comments above, built form mand scale). Further detail development is required.</p> |
| Amenity | <p>Unit layouts have been developed to provide a reasonable level of amenity.</p> <p>Room sizes have been documented to demonstrate compliance with the minimum dimensional requirements of the ADG.</p> <p>Egress distances within upper level lobbies appear to be in excess of BCA requirements. The applicant is encouraged to discuss this issue with his building certifier.</p> |
| Safety | <p>The proposals interface with the street has significantly improved, many of the issues created by the previous proposal have now been addressed.</p> |

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| Housing Diversity and Social Interaction | Pending further refinement, the proposal could contribute an appropriate mix of uses to this important town centre location. It is however essential that the building engages with the street and laneway. |
| Aesthetics | <p>The selection and quality of materials will play an important role in the eventual success of this proposal. A 1:50 section documenting materials, types of and rails drainage, lighting has now been provided.</p> <p>Servicing of the building must be considered at this stage of the design process. The location of service risers, car park exhausts, AC condensers, down pipes, substation and fire hydrant boosters should be accommodated.</p> <p>The curved aesthetic of the building forms has been developed in a reasonable manner. A competent aesthetic has been developed, utilising an appropriate pallet of materials.</p> |
| Key issues, further Comments & Recommendations | <p>Significant and positive developments have been made to the proposal, which now responds more appropriately to its immediate context and provides a more active connection to the public domain. However, further refinements are recommended to provide a better relationship with the immediate context of the site, improve amenity and demonstrate compliance with the minimum requirements of the ADG:</p> <ul style="list-style-type: none"> - Refine northern edge of building to reduce visual bulk. - Further development of northern residential lobby. - Further development of through site link. - Further refinement of the buildings interface with Moolawang Place. - Explore the potential to reduce vehicle service access to a single point of access. - Demonstrate ADG building separation compliance with existing neighboring buildings. - Further information to be provided to demonstrate compliance with ADG solar access requirements. |



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Annexure 6

ADG Compliance Table

APARTMENT DESIGN GUIDE COMPLIANCE ANALYSIS

CLIENT: SHILOH PROPERTIES PTY LTD

ADDRESS: 16 COLLEGE AVENUE, SHELLHARBOUR

PROJECT: **PROPOSED SHOP TOP HOUSING CONSISTING OF GROUND FLOOR BUSINESS PREMISES AND RESIDENTIAL UNITS (ISSUE C)**

| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|-----------------------------------|--|---|------------|
| PART 1: IDENTIFYING THE CONTEXT | | | |
| 1A Apartment Building Types | <p>Shop top apartments are mixed use residential buildings often located in established centres, along main streets or close to public transport hubs. They can be small infill or larger developments where the ground floor is occupied by retail or commercial uses. Shop top apartments typically range between two and six storeys and are best used when:</p> <ul style="list-style-type: none"> increased residential uses are desired in established retail and commercial areas the context is a traditional main street zero setbacks to side boundary walls are possible or desired active frontages such as retail tenancies are desired at street level pedestrian activity on the street is desired rear lane access is available. | <p>The development sits within the commercial and retail hub of Shellharbour City.</p> <p>The site is adjacent to ‘Shellharbour City Hub’ and forecourt and directly adjacent to the Stocklands Shellharbour Retail and Restaurant precinct.</p> <p>The proposed development comprises of 1.5 basement levels, 7 lower and upper ground floor business premises with 77 Residential Units above.</p> <p>The building activates the street through a series of residential lobby entrances and business premises to College Avenue and public domain forecourt and business lobby entrance to Moolawang Place.</p> <p>Pedestrian activity is activated at ground level. The business premises face the street and provide a direct visual link to the street front and promote activity and surveillance at street level.</p> <p>Rear lane access is provided to Moolawang Place via a business lobby at upper ground and through the carpark at lower ground.</p> <p>A through site link has been created from Moolawang Place through to College Avenue.</p> <p>A Street activation analysis is included within the architectural documentation.</p> | ✓ |

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| <p>1B Local Character + Context</p> | <p>Good design responds and contributes to its context. Context is everything that has a bearing on an area and comprises its key natural and built features. Context also includes social, economic and environmental factors.</p> <p>The desired future character can vary from preserving the existing look and feel of an area to establishing a completely new character based on different uses, street patterns, subdivisions, densities and typologies.</p> <p>The planning process establishes the appropriate location for residential apartment development by determining land use and density in proximity to transport, employment, services, land form and environmental features. Within this framework, the specific characteristics of a place or its setting will inform design decisions. Common settings for residential flat buildings include:</p> <ul style="list-style-type: none"> • strategic centres • local centres • urban neighbourhoods • suburban neighbourhoods. | <p>Site analysis and local context analysis is provided in the SEE and Site analysis plans.</p> <p>An urban analysis is also provided as part of the documentation.</p> <p>Characteristics from the surrounding area has driven the character of the proposal which will enhance the city centre of Shellharbour.</p> <p>Further analysis has been undertaken as part of the SRRPP and DRP Panel Requests:</p> <ul style="list-style-type: none"> - Contextual Relationship Analysis - Access and Circulation Analysis - Public Domain Analysis - Street Activation Analysis | <p>✓</p> |
| <p>1C Precincts and Individual Sites</p> | <p>Precincts are characterised by large land parcels or a group of larger sites undergoing extensive change. These sites often need to be restructured to support a change of land use mix, building height and density.</p> <p>Precinct plans typically incorporate new streets and infrastructure, through-site links and public open spaces that relate in scale, location and character to the local context. The subdivision of large land parcels into smaller ones assists in creating a finer urban grain and achieving greater diversity in building design.</p> <p>It can also assist with the staging of redevelopment.</p> | <p>The development sits within the commercial and retail hub of Shellharbour City.</p> <p>The area has recently undergone significant upgrades, the proposed development will form part of a larger response to the future desired character of the area.</p> <p>The proposal has been designed to incorporate and engage with the existing establishments such as Stocklands Shellharbour Retail and Restaurant Precinct and 'Shellharbour City Hub'.</p> | <p>✓</p> |

| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
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| PART 2: DEVELOPING THE CONTROLS | | | |
| 2A Primary Controls | Primary development controls are the key planning tool used to manage the scale of development so that it relates to the context and desired future character of an area and manages impacts on surrounding development. | <p>The building responds to the future desired character of the area and provides a precedent for future developments.</p> <p>A detailed urban analysis of the site and the surrounding areas has been included on the amended architectural documentation.</p> | √ |
| 2B Building Envelopes | <p>A building envelope is a three-dimensional volume that defines the outermost part of a site that the building can occupy.</p> <p>Building envelopes set the appropriate scale of future development in terms of bulk and height relative to the streetscape, public and private open spaces, and block and lot sizes in a particular location.</p> | <p>The bulk, scale and siting are generally compliant with the envelope controls and have been developed through urban design analysis (refer to planning report for details). The bulk and scale are a representation of the future and desired character of the area.</p> <p>The building envelope has a bulk and scale which is appropriate to the existing surrounding developments as well as future development in the area, the scale of the building provides a precedent for the location and is appropriate for such a prominent envelope.</p> <p>The bulk and scale are in general keeping with the comments and advice provided by the SRRPP and DRP Panels. Particular care has been taken in creating a landmark for the area, extensive analysis has been undertaken to ensure the building is in keeping with the existing surrounding environment, but also being a future precedent for the area.</p> | √ |
| 2C Building Height | Height controls should be informed by decisions about daylight and solar access, roof design and use, wind protection, residential amenity and in response to landform and heritage. | <p>The building height was derived from undertaking detailed site, urban and contextual analysis of the site and the surrounding areas.</p> <p>The Development has been designed to respond to the surrounding locality and desired future character.</p> <p>Building height diagram is included in the documentation.</p> | √ |

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| <p>2D Floor Space Ratio</p> | <p>Floor space ratio (FSR) is the relationship of the total gross floor area (GFA) of a building relative to the total site area it is built on.</p> <p>The GFA should fit comfortably within the building envelope as the envelope needs to also account for building elements and service areas that are not included in the GFA definition and to allow for building articulation.</p> <p>Ensure that development aligns with the optimum capacity of the site and the desired density of the local area.</p> <p>Provide opportunities for building articulation and creativity within a building envelope by carefully setting the allowable floor space.</p> | <p>There is no FSR requirement for the site.</p> <p>The FSR has been driven by the urban design analysis and appropriate building form for the existing and future character of the area.</p> <p>The building is well articulated and responsive to the context and surrounds. The activated street frontage and forecourt area provide an invaluable space for the residents and community alike.</p> | <p>✓</p> |
| <p>2E Building Depth</p> | <p>Building depth influences building circulation and configuration and has a direct relationship to internal residential amenity by determining room depths, which in turn influences access to light and air. For residential development in general, narrower building depths have a greater potential to achieve optimal natural ventilation and daylight access than deeper floor plates. Depths of mixed-use buildings transition from deeper commercial and retail uses at the lower levels to narrower building depths for the residential uses at upper levels.</p> <p>Ensure that the bulk of the development relates to the scale of the desired future context.</p> <p>Ensure building depths support apartment layouts that meet the objectives, design criteria and design guidance within the Apartment Design Guide.</p> | <p>The building bulk and scale is in keeping with the surrounding development and provides a precedent for other surrounding sites in the area.</p> <p>The scale is representative of future desired character of the area.</p> <p>A detailed solar access report has been included as part of this application.</p> | <p>✓</p> |

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| <p>2F Building Separation</p> | <p>Building separation is the distance measured between building envelopes or buildings. Separation between buildings contributes to the urban form of an area and the amenity within apartments and open space areas.</p> <p>Minimum separation distances for buildings are:</p> <p>9 storeys and above – 12-24m Up to 8 storeys – 9-18m Up to 4 storeys – 6-12m</p> | <p>Building separation requirements are in accordance with the apartment design guide.</p> <p>Dimensions are provided on the architectural documentation (refer to site plan and site elevations).</p> <p>Building is 12.7m from mixed use development to the north and 12m from mixed use development to the west.</p> | <p>✓</p> |
| <p>2G Street Setbacks</p> | <p>Street setbacks establish the alignment of buildings along the street frontage, spatially defining the width of the street.</p> <p>Determine street setback controls relative to the desired streetscape and building forms, for example:</p> <ul style="list-style-type: none"> Define a future streetscape with the front building line match existing development step back from special buildings retain significant trees in centres the street setback may need to be consistent to reinforce the street edge consider articulation zones accommodating balconies, landscaping etc. within the street setback use a setback range where the desired character is for variation within overall consistency, or where subdivision is at an angle to the street manage corner sites and secondary road frontages | <p>The proposed building has been sited to fit the future and desired character of the surrounding area and precinct.</p> <p>The setbacks are generally compliant with council principles.</p> <p>The setbacks have been formed by review of the streetscape and the desired future character of the area.</p> <p>The shadow of the building falls into the street and surrounds and has a limited impact on adjacent properties (refer to shadow diagrams).</p> <p>Carparking on site is provided in the underground basement levels for residents, visitors and tenants for business premises.</p> | <p>✓</p> |
| <p>2H Side and Rear Setbacks</p> | <p>Side and rear setbacks govern the distance of a building from the side and rear site boundaries and are related to the height of the building.</p> <ul style="list-style-type: none"> provide access to light, air and outlook for neighbouring properties and future buildings | <p>The setbacks have been formed by review of the streetscape and the desired future character of the area.</p> <p>The setbacks correspond to the Building separation and open space requirements, the setbacks are appropriate and sufficient area is provided in these</p> | <p>✓</p> |

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| | <ul style="list-style-type: none">• provide for adequate privacy between neighbouring apartments• retain or create a rhythm or pattern of spaces between buildings that define and add character to the streetscape achieve setbacks that maximise deep soil areas, retain existing landscaping and support mature vegetation consolidated across sites• manage a transition between sites or areas with different development controls such as height and land use | <p>areas for significant landscaping. There is a high % of landscape coverage across the site.</p> <p>The setbacks vary according to the building articulation and treatment.</p> <p>The proposed setbacks are consistent with the future desired character of the precinct.</p> <p>The project has been designed in general compliance with SEPP65.</p> | |
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| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|--------------------------------|--|---|------------|
| PART 3: SITING THE DEVELOPMENT | | | |
| 3A Site Analysis | <p>Site analysis is an important part of the design process and should be undertaken at the outset of a project to inform the design principles. Development proposals need to illustrate that design decisions are based on careful analysis of the site conditions and relationship to the surrounding context.</p> | <p>A detailed site analysis plan, survey plan and written analysis are provided as part of the architectural documentation.</p> <p>Further analysis has been undertaken as part of the SRRPP and DRP Panel Requests:</p> <ul style="list-style-type: none"> - Contextual Relationship Analysis - Access and Circulation Analysis - Public Domain Analysis - Street Activation Analysis - Future Development Analysis | ✓ |
| 3B Orientation | <p>Orientation is the position of a building and its internal spaces in relation to its site, the street, the subdivision and neighbouring buildings. Building orientation influences the urban form of the street and building address.</p> <p>Designing the site layout to maximise northern orientation is an important consideration, but it must be balanced with:</p> <ul style="list-style-type: none"> • responding to desired streetscape character • promoting amenity for both the proposed development and neighbouring properties • providing for the enjoyment of significant views • retaining trees and locating open spaces • responding to the topography and contextual constraints such as overshadowing and noise. | <p>The development has been orientated to maximise solar access to living spaces and minimise overshadowing to adjacent buildings. Refer to 'views from the sun' in architectural documentation.</p> <p>The building has been designed to respond to the surrounding streetscape and provide adequate solar access.</p> <p>Excerpt from Solar and Access Report submitted by SLR states:</p> <ul style="list-style-type: none"> • <i>From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.</i> • <i>It is also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.</i> | ✓ |

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| | | <p><i>Solar access at the 3hr standard is severely constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting, at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.</i></p> <p>Please refer to attached solar report completed by SLR Consulting for more detail.</p> | |
| 3C Public Domain Interface | <p>The public domain interface is the transition area between the apartment building, its private or communal space at the street edge and the public domain.</p> <p>The interface of the development contributes to the quality and character of the street. Subtle variations through planting and fencing can create an attractive and active public domain with a pedestrian scale.</p> | <p>The design has allowed for a forecourt area with garden and amenities to directly correspond with the adjacent forecourt provided by Shellharbour City Council.</p> <p>The forecourt area provides a quality expanse for residents, employees and or visitors to the business premises and the community. The forecourt will promote pedestrian activity and activate the street front.</p> | ✓ |
| 3D Communal and Public Open Spaces | <p>Communal open space is an important environmental resource that provides outdoor recreation opportunities for residents, connection to the natural environment and valuable 'breathing space' between apartment buildings. It also contributes to the appeal of a development and the wellbeing of residents.</p> <p>Communal open space has a minimum area equal to 25% of the site Developments achieve a minimum of 50% direct sunlight to the principal usable part of the communal open space for a minimum of 2 hours between 9 am and 3 pm on 21 June (mid winter).</p> | <p>Communal open space provided to is 1379.4m² (42.9%).</p> <p>As noted above, the design includes for a forecourt which is accessible to residents, customers and employees of the building. This space will also be opened to the general public</p> <p>There is also common open space to level 4 and the roof terrace which will be accessible to all residents.</p> <p>The communal and private open spaces address all relevant requirements of the Code, with appropriate landscape treatment of communal open space, terraces and private balconies.</p> <p>Excerpt from Solar and Ventilation Report submitted by SLR states:</p> <p>SLR has found there will be solar access to more than 50% of the communal open space across the full 6-hour assessment period.</p> | ✓ |

| <div>3E</div> <div>Deep Soil Zones</div> | <div>Deep soil zones are areas of soil not covered by buildings or structures within a development. They exclude basement car parks, services, swimming pools, tennis courts and impervious surfaces including car parks, driveways and roof areas.</div> <div><div>Design criteria</div><div>1. Deep soil zones are to meet the following minimum requirements:</div><table><thead><tr><th>Site area</th><th>Minimum dimensions</th><th>Deep soil zone (% of site area)</th></tr></thead><tbody><tr><td>less than 650m²</td><td>-</td><td rowspan="4">7%</td></tr><tr><td>650m² - 1,500m²</td><td>3m</td></tr><tr><td>greater than 1,500m²</td><td>6m</td></tr><tr><td>greater than 1,500m² with significant existing tree cover</td><td>6m</td></tr></tbody></table></div> | Site area | Minimum dimensions | Deep soil zone (% of site area) | less than 650m ² | - | 7% | 650m ² - 1,500m ² | 3m | greater than 1,500m ² | 6m | greater than 1,500m ² with significant existing tree cover | 6m | <div>The location and building typology do not allow for deep soil at ground level, however, a sufficient amount of deep soil podium planting has been provided on various levels.</div> <div>The site is located within the city centre and has non-residential uses on ground floor level therefore alternative forms of planting have been provided at level 4 podium and the roof terraces.</div> <div>This has allowed a high percentage of landscape site coverage.</div> <div>Total deep soil zone is 11m².</div> <div>Total deep soil podium planting is 142m².</div> | <div>✓</div> <div>Achieves Design Objective</div> |
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| Site area | Minimum dimensions | Deep soil zone (% of site area) | | | | | | | | | | | | | |
| less than 650m ² | - | 7% | | | | | | | | | | | | | |
| 650m ² - 1,500m ² | 3m | | | | | | | | | | | | | | |
| greater than 1,500m ² | 6m | | | | | | | | | | | | | | |
| greater than 1,500m ² with significant existing tree cover | 6m | | | | | | | | | | | | | | |
| <div>3F</div> <div>Visual Privacy</div> | <div>Visual privacy balances site and context specific design solutions with views, outlook, ventilation and solar access. The adjacent context, site configuration, topography, the scale of the development and the apartment layout all need to be considered.</div> <div><div>Design criteria</div><div>1. Separation between windows and balconies is provided to ensure visual privacy is achieved. Minimum required separation distances from buildings to the side and rear boundaries are as follows:</div><table><thead><tr><th>Building height</th><th>Habitable rooms and balconies</th><th>Non-habitable rooms</th></tr></thead><tbody><tr><td>up to 12m (4 storeys)</td><td>6m</td><td>3m</td></tr><tr><td>up to 25m (5-8 storeys)</td><td>9m</td><td>4.5m</td></tr><tr><td>over 25m (9+ storeys)</td><td>12m</td><td>6m</td></tr></tbody></table><div>Note: Separation distances between buildings on the same site should combine required building separations depending on the type of room (see figure 3F.2)</div><div>Gallery access circulation should be treated as habitable space when measuring privacy separation distances between neighbouring properties</div></div> | Building height | Habitable rooms and balconies | Non-habitable rooms | up to 12m (4 storeys) | 6m | 3m | up to 25m (5-8 storeys) | 9m | 4.5m | over 25m (9+ storeys) | 12m | 6m | <div>Visual privacy has been addressed through separation:</div> <div><div><div></div><div>Adequate setbacks, separation and screening to adjoining properties.</div></div><div><div></div><div>Room layouts and balcony locations to minimise overlooking.</div></div></div> | |
| Building height | Habitable rooms and balconies | Non-habitable rooms | | | | | | | | | | | | | |
| up to 12m (4 storeys) | 6m | 3m | | | | | | | | | | | | | |
| up to 25m (5-8 storeys) | 9m | 4.5m | | | | | | | | | | | | | |
| over 25m (9+ storeys) | 12m | 6m | | | | | | | | | | | | | |
| <div>3G</div> <div>Pedestrian Access and Entries</div> | <div>Good pedestrian access delivers high quality, equitable, safe and pleasant walking environments along the street, into the development and to individual apartments.</div> <div>Pedestrian access and entries must be priorities over vehicle access.</div> | <div>All dwellings have lift and stair access.</div> <div>Fire egress is by way of Fire isolated stairs, accessible on all levels of the building.</div> <div>The building entries have been designed to provide an appropriate, identifiable, secure, safe series of accessible entries. Residential</div> | <div>✓</div> | | | | | | | | | | | | |

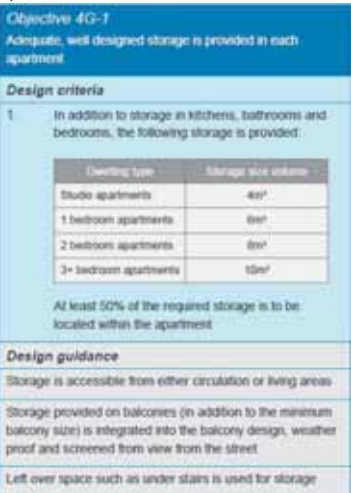
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| | <p>Access, entries and pathways are accessible and easy to identify</p> <p>Building entries and pedestrian access connects to and addresses the public domain.</p> <p>Large sites provide pedestrian links for access to streets and connection to destinations</p> | <p>lobbies have been separated from business lobbies.</p> <p>Separate entries are provided for pedestrians and vehicles.</p> <p>Mailboxes are provided in appropriate, secure locations proximate to the lobby areas.</p> <p>A generously sized, secure through-site link assists to activate the site and enhance pedestrian connection between College Avenue and the mid-block parking to Moolawang Place.</p> <p>A through site link has been enhanced by the use of feature wall paneling, skylights and direct sightlines through to the lobby and concierge areas.</p> | |
| <p>3H Vehicle Access</p> | <p>The location, type and design of vehicle access points have significant impacts on the streetscape, the site layout and the building facade design. It is important that vehicle access is integrated with site planning from an early stage to balance any potential conflicts with traffic patterns, streetscape elements and safe pedestrian access.</p> <p>Vehicle access points are designed and located to achieve safety, minimise conflicts between pedestrians and vehicles and create high quality streetscapes</p> | <p>There is adequate separation from the proposed driveway to surrounding intersections. Cars will enter and exit the basement parking via Moolawang Place.</p> <p>Loading vehicles and trucks will enter via Moolawang Place and exit via Bimbala Place in a forward direction.</p> <p>The driveways have been separated for in-going and out-going traffic. They have been designed to have minimum impact on the streetscape.</p> <p>Pedestrian and vehicular entries are provided for separately.</p> | ✓ |
| <p>3J Bicycle and Carparking</p> | <p>Integrating car parking within apartment buildings has a significant impact on site planning, landscape and building design. Onsite parking can be located underground, above ground within a structure or at grade.</p> <p>Design Criteria: For development in the following locations:</p> <ul style="list-style-type: none"> on sites that are within 800 metres of a railway station or light rail stop in the Sydney Metropolitan Area; or on land zoned, and sites within 400 metres of land zoned, B3 Commercial | <p>All car, motorbike and bicycle parking are provided in the basement and lower ground of the building. Visitor business bicycle parking is provided at lower ground level.</p> <p>Carparking numbers comply with council codes.</p> <p>Refer to attached traffic report completed by TTPA.</p> | ✓ |

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| | <p>Core, B4 Mixed Use or equivalent in a nominated regional centre</p> <p>The minimum car parking requirement for residents and visitors is set out in the Guide to Traffic Generating Developments (GTGD), or the car parking requirement prescribed by the relevant council, whichever is less</p> <p>The car parking needs for a development must be provided off street.</p> <p>Car parking is provided based on proximity to public transport in metropolitan Sydney and centres in regional areas.</p> <p>Parking and facilities are provided for other modes of transport.</p> <p>Car park design and access is safe and secure.</p> | | |
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| ITEM | DESIGN CRITERIA | COMMENTS | COMPLIANCE |
|--|---|--|--------------------------------|
| PART 4: DESIGNING THE BUILDING | | | |
| 4A Solar and Daylight Access | <p>Solar and daylight access are important for apartment buildings, reducing the reliance on artificial lighting and heating, improving energy efficiency and residential amenity through pleasant conditions to live and work.</p> <p>To optimise the number of apartments receiving sunlight to habitable rooms, primary windows and private open space.</p> <p>Daylight access is maximised where sunlight is limited.</p> <p>Design incorporates shading and glare control, particularly for warmer months.</p> | <p>The proposed development has been orientated to maximise the northern, eastern and western aspect.</p> <p>The layout of units and window location provides good daylight access.</p> <p>Daylight Access has also been considered for the surrounding neighbourhood as shown on the accompanying shadow diagrams (views from the sun) and solar analysis report undertaken by SLR Consulting:</p> <p><i>Excerpt from Solar and Ventilation Report submitted by SLR states:</i></p> <ul style="list-style-type: none"> <i>From the model provided, SLR has calculated that 2 hours of direct sunlight will reach 79.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 2 hours of direct sunlight will increase to 85.7% of the apartments and number of apartments without direct sunlight is 6.5%.</i> <i>It is also calculated that 3 hours of direct sunlight will reach 44.2% of the apartments and number of apartments without direct sunlight is 6.5% from 9am to 3pm. From 8am to 4pm, the 3 hours of direct sunlight will increase to 77.9% of the apartments and number of apartments without direct sunlight is 6.5%.</i> <p><i>Solar access at the 3hr standard is severely constrained by the orientation of the site, which is a factor over which the applicant has no control. However, as demonstrated in the Solar Access Analysis prepared by SLR Consulting, at the 2hr standard (which applies to most urban areas in NSW) the design has optimised solar access to the extent that almost 80% of apartments receive more than 2hrs of sunlight in mid-winter. In ordinary circumstances this would be regarded as providing a very high level of amenity.</i></p> <p>Please refer to attached solar report completed by SLR Consulting.</p> | ✓ Achieves Design Objective |

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| <p>4B Natural Ventilation</p> | <p>Natural ventilation is the movement of sufficient volumes of fresh air through an apartment to create a comfortable indoor environment. Sustainable design practice incorporates natural ventilation by responding to the local climate and reduces the need for mechanical ventilation and air conditioning.</p> <p>All habitable rooms are naturally ventilated.</p> <p>The layout and design of single aspect apartments maximises natural ventilation.</p> <p>The number of apartments with natural cross ventilation is maximised to create a comfortable indoor environment for residents.</p> | <p>The natural ventilation requirements have been addressed as follows:</p> <p>Open plan unit layouts have been designed to maximise natural ventilation.</p> <p>Excerpt from Solar and Ventilation Report submitted by SLR states:</p> <p><i>64.9% (50 of 77) of apartments will be naturally-ventilated. This meets the requirement stated above.</i></p> <p><i>This analysis has been made on the basis of our best engineering judgment and on the experience gained from model scale wind tunnel testing or Computational Fluid Dynamics (CFD) analysis of a range of developments of similar magnitude to the currently proposed development.</i></p> | <p>✓</p> |
| <p>4C Ceiling Heights</p> | <p>Ceiling height is measured internally from finished floor level to finished ceiling level. The height of a ceiling contributes to amenity within an apartment and the perception of space. Well designed and appropriately defined ceilings can create spatial interest and hierarchy in apartments.</p> <p>Ceiling height achieves sufficient natural ventilation and daylight access.</p> <p>Ceiling height increases the sense of space in apartments and provides for well proportioned rooms.</p> <p>Ceiling heights contribute to the flexibility of building use over the life of the building.</p> | <p>Minimum floor to ceiling height of 2.7m is provided to the main living areas and habitable rooms of each unit.</p> <p>Business premises ceiling heights achieve compliance. Ceiling heights are noted on all architectural documentation.</p> | <p>✓</p> |
| <p>4D Apartment Size and Layout</p> | <p>The layout of an apartment establishes the way rooms of different functions are arranged and located, the size of the rooms, the circulation between rooms and the degree of privacy for each room.</p> <p>The layout of rooms within an apartment is functional, well organised and provides a high standard of amenity.</p> | <p>The development provides a range of 1, 2 and 3-bedroom units which is considered appropriate for the local market.</p> <p>More than 20% of the units are provided as adaptable units and are a combination of 1- & 2-bedroom units.</p> <p>The units are an appropriate mix for the local market and allow for modifications over time.</p> | <p>✓</p> |

| | <div><p>Design criteria</p><p>1. Apartments are required to have the following minimum internal areas:</p><table><tr><th>Apartment type</th><th>Minimum internal area</th></tr><tr><td>Studio</td><td>35m²</td></tr><tr><td>1 bedroom</td><td>50m²</td></tr><tr><td>2 bedroom</td><td>70m²</td></tr><tr><td>3 bedroom</td><td>90m²</td></tr></table><p>The minimum internal areas include only one bathroom. Additional bathrooms increase the minimum internal area by 5m² each</p><p>A fourth bedroom and further additional bedrooms increase the minimum internal area by 12m² each</p><p>2. Every habitable room must have a window in an external wall with a total minimum glass area of not less than 10% of the floor area of the room. Daylight and air may not be borrowed from other rooms</p></div> <p>Environmental performance of the apartment is maximised.</p> <p>Apartment layouts are designed to accommodate a variety of household activities and needs.</p> | Apartment type | Minimum internal area | Studio | 35m ² | 1 bedroom | 50m ² | 2 bedroom | 70m ² | 3 bedroom | 90m ² | <p>All units provide appropriate kitchen and storage facilities (refer to storage schedule).</p> <p>Units allow for adequate solar access and natural ventilation and have living rooms with within 8m of a window.</p> | |
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| Apartment type | Minimum internal area | | | | | | | | | | | | |
| Studio | 35m ² | | | | | | | | | | | | |
| 1 bedroom | 50m ² | | | | | | | | | | | | |
| 2 bedroom | 70m ² | | | | | | | | | | | | |
| 3 bedroom | 90m ² | | | | | | | | | | | | |
| <p>4E</p> <p>Private Open Space and Balconies</p> | <p>Private open spaces are outdoor spaces of the apartment, including balconies, courtyards and terraces, which enhance the amenity and indoor/outdoor lifestyle of residents. They capitalise on New South Wales' temperate climate, providing an area for external activities and an extension of living spaces.</p> <p>Apartments provide appropriately sized private open space and balconies to enhance residential amenity.</p> <p>Primary private open space and balconies are appropriately located to enhance liveability for residents.</p> <p>Private open space and balcony design is integrated into and contributes to the overall architectural form and detail of the building.</p> <p>Private open space and balcony design maximises safety.</p> | <p>Each unit has access to at least one private balcony or courtyard and common open space.</p> <p>Generous balconies are provided adjacent to the living areas in all units and designed to be an extension of the living areas.</p> | <p>✓</p> | | | | | | | | | | |

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| <p>4F Common Circulation and Spaces</p> | <p>Common circulation and spaces within a building are shared communally by residents. They include lobbies, internal corridors and external galleries, vertical circulation such as lifts and stairs, as well as community rooms and other spaces.</p> <p>Common circulation spaces achieve good amenity and properly service the number of apartments.</p> <p>Common circulation spaces promote safety and provide for social interaction between residents.</p> | <p>The proposed internal circulation addresses the requirement of the Code by:</p> <ul style="list-style-type: none"> • Providing generous and articulated circulation spaces with visual interest and outlook to outdoor spaces and or street. • Utilising robust materials in circulation areas. • Circulation areas are well lit with natural light (both east and west facing glazing to street). <p>Natural light has been increased in the Business lobby and through site link through the addition of skylights.</p> <p>Refer to SEE for justification on the minimum number of units accessible from a corridor.</p> | <p>✓</p> <p>✓ Achieves Design Objective</p> |
| <p>4G Storage</p> | <p>Adequate storage is an important component of apartment design. It is calculated by volume as opposed to floor area and should be provided proportionally to the size of the apartment.</p> <p>Adequate, well designed storage is provided in each apartment.</p> <p>Additional storage is conveniently located, accessible and nominated for individual apartments.</p>  | <p>Storage has been provided in accordance with ADG requirements within apartments and garage areas which provides secure storage for individual use (refer to storage schedule in architectural documentation).</p> | <p>✓</p> |

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| <p>4H Acoustic Privacy</p> | <p>Acoustic privacy is about protecting sound transmission between external and internal spaces, between apartments and communal areas and between apartments within a building.</p> <p>Noise transfer is minimised through the siting of buildings and building layout Noise impacts are mitigated within apartments through layout and acoustic treatments.</p> | <p>The proposed development complies with the requirements of the BCA.</p> <p>Party walls have been designed with the minimum RW rating according to BCA.</p> <p>The majority of the apartment layouts provide similar rooms adjoining each other where possible.</p> <p>Noise from external sources will be treated to ensure compliance with Council's requirements.</p> <p>Acoustic Report has been provided by Harwood Acoustics.</p> | <p>✓</p> |
| <p>4J Noise and Pollution</p> | <p>Properties located near major roads, rail lines and beneath flight paths can be subject to noise and poor air quality. Similarly, hostile and noisy environments such as industrial areas, substations or sports stadiums can have impacts on residential amenity.</p> <p>Careful design solutions can help to improve quality of life in affected apartments by minimising potential noise and pollution impacts.</p> <p>In noisy or hostile environments, the impacts of external noise and pollution are minimised through the careful siting and layout of buildings</p> <p>Appropriate noise shielding or attenuation techniques for the building design, construction and choice of materials are used to mitigate noise transmission.</p> | <p>Shutters and appropriate glazing are provided to the external facade.</p> <p>Acoustic Report has been provided by Harwood Acoustics.</p> | <p>✓</p> |
| <p>CONFIGURATION</p> | | | |
| <p>4K Apartment Mix</p> | <p>Apartment mix refers to the percentage of apartments with different numbers of bedrooms in a development. The number of bedrooms is directly related to floor area which in turn determines the yield that can be generated on the site.</p> | <p>The development provides a range of 1, 2 and 3-bedroom units which is considered appropriate for the local market.</p> <p>More than 20% are provided as adaptable units.</p> | <p>✓</p> |

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| | <p>A range of apartment types and sizes is provided to cater for different household types now and into the future.</p> <p>The apartment mix is distributed to suitable locations within the building.</p> | | |
| <p>4L Ground Floor Apartments</p> | <p>Ground floor apartments offer the potential for at-grade landscaped private open spaces and direct access from the street. They also provide opportunities for the apartment building and its landscape to respond to the human scale of the streetscape. On steep sites they may be located over different floors of the building stepping down the site.</p> <p>Street frontage activity is maximised where ground floor apartments are located.</p> <p>Design of ground floor apartments delivers amenity and safety for residents.</p> | <p>There are no ground floor units.</p> <p>Business premises are located along the upper and lower ground floors.</p> <p>Street frontage is activated by the pedestrian activity to the business premises, residential and business lobbies and forecourt area.</p> | ✓ |
| <p>4M Facades</p> | <p>The design of facades contributes greatly to the visual interest of the building and the character of the local area. Facades that face the street have an impact on the public domain, while side and rear facades often influence the amenity of neighbouring buildings and communal and private open spaces.</p> <p>Building facades provide visual interest along the street while respecting the character of the local area.</p> <p>Building functions are expressed by the facade.</p> | <p>The building elements have been designed with regard to the elements, textures, materials and colours of the locality.</p> <p>The façade is intended to reduce the visual bulk of the building and offers an interesting range of colours, materials and textures which are inspired to create a modern building.</p> <p>The façade materials and colours are gathered from the surrounding environment and buildings such as Stocklands Shellharbour and ‘Shellharbour City Hub’</p> <p>A schedule of materials and finishes has been submitted.</p> | ✓ |
| <p>4N Roof Design</p> | <p>The roof is an important element in the overall composition and design of a building. Quality roof design provides a positive addition to the character of an area and can form an important part of the skyline. Roofs also provide opportunities for open space where appropriate and can add to the sustainability performance of a building.</p> | <p>The roofs have been designed to be a common open area with an extensive garden and amenities for the residents.</p> <p>The roof incorporates BBQ areas, sculptural planting and paving, community gardens, various communal activities. The rooftops serve as an oasis for the residents of the building with a high percentage of landscaped site coverage.</p> | ✓ |

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| | <p>Roof treatments are integrated into the building design and positively respond to the street.</p> <p>Opportunities to use roof space for residential accommodation and open space are maximised</p> <p>Roof design incorporates sustainability features.</p> | <p>Refer to landscape drawings completed by Taylor Brammer Landscape Design for further detail.</p> | |
| <p>4O Landscape Design</p> | <p>Landscape design includes the planning, design, construction and maintenance of all external spaces.</p> <p>Landscape design is viable and sustainable.</p> <p>Landscape design contributes to the streetscape and amenity.</p> | <p>The development will consist of numerous landscaped areas.</p> <p>The landscaped areas contribute to the streetscape in the form of a public domain and forecourt, consisting of sculptural planting and paving features.</p> <p>The landscape design reinforces the established character of trees and landscaping in the immediate locality and forecourt area.</p> <p>The landscaping provides a connection to Shellharbour City Hub building and the Stocklands Shellharbour restaurants and shopping precinct.</p> | <p>✓</p> |
| <p>4P Planting on Structures</p> | <p>Planting on structures is where plants are on top of built structures such as basement car parks, podiums, roofs and walls. Planting on structures can provide amenity, improve air quality and microclimate, and reduce direct energy use and stormwater runoff. It can also supplement deep soil planting on sites where opportunities for this are limited or restricted, e.g. in high density areas.</p> <p>Common ways of planting on structures include green roofs, green walls, raised planters and roof top gardens. Plants grown in these situations are subject to a range of environmental stressors that affect both the health and vigor of the plants.</p> <p>Appropriate soil profiles are provided</p> <p>Plant growth is optimised with appropriate selection and maintenance.</p> | <p>Appropriate planting is provided and integrated with landscaped area around the development.</p> <p>There is extensive planting to the forecourt, level 1 podium, level 4 podium level and roof top common areas.</p> <p>The podium planting is designed to spill over onto the building to soften the street elevations.</p> <p>The extensive planting and sculptural landscaping in the forecourt, podium and rooftop all add to the amenity of the residents and the general public using the street.</p> | <p>✓</p> |

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| | Planting on structures contributes to the quality and amenity of communal and public open spaces. | | |
| 4Q Universal Design | <p>Universally designed apartments are safer and easier to enter, move around and live in. They benefit all members of the community, from young families to older people, their visitors, as well as those with permanent or temporary disabilities.</p> <p>Universal design features are included in apartment design to promote flexible housing for all community members</p> <p>A variety of apartments with adaptable designs are provided.</p> <p>Apartment layouts are flexible and accommodate a range of lifestyle needs.</p> | <p>Multiple entries are provided to the building components, including main street entries and lift and stair access from the basement parking levels.</p> <p>Stair and lift access are provided to all units.</p> <p>Fire egress is provided via stairs and are accessible on all levels, designed to comply with BCA requirements.</p> <p>20% of the units are adaptable.</p> | ✓ |
| 4S Mixed Use | <p>Mixed use development includes multiple uses in one building.</p> <p>In areas zoned for mixed use development building design should allow for a range of non-residential uses. Where the location or site constraints are not suited for retail uses, the design should accommodate other uses such as commercial offices.</p> <p>Mixed use developments are provided in appropriate locations and provide active street frontages that encourage pedestrian movement.</p> <p>Residential levels of the building are integrated within the development, and safety and amenity is maximised for residents.</p> | The development meets the requirement of mixed use with business and residential uses. | ✓ |
| 4T Awnings and Signage | <p>Awnings are prominent streetscape elements requiring considerable design attention.</p> <p>Continuous awnings encourage pedestrian activity along streets and in conjunction with active frontages, support and enhance the vitality of the local area.</p> <p>Awnings are well located and complement and integrate with the building design.</p> <p>Signage responds to the context and desired streetscape character.</p> | <p>Appropriate awnings and lighting are provided to the building entries.</p> <p>Awning shape responds to the building and the surrounding streetscape character and are well integrated into the building design.</p> | ✓ |

| PERFORMANCE | | | |
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| 4U Energy Efficiency | <p>Passive environmental and energy efficient design is about the ability of an apartment to manage thermal performance (thermal comfort) and daylight access, providing increased amenity to occupants and reducing energy costs.</p> <p>Development incorporates passive environmental design.</p> <p>Development incorporates passive solar design to optimise heat storage in winter and reduce heat transfer in summer.</p> <p>Adequate natural ventilation minimises the need for mechanical ventilation.</p> | <p>The proposed business/ commercial space and residential units have been designed for optimal energy efficiency.</p> <p>Refer amended Basix Assessment lodged with application.</p> | ✓ |
| 4V Water Management and Conservation | <p>Water sensitive urban design is the integrated management of water in urban areas. It takes into account all of the elements of the urban water cycle including potable (drinking quality) water, rainwater, wastewater, stormwater and groundwater.</p> <p>Potable water use is minimised.</p> <p>Urban stormwater is treated on site before being discharged to receiving waters.</p> <p>Flood management systems are integrated into site design.</p> | <p>The proposed business/ commercial space and residential units have been designed for optimal energy efficiency.</p> <p>Refer to Water Sensitive Urban Design prepared by ATB Engineers.</p> | ✓ |
| 4W Waste Management | <p>The minimisation and effective management of domestic waste from apartments contributes to the visual and physical amenity of the building as well as limiting potentially harmful impacts on the environment.</p> <p>Waste storage facilities are designed to minimise impacts on the streetscape, building entry and amenity of residents.</p> <p>Domestic waste is minimised by providing safe and convenient source separation and recycling.</p> | <p>Waste management report has been carried out by Elephants Foot Consulting.</p> | ✓ |

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| 4X Building Maintenance | <p>Careful design and material selection can reduce the long-term maintenance obligations of apartment development. In addition, effective maintenance of the development ensures the longevity of buildings, sustaining the value of the property and reducing the life-cycle cost to owners.</p> <p>Building design detail provides protection from weathering.</p> <p>Systems and access enable ease of maintenance.</p> <p>Material selection reduces ongoing maintenance costs.</p> | <p>Maintenance has been addressed as follows:</p> <p>The roof is accessible for maintenance only with the provision of service ladders to comply with Australian Standards and OH&S.</p> <p>Materials will be durable and cleanable. Landscape elements are appropriate for the site condition, with the selection of hardy, low maintenance plantings and paving.</p> <p>Refer to landscape management and maintenance plan from Taylor Brammer Landscape Architects.</p> | ✓ |
|--------------------------------------|--|--|---|



City Plan Strategy & Development P/L
ABN 58 133 501 774



Annexure 7

Photomontage CGI images





Roads and Maritime Services –
2 July 2018;



Our ref: STH18/00116
Contact: Melissa Steep 4221 2423
Your ref: 0262/2018

2 July 2018

Bryce Koop
Shellharbour City Council
council@shellharbour.nsw.gov.au

cc: Bryce.koop@shellharbour.nsw.gov.au

**DEVELOPMENT APPLICATION 0262/2018 – LOT 3 DP 1072916, 16 COLLEGE AVENUE,
SHELLHARBOUR CITY CENTRE, SHOP TOP HOUSING AND BASEMENT PARKING**

Dear Sir/Madam,

Roads and Maritime Services (RMS) refers to your correspondence dated 18 June 2018 regarding the subject development application.

RMS has completed an assessment of the development, based on the information provided and focussing on the impact to the State Road Network. For this development, the key state road is Lake Entrance Road.

RMS does not believe the development will have a significant impact on the State Road Network and on this basis, does not object to the development application.

If you have any questions please contact Melissa Steep on 4221 2423.

Please ensure that any further email correspondence is sent to development.southern@rms.nsw.gov.au.

Yours faithfully,

A handwritten signature in blue ink, appearing to read "Chris Millet".

Chris Millet
Manager Land Use
Southern Region

29 March 2019;



Our ref: STH18/00116/02
Contact: Melissa Steep 4221 2771
Your ref: DA0262/2018

29 March 2019

Bryce Koop
Shellharbour City Council
council@shellharbour.nsw.gov.au

cc: Bryce.koop@shellharbour.nsw.gov.au

**DEVELOPMENT APPLICATION 0262/2018 – LOT 3 DP 1072916, 16 COLLEGE AVENUE,
SHELLHARBOUR, MIXED USE DEVELOPMENT**

Dear Bryce,

Roads and Maritime Services (RMS) refers to your correspondence dated 21 March 2019 regarding the subject development application.

RMS has completed an assessment of the development, based on the information provided and focussing on the impact to the State Road Network. For this development, the key state road is Lake Entrance Road.

RMS does not believe the development will have a significant impact on the State Road Network and on this basis, does not object to the development application.

If you have any questions please contact Melissa Steep on 4221 2771.

Please ensure that any further email correspondence is sent to development.southern@rms.nsw.gov.au.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Chris Millet', is written over a horizontal line.

Chris Millet
Manager Land Use
Southern Region

Sydney Water –
16 April 2019;



FERRY, CALEB <CALEB.FERRY@sydneywater.com.au>

Information Management; Bryce Koop ▾

16/04/2019

DA0262/2018 - Sydney Water Comments - 16 College Avenue, Shellharbour City Centre

Dear Mr Koop,

Sydney Water previously provided advice on this development back in August 2018 requiring the applicant to obtain a Building Plan Approval and Section 73 certificate.

Please find this advice detailed below.

Due to the proximity of the proposed development to Sydney Water assets, we recommend that the Council impose the following conditions of consent:

Building Plan Approval

The approved plans must be submitted to the Sydney Water [Tap in™](#) online service to determine whether the development will affect any Sydney Water sewer or water main, stormwater drains and/or easement, and if further requirements need to be met.

The Sydney Water Tap in™ online self-service replaces our Quick Check Agents as of 30 November 2015.

The [Tap in™](#) service provides 24/7 access to a range of services, including:

- building plan approvals
- connection and disconnection approvals
- diagrams
- trade waste approvals
- pressure information
- water meter installations
- pressure boosting and pump approvals
- changes to an existing service or asset, e.g. relocating or moving an asset.

Sydney Water's [Tap in™](#) online service is available at:

<https://www.sydneywater.com.au/SW/plumbing-building-developing/building/sydney-water-tap-in/index.htm>

Section 73 Certificate

A Section 73 Compliance Certificate under the *Sydney Water Act 1994* must be obtained from Sydney Water.

It is recommended that applicants apply early for the certificate, as there may be water and sewer pipes to be built and this can take some time. This can also impact on other services and building, driveway or landscape design.

Application can be made through an authorised Water Servicing Coordinator. For help either visit www.sydneywater.com.au > Plumbing, building and developing > Developing > Section 73 Compliance Certificates or telephone 13 20 92.

If you require any further information, please contact me on the details below.

Regards,

Caleb Ferry | Student Town Planner

Growth Planning & Development

Liveable City Solutions

Sydney Water, Level 7, 1 Smith Street, Parramatta NSW 2150

**Sydney
WATER**

Ph 02 8849 4269

caleb.ferry@sydneywater.com.au

Civil Aviation Safety Authority –
21 December 2018;



Australian Government
Civil Aviation Safety Authority

AIR NAVIGATION, AIRSPACE AND AERODROMES

CASA Ref: F17/8039-7

21 December 2018

Ms Adele Badenhorst
Airport Compliance and Operations Coordinator
Shellharbour City Council
Locked Bag 155
Shellharbour City Centre NSW 2529

DA0262/2018

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|-------------|
| Doc No. |
| 07 JAN 2019 |
| Batch No. |
| Rev No. |

Dear Ms Badenhorst,

Proposed development – 16 College Avenue, Shellharbour

CASA has assessed the proposed development (the proposed building) at 16 College Avenue, Shellharbour.

The proposed building, at an overall height of 76 m above Australian Height Datum (AHD), would penetrate the Conical Surface of the future Obstacle Limitation Surfaces (OLS) for Wollongong Aerodrome by approximately 7 m. The proposed building is not shielded by any other lit structure, or terrain in the area.

As a Code 2 non-instrument runway, the current Runway 08 Take-off Surface and Runway 26 Approach Surface of the OLS are not affected.

Wollongong Aerodrome Manual Part 2 Section 12 states:

" A proposed structure will not normally be approved if it will penetrate the OLS. Applications for the erection of structures are referred to the Aerodrome Engineer for approval. Any crane to be used for construction shall also be taken into consideration. The Aerodrome Engineer will assess the likely infringement of the OLS and if necessary, refer the proposal to CASA for operational advice and hazard determination. These requests are directed to the Aerodrome Inspector. In assessing the compatibility of a proposed structure, the Aerodrome Engineer will weigh the cost of preventing, or perhaps removing the obstacle in the future, against the restrictions imposed by the obstacle on the aerodromes' immediate and long-term usability."

Given Council's plans to upgrade Runway 08/26 to an instrument non-precision runway, CASA recommends that a procedure designer is consulted to determine whether the future provision of an instrument approach to runway 08/26 is possible and therefore whether the protection of future terminal instrument procedures is necessary.

CASA's determination is that the proposed building will be a hazardous object because of its location, height, and lack of obstacle lighting in accordance with r139.370 of the Civil Aviation Safety Regulations 1998 (CASR).

CASA recommendations are:

- The proposed building is to obstacle lit by low intensity steady red lighting during the hours of darkness at the highest point of the building. Obstacle lights are to be arranged to ensure the building can be observed in a 360° radius as per subsection 9.4.3 of the Manual of Standards Part 139 - Aerodromes (MOS Part 139). Characteristics for low intensity lights are stated in subsection 9.4.6 of the Manual of Standards Part 139 – Aerodromes (MOS);
- Obstacle lighting is to have a remote monitoring capability, in lieu of observation every 24 hours, to alert Wollongong Aerodrome reporting staff of any outage. For detailed requirements for obstacle monitoring, within the OLS of the aerodrome, refer to the subsection 9.4.10 of the MOS;
- The proponent is to provide information to the Council that the obstacle lighting provisions are in accordance with the MOS; and
- The proponent is to inform the Council, upon completion, of the finished building heights.

This assessment is based on the overall height of 76.0 m AHD and any future addition will increase the penetration of the OLS that will require a separate assessment by CASA.

CASA recommends that construction cranes should be reviewed at the planning stage of the development.

Further, CASA recommends that any external lighting is to comply with regulation 94 of the Civil Aviation Regulations 1988 (CAR 1988) and section 9.21 'Lighting in the Vicinity of Aerodromes' of the MOS.

The information on all tall structures is held in a central database that is managed by Airservices. The proponent should advise Airservices upon completion and confirm the finished height and location to allow for entry into the Aeronautical Information Package (AIP). Information on tall structures and any queries about the database should be directed to:

Business Reply Post
GPO Box 367, Canberra, ACT, 2600
AIRSERVICES AUSTRALIA
ATTN: AIR TRAFFIC MANAGEMENT: DATA SERVICES
Tel: (02) 6268 5596
Email: vod@airservicesaustralia.com

If you require any clarification, please contact me on (02) 8651-3110 or email: slavica.despotovic@casa.gov.au

Yours sincerely



Slavica Despotovic
A/ Team Leader Aerodromes
CASA Sydney Office

Endeavour Energy -

09/07/2018;



Cornelis Duba <Cornelis.Duba@endeavourenergy.com.au>

Information Management; Bryce Koop; Jennie Saban

7

09/07/2018

DA0262/2018 - Endeavour Energy - 16 College Avenue, Shellharbour City Centre

| | | |
|--|--|---|
| | Endeavour Energy Technical Review Request FPJ 6007 July 2017.pdf .pdf File | ▼ |
| | Endeavour Energy Guide to Fencing, Retaining Walls & Maintenance Aroundpdf .pdf File | ▼ |
| | emf-what-we-know-jan-2014-final_1_1.pdf | ▼ |

The General Manager
Shellharbour City Council

ATTENTION: Bryce Koop, Senior Development Assessment Officer

Dear Sir or Madam

I refer to Council's letter of 18 June 2018 regarding Development Application No. 0262/2018 at 16 College Avenue, Shellharbour City Centre (Lot 3 DP 1072916) for 'Shop Top Housing Consisting Of Eight Business Premises And 84 Residential Apartments And Basement Parking'. Submissions need to be made to Council by 9 July 2018.

As shown in the below site plans from Endeavour Energy's G/Net master facility model (and the extract from Google Maps Street View) there is:

- An easement over the site benefitting Endeavour Energy (indicated by red hatching) for padmount substation no. 22788 to the Bimbala place road frontage.
- Low voltage and 11,000 volt / 11 kV high voltage underground cables to the Mollawang Place and Bimbala Place road verges / roadways (including streetlights).
- Low voltage underground cables to the College Avenue and Cygnet Avenue road verges / roadways (including streetlights).
- Underground earth cables from padmount substation no. 22788 to the Bimbala Place road verge roadway and crossing College Avenue.

Please note the location, extent and type of any electricity infrastructure, boundaries etc. shown on the plan is indicative only. Generally (depending on the scale and/or features selected), low voltage (normally not exceeding 1,000 volts) is indicated by blue lines and high voltage (normally exceeding 1,000 volts but for Endeavour Energy's network not exceeding 132,000 volts / 132 kV) by red lines (these lines can appear as solid or dashed and where there are multiple lines / cables only the higher voltage may be shown). This plan only shows the Endeavour Energy network and does not show electricity infrastructure belonging to other authorities or customers owned electrical equipment beyond the customer connection point / point of supply to the property. This plan is not a 'Dial Before You Dig' plan under the provisions of Part 5E 'Protection of underground electricity power lines' of the *Electricity Supply Act 1995* (NSW).

In regards to the padmount substation easement on the site, Endeavour Energy has noted that the Statement of Environmental Effects does not appear to address this in any detail ie.

2.4 Site Analysis

The site analysis is the foundation of good design and is used as an initial source of information upon which to base the design and configuration of development taking account of all environmental constraints and opportunities, as they relate to the unique features of the site and nearby land.

Objectives:

- *Identify the constraints and opportunities for the development of the site.*
- *Provide an understanding of how the development relates to the site.*
- *Identify the capability and suitability of the site for development.*

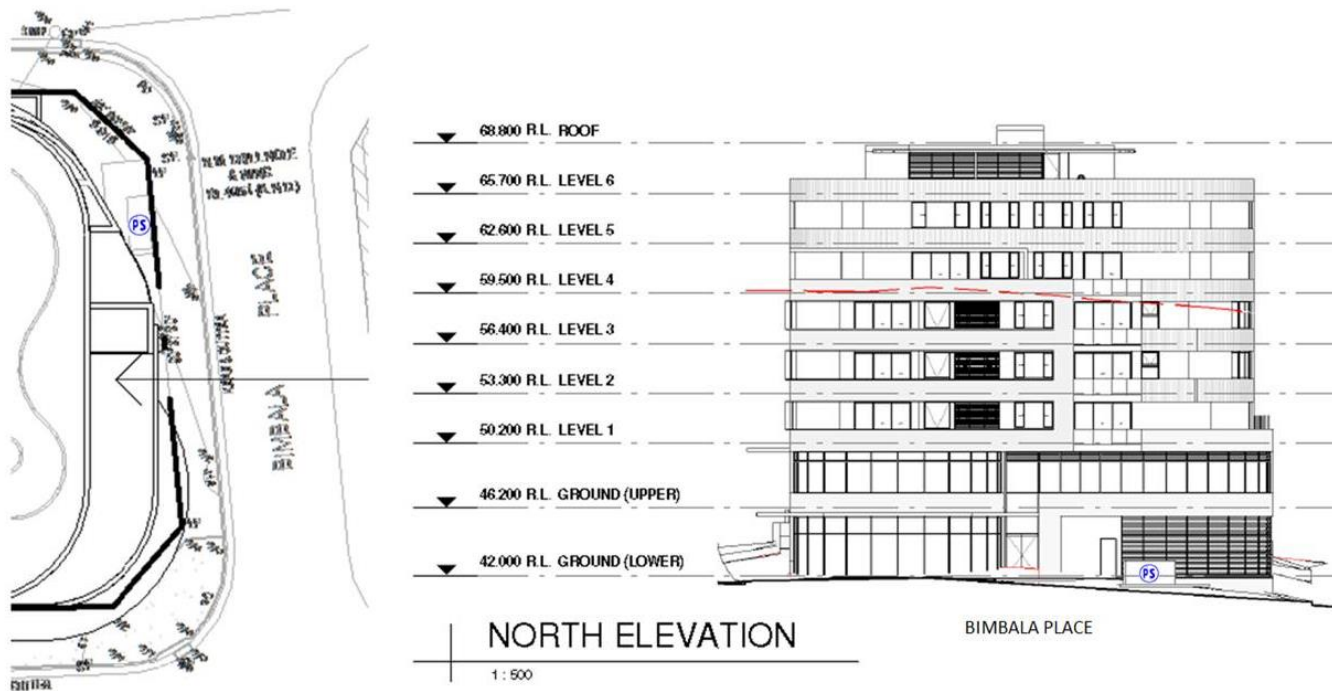
A Site Analysis Plan is provided in support of the development application. The scope of the site analysis has addressed:

vii) *easements, services, existing infrastructure and utilities;*

Response: Services have been identified. Refer to the Survey plan.

Section 4.2.5 State Environmental Planning Policy (Infrastructure) 2007, only discusses the level of traffic noise intrusion.

In the following extracts of the Notification Plans the location of the padmount substation (PS) has been highlighted.



As per the attached copy of Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' the easements for padmount substations now also include additional clearances / restrictions for fire rating. These were introduced on a case for case basis from 2003 before becoming standard in 2009. DP 1072916 was registered on 16 September 2004 but does not include the restrictions for fire ratings. Whilst the fire rating restriction is not included with the easement registered on title, Endeavour Energy strongly recommends that it be considered and adopted for any new development – particularly in this instance being part nine (9) and eight (8) storey shop top housing development. Should the existing padmount substation require augmentation (please refer to the below point 'Network capacity / Connection') the Level 3 Accredited Service Provider's (ASP) would be responsible (engaged by the developer) to make sure that the substation location and design complies with Endeavour Energy's current standards in regards to the suitability of access, safety clearances, fire ratings, etc.

The fire exclusion zone for a padmount substation as referred to in Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights' extends in plane 3 metres horizontally and 6 metres vertically from the base of the physical substation. Overhanging structures of any kind or at any height are not allowed over the substation easement area. Figure 47 from Endeavour Energy's Mains Construction Instruction MCI0006 'Underground distribution: Construction standards manual' explains this:

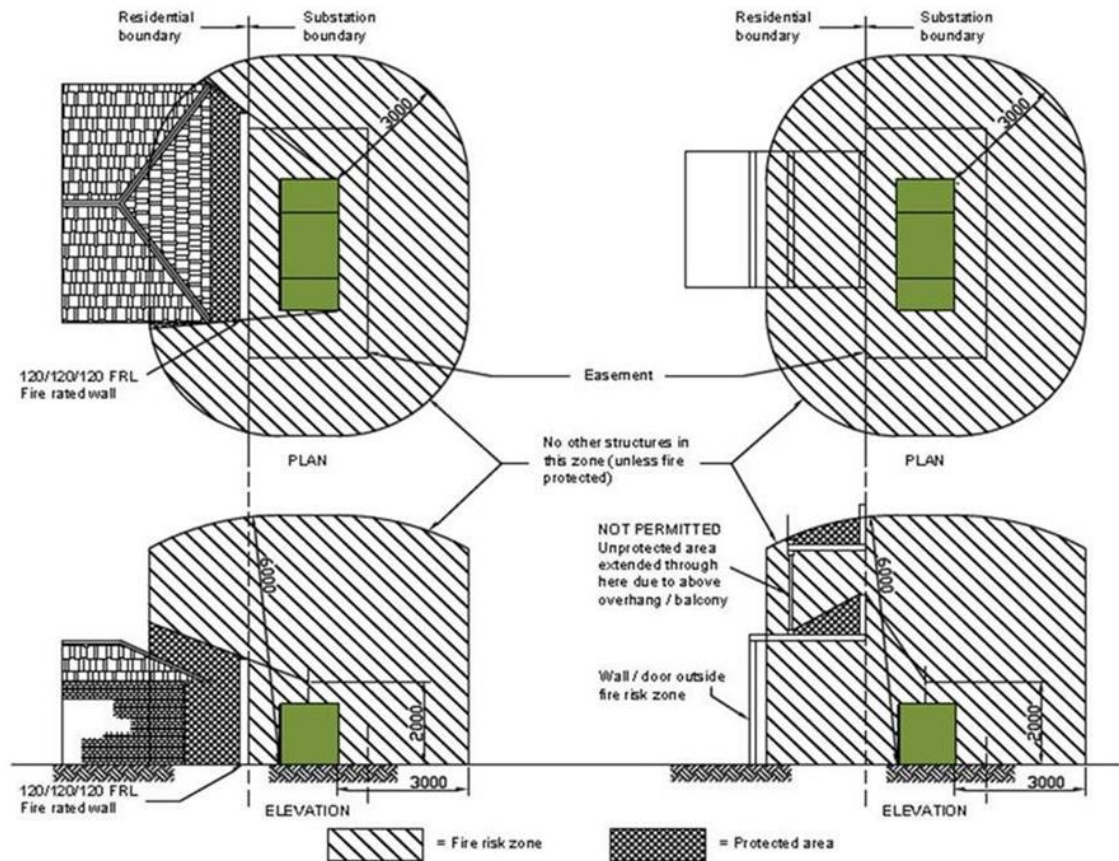


Figure 47 - Typical effect of screen walls

This is also outlined in Endeavour Energy's Mains Design Instructions MDI0028 'Underground distribution network design' and the Australian Standard AS2067: 2016 'Substations and high voltage installations exceeding 1 kV a.c.'. This excludes any constructions with non-fire rated materials being allowed within the fire clearance zone.

Subject to the foregoing and the following recommendations and comments Endeavour Energy has no objection to the Development Application.

- Network Capacity / Connection

Endeavour Energy has noted that the Statement of Environmental Effects does not appear to address in detail the suitability of the site for the development in regards to whether utility services are available and adequate for the development.

Utilities:

The proposal is not envisaged to place an unreasonable demand on utilities supply.

The availability of supply to a site is based on a wide range of factors eg. the age and design of the network; other development in the locality utilising previously spare capacity within the local network; the progress of nearby / surrounding sites including electricity infrastructure works eg. a smaller and isolated development that may not of its own accord require a padmount substation may require a padmount substation to facilitate the development and from which the spare capacity is made available to subsequent nearby development ie. a padmount substation can accommodate loads from 315 kVA up to 1,500 kVA (typically 500 kVA) ie. there is a significant variation in the number and type of premises able to be connected to a substation. In this instance padmount substation no. 22788 currently has 7 customer connection points servicing 25 premises.

The following site plan from Endeavour Energy's G/Net master facility model shows the site is part of a 'Work Polygon' (shown by the coloured highlighting and/or hatching of the lot) indicating enquiries and applications for proposed contestable works projects with Endeavour Energy's Network Connections Branch for electricity supply to the development for urban commercial subdivision (Endeavour Energy's reference UCS0063 & UCS0143). As such, Endeavour Energy's Network Connections Branch managed the conditions of supply with the proponent and their authorised service provider (ASP) for the Shellharbour City Centre. Whilst there are customer connection points provided to the lot as part of the subdivision, the Supply / Connection Offer related to the subdivision is based on a desktop assessment using an After Diversity Maximum Demand (AMMD) where demand is aggregated over a large number of customers providing an ADMD for the site / per lot. Depending on the actual development proposed for the site, the ADMD provided may not be sufficient. If the proposed development results in an electricity load that is outside of the AMMD, an application for additional load is required eg. the hatching on the lots within the 'Work Polygon' for the Shellharbour City Centre indicates that there have been additional enquiries and applications for load and proposed contestable works projects.



In due course the applicant for the future proposed development of the site may need to submit an application for connection of additional load via Endeavour Energy's Network Connections Branch to carry out the final load assessment and the method of supply will be determined. With the Statement of Environmental Effects indication total Gross Floor Area (GFA) of approximately 2,129.29 m², the existing local network should be able to supply the proposed development but an extension or augmentation of the network may be required. However this cannot be determined for certain until the final load assessment is completed. Further details are available by contacting Endeavour Energy's Network Connections Branch via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 8am - 5:30pm or on Endeavour Energy's website under 'Home > Residential and business > Connecting to our network' via the following link:

<http://www.endeavourenergy.com.au/>

Advice on the electricity infrastructure required to facilitate the proposed development can be obtained by submitting a Technical Review Request to Endeavour Energy's Network Connections Branch, the form for which FPJ6007 is attached and further details (including the applicable charges) are available from Endeavour Energy's website under 'Our connection services'. The response to these enquiries is based upon a desktop review of corporate information systems, and as such does not involve the engagement of various internal stakeholders in order to develop a 'Connection Offer'. It does provide details of preliminary connection requirements which can be considered by the applicant prior to lodging a formal application for connection of load.

Alternatively the applicant should engage a Level 3 Accredited Service Provider (ASP) approved to design distribution network assets, including underground or overhead. The ASP scheme is administered by NSW Trade & Investment and details are available on their website via the following link or telephone 13 77 88:

<http://www.resourcesandenergy.nsw.gov.au/energy-supply-industry/pipelines-electricity-gas-networks/network-connections/contestable-works>

- Easement Management / Network Access

The following is a summary of the usual / main terms of Endeavour Energy's electrical easements requiring that the land owner:

- o Not install or permit to be installed any services or structures within the easement site.
- o Not alter the surface level of the easement site.
- o Not do or permit to be done anything that restricts access to the easement site without the prior written permission of Endeavour Energy and in accordance with such conditions as Endeavour Energy may reasonably impose.

Endeavour Energy's preference is for no activities or encroachments to occur within its easement areas. Most activities are prohibited within the padmount substation easement area. However, if any proposed works (other than those approved / certified by Endeavour Energy's Network Connections Branch as part of an enquiry / application for load) will encroach/affect Endeavour Energy's easements, contact must first be made with the Endeavour Energy's Easements Officer, Jennie Saban, on mobile 0417484402 or alternately via email Jennie.Saban@endeavourenergy.com.au.

Please find attached for the applicant's reference a copy Endeavour Energy's 'Guide to Fencing, Retaining Walls and Maintenance Around Padmount Substations'.

It is imperative that the access to the existing electrical infrastructure adjacent and on the site is maintained at all times. To ensure that supply electricity is available to the community, access to the electrical assets may be required at any time.

- Prudent Avoidance

The electricity network is operational 24/7/365 ie. all day, every day of the year. The electricity industry has adopted a policy of prudent avoidance by doing what can be done without undue inconvenience and at modest expense to avert the possible risk to health from exposure to emissions from electricity infrastructure such as electric and magnetic fields (EMF) and noise which generally increase the higher the voltage ie. Endeavour Energy's network ranges from low voltage (normally not exceeding 1,000 volts) to high voltage (normally exceeding 1,000 volts but not exceeding 132,000 volts / 132 kV). In practical terms this means that when designing new transmission and distribution facilities, consideration is given to locating them where exposure to the more sensitive uses is reduced and increasing separation distances. These emissions are generally not an issue but with Council's permitting or encouraging development with higher density, reduced setbacks and increased building heights, new development can impact on existing electricity infrastructure. Where development is proposed in the vicinity of electricity infrastructure, Endeavour Energy is not responsible for any amelioration measures for such emissions that may impact on the nearby proposed development. Endeavour Energy believes that likewise Council should also adopt a policy of prudent avoidance by the siting of more sensitive uses away from any electricity infrastructure – including any possible future electricity infrastructure required to facilitate the proposed development.

Please find attached a copy of ENA's 'Electric & Magnetic Fields – What We Know, January 2014' which can also be accessed via the ENA's website at <http://www.ena.asn.au/> and provides the following advice:

Localised EMFs may also be encountered in specific situations such as near substations, underground cables, specialised electrical equipment, or at elevated locations near lines. Note that the strengths of EMFs decrease rapidly with distance from the source.

Typical magnetic field measurements associated with Endeavour Energy's activities and assets given the required easement widths, safety clearances etc. and having a maximum voltage of 132,000 volt / 132 kV, will with the observance of these separation distances not exceed the recommended magnetic field public exposure limits.

- Vegetation Management

The planting of large trees in the vicinity of electricity infrastructure is not supported by Endeavour Energy. Suitable planting needs to be undertaken in proximity of electricity infrastructure. Larger trees should be planted well away from electricity infrastructure and even with underground cables, be installed with a root barrier around the root ball of the plant. Landscaping that interferes with electricity infrastructure may become subject to Endeavour Energy's Vegetation Management program and/or the provisions of the Electricity Supply Act 1995 (NSW) Section 48 'Interference with electricity works by trees' by which under certain circumstances the cost of carrying out such work may be recovered.

- Dial Before You Dig

Before commencing any underground activity the applicant is required to obtain advice from the **Dial Before You Dig 1100** service in accordance with the requirements of the Electricity Supply Act 1995 (NSW) and associated Regulations. This should be obtained by the applicant not only to identify the location of any underground electrical and other utility infrastructure across the site, but also to identify them as a hazard and to properly assess the risk.

- Excavation

The applicant should be advised of the following object of Section 49A 'Excavation work affecting electricity works' of the Electricity Supply Act 1995 (NSW) covering the carrying out or proposed carrying out of excavation work in, on or near Endeavour Energy's electrical infrastructure.

Electricity Supply Act 1995 No 94

Current version for 8 January 2016 to date (accessed 30 March 2016 at 08:12)
[Part 5](#) > [Division 2](#) > Section 49A

<< page >>

49A Excavation work affecting electricity works

- (1) This section applies if a network operator has reasonable cause to believe that the carrying out or proposed carrying out of excavation work in, on or near its electricity works:
 - (a) could destroy, damage or interfere with those works, or
 - (b) could make those works become a potential cause of bush fire or a potential risk to public safety.
- (2) In those circumstances, a network operator may serve a written notice on the person carrying out or proposing to carry out the excavation work requiring the person:
 - (a) to modify the excavation work, or
 - (b) not to carry out the excavation work, but only if the network operator is of the opinion that modifying the excavation work will not be effective in preventing the destruction or damage of, or interference with, the electricity works concerned or in preventing those works becoming a potential cause of bush fire or a potential risk to public safety.

SRPP No. 2018STH0017
Development Application No. 0262/2018
Lot 3, DP 1072916, 16 College Avenue, Shellharbour City Centre
Attachment 7 – External Referrals & Record of Public Exhibition Notices

With the increased number of developments incorporating basements often being constructed to the property boundaries, the integrity of the nearby electricity infrastructure can be placed at risk.

If any excavation work affects Endeavour Energy's electricity infrastructure, prior contact must be made to Endeavour Energy's Regional Services South via Head Office enquiries on telephone: 133 718 or (02) 9853 6666 from 8am - 5:30pm or alternately email RegionalServices.South@endeavourenergy.com.au.

- Public Safety

Workers involved in work near electricity infrastructure run the risk of receiving an electric shock and causing substantial damage to plant and equipment. I have attached Endeavour Energy's public safety training resources, which were developed to help general public / workers to understand why you may be at risk and what you can do to work safely. The public safety training resources are also available via Endeavour Energy's website via the following link:

<http://www.endeavourenergy.com.au/wps/wcm/connect/ee/nsw/nsw+homepage/communitynav/safety/safety+brochures>

If the applicant has any concerns over the proposed works in proximity of the electricity infrastructure, as part of a public safety initiative Endeavour Energy has set up an email account that is accessible by a range of multiple stakeholders across the company in order to provide more effective lines of communication with the general public who may be undertaking construction activities in proximity of electricity infrastructure such as builders, construction industry workers etc. The email address is Construction.Works@endeavourenergy.com.au.

- Emergency Contact

In case of an emergency relating to Endeavour Energy's electrical network, the applicant should note the Emergencies Telephone is 131 003 which can be contacted 24 hours/7 days.

I appreciate that not all the foregoing issues may be directly relevant or significant to the Development Application. However, Endeavour Energy's preference is to alert proponents / applicants of the potential matters that may arise should development within closer proximity of the existing and/or required electricity infrastructure needed to facilitate the proposed development on or in the vicinity of the site occur.

Could you please pass on a copy of this submission and the attached resources to the applicant? Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified above in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to Property@endeavourenergy.com.au is preferred.

Yours faithfully

Cornelis Duba

Development Application Specialist

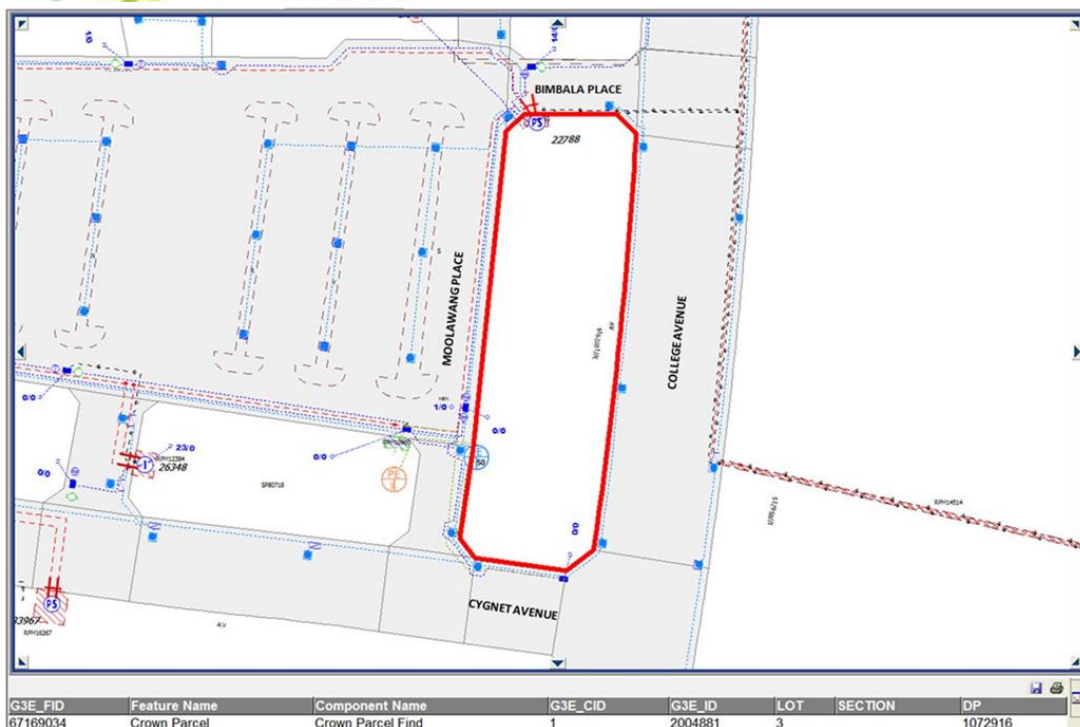
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11/04/2019;




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DA0262/2018 - Endeavour Energy - Report - 16 College Avenue SCC

 Shellharbour City Council Development Application No. 0262/2018 RE 16 College Avenue, Shellharbour City Centre
Outlook item

 Endeavour Energy MDI0044 Easements and Property Tenure.pdf
1 MB

 Endeavour Energy FPJ 6007 Technical Review Request July 2018.pdf

The General Manager
Shellharbour City Council

ATTENTION: Bryce Koop, Senior Development Assessment Officer

Dear Sir or Madam

I refer to Council's attached letter of 21 March 2019 regarding Development Application No. 0262/2018 at 16 College Avenue, Shellharbour City Centre (Lot 3 DP 1072916) for 'Mixed Use Development - Seven Storey Building Comprising Eight Business Premises and 77 Residential Apartments as Shop Top Housing Including Two Basement Parking Levels and Roof Top Common Area'. Submissions need to be made to Council by 11 April 2019.

Please find attached a copy of Endeavour Energy's submission made to Council on 9 July 2018 regarding Development Application No. 0262/2018 at 16 College Avenue, Shellharbour City Centre (Lot 3 DP 1072916) for 'Shop Top Housing Consisting Of Eight Business Premises And 84 Residential Apartments And Basement Parking'. The recommendations and comments provided therein remain valid.

Subject to the foregoing and the following additional recommendations and comments Endeavour Energy has no objection to the Development Application.

- Network Capacity / Connection

Endeavour Energy has noted that the Statement of Environmental Effects does not appear to address in detail the suitability of the site for the development in regards to whether the available electricity services are adequate for the development.

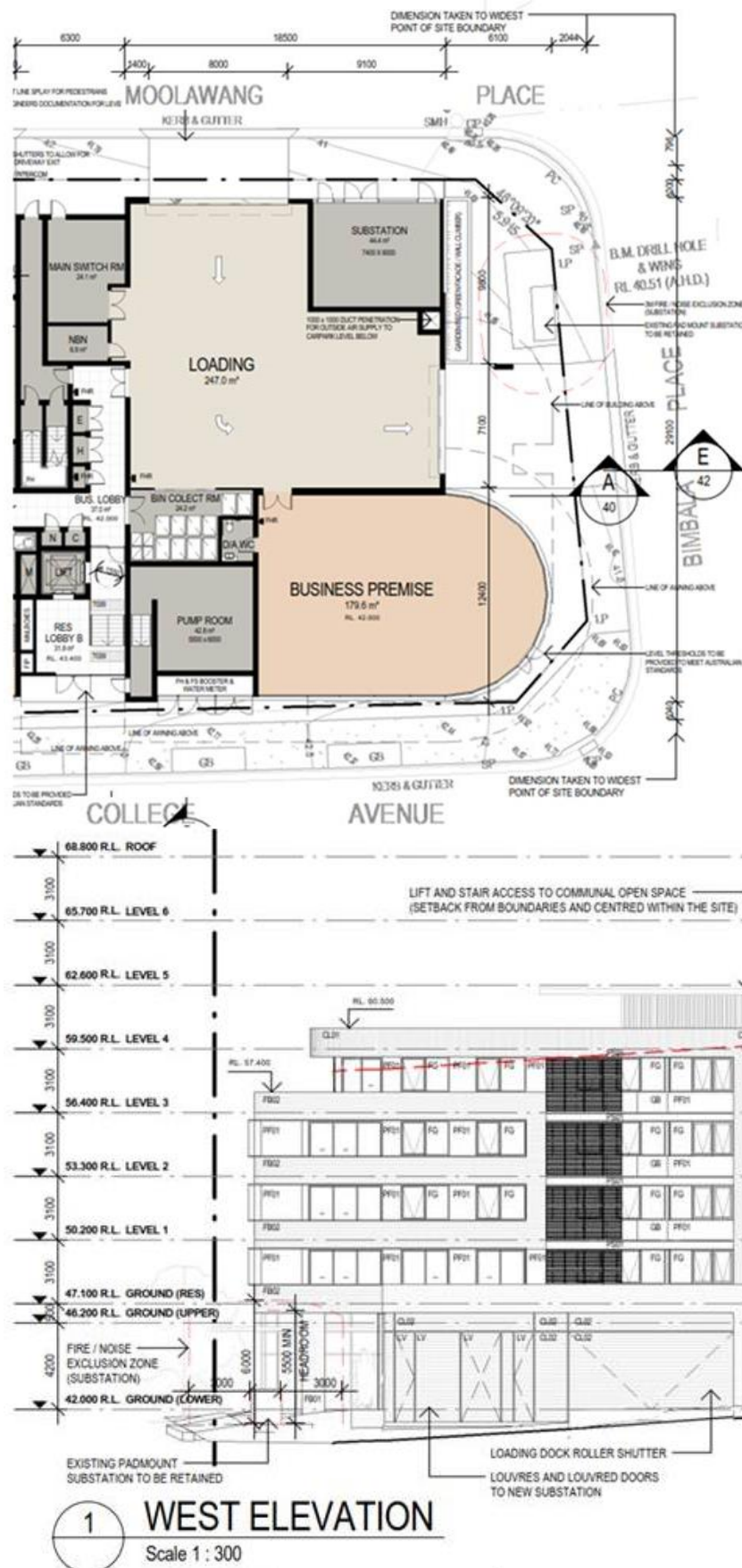
Remaining SLEP 2013 Provisions

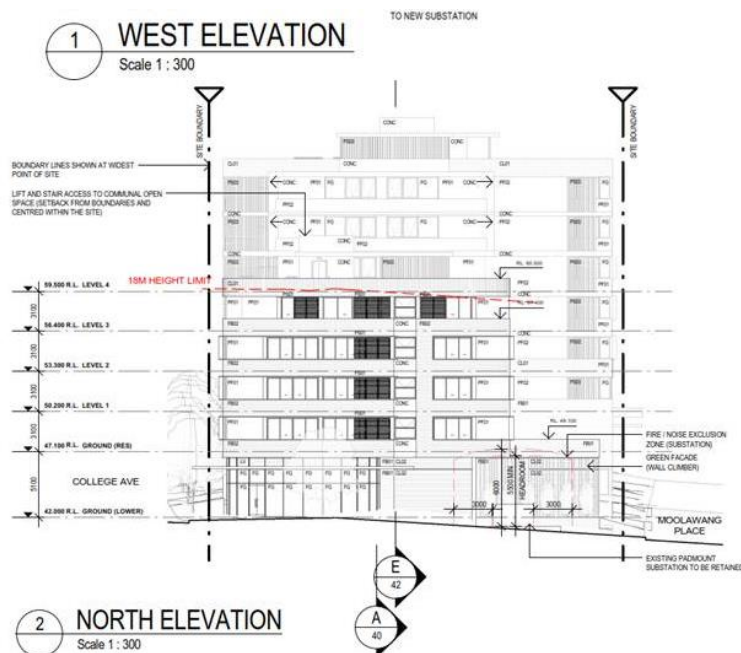
| Relevant Clause | Comment | Comply |
|----------------------------------|---|--------|
| Clause 6.9 Essential services | Before determining a DA, this clause requires the consent authority to be satisfied that essential utilities would be available to the proposal. The subject site is capable of being serviced by water, electricity, sewer as well as direct vehicular and pedestrian access services, as required by the clause. | Yes |

Endeavour Energy's Network Connections Branch has advised that padmount substation no. 22788 at a reading taken in 2017 was at approximately at 50% of its maximum load and confirmed that for the new development, the developer will need to install a new substation on site to establish supply.

With reference to the following extracts of the Architectural Plans, given the inclusion of a new indoor substation to the Moolawang Place road frontage, potentially padmount substation no. 22788 to the Bimbala Place road frontage could be decommissioned if adequate alternative supply is provided within the new indoor substation ie. larger capacity transformers would be needed. Whilst not necessarily required to establish supply for the proposed development, this would have the advantage of addressing the fire restriction zone for the padmount substation as well as potentially providing additional developable area and improving the streetscape.

Attachment 7 Page12





From Endeavour Energy's perspective the fact that provision is being made for the substation is a positive. As per the attached copy of Endeavour Energy's Mains Design Instruction MDI 0044 'Easements and Property Tenure Rights', Section 5.3.5 'Indoor substations' outlines the easement requirements for an indoor substation. Generally it is the Level 3 Accredited Service Provider's (ASP) responsibility (engaged by the developer) to make sure that the substation location and design complies with Endeavour Energy's standards the suitability of access, safety clearances, fire ratings, flooding etc. As a condition of the Development Application consent Council should request the submission of documentary evidence from Endeavour Energy confirming that satisfactory arrangements have been made for the connection of electricity and the design requirements for the substation, prior to the release of the Construction Certificate / commencement of works.

5.3.5 Indoor substations

The boundaries of an easement for indoor substation must be defined by the internal face of the walls, ceiling, floor, and cable trenches of the substation room.

An easement for the cables that enter and exit the substation room will also be required if they are not installed within public roads and/or existing Endeavour Energy easements.

A right of access may also be required to give Endeavour Energy employees, vehicles, and equipment unrestricted access to the indoor substation at all times.

- Earthing

The construction of any building or structure (including fencing, signage, flag poles, hoardings etc.) whether temporary or permanent that is connected to or in close proximity to Endeavour Energy's electrical network is required to comply with Australian/New Zealand Standard AS/NZS 3000:2018 'Electrical installations' as updated from time to time. This Standard sets out requirements for the design, construction and verification of electrical installations, including ensuring there is adequate connection to the earth. Inadequate connection to the earth to allow a leaking/fault current to flow into the grounding system and be properly dissipated places persons, equipment connected to the network and the electricity network itself at risk from electric shock, fire and physical injury.

I appreciate that not all the foregoing issues may be directly relevant or significant to the Development Application. However, Endeavour Energy's preference is to alert proponents / applicants of the potential matters that may arise should development within closer proximity of the existing and/or required electricity infrastructure needed to facilitate the proposed development on or in the vicinity of the site occur.

Could you please pass on a copy of this submission and the attached resources to the applicant? Should you wish to discuss this matter, or have any questions, please do not hesitate to contact me or the contacts identified in the attachment in relation to the various matters. Due to the high number of development application / planning proposal notifications submitted to Endeavour Energy, to ensure a response contact by email to property.development@endeavourenergy.com.au is preferred.

Yours faithfully
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Public Exhibition Notice;
28 June 2018;





Re-Public Exhibition Notice;
21/03/2019;



