

Annexure 2

Urban Design Planners Referral Response

28 August 2017

REFERRAL RESPONSE URBAN DESIGN

1.1.2 FILE NO: Development Applications/ 359/2017/1

1.1.3

1.1.4 ADDRESS: 30-36 Bay Street DOUBLE BAY 2028

1.1.5

1.1.6 PROPOSAL: Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars) and the removal of a tree at the rear of 28 Bay Street. The proposal also includes a Voluntary Planning Agreement (VPA) with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (Council has not considered the VPA offered by the applicant nor has it proposed to enter into an agreement in accordance with Clause 25D of the EPA Regulations but is provided for information only)

1.1.7

1.1.8 FROM: Tom Jones
Urban Design

1.1.9

1.1.10 TO: Mr D Lukas

Information

Architectural drawings:

GSA August 2017

DRAWING LIST			
Sheet Number	Sheet Name	Sheet Issue Date	Current Revision
0000 - 0999 - TITLE PAGE/LOCATION PLAN			
DA0000	DRAWING SCHEDULE / SITE LOCATION PLAN	10/05/16	E
1000 - 1099 - DEMOLITION PLANS			
DA1000	DEMOLITION PLAN - EXISTING SITE PLAN	10/05/16	C
1100 - 1199 - SITE PLANS			
DA1100	SITE ANALYSIS	10/18/16	B
DA1110	PROPOSED SITE PLAN	10/05/16	E
DA1200	SOLAR STUDY PLANS - 9AM TO 12 PM	11/08/16	F
DA1201	SOLAR STUDY PLANS - 1PM TO 3PM	08/06/16	C
DA1210	SOLAR STUDY - EYE OF SUN - 9AM TO 12PM	11/08/16	D
DA1211	SOLAR STUDY - EYE OF SUN - 1PM TO 3PM	08/06/16	C
DA1221	SOLAR STUDY - SHADOW DIAGRAMS	03/23/17	C
2000 - 2199 - FLOOR PLANS			
DA2000	BASEMENT PLAN	10/05/16	J
DA2001	GROUND LEVEL PLAN	10/05/16	K
DA2002	LEVEL 1 FLOOR PLAN	10/05/16	G
DA2003	LEVEL 2 TO 4 FLOOR PLAN	10/05/16	G
DA2006	LEVEL 5 FLOOR PLAN	10/05/16	H
DA2007	LEVEL 6 FLOOR PLAN	10/05/16	I
DA2008	ROOF PLAN	10/05/16	I
3000 - 3099 - ELEVATIONS			
DA3000	ELEVATIONS - NORTH & EAST	10/05/16	H
DA3001	ELEVATIONS - NORTH WEST AND SOUTH	10/05/16	G
DA3002	ELEVATIONS - SOUTH WEST & NORTH WEST	10/05/16	G
3100 - 3199 - SECTIONS			
DA3100	SECTION 1	10/05/16	E
DA3101	SECTION 2	11/25/16	E
3200 - 3299 - PERSPECTIVES			
DA3200	Photomontage 1	10/18/16	B
DA3201	Photomontage 2	10/18/16	B
4000 - 4999			
DA4100	GFA, CROSS VENTILATION & SOLAR ACCESS	10/18/16	H
DA4200	UNIT TYPES DIAGRAMS	10/18/16	E
5000 - 5099 - ADAPTABLE UNITS			
DA5000	ADAPTABLE TYPE 1	10/27/16	C
6000 - 6999			
DA6002	MATERIALS BOARD	04/13/17	B
TOTAL : 27			

Statement of Environmental Effects
Survey:

Ingram Planning Job No.16161 August 2017
Norton Survey Partners 13.5.2016

Background

This DA is assessed and determined on the basis of the current controls. It is not open to Council to depart from our existing development standards unless an objection submitted under clause 4.6 of WLEP 2014 is upheld.

Context

The proposed development is positioned on Bay Street and Guilfoyle Avenue adjacent to the heart of the Double Bay Centre. The site's North elevation faces a small park which hosts a market on Thursdays. The East elevation faces Bay Street. The site adjoins residential zonings to the West.

Proposal

The proposal is for apartments over retail frontages at ground level. The building is proposed to rise 7 levels. The proposal occupies the whole site at ground level, other than a slight recess to the north elevation.

Controls

- State Environmental Planning Policy # 65 (SEPP 65) : Apartment Design Guide (ADG)
- Woollahra Local Environment Plan 2014 (WLEP2014)
- Woollahra Development Control Plan 2015 (WDCP2015)

Compliance

The following is an assessment of the proposal against the relevant controls above.

SEPP 65: 9 Design Principles

SEPP 65 Clause 28(2)(b) provides that the consent authority must consider design quality when evaluating the development taking into account the following 9 design principles. The assessment against the principles has been made with reference to the relevant objectives of the Apartment Design Guide.

Principle 1: Context and Neighbourhood Character

Good design responds and contributes to its context. Context is the key natural and built features of an area, their relationship and the character they create when combined. It also includes social, economic, health and environmental conditions.

Responding to context involves identifying the desirable elements of an area's existing or future character. Well-designed buildings respond to and enhance the qualities and identity of the area including the adjacent sites, streetscape and neighbourhood. Consideration of local context is important for all sites, including sites in established areas, those undergoing change or identified for change.

The proposed building is 7 levels. The controls for the location envisage 4 levels. Retail space makes up 7% of the GFA of this proposal. (please refer to urban design review)

Principle 2: Built Form and Scale

Good design achieves a scale, bulk and height appropriate to the existing or desired future character of the street and surrounding buildings.

Good design also achieves an appropriate built form for a site and the building's purpose in terms of building alignments, proportions, building type, articulation and the manipulation of building elements. Appropriate built form defines the public domain, contributes to the character of streetscapes and parks, including their views and vistas, and provides internal amenity and outlook.

The site reinforces the street wall to Guilfoyle Avenue and Bay Street. There is a slight concavity to the north elevation which provides identity to the development.

The WDCP 2015 however requires a 4 storey street wall with a setback on the top level

Principle 3: Density

Good design achieves a high level of amenity for residents and each apartment, resulting in a density appropriate to the site and its context.

Appropriate densities are consistent with the area's existing or projected population. Appropriate densities can be sustained by existing or proposed infrastructure, public transport, access to jobs, community facilities and the environment.

The proposal is for 39 apartments. This population density is acceptable in this well serviced location.

Principle 4: Sustainability

Good design combines positive environmental, social and economic outcomes. Good sustainable design includes use of natural cross ventilation and sunlight for the amenity and liveability of residents and passive thermal design for ventilation, heating and cooling reducing reliance on technology and operation costs. Other elements include recycling and

reuse of materials and waste, use of sustainable materials, and deep soil zones for groundwater recharge and vegetation.

Solar panels are proposed on the roof.

The development proposes a waste chute system which is problematic since it does not encourage responsible recycling and is unable to respond to changes which may occur in the Council's waste regime.

The proposal does not provide outdoor drying space as required by the WDCP2015 and the ADG.

Principle 5: Landscape

Good design recognises that together landscape and buildings operate as an integrated and sustainable system, resulting in attractive developments with good amenity. A positive image and contextual fit of well-designed developments is achieved by contributing to the landscape character of the streetscape and neighbourhood.

Good landscape design enhances the development's environmental performance by retaining positive natural features which contribute to the local context, co-ordinating water and soil management, solar access, micro-climate, tree canopy, habitat values, and preserving green networks. Good landscape design optimises usability, privacy and opportunities for social interaction, equitable access, respect for neighbours' amenity, provides for practical establishment and long term management.

There is a small communal garden on the first floor which is unlikely to be viable since it is on the dark side of the building and is immediately adjacent to apartments. The second garden on the sixth floor is better positioned and provides good potential amenity.

Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident well being. Good amenity combines appropriate room dimensions and shapes, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage, indoor and outdoor space, efficient layouts and service areas, and ease of access for all age groups and degrees of mobility.

The proposal provides good internal amenity.

Principle 7: Safety

Good design optimises safety and security, within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. Opportunities to maximise passive surveillance of public and communal areas promote safety.

A positive relationship between public and private spaces is achieved through clearly defined secure access points and well lit and visible areas that are easily maintained and appropriate to the location and purpose.

There are no safety concerns regarding this principle.

Principle 8: Housing Diversity and Social Interaction

Good design achieves a mix of apartment sizes, providing housing choice for different demographics, living needs and household budgets.

Well-designed apartment developments respond to social context by providing housing and facilities to suit the existing and future social mix. Good design involves practical and

flexible features, including different types of communal spaces for a broad range of people, providing opportunities for social interaction amongst residents.

The proposal provides a wide diversity of dwellings

Principle 9: Aesthetics

Good design achieves a built form that has good proportions and a balanced composition of elements, reflecting the internal layout and structure. Good design uses a variety of materials, colours and textures.

The visual appearance of well-designed apartment development responds to the existing or future local context, particularly desirable elements and repetitions of the streetscape.

The aesthetics of this proposal are considered and the materials, proportions and layout are acceptable. The development's aesthetics do not respond to the identified *future local context* identified in the WDCP2015, particularly the desirable elements of the streetscape and as such are not compatible with the location.

SEPP 65: 8 Topic Criteria

SEPP 65 Clause 28(2)(c) provides that the consent authority must take into account particular design criteria in the Apartment Design Guide. Eight topics are listed in SEPP 65 clause 6A and override any controls in the WDCP2015 when the development is being evaluated.

Topic Area	Subject	Compliance
3F Building separation	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:	Yes
	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	
4A Solar access	1. 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	Yes
	2. In all other areas, living rooms and private open spaces of at least 70% of apartments in a building receive a minimum of 3 hours direct sunlight between 9 am and 3 pm at mid winter	Yes
	3. A maximum of 15% of apartments in a building receive no direct sunlight between 9 am and 3 pm at mid winter	
4F Common circulation spaces	1. The maximum number of apartments off a circulation core on a single level is eight 2. For buildings of 10 storeys and over, the maximum number of apartments sharing a single lift is 40	Yes
4D Apartment	1. Apartments are required to have the following minimum internal areas: Apartment type Minimum internal area	Yes

size	Studio 35m² 1 bedroom 50m² 2 bedroom 70m² 3 bedroom 90m² 2.Habitable room depths are limited to a maximum of 2.5 x the ceiling height 3.In open plan layouts (where the living, dining and kitchen are combined) the maximum habitable room depth is 8m from a window 1.Master bedrooms have a minimum area of 10m² and other bedrooms 9m² (excluding wardrobe space) 2.Bedrooms have a minimum dimension of 3m (excluding wardrobe space) 1.Living rooms or combined living/dining rooms have a minimum width of: 3.6m for studio and 1 bedroom apartments 4m for 2 and 3 bedroom apartments 2.The width of cross-over or cross-through apartments are at least 4m internally to avoid deep narrow apartment layouts																
4C Ceiling Height	Measured from finished floor level to finished ceiling level, minimum ceiling heights are: Minimum ceiling height for apartment and mixed use buildings Habitable rooms 2.7m Non-habitable 2.4m For 2 storey apartments 2.7m for main living area floor 2.4m for second floor, where its area does not exceed 50% of the apartment area Attic spaces 1.8m at edge of room with a 30 degree minimum ceiling slope If located in mixed used areas 3.3m for ground and first floor to promote future flexibility of use	Yes															
4E Private open space	1. All apartments are required to have primary balconies as follows: <table> <tr> <th>Dwelling type</th><th>Minimum area</th><th>Minimum depth</th></tr> <tr> <td>Studio apartments</td><td>4m²</td><td>-</td></tr> <tr> <td>1 bedroom apartments</td><td>8m²</td><td>2m</td></tr> <tr> <td>2 bedroom apartments</td><td>10m²</td><td>2m</td></tr> <tr> <td>3+ bedroom apartments</td><td>12m²</td><td>2.4m</td></tr> </table>	Dwelling type	Minimum area	Minimum depth	Studio apartments	4m ²	-	1 bedroom apartments	8m ²	2m	2 bedroom apartments	10m ²	2m	3+ bedroom apartments	12m ²	2.4m	Yes
Dwelling type	Minimum area	Minimum depth															
Studio apartments	4m ²	-															
1 bedroom apartments	8m ²	2m															
2 bedroom apartments	10m ²	2m															
3+ bedroom apartments	12m ²	2.4m															
4B Cross ventilation	1. 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 2. Overall depth of a cross-over or cross-through apartment does not exceed 18m, measured glass line to glass line	Yes															

4G Storage volumes	In addition to storage in kitchens, bathrooms and bedrooms, the following storage is provided:		Yes
	Dwelling type	Storage size volume	
	Studio apartments	4m3	
	1 bedroom apartments	6m3	
	2 bedroom apartments	8m3	
	3+ bedroom apartments	10m3	
	At least 50% of the required storage is to be located within the apartment		

SEPP 65 Summary

The proposal fails to meet the expectations of SEPP 65 because at 7 storeys it does not meet the desired future character for the location. In terms of performance against the 8 topic criteria the proposal performs well.

Woollahra Local Environment Plan 2014 (WLEP2014)

This location requires residential uses above ground level retail. This proposal provides 265sqm of retail to the street edge. The total footprint of the building is 1111.8sqm. The balance of the ground level (76%) is used for parking, access and servicing. This amount of retail can provide a maximum of 6 car spaces. The proposal provides 9 spaces on the ground level. It is debatable whether this is shop top housing. If it is not, it not permitted in this location. Refer the assessing planner's report.

At 7 levels the proposal significantly exceeds the height limits which permit 4 (14.3m) and 5 storeys (18.1m) to the Bay Street frontage. The proposal also exceeds the amount of gross floor area permitted in this location.

Woollahra Development Control Plan 2015 (WDCP2015)

The building does not adhere to the building envelope controls for this location.

Urban Design Review

The applicant's argument for this significantly non-compliant development proposal is based on the 3.5:1 FSR that the Hill PDA review suggested was needed to make development in Double Bay Centre viable. So this development has been generated with the floor area yield provided by an FSR of 3.5:1 as the predominant criteria. Height has not been considered a constraint. However 7 storeys is not compatible with the desired future character of the location. Two development applications in another part of Double Bay Centre for buildings of 6 storeys have been approved recently. This development is not comparable with these, since it higher and is in a different location that sits on the edge of the commercial zone adjacent to a 9.5m height limit.

Perhaps more significant than the height though from an urban design perspective is that the retail space lacks both quantity and amenity. The viability of the retail spaces is essential to

the continuing prosperity of the centre as a place to be. Small poorly serviced retail spaces are not able to attract the diversity of retail offerings required to enable commercial activity in the centre to grow.

Recommendation

Although it is recognised that the design has qualities, from an urban design perspective the proposal will need to be both significantly lower and provide more and better quality retail spaces to be acceptable.

Tom Jones
Urban Design

Annexure 3

Development Engineers Referral Response

REFERRAL RESPONSE – TECHNICAL SERVICES

FILE NO: Development Applications/ 359/2017/1
ADDRESS: 30-36 Bay Street DOUBLE BAY 2028
PROPOSAL: Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars) and the removal of a tree at the rear of 28 Bay Street. The proposal also includes a Voluntary Planning Agreement (VPA) with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (Council has not considered the VPA offered by the applicant nor has it proposed to enter into an agreement in accordance with Clause 25D of the EPA Regulations but is provided for information only)
FROM: Mr R Lam
TO: Mr D Lukas

1. ISSUES

- None

2. 2. DOCUMENTATION

I refer to the following documents received for this report:

- Statement of Environment Effects, referenced 16161, prepared by Ingham Planning P/L, dated August 2017.
- Revised Architectural Plans, referenced 160279, drawing no. DA2001-Issue O, prepared by Group GSA, dated 31/07/2017.
- Survey, referenced 41414, prepared by Norton Survey Partners, dated 03/05/17.
- Stormwater Disposal Concept Plan, referenced 160049, prepared by SCP Consulting P/L, dated 12/05/2017.
- Geotechnical Report, referenced 85575.00, prepared by Douglas Partners, dated April 2017.
- Traffic Report, referenced 10318/2, prepared by Colston Budd Rogers & Kafes P/L, dated May 2017.

3. ASSESSMENT

Comments have been prepared on the following:

a. Site Drainage comments

The submitted concept stormwater plans are considered satisfactory in principle subject to refinements at the CC stage. Conditions will be imposed to reflect any required changes required at the CC stage. Stormwater runoff from the site will be discharged to the Council's underground drainage system by gravity via the construction of a new kerb inlet pit over the existing pipeline in Bay Street.

Council's Technical Services Division is satisfied that adequate provision could be made for the disposal of stormwater from the land it is proposed to develop and complies with Chapter E2 "Stormwater and Flood Risk Management" DCP.

b. Flooding & Overland Flow comments

The property is subject to flood related development control. It is advised that the applicant has submitted revised architectural plans showing the installation of mechanical flood barriers across all entrances to the basement and foyer areas. Council's Engineers have no further objections to this proposal from a flooding perspective subject to relevant conditions.

c. Impacts on Council Infrastructure comments

The applicant seeks to provide basement parking as part of this development. As such, the applicant shall construct a new 5.5 metres wide vehicular crossing to enable two-way access for the first 6m into the property boundary as required by AS2890.1 which will be conditioned accordingly.

d. Traffic comments

Council's Traffic Engineer has no objections to the proposed development subject to relevant conditions. A copy of memo from Council's Traffic Engineer is available in HPE Content Manager.

e. Vehicle/ Pedestrians Access and Accommodation comments

The proposed vehicular access and carparking layout comply with AS2890.1. The applicant has submitted revised architectural plans addressing issues which were previously raised by Council's Engineers.

f. Geotechnical, Hydrogeological and/or Structural comments

A Geotechnical Report by Douglas Partners, Ref: 85575.00, dated April 2017, has been submitted in support of the application. The proposal involves excavation with a depth of about 3.5 metres for the proposed development.

The report identified that the subsurface conditions as:

- a) Fill comprising silty sand to a depth of 0.4-0.5m*

- b) *Depth of natural sand with various density from a depth beneath the fill to a depth of 3.2m*
- c) *Sandstone bedrock was encountered beneath the natural sand.*
- d) *Groundwater seepage was observed at a depth of 0.95m at BH2.*

The report made comments and recommendations on the following:

- *Shoring and support,*
- *Vibration Monitoring,*
- *Excavation method,*
- *Further Geotechnical input.*

Conditions covering these matters as well as others identified by Council have been added to the Referral.

Council's Technical Services has no objection to the proposed excavation on technical grounds. Notwithstanding this, Council's Planning Officer is also to undertake an assessment of the proposed excavation against the relevant excavation objectives and controls prescribed under the LEP and DCP.

4. RECOMMENDATION

Council's Development Engineer has determined that the proposal is satisfactory subject to the conditions

Annexure 4

Traffic Engineers Referral Response

3. Memorandum - Traffic

Date 29 August, 2017

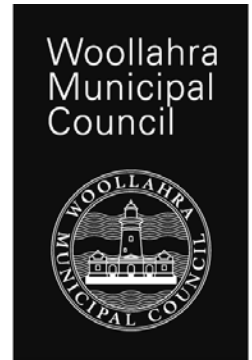
File No. Development Applications: 359/2017/1

To Mr D Lukas

CC Mr R Lam

From Ms Q Liu

Address 30-36 BAY STREET DOUBLE BAY 2028



ABN 32 218 483 245

Redleaf Council Chambers
536 New South Head Road
Double Bay NSW 2028
Correspondence to
General Manager
PO Box 61
Double Bay NSW 1360
DX 3607 Double Bay
records@woollahra.nsw.gov.au
www.woollahra.nsw.gov.au
Telephone (02) 9391 7000
Facsimile (02) 9391 7044

I refer to the memo from the Planning Department dated 11 August 2017 requesting comments in relation to the above.

Traffic Engineering has reviewed:

1. Transport Report dated March 2017 by Colston Budd Rogers & Kafes Pty Ltd;
2. Architectural Plans dated 10 May 2017 by Group GSA Pty Ltd.

Proposal

Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars). The proposal also includes a Voluntary Planning Agreement with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (this VPA offered by the applicant has not be proposed to be entered into in accordance with Clause 25D of the EPA Regulations and is mentioned for information only) and the removal of a tree at the rear of 28 Bay Street

COMMENTS

Parking Provision

The car parking provision for the proposed development has been assessed in accordance with Council's *DCP 2015 Chapter E1 Parking and Access*.

Residential component	Quantity of additions	DCP Maximum Requirement per Apartment	DCP Maximum Required Parking
1 bedroom or studio apartment	17	0.5 x 0.6 multiplier	5.1
2 bedroom	18	1	18
3 or more bedroom	4	1.5	6
Visitor	39	0.2	7.8
Total			37
Non-residential Component	Quantity	DCP Minimum Requirement per 100m²	DCP Minimum Required Parking
retail	209 m ²	3.3 spaces x 0.6 multiplier	4.1
Food and drink premises	56 m ²	7 spaces x 0.6 multiplier	2.4
Total			7

The proposed parking provision includes 9 dual use car spaces which are to cater for retail parking during the retail operating hours and accommodate residential visitor parking outside the retail operating hours. This arrangement satisfies the minimum parking requirement for the retail component however does not provide adequate parking for residential visitors during the retail operating hours. Considering that the proposed retail parking provision already exceeds the minimum requirement, it is recommended that at least one of the nine retail spaces is to be reassigned as full-time residential visitor parking space.

The proposal also includes 24 car spaces for residents only which results in a shortfall of 5 spaces from Council's maximum parking requirement. This reduced parking provision for residents is considered acceptable due to the following reasons:

- The subject site is served by regular train and bus services;
- The allocation of bicycle and motorbike parking on-site to promote alternative transport modes and discourage car usage;
- The subject site is in close vicinity of existing car sharing services;
- The site is served by nearby retails and services which generates less vehicle trips and reduces car ownership; and
- The on-street parking in close vicinity is protected by resident permit parking schemes or ticket parking schemes.

It should be noted that resident permit parking schemes operate in close vicinity to the subject site which do currently assist to some extent neighbouring residents without off-street parking or visitors in terms of their ability to find on-street parking. Such schemes will remain viable as future tenants and residents of the proposed development will be denied access to these schemes as per Council Policy.

BICYCLE			
	Quantity	DCP Minimum Requirement	DCP Minimum Required Parking
Residents	39 dwellings	1 per dwelling	39
Residential visitors	39 dwellings	10 per dwelling	3.9

Shop, restaurant or café employees	265m ²	1 per 250m ² GFA	1
Shop, restaurant or café customers	265m ²	2 + 1 per 100m ² over 100m ² GFA	4
Total			48
MOTORBIKE			
	Quantity	DCP Minimum Requirement	DCP Minimum Required Parking
car spaces	33	1 per 10 car spaces	3.3
Total			3

The proposal makes provision of 32 bicycle spaces for residents, four bicycle spaces for residential visitors, two bicycle spaces for retail employees, five bicycle spaces for retail customers and two motorbike spaces. It is noted that two of the four bicycle spaces for the retail customer are proposed to be installed in the western footpath area of Bay Street, outside the property boundary. This is not supported. The applicant must provide bicycle parking on-site. The applicant shall increase the resident bicycle parking spaces to 39 spaces, increase the motorbike parking spaces to three spaces and also alter the retail visitor bicycle parking to provide minimum four spaces for retail visitors on-site.

The proposal includes four adaptable units which generates a minimum requirement of four disabled parking spaces. The proposed four disabled parking spaces in basement are considered satisfactory.

Traffic Generation

Traffic generation from the proposed development has been calculated in accordance with *RMS Guide to Traffic Generating Developments 2002* and *RMS Guide to Traffic Generating Developments Updated traffic surveys TDT 2013/04a*.

Proposed Development

High Density Residential

- Weekday AM peak hour vehicle trips: 39 units x 0.07-0.32 per unit = 2.7-12.5 trips
- Weekday PM peak hour vehicle trips: 39 units x 0.06-0.41 per unit = 2.3-16.0 trips
- Weekday daily vehicle trips: 39 units x 0.77-3.14 per unit = 30.0-122.5 trips

Retail Premises

- Weekday peak hour vehicle trips: 209m² x 12.5 per 100m² GFA = 26.1 trips
- Daily vehicle trips: 209m² x 121 per 100m² GFA = 252.9 trips

Restaurants Premises

- Weekday peak hour vehicle trips: 56m² x 5 per 100m² GFA = 2.8 trips
- Daily vehicle trips: 56m² x 60 per 100m² GFA = 33.6 trip

Total

- Weekday peak hour vehicle trips: 31.2-44.9 trips
- Daily vehicle trips: 316.5-409 trips

Existing Development

Business and Retail Premises

- Weekday peak hour vehicle trips: $1827\text{m}^2 \times 2-12.5 \text{ per } 100\text{m}^2 \text{ GFA} = 36.5-228.4$ trips
- Daily vehicle trips: $1827\text{m}^2 \times 10-121 \text{ per } 100\text{m}^2 \text{ GFA} = 182.7-2210.7$ trips

Net Traffic Generation Increase

- **Weekday peak hour vehicle trips: (-197) - 8 trips**
- **Daily vehicle trips: (-1894) - 226 trips**

Detailed information on the existing land use has not been provided, a range of traffic generation is therefore estimated based the available GFA. Based on the above calculation, the traffic generation will in the worst scenario stay at a comparable level post-development and thus will not result in unacceptable adverse traffic impact on the existing road network.

Parking Layout

With reference to architectural drawing titled 'Basement Plan' and 'Ground Level Plan', a number of design deficiencies have been identified, as discussed below:

1. *Pursuant to Clause 2.2.1 of AS/NZS 2890.6:2009*, bollards shall be provided within the shared area in the positions shown in Figures 2.2 and 2.3.
2. *Pursuant to Clause 3.2.4 of AS/NZS 2890.1:2004*, a pedestrian splay shall be provided at the property line, west of the driveway.

Loading Facilities

In accordance of *Clause E1.14.1 of Council DCP*, the proposed development does not require loading facility to be provided on-site. Future deliveries associated with the development are anticipated to utilise the available on-street parking.

RECOMMENDATION

It is recommended that the development not be supported at this stage until the following issues are addressed:

1. *Pursuant to Clause 2.2.1 of AS/NZS 2890.6:2009*, bollards shall be provided within the shared area in the positions shown in Figures 2.2 and 2.3.
2. *Pursuant to Clause 3.2.4 of AS/NZS 2890.1:2004*, a pedestrian splay shall be provided at the property line, west of the driveway.
3. The applicant must provide bicycle parking on-site. The applicant shall increase the resident bicycle parking spaces to 39 spaces, increase the motorbike parking spaces to three spaces and also alter the retail visitor bicycle parking to provide minimum four spaces for retail visitors on-site.
4. Considering that the proposed retail parking provision already exceeds the minimum requirement, it is recommended that at least one of the nine retail spaces is to be reassigned as full-time residential visitor parking space.

Annexure 5

Drainage Engineers Referral Response

Memorandum - Drainage

Date 30 August, 2017

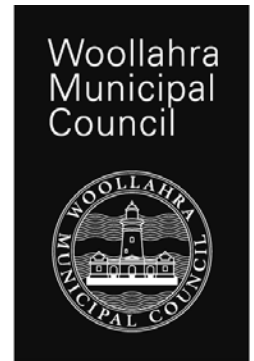
File No. Development Applications: DA2017/359/1

To Robert Lamb

CC D Lucas

From Michael Casteleyn

Address 30-36 Bay Street DOUBLE BAY



ABN 32 218 483 245

Redleaf Council Chambers
536 New South Head Road
Double Bay NSW 2028
Correspondence to
General Manager
PO Box 61
Double Bay NSW 1360
DX 3607 Double Bay
records@woollahra.nsw.gov.au
www.woollahra.nsw.gov.au
Telephone (02) 9391 7000
Facsimile (02) 9391 7044

I refer to the following documents received for this report:

7/142179 Plan - Architectural 4_ Elevations - DA2017-359-1 - 30-36 Bay St & 2 Guilfoyle Ave Double Bay Ref 160279 DA3000 H
17/142175 Plan - Architectural 3_ Floor Plans - DA2017-359-1 - 30-36 Bay St & 2 Guilfoyle Ave Double Bay Ref 160279 DA2000 J

RECOMMENDATION

Council's drainage Engineer has determined that the development proposal is generally satisfactory subject to the following conditions;

- A permanent flood risk management plan is to be installed in a area frequented by the residents and business owners such as the lift foyer
- Flood compatible materials are to be used for all flood exposed construction below the flood planning level of 4.420m AHD.
- The lower level carpark is to be protected to the flood planning level of 4.220m AHD if protected by physical means to the flood planning level of 4.420m AHD if protected by mechanical means.
- All exposed electrical wiring and equipment is to be located above or waterproofed to the flood planning level of 4.420 m AHD.
- The ground floor habitable area is to be protected to the flood planning level of 4.420 m AHD by physical or mechanical means.
- Permanent brass plaques are to be mounted adjacent to all mechanical flood barriers explaining their function and method of operation.

Annexure 6

Environmental Health Officers Referral Response

REFERRAL RESPONSE - ENVIRONMENTAL HEALTH

- 3.1.2 FILE NO:** Development Applications/ 359/2017/1
3.1.3 ADDRESS: 30-36 Bay Street DOUBLE BAY 2028
3.1.4 PROPOSAL: Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars) and the removal of a tree at the rear of 28 Bay Street. The proposal also includes a Voluntary Planning Agreement (VPA) with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (Council has not considered the VPA offered by the applicant nor has it proposed to enter into an agreement in accordance with Clause 25D of the EPA Regulations but is provided for information only)
3.1.5 FROM: Graeme Reilly Environmental Health Surveyor
3.1.6 TO: Mr D Lukas
-

4. ISSUES

- **Contamination**

5. DOCUMENTATION

I refer to the following documents received for this report:

- Statement of Environment Effects, referenced Job No 16161 prepared by Ingham Planning, dated August 2017.
- Architectural Plans, referenced DA 2000 Issue J, 2001 Issue K, 2002 Issue G, 2003 Issue G, 2006 Issue H , 2007 Issue I, 2008 Issue I, prepared by Group GSA P/L, dated 27/07/2017 ,
- Acoustic Report, referenced 20161365.1 , prepared by Acoustic Logic dated 14/09/2016
- Acid Sulphate Soil Management Plan referenced Project 85575.01, prepared by Douglas Partners dated July2017.
- Preliminary Site Investigation for Land Contamination Report, referenced Project No 85575.01, prepared by Douglas Partners, dated April 2017.

6. RESEARCH

The following research was undertaken in the preparation of this assessment:

- A site inspection was carried out on the following date: 25/08/2017

7. SUMMARY OF PROPOSAL

Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars) and the removal of a tree at the rear of 28 Bay Street. The proposal also includes a Voluntary Planning Agreement (VPA) with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (Council has not considered the VPA offered by the applicant nor has it proposed to enter into an agreement in accordance with Clause 25D of the EPA Regulations but is provided for information only)

4.2 Summary of the proposal

The proposal involves the removal of all existing structures and vegetation from the site (which will be recycled/reused where possible) and the construction of a new mixed use development including:

- Demolition and site preparation works;
- Excavation to allow the construction of single basement level accommodating 24 car spaces (4 accessible, 5 tandem) plus storage and plant areas. Access to this level is via a car lift;
- Construction of a 5-7 level mixed use building accommodating 263sqm of retail premises (3 notional tenancies), a residential lobby, plant, waste rooms and storage and parking for 9 cars at Ground Level with 39 apartments above (5 studios, 12x1 bedroom, 18x2 bedrooms and 4x3 bedrooms). The roof space incorporates a communal garden space. Further landscaped open space is provided at Level 1 (which approximates the existing levels of the site in this area;

-
- The proposed hours of operation of the retail tenancies are 6am-10pm, Mon-Sat and 7am-10pm Sunday.

8. ASSESSMENT

Comments have been prepared on the following. **Where Approval is recommended, Conditions of Consent follow at the end of the comments.**

a) Acoustics

Acoustic Logic Acoustic Assessment Project No 20161365.1 dated 14/09/2016

This report presents an acoustic assessment to accompany the development application for the proposed residential development to be located at 30-36 Bay Street, Double Bay.

In the report we have:

- Conducted an external noise intrusion assessment from traffic to determine the acoustic treatments required to achieve a reasonable level of amenity for future occupants.
- Conducted background noise monitoring to determine noise emission goals for future use of the development to meet Council and NSW EPA Industrial Noise Policy acoustic requirements.

This noise assessment is based on the Group GSA Architectural drawings provided to this office dated 8/18/16.

4 INTERNAL NOISE CRITERIA

Potential noise sources in the vicinity of the site are as follows:

- Bay Street to the east of the site;
- Guilfoyle Avenue to the north;

Noise impacts should comply with the requirements of the Australian Standard AS2107 'Recommended Design Sound Levels and Reverberation Times for Building Interiors'.

4.1 AUSTRALIAN STANDARD 2107 - 2000

Internal noise levels for different areas within the proposed plastic surgery development will have to comply with the requirements of AS 2107 – 2000 “*Recommended Design Sound Levels and Reverberation Times for Building Interiors*”. These are outlined in the table below.

Table 2 – Internal Noise Level Criteria

Space /Activity Type	Recommended Satisfactory Sound Level dB(A) _{Leq}
Bedrooms	35 _{Leq}
Living Rooms	40 _{Leq}

7 NOISE EMISSION ASSESSMENT

Noise emissions from the site should be assessed to ensure that the amenity of nearby land users are not adversely affected.

Potential noise sources which should be assessed are:

- Noise generated by mechanical plant, typically air-conditioning and carpark fans.

The nearest potentially affected noise receivers are:

- The residential dwellings immediately to the east and west of the proposed development site.

Noise emission criteria will be determined based on the following documents

- NSW EPA Industrial Noise Policy;
- Protection of the Environment Operations Act Regulation 2000;
- Woollahra City Council DCP 2003.

7.1 BACKGROUND NOISE MONITORING

Background noise levels for the site were obtained using an unattended noise logger.

The monitoring was conducted using an Acoustic Research Laboratory's noise logger. The logger was set to A-weighted fast response and was programmed to store 15-minute statistical noise levels throughout the monitoring period. The monitor was calibrated at the start and end of the monitoring period using a Rion NC-73 calibrator. No significant drift was noted.

The measurement was conducted from the 12th to the 19th September 2016. Refer to the aerial photo in figure 1 for the noise monitor location.

The measured background noise levels are summarised in the table below.

Table 7 - Measured Background Noise Levels

Description	Day Noise Level 7am to 6pm (dB(A))	Evening Noise Level 6pm to 10pm (dB(A))	Night Noise Level 10pm to 7am (dB(A))
Minimum Repeatable Background L _{90,15min}	43	42	40

7.3 RESULTANT PROJECT NOISE EMISSION CRITERIA

Based on the requirements stated in the sections above, table 11 provides a summary of the assessment criteria applicable to the future residential development at the project site. The assessment criteria are also based on the background noise monitoring data conducted at the proposed development location.

Table 10 – Environmental Noise Emission Criteria

Time Period	Assessment Background Noise Level dB(A) _{L₉₀}	Amenity Criteria dB(A) _{L_{eq}}	Intrusiveness Criteria Background + 5 dB(A) _{L_{eq}(15min)}	Woollahra City Council DCP Criteria Background + 0 dB(A) _{L_{eq}(15min)}	EPA Criteria for Residential Condensers	EPA Criteria for Sleep Disturbance dB(A) _{L₁(1minute)}
Day	43	55	48	43	N/A	N/A
Evening	42	45	47	42	N/A	N/A
Night	40	40	45	40	Inaudible within neighbouring premises	55

7.4 MECHANICAL PLANT NOISE

As detailed plant selections for the proposed development are not available at this stage it is not possible to carry out a detailed examination of the ameliorative measures that may be required to achieve the noise targets.

Plant will be acoustically treated to prevent noise emissions from adversely impacting the surrounding properties in conjunction with the criteria detailed in this report. This may include selecting the quietest plant practicable, or treating the plant with enclosures, barriers, duct lining and silencers, etc as required to comply with the sound level recommendations.

Experience with similar projects indicates that it would be possible to achieve the requirement with appropriate treatment of the plant. General requirements for a number of potential plant items on the site are expanded on below.

7.4.1 Supply / Exhaust fans

Supply and exhaust fans may be located within the plant rooms or in rooftop plant areas. These units typically emit high noise levels and require acoustic treatment such as silencers and internal lined ductwork. Silencer requirements would be determined once fan selections have been completed.

7.4.2 Minor Plant

Other minor plant items, such as bathroom or kitchen exhaust fans, may also be required. These items typically emit relatively low noise levels and may require minimal acoustic treatment of a standard nature, such as internally lining of ductwork.

7.4.3 Condenser, Heating and Reverse Cycling Air Conditioners

It is at the construction design stage that consideration should be given to the placement of external air conditioning/ heating/ reverse cycle air conditioning units.

The location of heating/cooling units is the most important factor to ensure noise is not going to be intrusive. The location and selection of the proposed units associated with the development will be conducted such that noise impact to both the future residential tenancies and existing receivers will comply with the relevant EPA criteria of the noise standard less 5dB(A) and compliance with this standard inside any other unit in the same complex .

e) Acid Sulphate Soils

3. Previous Assessment

An ASS assessment was conducted as part of intrusive investigations conducted by DP at the site in July 2016. Assessment results relevant to the proposed development have been reported in:

- Douglas Partners Pty Ltd (DP), *Report on Preliminary Site Investigation for Contamination with Limited Sampling* (Project 85575.01) September 2016 (DP 2016); and
- Douglas Partners Pty Ltd (DP) *Groundwater Investigation, Proposed Mixed-Use development, 30-36 Bay Street, Double Bay*, September 2016 (DP ref: 85575.01.R002) (DP 2016a).

Pertinent information from the above reports is included in relevant sections of this report.

A report entitled; Douglas Partners Pty Ltd (DP) *Report on Geotechnical and Hydrogeological Investigation* (DP reference 85575.00), August 2016, for the site was also undertaken concurrently with the contamination assessment.

All soil samples were sent for SPOCAS (suspension peroxide oxidation combined acidity and sulphate) analysis at a NATA accredited laboratory. The samples submitted returned results above the action criterion of 18 mol H⁺ /tonne for net acidity (adopted from Dear SE et al., 2002) in two samples (BH2/1.0 and BH2/1.5). The results indicated the PASS does exist within the alluvial soil profile, which confirms the results of the initial (field) screening. A summary of results of field screening and SPOCAS analysis is shown in Tables 1 and 2 above.

Overall, results of field screening and SPOCAS analysis indicated that the shallowest sample where PASS was detected was at a depth of 1.0 m bgl, which is approximately RL 2 m AHD.

When taking into account the initial screening results, it is considered that natural soils at the site at depths at or near (or below) the groundwater level are likely to comprise PASS.

5.2 Geology

The *Sydney 1:100 000 Geological Series Sheet* shows that the site lies close to the mapped boundary between man-made filling and alluvium. Man-made filling is mapped as underlying most of the site and all land to the north towards the harbour/bay. The filling reportedly comprises various soils, rock, building and waste materials that was placed many years ago to reclaim the land area now known as the Double Bay business precinct. The alluvium is reported to comprise silty to peaty quartz sand, silt and clay, and overlies rock of the Hawkesbury Sandstone formation at considerable depth.

Results for the 3 test locations are as described below:

- At Test Bore 1 – asphaltic concrete overlaying, filling comprising dark grey sand igneous gravel (road-base), overlaying dark grey brown medium to fine grey sand filling with sandstone and brick gravel with a trace of rootlets and glass to 1.5 m, overlaying red brown medium grained sand to 1.8 m where odorous (sulphurous) brown sand was encountered. The bore terminated at 2.1 m;
- At Test Bore 2 - asphaltic concrete overlaying, filling comprising dark grey sand igneous gravel (road-base), overlaying silty sandy filling with concrete gravel, brick fragments and trace rootlets, 0.5 m concrete cobble, 1.5 m colour change 1.6 m wet, brown medium grained sand with a strong sulphuric odour. The bore terminated at 2.1 m; and
- At Test Bore 3 - asphaltic concrete overlaying, filling comprising dark grey sand igneous gravel (road-base), light grey sandy, loamy filling with some brick, render and concrete gravel, half brick piece and glass encountered at 0.5 m. Medium grained yellow sand to 1.3 m overlying medium grained red brown sand to 1.9 m overlaying red medium to coarse grained sand. The bore terminated at 2.6 m.

Test bore logs (from DP, 2016) are provided in Appendix B. Test locations are shown on Drawing 1, Appendix A. Previous test bore logs are also shown in Appendix B.

5.3 Groundwater

During fieldwork reported in DP (2016), free groundwater was observed whilst augering in all test bores. Free groundwater was observed in sandy natural soils, typically sand to silty sand layers.

Reported groundwater depths ranged from levels from 1.5 to 2.0 metres bgl.

The inferred groundwater flow direction is shown on Drawing 1, Appendix A, and is towards Sydney Harbour/Double Bay to the north/north-east.

Groundwater was encountered at approximate levels of between RL 1.5 and RL 2.2 (AHD) during the investigation. Given the site location, it is considered likely that the groundwater levels could periodically rise to the ground surface during the life of the new structure due to fluctuations in rainfall/evaporation and to a lesser extent tidal influences. Further, it is understood that the site has the potential to be affected by flooding, which could easily assist in raising groundwater surface levels quite rapidly. Based on the single round of groundwater sampling and analytical results (DP 2016), from one well installed at the site groundwater quality does not appear to present a risk of harm to human health or the environment and therefore does not require any specific remediation.

6. Proposed Development and Potential for disturbance of ASS

A summary of the proposed works that have the potential to disturb or impact upon ASS are summarised in Table 3.

Table 3: Works that have the Potential to Impact Acid Sulphate Soil

Nature of Works	Potential Impact
Excavation of ground for additional basement level	Excavations are expected to be 3.5 m bgl. The proposed basement has a preliminary design floor level of RL 0 m, relative to Australian height datum (AHD). Therefore it is considered unlikely that ASS will be disturbed. Disturbance of ASS in natural soils will occur as part of these works.
Piles for construction	Spoil returns (if any) from piling are likely to contain a mixture of (identified) ASS and non-ASS soils.
Dewatering	Lowering of the groundwater table by dewatering at this site or at adjacent sites may expose potential acidic soils and cause ASS reactions.

7.7 Proposed Acid Sulphate Soil Management Strategy

Two options for management of ASS are detailed in the following sections, namely either on or off-site treatment of ASS, as these options are considered to be the most suitable to the proposed development. Regardless of which option is adopted, careful on-site management of soils and water will be required.

8. On-Site Treatment of ASS

Option 1 for management of the ASS is on-site treatment. The management requirements for this strategy are detailed in this section and the following sections (excluding Section 9). On site neutralisation, management, monitoring and validation of ASS should be undertaken as required using the methodology given below.

Where there is any uncertainty regarding the presence/absence of ASS, the subject materials should be treated in accordance with this methodology. If ASS assessment of materials assumed to contain

ASS shows that they do in fact not contain ASS, then further management/treatment for ASS will not be required.

8.1 Prior to Excavation of ASS

On-site treatment will require preparation of a Treatment Area(s), Stockpiling Area(s) and Leachate Collection Area(s).

Allowances should be made during construction planning to reserve sufficient land to allow for these items. Leachate collection location, lining and construction should be similarly pre-planned.

Figure 1 shows a cross section of a typical treatment pad.

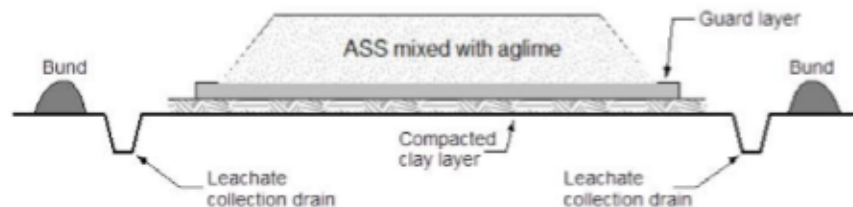


Figure 1: Schematic cross-section of a treatment pad, including clay layer, guard layer, leachate collection drain and bunding¹

These areas should be prepared as follows:

- Prepare a treatment pad and (if required) stockpile pad of appropriate area for the volume of soil to be treated/ stored. The pad should be prepared on relatively level or gently sloping ground to minimise the risk of any potential instability issues, with a natural (or shaped) fall to the local drainage sump. The treatment area should be located as far as practical from any potential ecological receptors (such as drainage lines which enter the stormwater system);
- Lining of the surface of the pad with selected compacted clay (at least two layers to a combined compacted thickness of 0.5 m) or a geosynthetic liner as approved by the environmental consultant;
- Apply a guard layer of fine agricultural lime ('ag lime') over the compacted clay or geosynthetic liner, to neutralise downward seepage. This guard layer of lime should be applied at a rate of approximately 10 kg fine ag lime per m² per vertical metre of stockpile, i.e. if a treatment stockpile of 3 m is proposed, the guard layer would need to comprise approximately 30 kg of ag lime per

¹ Figure reproduced from Dear, S-E

Dear S E, Ahern, C R, O'Brien, L E, S K McElene, A E Moore, N G & Watling, K M, *Queensland Acid Sulfate Soil Technica Manual: Soil Management Guidelines*, Brisbane: Department of Science, Information Technology, Innovation and the Arts, Queensland Government, 2014

m² of surface area. The guard layer should be re-applied following removal of treated soils prior to addition of untreated ASS; and

- Liming pads should be bunded and a circumference drain excavated to collect and contain leachate. The drain and inner bund slopes should be covered with a layer of fine lime applied to neutralise any possible leachate migrating from the stockpiled material. The drain should direct soil into an appropriately sized sump or retention pond. Collect waters should be monitored and if necessary treated before reuse or release. Alternatively water from the drain can be pumped into on-site tanks for storage, testing and treatment.

If small quantities of ASS are to be excavated, then the use of a skip bin may be appropriate instead of treatment pad. Any leachate drainage from the skip bin should be avoided, or otherwise will need to be contained and treated as necessary.

8.2 Neutralising Materials for Soils

Agricultural lime commonly known as ag lime, is the preferred neutralisation material for the management of ASS, as this material is usually the cheapest and most readily available product for acid neutralisation. Furthermore, ag lime is slightly alkaline (pH of 8.5 to 9), non-corrosive, of low solubility and does not present handling problems. Ag lime comprises calcium carbonate (CaCO_3), typically made from limestone that has been finely ground and sieved to a fine powder.

It is generally preferable if an ag lime with a purity of 95% or better is used (i.e. NV >95, where NV is the neutralising value, a term used to rate the neutralising power of different forms of materials relative to pure, fine calcium carbonate which is designated NV = 100). The ag lime should be fine and dry, as texture and moisture can also decrease the effective neutralising value. Ag lime with a NV of 95% to 98% is usually used. There could be economic justification for using a less pure grade of ag lime, however, this would require a higher application rate to be adjusted by a factor of 100/NV (see Section 7.3 for application rates). Potential cost savings from using less pure material may be offset by the corresponding increase in the transport and disposal costs.

Coarse grained calcite is not recommended, as one of the products of the neutralisation reaction is gypsum ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) which has a relatively low solubility and tends to coat the reacting calcite grain, forming a partial barrier against further reaction.

Gypsum may also give off hydrogen sulphide if in reaction with acidic conditions and can itself result in the generation of sulphuric acid.

Dolomitic ag lime, or magnesium blend ag lime, should not be used as these materials impose environmental risks from overdosing with the potential to damage estuarine ecosystems.

An alternative neutralising material can be used subject to prior approval by a suitably qualified scientist or engineer.

8.3 Lime Application Rate and Pre-Treatment Testing

Calculated liming rates from investigations reported in DP (2016) are shown in Table 3. These are considered to be indicative liming rates (or as a "starting point"), and actual liming rates for successful neutralisation of ASS are likely to be variable for the following reasons:

- Acid production will vary both horizontally and vertically through the ASS profile due to the variability of natural systems; and
- Delineation of ASS across the entire site has not been undertaken.

It is therefore recommended that some pre-treatment testing, where possible, be undertaken to determine liming rates prior to treatment of ASS. Results of pre-treatment testing may reveal that some excavated soils will not require treatment prior to disposal/re-use.

Table 3: Indicative liming rates based on analytical results presented in DP (2016)

Sample Location (Test Bore / depth (m))	Liming Rate (kg CaCO ₃ /tonne)
BH1/1.5	1.3
BH2/0.5	0.80
BH2/1.0	0.84
BH2/1.5	1.6

Some excavations (such as from piling returns) are likely to contain a mix of ASS and non-ASS. Such soils may be temporarily stored in stockpile pads (see Section 8.1) or in skip bins (if in smaller quantities) so that the soil can be tested as 'batches' prior to treatment. Testing of samples for SPOCAS and/ or Chromium Suite should be undertaken at a rate of between one sample per 100 m³ and one sample per 500 m³ of soil (typically a minimum of three samples) depending on the size of the batch and homogeneity of the material.

Possible overtreatment of soils may be avoided with pre-treatment testing. It is noted that the fastest turnaround of results for SPOCAS testing is typically three days from receipt of the sample at the laboratory (with the timing generally commencing from the morning after the samples are received by the laboratory), and this timing may not always be available from the laboratory. Accordingly corresponding delays between sampling and classification should be expected.

Material will only be considered to have been successfully treated when all soil has been validated in accordance verification testing with Section 8.5.

If an alternate neutralising product is used, a specific dosing rate will need to be calculated. The required dosing rate should be calculated from the following formula:

Neutralising Material Required (kg) per tonne of soil =

$$\frac{\% S \times 623.7}{19.98} \cdot \frac{100}{ENV(\%)} \cdot FOS$$

Where:

- %S = net acidity (% S units). This value is obtained from the SPOCAS/ chromium suite analytical results and should be the "worst case" result of the acid or sulphur trails of all samples;
- 623.7 = % S to mol H⁺/t;
- 19.98 = mol H⁺/t to kg CaCO₃/t;
- FOS (factor of safety) = a minimum value of 1.5 needs to be adopted, although values of up to 2 can be suitable;
- ENV = Effective Neutralising Value (e.g. Approx. 95% for fine ag lime).

Further details for the calculation of liming rates are provided in Ahern C R et al (2004). Whilst the above formula is provided, the environmental consultant will provide the liming rate based on the soil analysis.

8.4 Treatment Process

The process for the treatment of ASS is as follows:

- Prepare a treatment/ stockpiling pad in accordance with Section 8.1;
- Excavate and segregate any non-ASS overburden (filling) from the area containing ASS if material types can be separated during works. [Given the soil profile (see Section 5), all excavated natural soils, close to or below the groundwater table, should be considered as PASS until otherwise determined by pre-treatment testing (Section 8.3)];
- Transport ASS material requiring treatment to the treatment area (in sealed trucks if required);
- Manage ASS during stockpiling and treatment to minimise dust and leachate generation (e.g. by covering, or lightly conditioning with water). If wet weather prevails, stop works and cover the stockpiled material with a plastic sheet to reduce the formation of acid leachate;
- Spread the ASS onto the guard layer in layers of up to 0.3 m thick, leaving a 1 m flat area between the toe of the spread soil and the containment bund or drain. When spreading the first soil layer, care should be taken not to churn up the lime guard layer;
- Let the ASS dry to facilitate lime mixing (if too wet, then adequate mixing of lime cannot be achieved);
- Apply ag lime to the stockpiled soil (see Section 8.3 for liming rate) and harrow/ mix thoroughly prior to spreading the next layer;
- Continue the spreading/ liming/ mixing cycle. This can be done one layer at a time, or with multiple ASS layers placed on top of each other;
- Assess the success of the treatment using verification testing (in accordance with Section 8.5). Samples will need to be collected from all layers (which is likely to require use of plant for sampling). The verification testing has two components: field screening and laboratory analysis. It is likely that laboratory analysis will only be undertaken after the field screening results have passed;
- If verification sampling indicates that additional neutralisation is required, add additional lime (at an appropriate liming rate) and mix as described above;

- When verification testing indicates that lime neutralisation is complete, then the stockpiled soil may be removed from the treatment pad;
- Re-use the treated ASS on-site or dispose off-site in accordance with waste classification (refer to Section 7.7); and
- Management of leachate water and groundwater (in accordance with Section 9).

8.5 Verification Testing

Verification testing should be conducted as follows:

- During and following neutralisation, the soils will require pH screening to confirm that the appropriate quantities of lime have been added and the soils have been suitably mixed/ blended prior to disposal. The pH testing (field and oxidised pH screening tests) should be undertaken on the treated material at a frequency of between one sample per 25 m³ and one sample per 100 m³ of treated soil or a minimum of six samples per treatment batch (depending on the volume and homogeneity of the batch);
- Once the pH screening results all meet the acceptance criteria (Section 8.6), laboratory verification testing will be required at a rate of between one sample per 100 m³ and one sample per 500 m³ (or typically a minimum of three per batch) of treated material. The laboratory testing can comprise SPOCAS, or, as an alternate method if no jarosite was present in the ASS prior to treatment, the Chromium Suite analytical method can be used. It is noted that typically the fastest turnaround of results for laboratory testing is three days from receipt of the sample at the laboratory (with the timing generally commencing from the morning after the samples are received by the laboratory), and this timing may not always be available from the laboratory. This should be taken into account to ensure adequate on site storage is available for treated and untreated ASS; and
- Compare the validation results with the acceptance criteria (Section 8.6). If all results meet the acceptance criteria, the ASS will be considered to have been successfully treated.

8.6 Acceptance Criteria for Treated ASS

The acceptance criteria are based on the results of "field" and peroxide pH testing and laboratory testing. ASS will be considered to have been successfully treated when all of the following are met:

- Field pH (i.e. field pH in water) is ≥ 5.5 (and ≤ 8.5 for any materials to be re-used on site);
- Peroxide pH (i.e. pH after forced oxidation) is ≥ 6.5 ;
- pH_{KCL} is ≥ 6.5 ;
- TAA = 0;
- TPA = 0 (preferably, although TPA < ANC may be considered suitable subject to specific assessment); and
- Net acidity is ≤ 0 .

The net acidity is calculated from SPOCAS/ chromium suite analytical results as follows:

$$\text{Net Acidity (\%Sulphur)} = (S_{\text{pos}} \text{ or } S_{\text{Cr}}) + s\text{-TAA} + (S_{\text{RAS}} \text{ or } S_{\text{NAS}}) - \text{ANC} / \text{FF}$$

Note: S_{pos} or S_{Cr} is potential acidity (from SPOCAS suite or chromium suite)
s-TAA is actual acidity
 S_{RAS} or S_{NAS} is retained acidity (from SPOCAS suite or chromium suite)
ANC is acid neutralising capacity
FF is Fineness Factor of soils

Further treatment of the soil will be required if any of the above conditions are not met.

8.7 Disposal of Treated ASS

Waste classification of treated ASS material to be disposed of off-site is to be conducted in accordance with NSW EPA (2014) and the *Protection of the Environment Operations (POEO) Act 1997*.

With regard to ASS, Part 4 (Acid Sulphate Soils) of NSW EPA (2014) states that ASS must be treated (neutralised) prior to acceptance by a landfill operator (unless it is to be disposed of as "PASS" to an appropriately licensed landfill). After treatment, the soil should be chemically assessed in accordance with Step 5 in Part 1 NSW EPA (2014). This will determine whether any other contaminants are present in the material. When the classification has been verified, the soil should be disposed of to a landfill that can lawfully accept that class of waste. The treated ASS would (at a minimum) be classifiable as General Solid Waste, however, chemical testing must be conducted to confirm the classification prior to disposal and a higher classification could apply. Prior arrangements should be made with the landfill to ensure that it is licensed to accept the waste.

9. Off-Site Treatment

Option 2 for management of the ASS is off-site treatment. The management requirements for this strategy are detailed in this section.

Where there is any uncertainty regarding the presence/absence of ASS, the subject materials should be treated in accordance with this methodology. If ASS assessment on materials being assumed to contain ASS shows that they do not contain ASS, further management/ treatment for ASS will not be required.

9.1 Prior to Excavation

Prior to disturbance of potential ASS, the following will be undertaken:

- Identification of a suitable, appropriately licenced treatment facility. It is advised that the waste generator is responsible for ensuring that waste is disposed to a facility/ site which is legally able to accept it, as required by the POEO Act 1997;
- Provision of test results to the facility;

- Determining and addressing any specific requirements of the treatment facility, and amending this ASSMP as required to check that all requirements are met; and
- Confirming that the treatment facility will accept ASS from the site on the dates required.

9.2 Management and Transport

The general procedure for the management and transport of ASS is as follows:

- Excavate and segregate or dispose of any non-ASS overburden (such as filling) from the area containing ASS if material types can be separated during works. [All excavated natural soils, close to or below the groundwater table, should be considered as PASS unless testing is undertaken and results show otherwise];
- Any ASS material requiring transport to the treatment facility should be loaded directly into sealed trucks (sufficient to contain any water draining from the soils) and covered. Given that the soil is likely to be wet, and as such heavier than dry soils, it is critical that an accurate estimate of the weight of the material is made so that trucks are not overloaded;
- Transport of the ASS to the waste facility by a direct route to minimise transport time; and
- Management of leachate water and groundwater (in accordance with Section 9) will also be required.

9.3 Treatment

The treatment facility must manage, treat and dispose of the ASS in accordance with their licence conditions.

10. Water and Groundwater Management

Water is the main mechanism by which acid and metals from oxidised ASS are mobilised and transported. Careful management of water is therefore paramount to effective management of potential adverse impacts from ASS.

The below sections provide strategies for management, assessment and disposal of water leaching from ASS, surface water and water from groundwater dewatering.

10.1 Leachate and Surface Water Collection

All water that has been in contact with ASS/ assumed ASS must be managed, assessed, treated and appropriately disposed of.

Water from the ASS treatment/ storage area should be collected in lined drains, retention ponds (see Section 10.3) or in tanks. Any other water which may have come into contact with ASS should be collected in an on-site retention ponds or tanks.

All water which has potentially come into contact with ASS requires management in accordance with the below sections.

10.2 Dewatering Management

Dewatering is expected to be required for the proposed development.

Dewatering a site with ASS is a high environmental risk activity. The reduction of the groundwater table may expose sulphidic soils to oxygen which may generate acidic leachate. The greater the spatial area exposed and the longer the groundwater is lowered from its usual level, the higher the risk of acidic leachate entering the environment.

10.2.1 Proposed Dewatering Methods

The extent of dewatering will depend on the groundwater levels encountered during site works. Measured groundwater levels are given in Section 5.3, however, groundwater levels fluctuate with weather conditions.

At this stage the dewatering method, quantitative details of the dewatering system, including proposed duration of discharge and the hourly and total quantities of groundwater to be discharged is not known. Discharge rates may be evaluated during on-site field trials.

10.2.2 Risks Associated With Dewatering

There are numerous risks associated with dewatering in areas underlain by ASS. These risks include:

- Acidification of *in situ* soils drained within the dewatering cone of depression and difficulties associated with neutralising these *in situ* soils;
- Acidification of groundwater within the dewatering cone of depression after the system has re-flooded;
- Iron, aluminium and heavy metal contamination of groundwater arising from mobilisation of these compounds under low pH conditions; and
- Acidification and contamination of surface water bodies which receive groundwater.

10.2.3 Dewatering Risk Management

The following dewatering risk management methods are recommended for the project:

- Staging soil excavation to minimise the amount of dewatering at any one time;
- Monitoring groundwater inflow rates into excavations and groundwater levels around the excavations to assess the likely impact on surrounding groundwater levels; and
- Monitoring groundwater quality within excavations and treating groundwater prior to discharge from the site (as discussed in the following sections).

Piezometers (groundwater monitoring bores) may be installed and utilised to monitor localised groundwater levels which can give warning as to when the water table has lowered and oxidation of the potential acid sulphate layer is likely. Advice should be sought from an environmental consultant (or similar professional) in regards to the appropriate installation of piezometers if this method is to be adopted for monitoring the water table level.

10.3 Water Storage and Treatment

Water potentially impacted by ASS must be stored in a lined on-site retention pond or tank. The available storage capacity must take into account potential rainfall to minimise the risk of overflows during heavy rain. The storage facilities and volumes being stored must be managed to ensure that no water overflows from the storage, including over close down-periods (including weekends).

10.4 Water Assessment

All water which has potentially come into contact with ASS requires testing (and if necessary treatment following assessment) for the parameters listed in Table 4, as a minimum. This table also details the recommended monitoring frequencies and target thresholds.

f) Land Contamination (SEPP 55)

Douglas Partners Preliminary Site Investigation for Contamination Report No 85575.01 dated April 2017.

This report presents the results of a Preliminary Site Investigation with Limited Sampling (PSI) for contamination undertaken for the proposed mixed use development at 30-36 Bay Street and 2 Guilfoyle Avenue, Double Bay. The investigation was commissioned by Dennis Meyer of Anka Property Group Pty Ltd and was undertaken in accordance with Douglas Partners Pty Ltd's (DP's) proposal dated 20 May 2016 (reference: SYD160573).

It is understood that a mixed development land use is proposed, with the demolition of the existing 4-storey structure on site, and the construction of a new seven storey building with one level of underground car parking.

The objectives of this PSI were to:

- Identify potential sources of site contamination and the potential contaminants of concern from historical information;
- Identify potential human and ecological receptors;
- Determine the (preliminary) contamination status of soils at the site from limited sampling; and
- Provide an opinion on the suitability of the site for the proposed redevelopment (from a contamination perspective).

A report entitled, Report on Geotechnical and Hydrogeological Investigation (DP reference 85575.00, Rev1, dated April 2017) for the site was undertaken concurrently with the contamination assessment and has been issued separately.

2. Scope of works

The scope of works for the PSI included:

- A review of topography, geology and soil maps;
- A review of NSW Environmental Protection Authority (EPA) registers published under the *Contaminated Land Management Act 1997* (CLM Act) and the *Protection of the Environment Operations Act 1997* (POEO Act);
- A review of registered groundwater bore information held by the NSW Office of Water;
- A review of the planning certificates and Council records (provided by Council) applicable to 30-36 Bay Street;

- A review of historical title deeds applicable to 30-36 Bay Street and selected historical aerial photographs for the site;
- A site walkover to observe current site features and assess potential contamination sources and receptors;
- Excavation of three test bores for the collection of soil samples;
- Screening samples for volatile organic compounds using a photo-ionisation detector (PID);
- Laboratory analysis of selected samples for the following:
 - Heavy metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, zinc);
 - Total recoverable hydrocarbons (TRH);
 - Benzene, toluene, ethylbenzene and xylene (BTEX);
 - Polycyclic aromatic hydrocarbons (PAH);
 - Polychlorinated biphenyls (PCB);
 - Organochlorine pesticides (OCP);
 - Organophosphorus pesticides (OPP);
 - Asbestos;
 - Cation exchange capacity (CEC);
 - pH; and
- Provision of this PSI report.

11 Potential Contamination Sources

Based on current and previous site uses and DP's site observations, the potential sources of contamination and associated contaminants are summarised in Table 2. A discussion of previous site uses based on historical findings is discussed in Section 10.1.

Table 2 Potential Sources of Contamination

Potential Source of Contamination S1	Contaminants of Concern
Imported contaminated filling used to form/level the site/ disturbed terrain	Various potential contaminants are possible, such as metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc); total petroleum hydrocarbons; BTEX, PAH, OCP, OPP, PCB and asbestos.
Hazardous building materials	Due to the age of the building, and previous inspections by DP, there is likelihood that hazardous building materials may be present in the building. Potential contaminants include: Asbestos, PCB and lead.

12 Potential Receptors

Potential receptors of contamination have been identified to include:

- R1 – Future site users (primarily residential occupants);
- R2 – Future construction workers and maintenance workers;
- R3 – Adjacent land users (primarily residential occupants and pedestrians);
- R4 – Surface waters (beyond site boundary);
- R5 – Groundwater;

- R6 – Terrestrial ecology; and
- R7 – In ground building structures.

10.2 Analytical Results for Soil

Concentrations of metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel and zinc) were within the respective HIL. Lead was recorded in the 3 bores at levels ranging from 2 mg/kg to 670 mg/kg the latter being relatively elevated. All lead levels were, however, below the relevant guideline limits.

PAH (including benzo(a)pyrene) was detected in samples BH1/0.5 and BH3/0.6 although again the reported concentrations were below the relevant guideline limits.

Concentrations of TRH, OCP, OPP, Phenols and PCB were below the laboratory's practical quantitation limits and, hence, were within the respective HIL, HSL, EIL, ESL and Management Limits.

Despite the presence of evidence of building rubble in filling at some test locations, asbestos was not detected at the laboratory's limit of reporting (0.1 g/kg) and was not observed during the site walkover or whilst sampling.

11 Conclusion

Based on results and findings of the investigation, it is considered that the site can be made suitable for the proposed mixed use development, subject to further assessment and any remedial activity found necessary as a result of the following:

- Further investigation from a contamination standpoint to characterise the filling and achieve a suitable sampling density for the site area. At present access at the site limits the ability to carry out a detailed contamination investigation and assessment;
- The proposed works are likely to encounter ASS or PASS. Further testing of the soils may be required to better characterise the site for ASS potential. A groundwater investigation may also be required to confirm that no impacts are present and that no dewatering issues will arise. Note that an ASSMP has been developed and is required to be implemented for this site; and
- Due to the age of the buildings, a pre-demolition hazardous building materials assessment will potentially be required to allow management of any potential hazardous building materials present within the buildings prior to demolition.

RECOMMENDATION

Council's Environmental Health Officer has determined that the proposal is satisfactory, subject to conditions.

Annexure 7

Trees and Landscape Officers Referral Response

REFERRAL RESPONSE – TREES & LANDSCAPING

FILE NO: DA 359/2017/1

ADDRESS: 30-36 Bay Street DOUBLE BAY 2028

PROPOSAL: Demolition of existing structures and construction of a seven storey mixed use development containing 39 residential units (5 x studios, 12 x 1 bed, 18 x 2 bed & 4 x 3 bed), 3 ground level retail spaces (proposed hours of 6am-10pm Mon-Sat and 7am-10pm Sun) with ground level parking (9 cars) and a basement car park accessed by a car lift (24 cars) and the removal of a tree at the rear of 28 Bay Street. The proposal also includes a Voluntary Planning Agreement (VPA) with an offer of \$500,000 for projects identified in Council's Double Bay Public Domain Strategy (Council has not considered the VPA offered by the applicant nor has it proposed to enter into an agreement in accordance with Clause 25D of the EPA Regulations but is provided for information only)

FROM: Nick Williams- Tree & Landscaping

TO: Mr D Lukas

9. I refer to the following documents received for this report:

- Statement of Environmental Effects, prepared by Ingham planning, dated August 2017.
- Survey Plan No. 41414, drafted by Norton Survey Partners, dated 13/5/2016.
- Architectural Drawing No's DA 1100-DA1110, DA2000-DA2008, DA3000-DA3002, DA3100-DA3101 drawn by Group GSA, dated 5/10/2016, 18/10/2016, and 25/11/2016.
- Stormwater drainage Plan No. C2.01, drawn by SCP, dated 12/5/2017.
- Arboricultural Impact Assessment Report, written by Tree IQ, dated 15th March 2017.
- Landscape Plan No's 160279 (L7001 & L7002), designed by Group GSA, dated 28/7/2017.
- Letter from Royal Oak Hotel (Puruse Pty Ltd) permitting tree removal, dated 1 June 2017.

A site inspection was carried out on: 17th of November 2017.

Relevant Control:

- Woollahra Local Environment Plan 2014
- Woollahra Residential Development Control Plan 2015
- The comments and recommendations within this Referral Response have taken into consideration the guidelines established within Australian Standard AS 4373 – Pruning

of amenity trees and Australian Standard AS 4970 – Protection of trees on development sites

10. SUMMARY

- No issues with the removal of Tree 1 and the pruning of Tree 2 (both of which are located within the Royal Oak hotel property boundary).
- Tree protection and a tree damage security deposit bond required for Council Street trees located on Bay Street (referenced Trees 3 & 4).
- Arborist supervision required for several stages of work and outlined in Condition B.2 of this referral response.

11. COMMENTS

Tree 1, which is located within the Royal Oak Hotel site, has been identified as a tree which is in decline. Furthermore, much of the crown of this tree exists within the proposed development site. The submitted tree report has identified that if the tree were to be retained a significant portion of the canopy would need to be pruned to accommodate the development. The likely result would be a disfigurement of the tree. Given these factors there are no issues with the removal of this tree. *The applicant has submitted documentation showing the Royal Oak consent to the removal of Tree 1.

While the proposed pruning of Tree 2 will result in the removal of large diameter branches it is unlikely to result in any severe aesthetic disfigurement of the tree or result in tree decline. The species is generally considered robust and able to tolerate a reasonable amount of above and below ground damage (such as root loss and branch pruning).

I generally agree with the assessment within the submitted Tree IQ report that the existing building has likely limited root spread from Tree 2 into the subject development site. However, this is possibly not the case in the courtyard area bordering the Royal Oak hotel (which falls within the trees awarded TPZ radius). For this reason and to mitigate the possibility of damage to tree 2 excavation within this area will need to be supervised by the site arborist as outlined within Condition B.2 of this referral response.

Tree protection is required for Council Street trees located on Bay Street (referenced 3 & 4) as outlined in Condition B.1 of this referral response. Also applicable to these trees is the requirement for a tree damage security deposit bond. An arborist must supervise works associated with the demolition of the existing awning and erection of hoarding and new awning for the proposed building- Condition B.2.

12. RECOMMENDATIONS

Council's Tree and Landscape Officer has determined that the development proposal is satisfactory in terms of tree preservation and landscaping, subject to Conditions

Annexure 1

Architectural plans and elevations

30-36 BAY ST & 2 GUILFOYLE AVE, DOUBLE BAY - DEVELOPMENT APPLICATION



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028
www.nathers.gov.au



DA SUBMISSION

BCA - Access Consultant
Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH:02 9387 4441
Civil & Structural
SCP Consulting Pty Ltd
Level 2, Danchen House , 507 Kent Street, Sydney , NSW
2000
PH 61 2 9267 9312
Electrical / Communications
Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669
Hydraulic
Insync Services Pty Ltd
Level 6, 89 York St, Sydney , NSW 2000
PH 92623400
Lift Engineer
Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH:2 7901 3242
Mechanical
Thwaite Consulting Group
Suite 4 , 137 Bathurst st , Sydney, NSW 2000
PH: 2 9283 0019
Planner
Ingham Planning Pty Ltd
19/363 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111
Waste Management
The Mack Group
2 Short Street, Leichhardt NSW 2040
Ph: 612 9550 0566
Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff , Sydney, NSW
2027
Ph: 02 9302 3000
Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title



30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

DRAWING SCHEDULE /
SITE LOCATION PLAN

Scale		1 : 100
Drawing Created (date)		10/05/16
Drawing Created (by)		Group GSA
Plotted and checked by		RT
Verified		RU
Approved		RU
Project No	Drawing No	Issue
160279	DA0000	F

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Do not scale drawings. Use figured Dimensions.

DRAWING LIST			
Sheet Number	Sheet Name	Current Revision Date	Current Revision
0000 - 0999 - TITLE PAGE/LOCATION PLAN			
DA0000	DRAWING SCHEDULE / SITE LOCATION PLAN	31/07/17	F
1000 - 1099 - DEMOLITION PLANS			
DA1000	DEMOLITION PLAN - EXISTING SITE PLAN	27/07/17	C
1100 - 1199 - SITE PLANS			
DA1100	SITE ANALYSIS	27/07/17	B
DA1110	PROPOSED SITE PLAN	27/07/17	E
DA1200	SOLAR STUDY PLANS - 9AM TO 12 PM	27/07/17	F
DA1201	SOLAR STUDY PLANS - 1PM TO 3PM	27/07/17	C
DA1210	SOLAR STUDY - EYE OF SUN - 9AM TO 12PM	27/07/17	D
DA1211	SOLAR STUDY - EYE OF SUN - 1PM TO 3PM	27/07/17	C
DA1220	SOLAR STUDY - SHADOW DIAGRAMS	27/07/17	D
DA1221	SOLAR STUDY - SHADOW DIAGRAMS	27/07/17	C
2000 - 2199 - FLOOR PLANS			
DA2000	BASEMENT PLAN	27/07/17	J
DA2001	GROUND LEVEL PLAN	27/07/17	K
DA2002	LEVEL 1 FLOOR PLAN	27/07/17	G
DA2003	LEVEL 2 TO 4 FLOOR PLAN	27/07/17	G
DA2006	LEVEL 5 FLOOR PLAN	27/07/17	H
DA2007	LEVEL 6 FLOOR PLAN	27/07/17	I
DA2008	ROOF PLAN	27/07/17	I
3000 - 3099 - ELEVATIONS			
DA3000	ELEVATIONS - NORTH & EAST	31/07/17	I
DA3001	ELEVATIONS - NORTH WEST AND SOUTH	31/07/17	H
DA3002	ELEVATIONS - SOUTH WEST & NORTH WEST	31/07/17	H
3100 - 3199 - SECTIONS			
DA3100	SECTION 1	31/07/17	F
DA3101	SECTION 2	31/07/17	F
3200 - 3299 - PERSPECTIVES			
DA3200	Photomontage 1	27/07/17	B
DA3201	Photomontage 2	27/07/17	B
4000 - 4999			
DA4100	GFA, CROSS VENTILATION & SOLAR ACCESS	31/07/17	I
DA4200	UNIT TYPES DIAGRAMS	27/07/17	E
DA 4300	BASIX THERMAL COMFORT INCLUSIONS	27/07/17	C
5000 - 5099 - ADAPTABLE UNITS			
DA5000	ADAPTABLE TYPE 1	27/07/17	C
6000 - 6999			
DA6002	MATERIALS BOARD	27/07/17	B
TOTAL : 29			

A ACRY ACST
ACC CLKG
ADH COMM
ADH CNR
AF COL
AGGR CONC
AHD CONSTR
A/C COORD
AL CORR
AMDT CPT
AO ACCESS OPENING
AP ACCESS PANEL
APD AGRICULTURAL PIPE DRAIN
APPROX APPROXIMATE
AR ACID-RESISTANT
ASB ASBESTOS
ASPH ASPHALT
AT ACUSTIC TILING
AUTO AUTOMATIC
AUX AUXILIARY
AVG AVERAGE

B B BASIN
BC BOOKCASE
BD BOARD
BHD BULKHEAD
BIT BITUMEN
BK BRICK
BLK BLANKET
BLK BLOCKWORK
BL BUILDING LINE
BLDG BUILDING
BLDR BUILDING
BLK BLOCK
BM BENCHMARK
BN BULLNOSE
BOL BOLLARD
BOT BOTTOM
BPL BASEPLATE
BRKT BRACKET
BTH BOUNDARY TRAP
BT BATH
BV BRICK VENEER
BWK BRICKWORK
BWU BOILING WATER UNIT

C C COOKER
CA CONTACT ADHESIVE
CAB CABINET
CAD COMPUTER-AIDED DESIGN/DRAFTING
CAN CANOPY
CANT CANTILEVER
CAP CAPACITY
CAV CAVITY
CB CONCRETE BLOCK
CC CHEMICAL CLOSET
C/C CENTRE TO CENTRE
CCTV CLOSED-CIRCUIT TELEVISION
CD CLOTHES DRYER
CEM CEMENT
CF CONCRETE FLOOR
CFC COMPRESSED FIBRE CEMENT
CG CLEAR GLASS
CGD CORNER GUARD
CGS CORRUGATED GALVANIZED STEEL
CH CHUTE
CH CLOTHES HOOK
CHAM CHAMFER
CHS CIRCULAR HOLLOW SECTION
CHNL CHANNEL
CI CAST IRON
CIP CAST IRON PIPE
CIRC CIRCLE
CJC CONSTRUCTION/CONTROL JOINT
CK CLOCK

D D DOOR
DET DETAIL
DIA DIAMETER
DIAG DIAGONAL
DIM DIMENSION
DIST DISTANCE
DPC DAMP-PROOF COURSE
DRG DRAWING
DRG DRG NO
DB DISTRIBUTION BOARD
DSB DISTRIBUTION SWITCHBOARD
DSC DISCONNECTOR TRAP
DT DRINKING FOUNTAIN
DG DOUBLE GLAZING
DH DOUBLE HUNG
DP DOWNPIPE
DPC DAMP-PROOF COURSE
DPM DAMP-PROOF MEMBRANE
DW DISHWASHER

E EA EACH
EJ EXPANSION JOINT
EG EAVES GUTTER
ELEC ELECTRIC, ELECTRICAL*
ELEV ELEVATION
ENGR ENGINEER
EMT EASEMENT
EQUV EQUIVALENT
EQ EQUAL
EQUIP EQUIPMENT
EST ESTIMATE
EXH EXHAUST
EXP EXPANSION
EXST EXISTING
EXT EXTERNAL

F F FEMALE
FA FIRE ALARM
FB FACE BRICK
FD FIRE DOOR
FE FIRE EXTINGUISHER
FH FIRE HYDRANT
FHR FIRE HOSE RACK/REEL
FIP FIRE INDICATOR PANEL
FG FIXED GLASS
FR FIRE RESISTANT
FREQ FREQUENCY
FS FLOOR SUMP
FWD FORWARD
FWK FRAMEWORK
FC FIBROUS CEMENT
FCL FINISHED CEILING LEVEL
FCU FAN COIL UNIT
FFL FINISHED FLOOR LEVEL
FW FLOOR WASTE

G GA GENERAL ARRANGEMENT
GALV GALVANIZE
GI GALVANIZED IRON
GIP GAS METER
GM GENERAL PURPOSE OUTLET
GPO GARBAGE CHUTE
GC GRATED DRAIN
GT GREASE TRAP
GV GATE VALVE
GEW GLAZED EARTHENWARE
GFL GROUND FLOOR LEVEL
QL GROUND LINE
GRAND GRANO
GRC GLASS-REINFORCED CONCRETE
GRP GLASS-REINFORCED PLASTIC

H H HYDRANT
HBD HARDBOARD
HCR HARDWARE
HC HOSE COCK
HD HAND DRYER
HR HAND RAIL
HEX HEXAGON
HMR HIGH MOISTURE RESISTANCE
HORIZ HORIZONTAL
HP HYDRANT POINT
HT HEIGHT
HTR HEATER
HW HOT WATER
HWU HOT WATER UNIT
HWD HARDWOOD
HYD HYDRAULIC

I ID INSIDE DIAMETER
IL INVERT LEVEL
INC INCORPORATE
IND INDICATOR
INSUL INSULATED OR INSULATION
INT INTERNAL
INV INVERT
IO INSPECTION OPENING
IP INSPECTION PIT
ISO INTERNATIONAL ORGANIZATION FOR STANDARDIZATION
IT INTERCEPTOR TRAP

J JT JOINT
JUNC JUNCTION

K KJ KEYED JOINT
KB KERB

L LINO LINOLEUM
LDG LANDING
LDRY LAUNDRY
LG LENGTH
LC LINEN CHUTE
LNG LINING
LNG LONGITUDINAL
LV LOW VOLTAGE
LVR LOUVRE

M M MALE
AX MAXIMUM
MECH MECHANICAL
MDF MEDIUM DENSITY FIBREBOARD
MI MIRROR
MIN MINIMUM
MISC MISCELLANEOUS
MPLY MARINE PLY
MRPD MOISTURE RESISTANT PLASTERBOARD
MRMDF MOISTURE RESISTANT MEDIUM DENSITY FIBREBOARD
MSB MAIN SWITCHBOARD
MSRY MASORYRY
MS MILD STEEL
NTG MOUNTING

N NEG NEGATIVE
NO NUMBER
NOM NOMINAL
NTS NOT TO SCALE
NP NICKEL PLATED

O O OVEN
OA OVERALL
OD OUTSIDE DIAMETER
OF OVERFLOW
OG OBSCURE GLASS
OH OVERHEAD
OPP OPPOSITE
OFC OFF-FORM CONCRETE
OS OVERSIZE

P PT PAINT
PF PAINT FINISH
PAR PARALLEL
PATT PATTERN
PBN PUSH-BUTTON
PB PH BOARD
PBD PLASTERBOARD
PC PRECAST CONCRETE
PED PEDESTAL
PFC PARALLEL FLANGE CHANNEL
PG PLATE GLASS
PLY PLYWOOD
PREFAB PREFABRICATED
PRELIM PRELIMINARY
PRESS PRESSURE
PSS POLISHED STAINLESS STEEL
PTD PAPER TOWEL DISPENSER
PTFE POLYTETRAFLUOROETHYLENE
PTN PARTITION
PVA POLYVINYL ACETATE
PVC POLYVINYL CHLORIDE

Q QTY QUANTITY
QT QUARRY TILE

R R REFRIGERATOR
RA RETURN AIR
RAD RADIUS
RC REINFORCED CONCRETE
RCP REFLECTED CEILING PLAN
REF RECTANGULAR REFERENCE
REINF REINFORCEMENT
REQD REQUIRED
RL REDUCED LEVEL
RM ROOM
RMW RECESSED MATT WELL
ROW RIGHT OF WAY
RS ROLLER SHUTTER
RHS RECTANGULAR HOLLOW SECTION
RSA ROLLED-STEEL ANGLE
RSC ROLLED-STEEL CHANNEL
RSJ ROLLED-STEEL JOIST
RV RELIEF VALVE
RL REDUCED LEVEL
RS ROLLER SHUTTER
RWH RAINWATER HEAD
RWO RAINWATER OUTLET
RWP RAINWATER PIPE

S S SLIDING
SCK STOPCOCK
SC SOLID CORE
SJ SAW-CUT JOINT
SCHD SCHEDULE
SCP SATIN CHROME PLATED
SECT SECTION
SD SMOKE DETECTOR
SFL STRUCTURAL FLOOR LEVEL
SHT SHEET
SH SOAP HOLDER

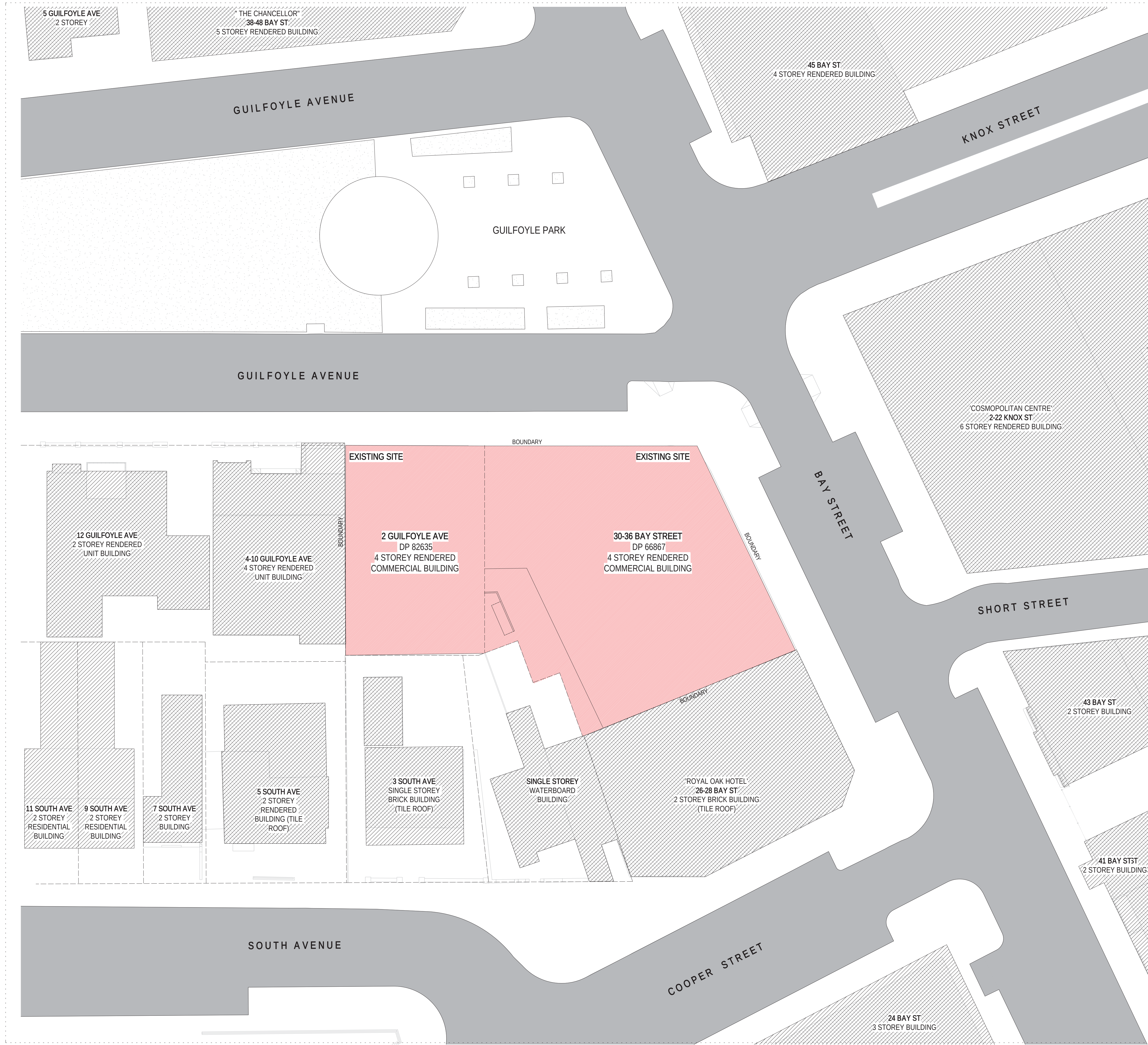
SHS SQUARE HOLLOW SECTION
SK SINK
SLD SLIDING
SPEC SPECIFICATION
SPR SPRINKLER
SP STANDPIPE
SHP SOLAR HYDROPONIC PANEL
SPP SOLAR PHOTOVOLTAIC PANEL
SPT SPIGOT
SFR SPREADER
SHR SHOWER
SS STAINLESS STEEL
SSS SATIN STAINLESS STEEL
SIST SANDSTONE
SQ SQUARE
ST STAIR
STD STANDARD
STER STERILIZER
STL STEEL
SV STOP VALVE
SVP SEWER VENT PIPE
SW SWITCH
SWBD SWITCHBOARD
SWD STORMWATER DRAIN
SWP STORMWATER PIT
SYM SYMMETRY
T TIMBER
TAG TONGUE AND GROOVED
TC TERRACOTTA
TEL TELEPHONE
TEMP TEMPERATURE
TEMP TEMPORARY
THK THICK
TOL TOLERANCE
TOL TOWEL RAIL
TRH TOILET ROLL HOLDER
TV TELEVISION
TYP TYPICAL
TRZO TERRAZZO

U U URINAL
UB UNIVERSAL BEAM
UC UNIVERSAL COLUMN
UNO UNLESS NOTED OTHERWISE
UTIL UTILITY
US UNDERSIDE

V V VINYL
VAC VACUUM
VB VAPOUR BARRIER
VC VITRIFIED CLAY
VCP VITRIFIED CLAY PIPE
VERT VERTICAL
VOL VOLUME
VOS VERIFY ON SITE
VP VENT PIPE
VT VINYL TILES

W W WINDOW
WB WEATHERBOARD
WC WATER CLOSET
W/..... WITH (COMBINATION FORM)
WM WASHING MACHINE
WNR WATER METER
W/O WITHOUT
WPM WATERPROOF MEMBRANE
WPLY WATERPROOF PLY
WT WASH TROUGH
WR WARDROBE
WRC WESTERN RED CEDAR
WS WALL STIFFENER

Y YG YARD GULLY



0m2m4m6m12m

Amendments

Issue	Description	Date
A	ISSUED FOR INFORMATION	19/05/17
B	ISSUED FOR INFORMATION	25/05/17
C	ISSUED FOR DA SUBMISSION	27/07/17

6.9

Average star rating

NATIONWIDEHOUSE

ENERGY RATING SCHEME

www.nathers.gov.au

Certificate no.:

Assessor Name:

Accreditation no.:

Certificate date:

Dwelling Address:

0001760850

Tracey Cools

VIC/BDV/12/1473

02 August 2017

Bay St Guilfoyle Av

Double Bay, NSW

2028

www.nathers.gov.au

North Point

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH 61 2 9267 9312
Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

Thwaite Consulting Group
Suite 4, 137 Bathurst st, Sydney, NSW 2000
PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/303 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111

Waste Management

The Mack Group
2 Short Street, Leichhardt NSW 2040
Ph: 612 9550 0566

Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW
2027
Ph: 02 9302 3000

Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title

DEMOLITION PLAN -
EXISTING SITE PLAN

Scale 1 : 200

Drawing Created (date) 10/05/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

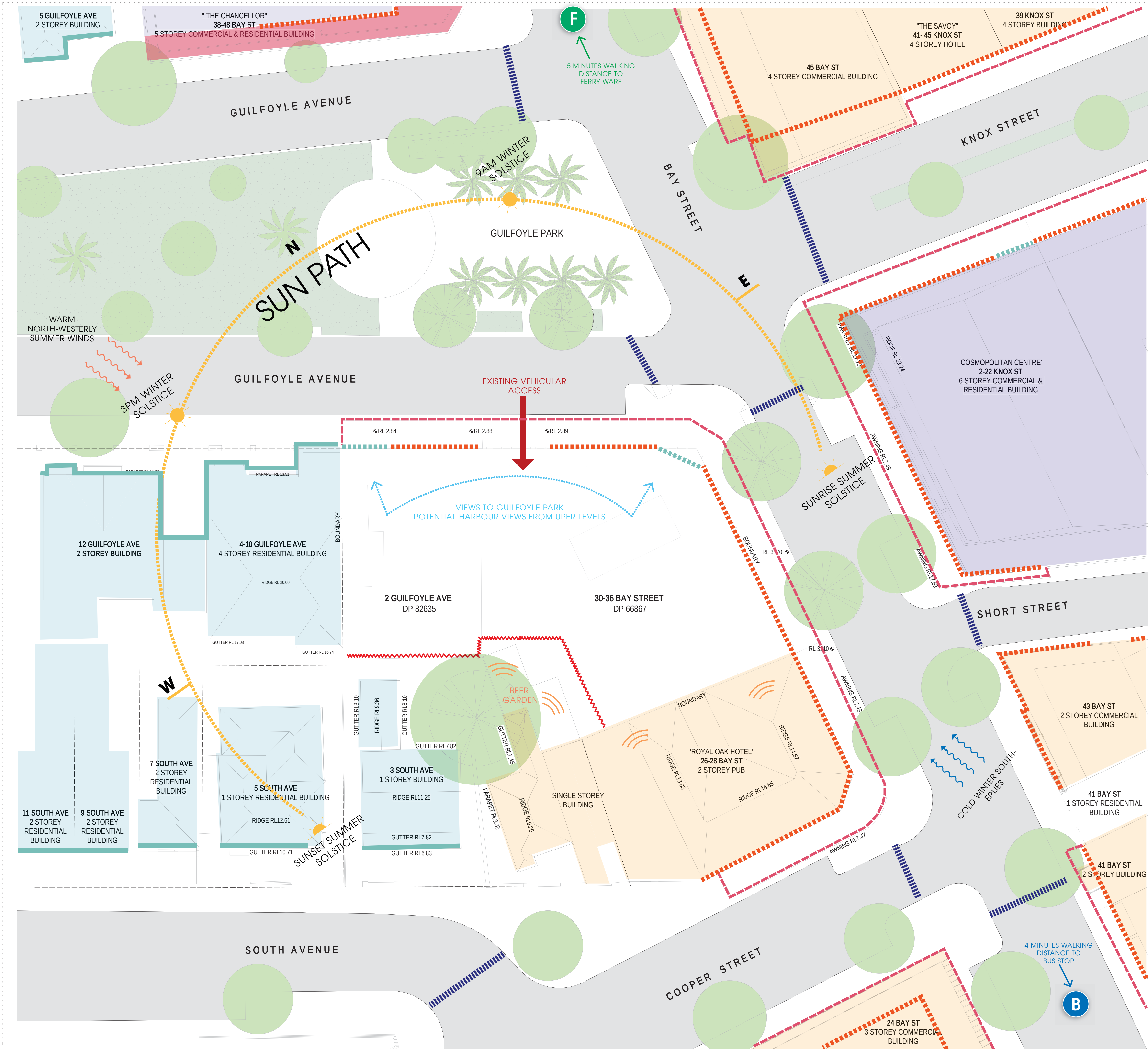
Approved RU

Project No Drawing No Issue

160279 DA1000 C

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27/07/2017 4:28:17 PM



0m2m4m8m12m

Amendments

Issue	Description	Date
A	ISSUED FOR INFORMATION	25/05/17
B	ISSUED FOR DA SUBMISSION	27/07/17

6.9

Average star rating

NATIONWIDEHOUSEENERGY RATING SCHEME

www.nathers.gov.au

Certificate no.:

Assessor Name:

Accreditation no.:

Certificate date:

Dwelling Address:

Bay St Guilfoyle Av

Double Bay, NSW

2028

0001760850

Tracey Cools

VIC/BDAV/12/1473

02 August 2017

North Point

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates

Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022

PH:02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd

Level 2, Danden House, 507 Kent Street, Sydney, NSW 2000

PH 61 2 9267 9312

Electrical / Communications

Audio Systems Logic

5 Sarah St, Mascot, NSW 2020

PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd

Level 6, 89 York St, Sydney, NSW 2000

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353 Slesser St, Sydney, NSW 2000

PH:2 7901 3242

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Thwaite Consulting Group

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PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd

19/303 Pacific Hwy, Lindfield, NSW 2070

PH: 94169111

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The Mack Group

2 Short Street, Leichhardt NSW 2040

PH: 612 9550 0566

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Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW 2027

PH: 02 9302 3000

GROUPGSA

Group GSA Pty Ltd ABN 76 002 113 779

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Australia 2011

www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape

nom architect M. Sheldon 3990

Project Title

30-36 BAY ST & 2 GUILFOYLE AV

DOUBLE BAY

Drawing Title

SITE ANALYSIS

Scale

1 : 200

Drawing Created (date)

10/18/16

Drawing Created (by)

Group GSA

Plotted and checked by

RT

Verified

RU

Approved

RU

Project No

Drawing No

Issue

160279

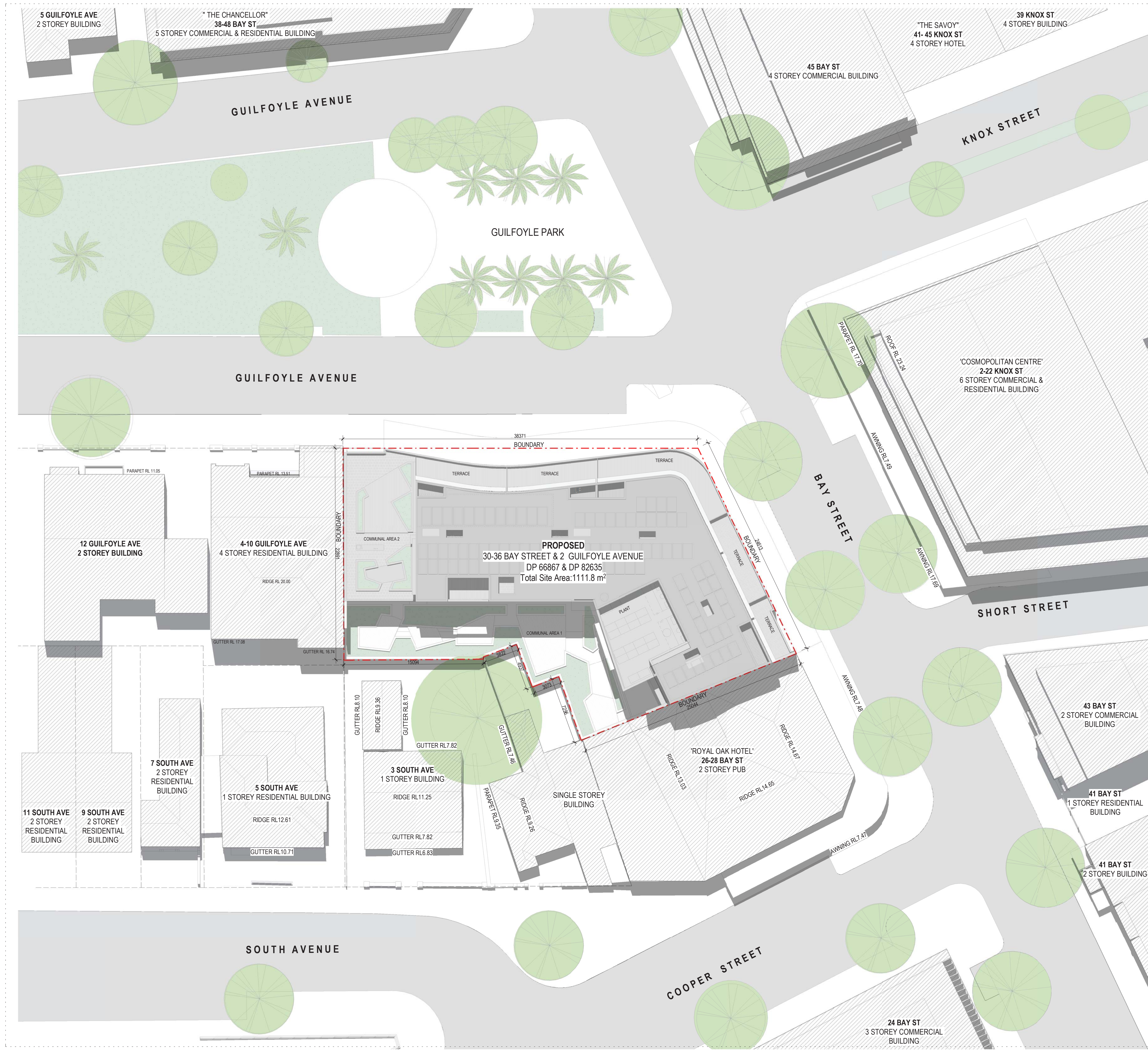
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28/07/2017 10:07:29 AM



Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	19/05/17
B	ISSUED FOR INFORMATION	25/05/17
C	ISSUED FOR INFORMATION	13/06/17
D	ISSUED FOR INFORMATION	23/06/17
E	ISSUED FOR DA SUBMISSION	27/07/17



Average star rating
6.9

Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAA/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St, Guilfoyle Av
Double Bay, NSW
2028
www.nathers.gov.au





North Point

DA SUBMISSION

- BCA - Access Consultant
Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH:02 9387 4441
- Civil & Structural
SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW, 2000
PH 61 2 9267 9312
Electrical / Communications
- Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669
- Hydraulic
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Level 6, 89 York St, Sydney, NSW 2000
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ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW 2027
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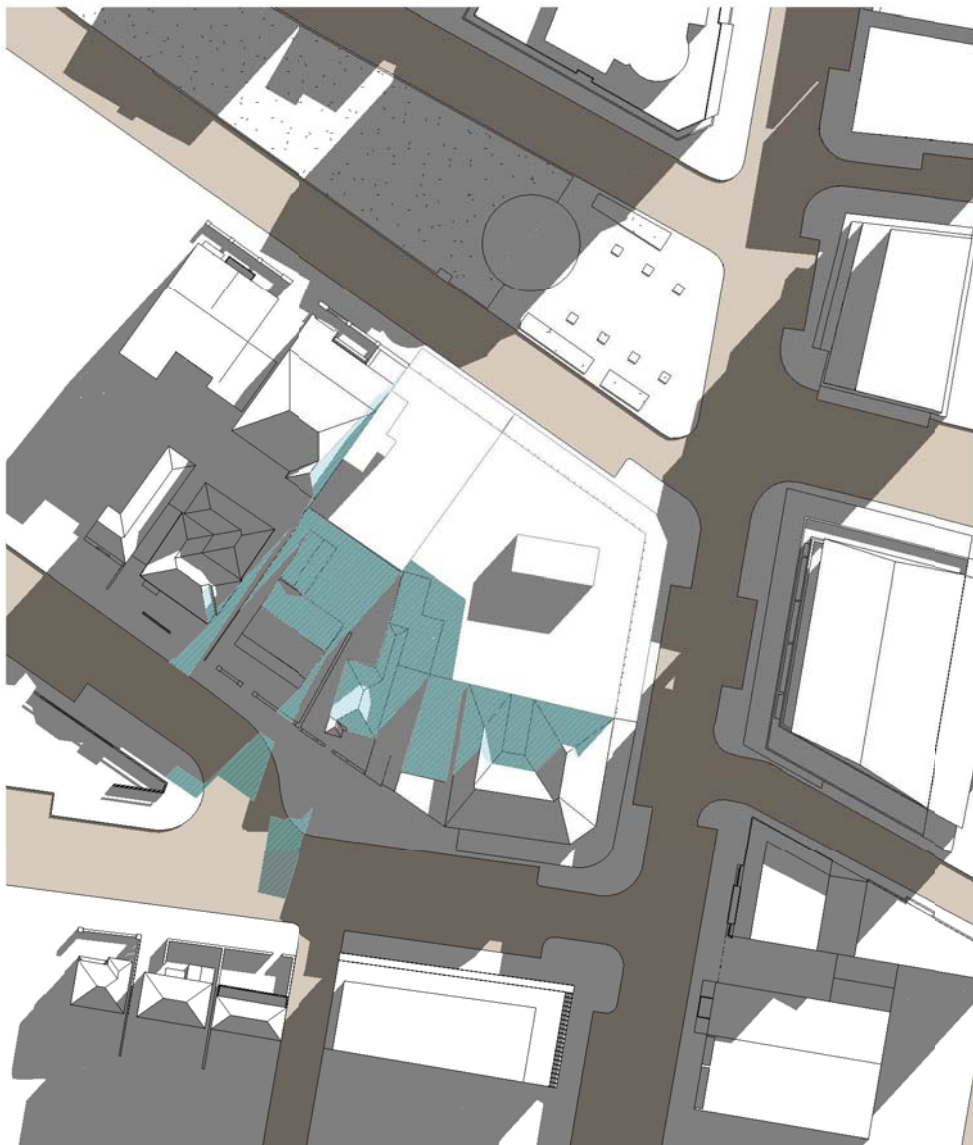
Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

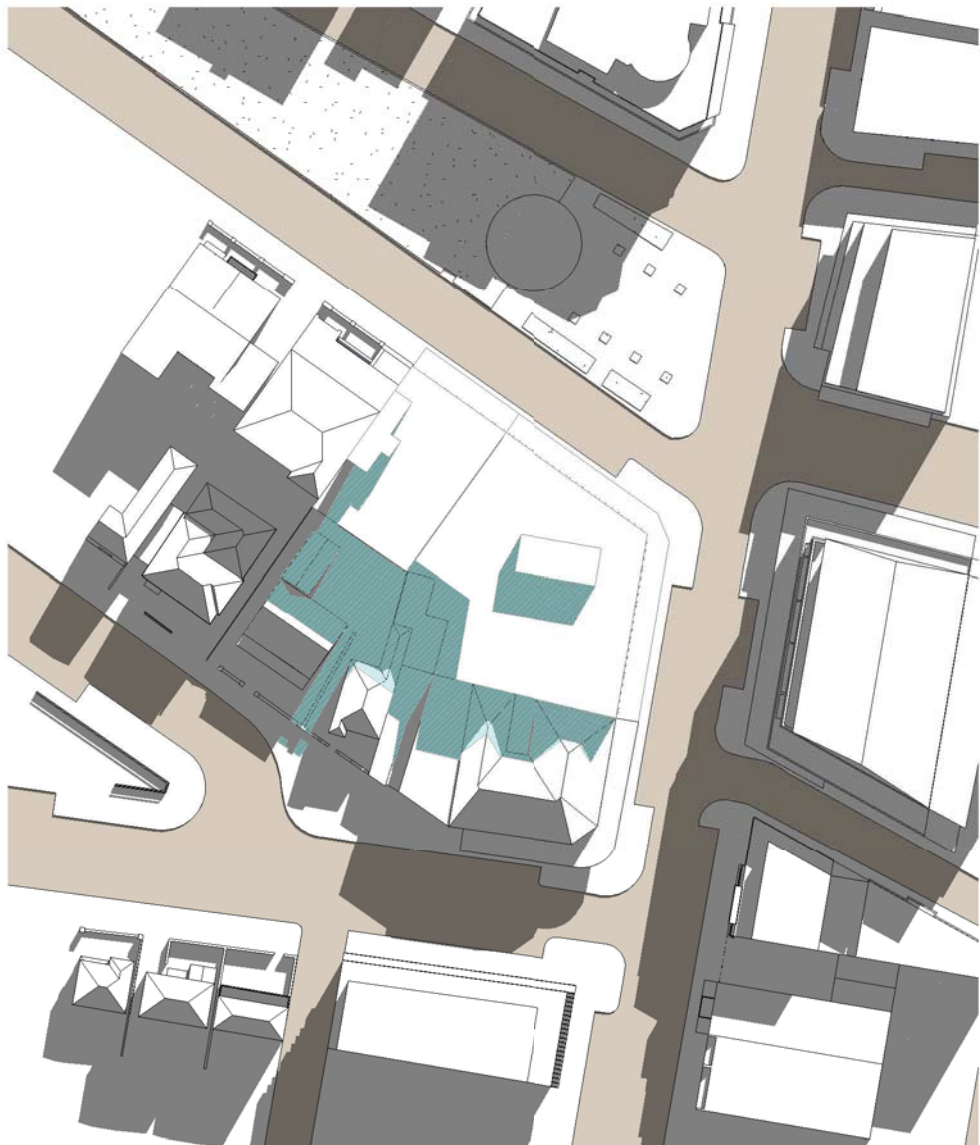
Drawing Title		
PROPOSED SITE PLAN		
Scale	1 : 200	
Drawing Created (date)	10/05/16	
Drawing Created (by)	Group GSA	
Plotted and checked by	RT	
Verified	RU	
Approved	RU	
Project No	Drawing No	Issue
160279	DA1110	E
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27/07/2017 4:21:23 PM

EXISTING - WINTER SOLSTICE - 21 JUNE



1 9AM EXISTNG
1:1000



2 10AM EXISTNG
1:1000



3 11AM EXISTING
1:1000



4 12PM EXISTING
1:1000

MASSING OF THE CURRENT LEP/DCP ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE



5 9AM CURRENT CONTROL
1:1000



6 10AM CURRENT CONTROL
1:1000



7 11AM CURRENT CONTROL
1:1000

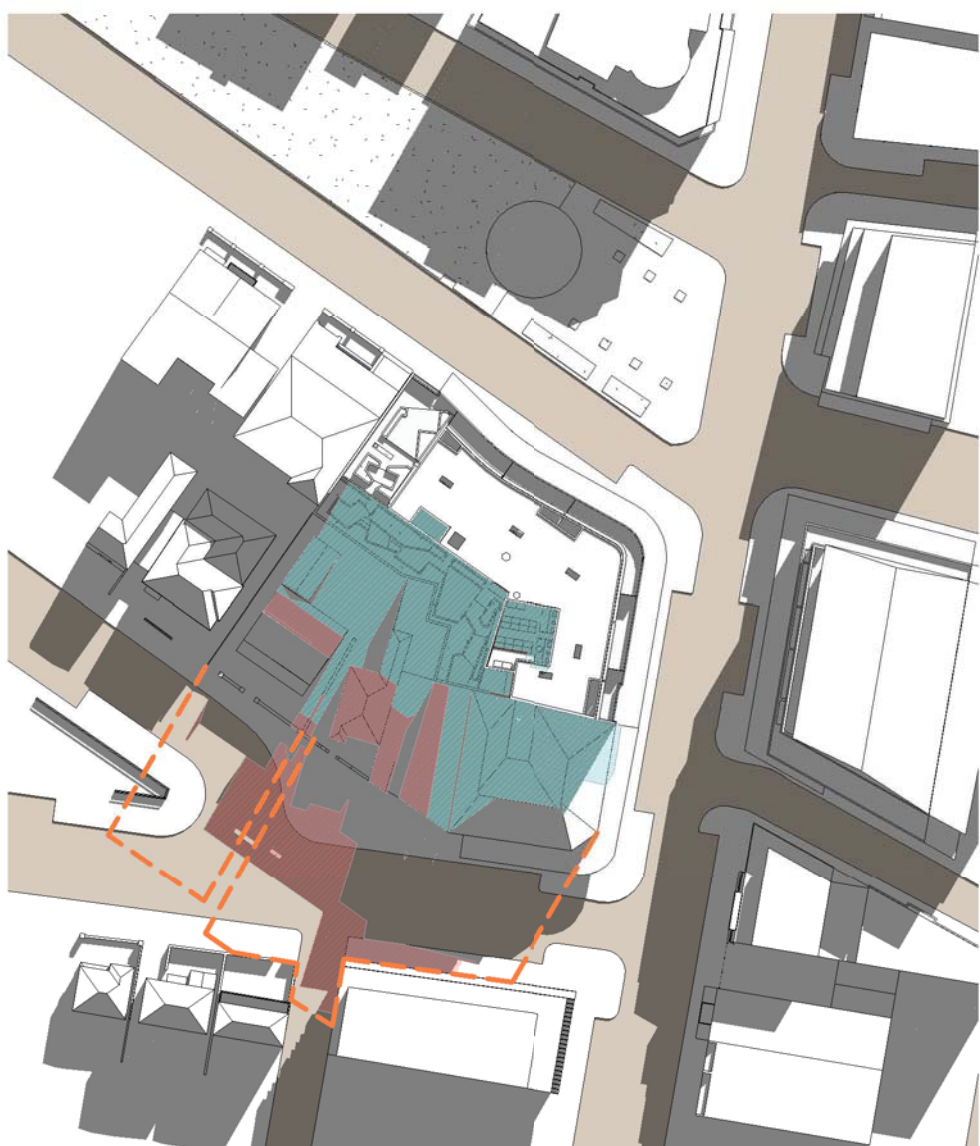


8 12PM CURRENT CONTROL
1:1000

PROPOSED - WINTER SOLSTICE - 21 JUNE



9 9AM PROPOSED
1:1000



10 10AM PROPOSED
1:1000



11 11AM PROPOSED
1:1000



12 12PM PROPOSED
1:1000



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW 2028
www.nathers.gov.au



DA SUBMISSION

BCA - Access Consultant
Matt Shuter + Associates Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022 PH:02 9387 4441
Civil & Structural
SCP Consulting Pty Ltd Level 2, Danchen House, 507 Kent Street, Sydney, NSW 2000 PH 61 2 9267 9312 Electrical / Communications
Audio Systems Logic 5 Sarah St, Mascot, NSW 2020 PH: 2 9700 8669
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Lift Engineer
Elevated Consulting 353 Sussex St, Sydney, NSW 2000 PH:2 7901 3242
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Waste Management
The Mack Group 2 Short Street, Leichhardt NSW 2040 Ph: 612 9550 0566
Client
ANKA DOUBLE BAY Pty Ltd Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW 2027 Ph: 02 9302 3000



Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title
SOLAR STUDY PLANS -
9AM TO 12 PM

Scale		As indicated
Drawing Created (date)		11/08/16
Drawing Created (by)		Group GSA
Plotted and checked by		RT
Verified		RU
Approved		RU
Project No	Drawing No	Issue

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LEGEND:
SHADOW AREA GENERATED BY BUILDING LOCATED ON SITE (30-36 BAY ST & 2 GUILFOYLE AVE)
SHADOW AREA ABOVE THE CURRENT ENVELOPE CONTROL OF SITE (30-36 BAY ST & 2 GUILFOYLE AVE)
SHADOW PROFILE CAST BY MAXIMISED ENVELOPE CONTROLS

EXISTING - WINTER SOLSTICE - 21 JUNE



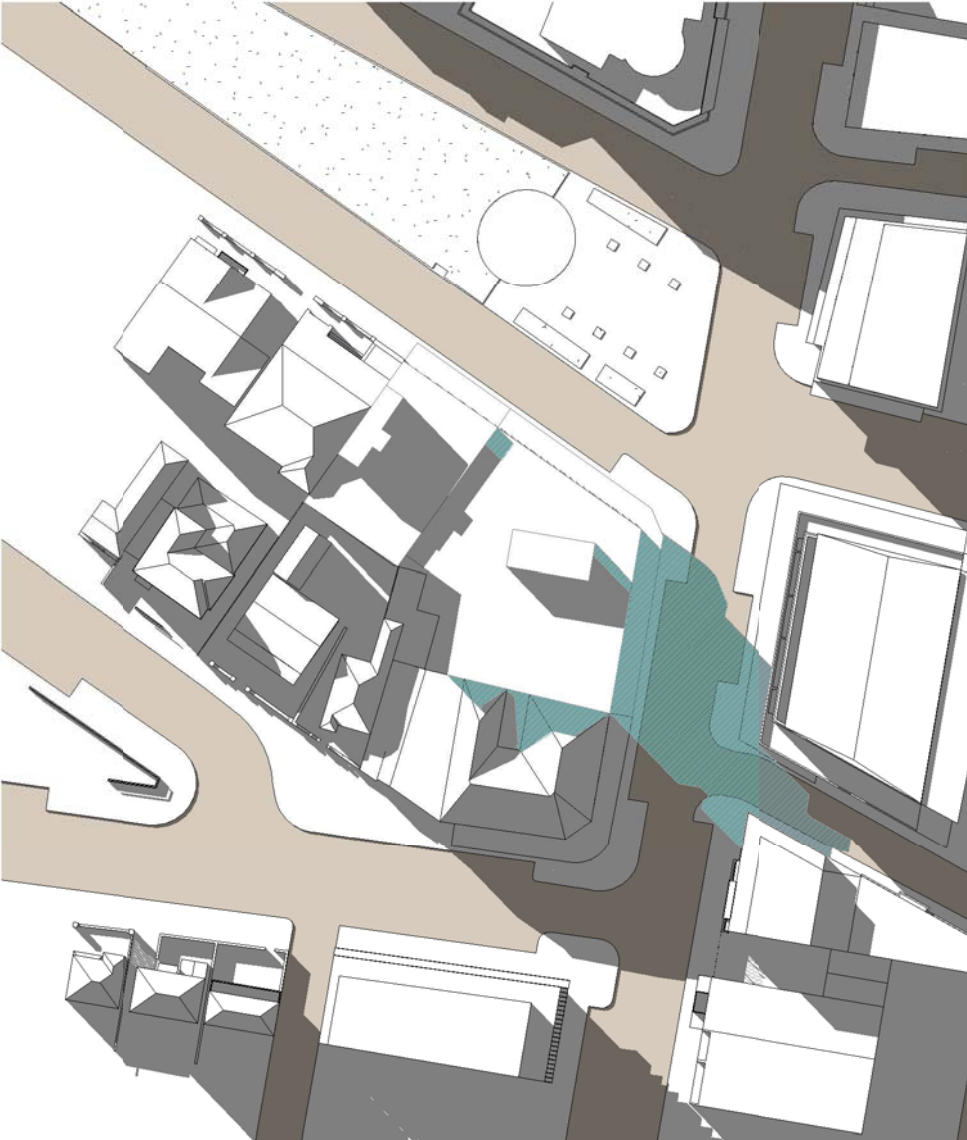
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1 : 1000



2 2PM EXISTING

1 : 1000



3 3PM EXISTING

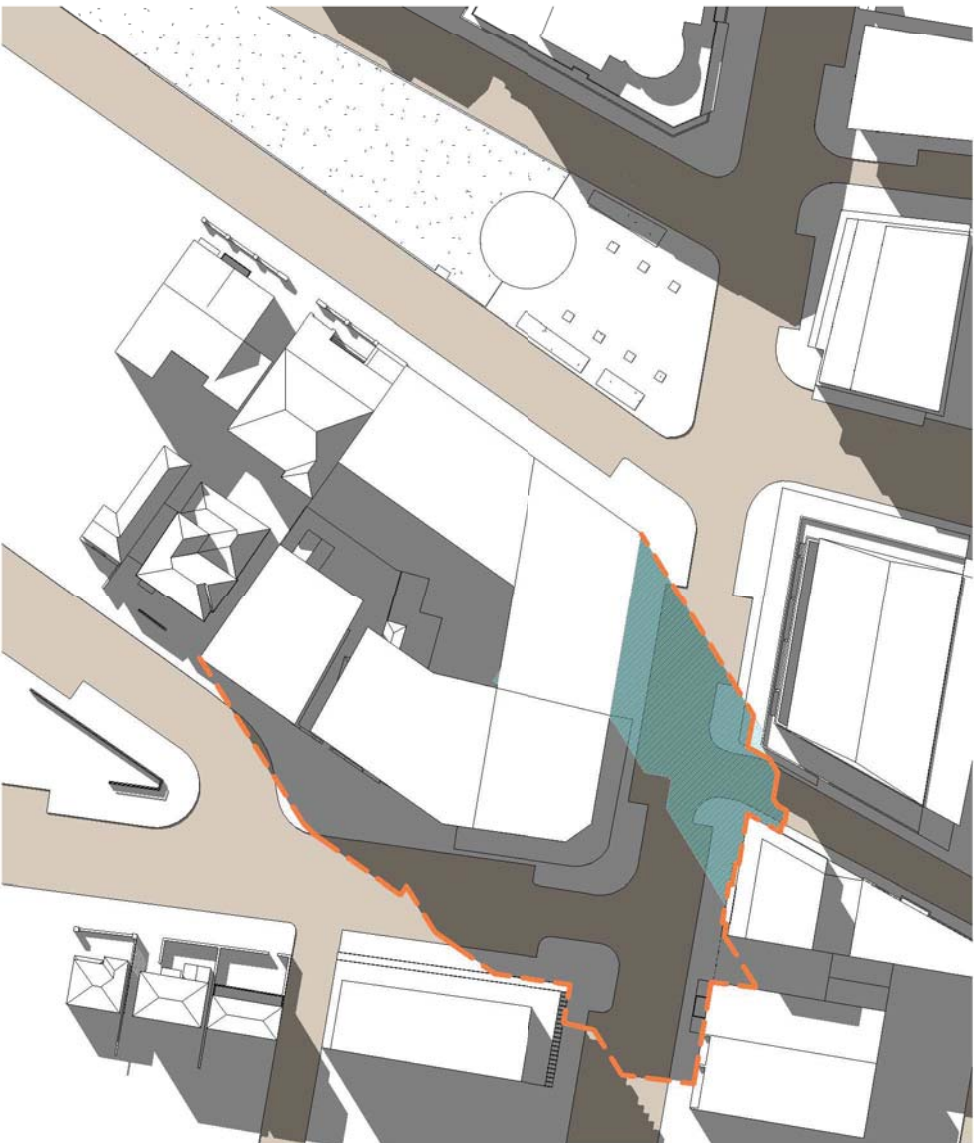
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MASSING OF THE CURRENT LEP/DCP ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE



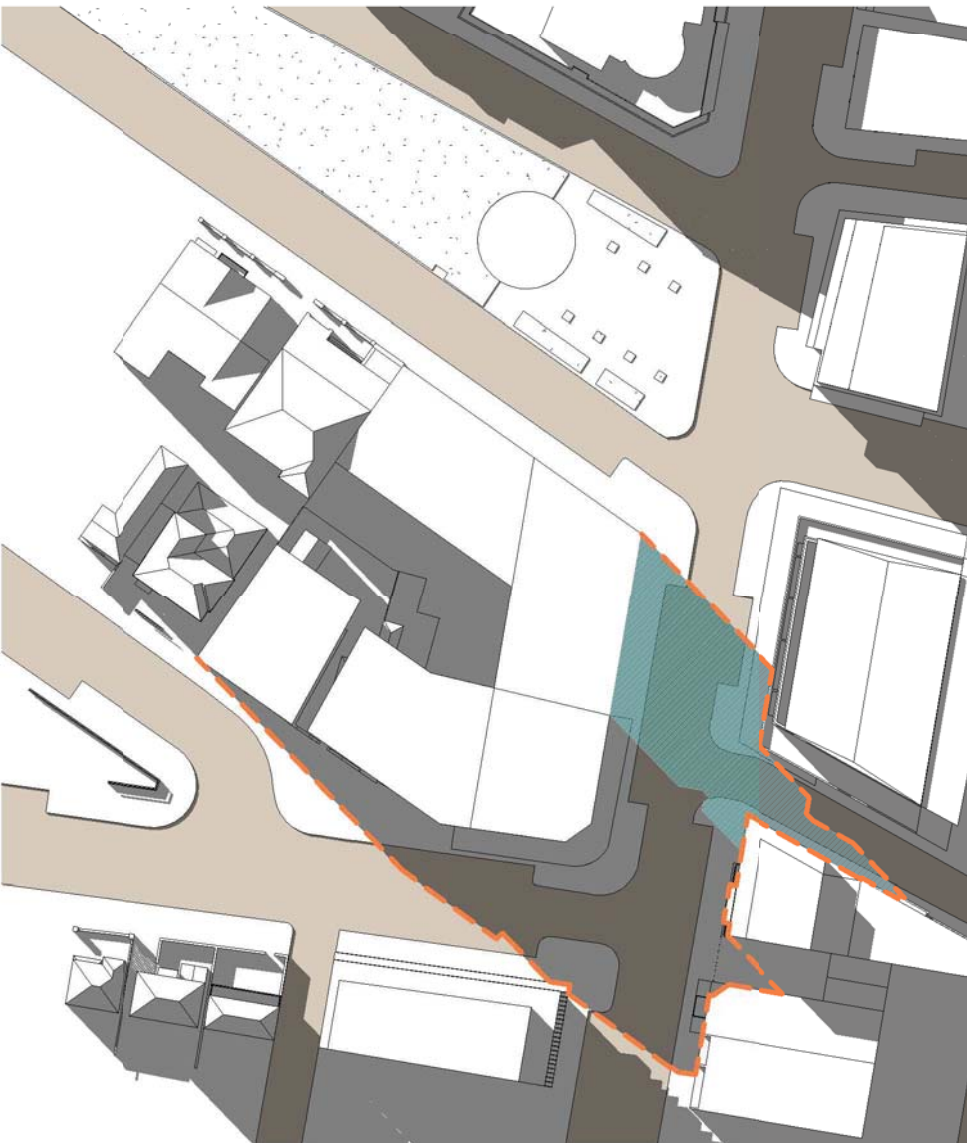
4 1PM CURRENT CONTROL

1 : 1000



5 2PM CURRENT CONTROL

1 : 1000



6 3PM CURRENT CONTROL

1 : 1000

PROPOSED - WINTER SOLSTICE - 21 JUNE



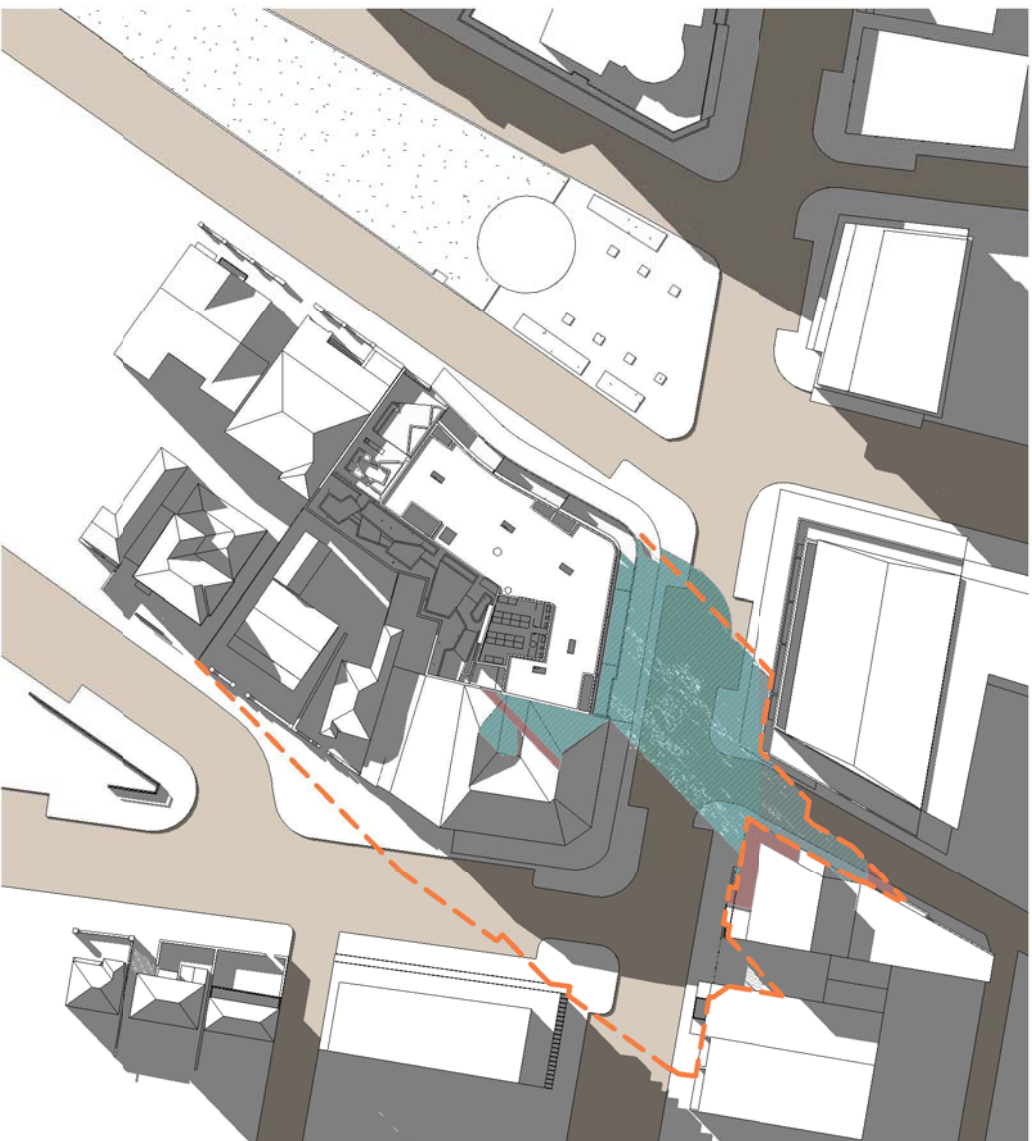
7 1PM PROPOSED

1 : 1000



8 2PM PROPOSED

1 : 1000

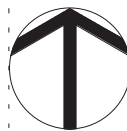


9 3PM PROPOSED

1 : 1000



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW 2028
www.nathers.gov.au



DA SUBMISSION

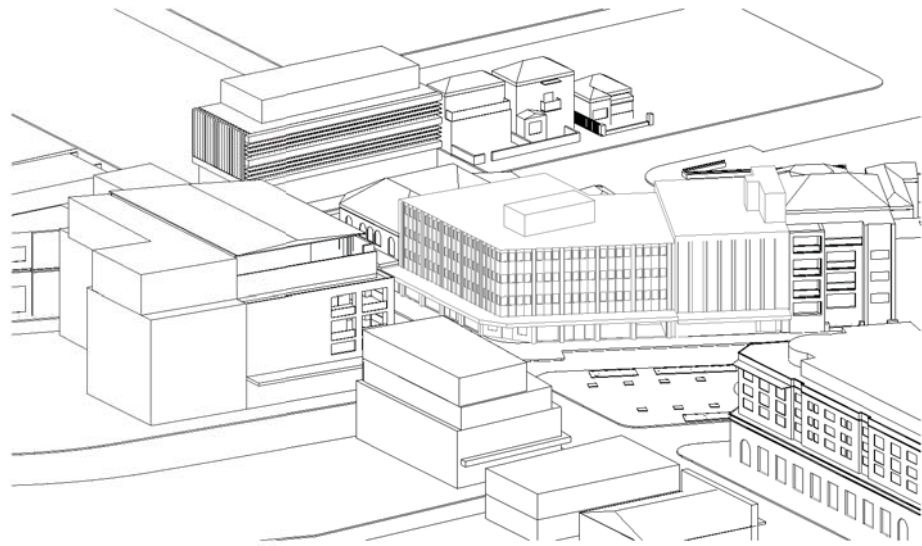
BCA - Access Consultant
Matt Shuter + Associates Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022 PH:02 9387 4441
Civil & Structural
SCP Consulting Pty Ltd Level 2, Danchen House, 507 Kent Street, Sydney, NSW 2000 PH 61 2 9267 9312 Electrical / Communications
Audio Systems Logic 5 Sarah St, Mascot, NSW 2020 PH: 2 9700 8669
Hydraulic
Insync Services Pty Ltd Level 6, 89 York St, Sydney, NSW 2000 PH 92623400
Lift Engineer
Elevated Consulting 353 Sussex St, Sydney, NSW 2000 PH:2 7901 3242
Mechanical
Thwaite Consulting Group Suite 4, 137 Bathurst st, Sydney, NSW 2000 PH: 2 9283 0019
Planner
Ingham Planning Pty Ltd 19/303 Pacific Hwy, Lindfield, NSW 2070 PH: 94169111
Waste Management
The Mack Group 2 Short Street, Leichhardt NSW 2040 Ph: 612 9550 0566
Client
ANKA DOUBLE BAY Pty Ltd Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW 2027 Ph: 02 9302 3000

GROUP GSA
Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

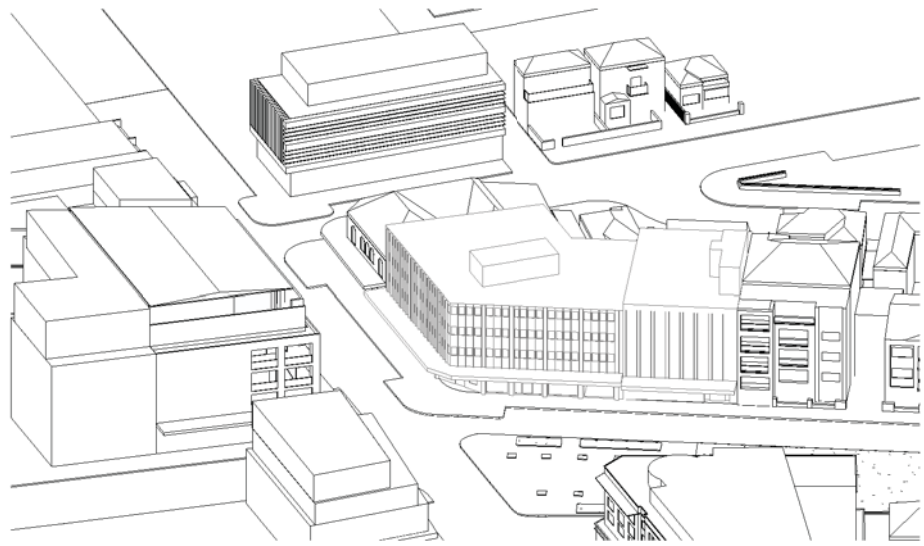
30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title		
SOLAR STUDY PLANS - 1PM TO 3PM		
Scale	As indicated	
Drawing Created (date)	09/06/16	
Drawing Created (by)	Group GSA	
Plotted and checked by	RT	
Verified	RU	
Approved	RU	
Project No	Drawing No	Issue
160279	DA1201	C
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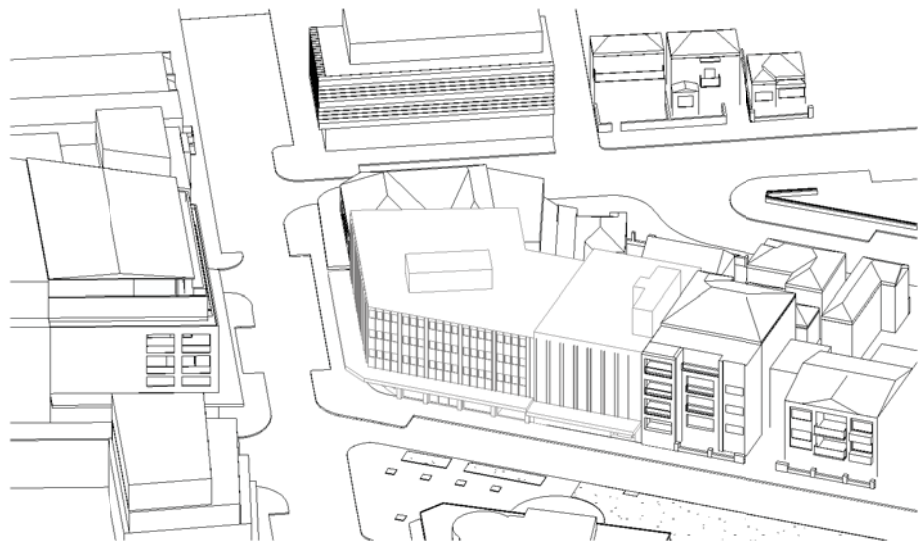
EXISTING - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



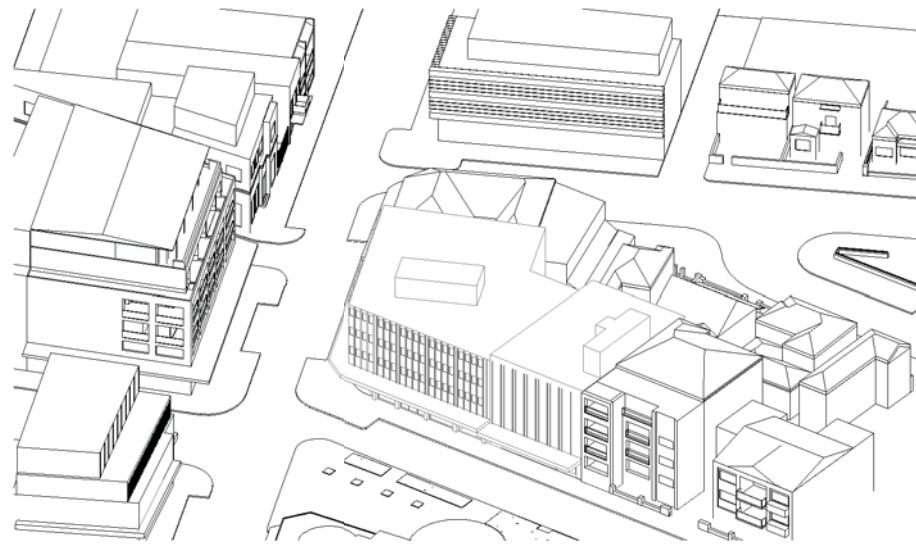
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2 10AM - EXISTING

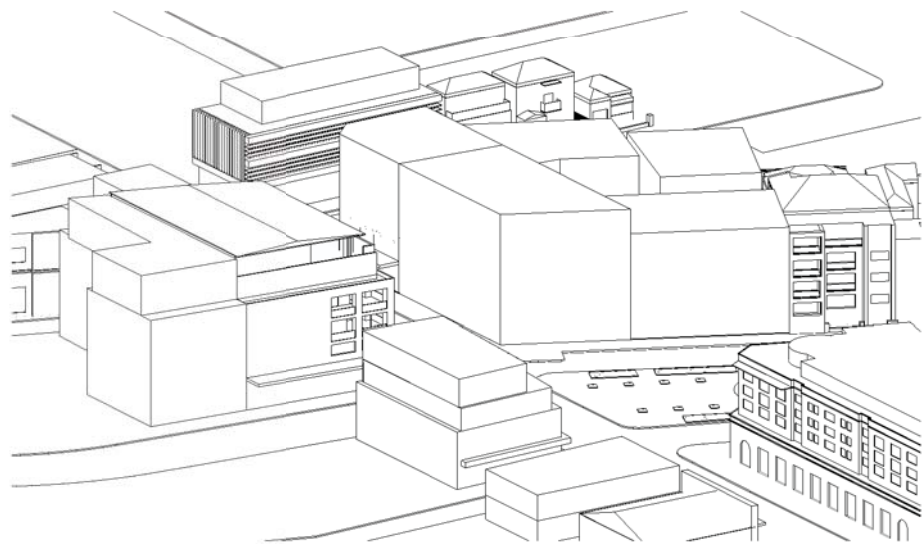


3 11AM - EXISTING

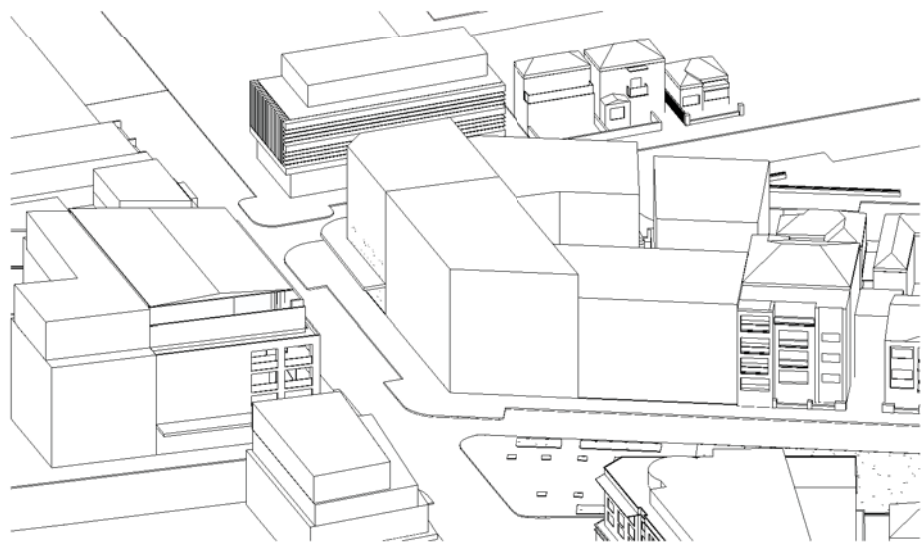


4 12PM - EXISTING

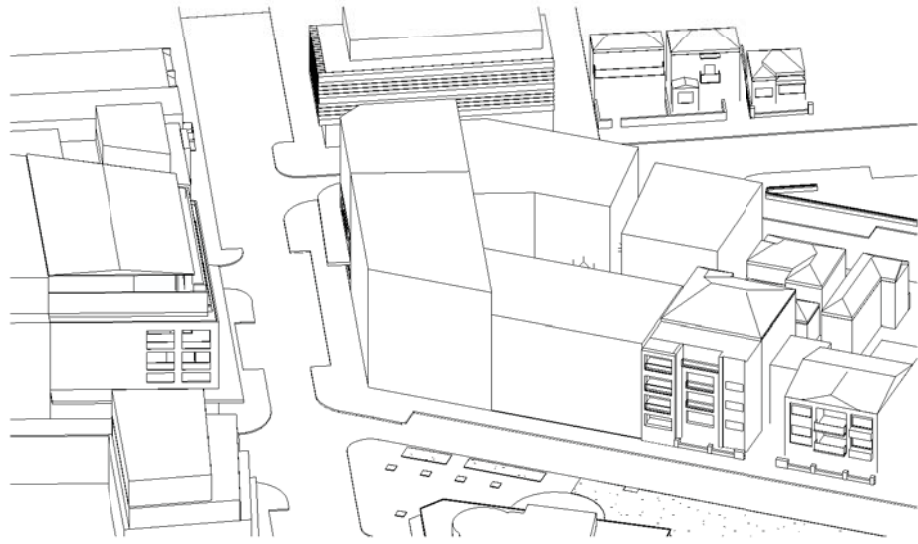
MASSING OF THE CURRENT ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



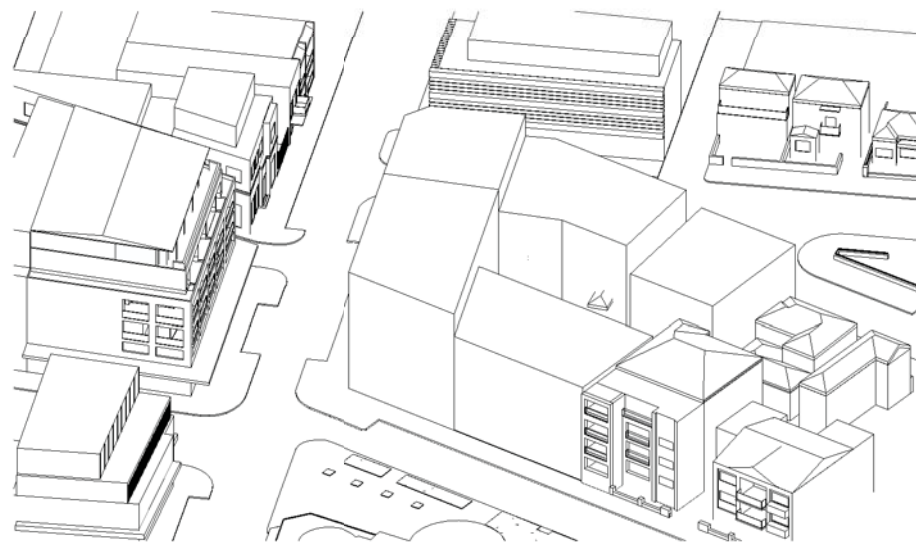
5 9AM - CURRENT CONTROL



6 10AM - CURRENT CONTROL



7 11AM - CURRENT CONTROL



8 12PM - CURRENT CONTROL

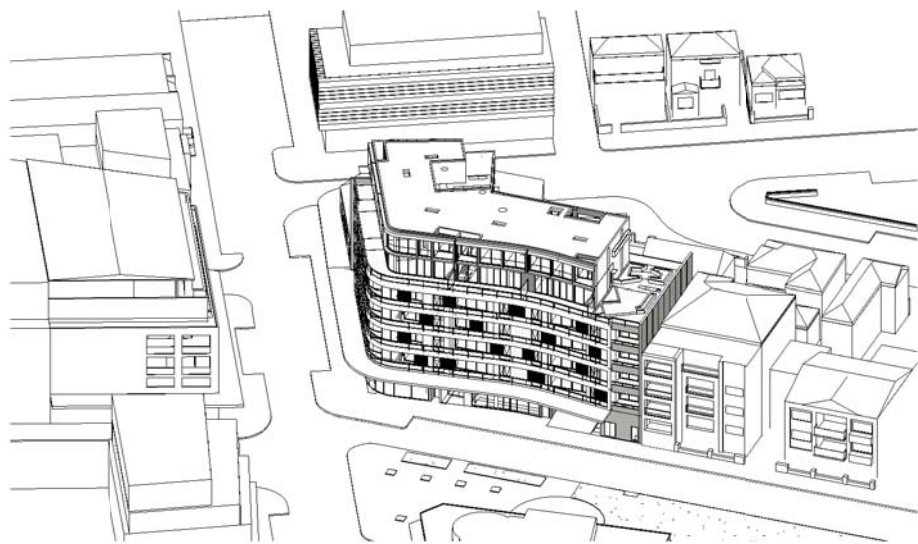
PROPOSED - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



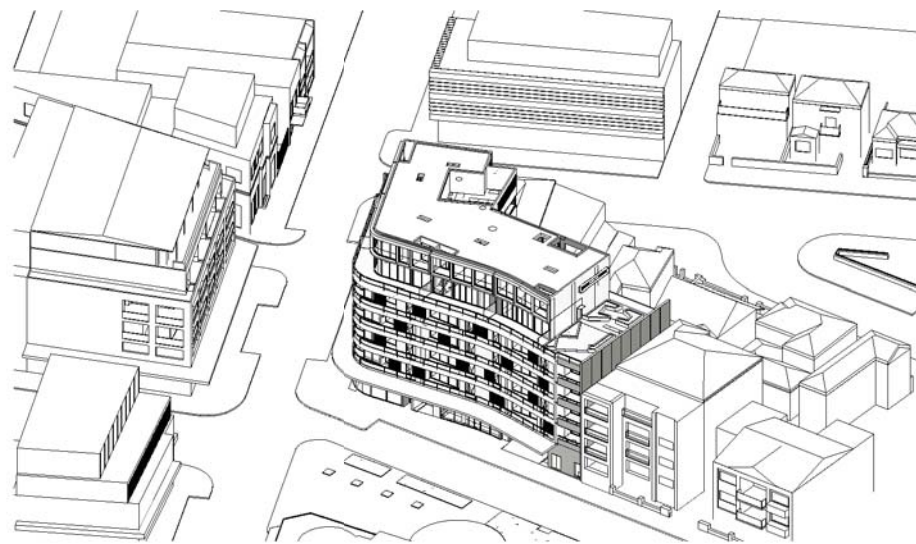
9 9AM - PROPOSED



10 10AM - PROPOSED



11 11AM - PROPOSED



12 12PM - PROPOSED



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDIV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028

www.nathers.gov.au



Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	10/05/17
B	ISSUED FOR INFORMATION	31/05/17
C	ISSUED FOR INFORMATION	13/06/17
D	ISSUED FOR DA SUBMISSION	27/07/17

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH: 61 2 9267 9312

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5 Sarah St, Mascot, NSW 2020
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GROUP GSA

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www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title

SOLAR STUDY - EYE OF
SUN - 9AM TO 12PM

Scale

Drawing Created (date) 11/08/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

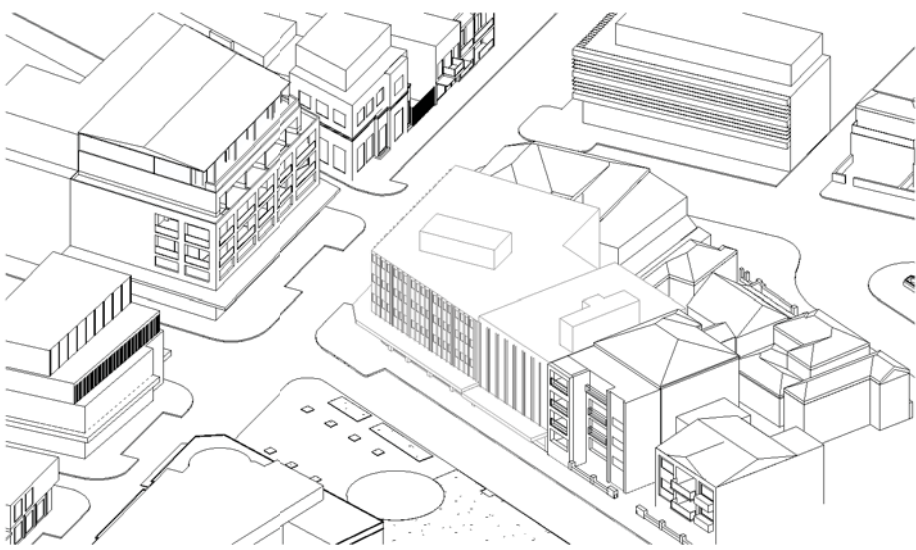
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160279 DA1210 D

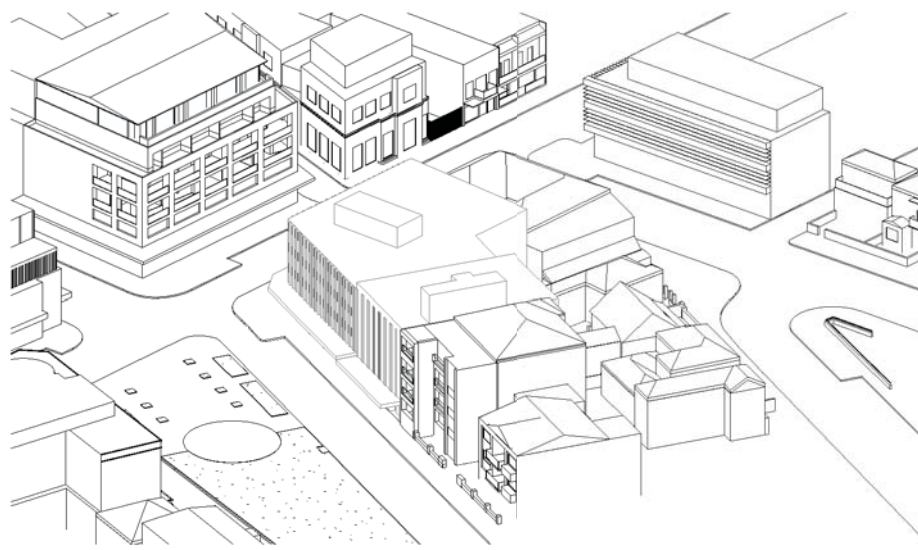
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27/07/2017 4:22:10 PM

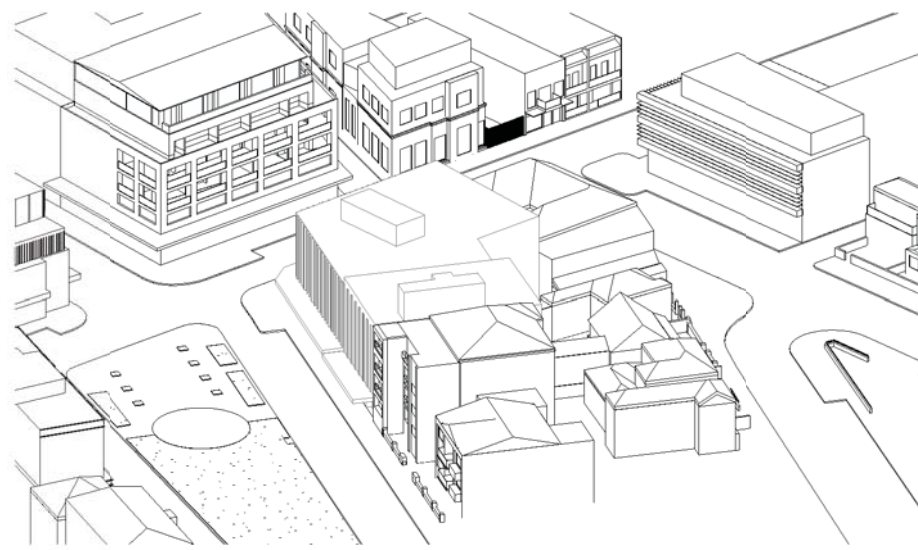
EXISTING - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



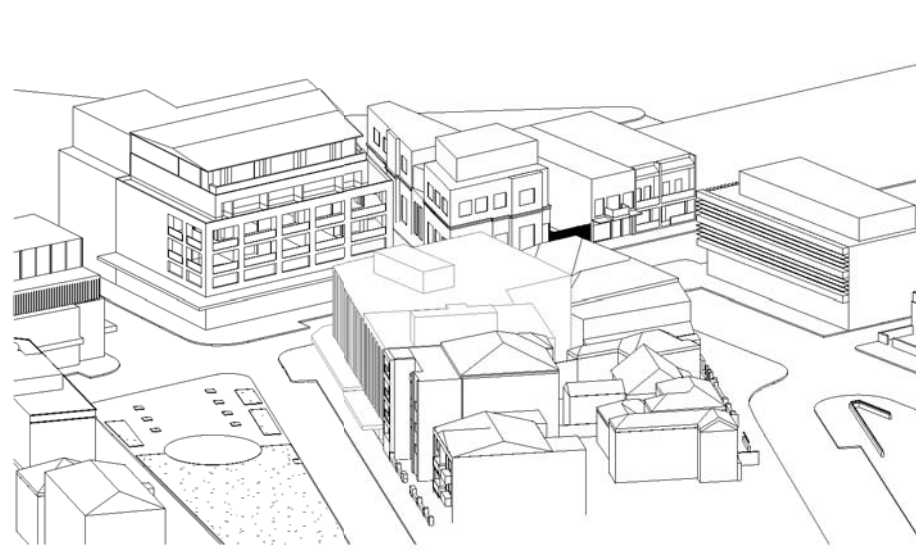
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2 2PM - EXISTING

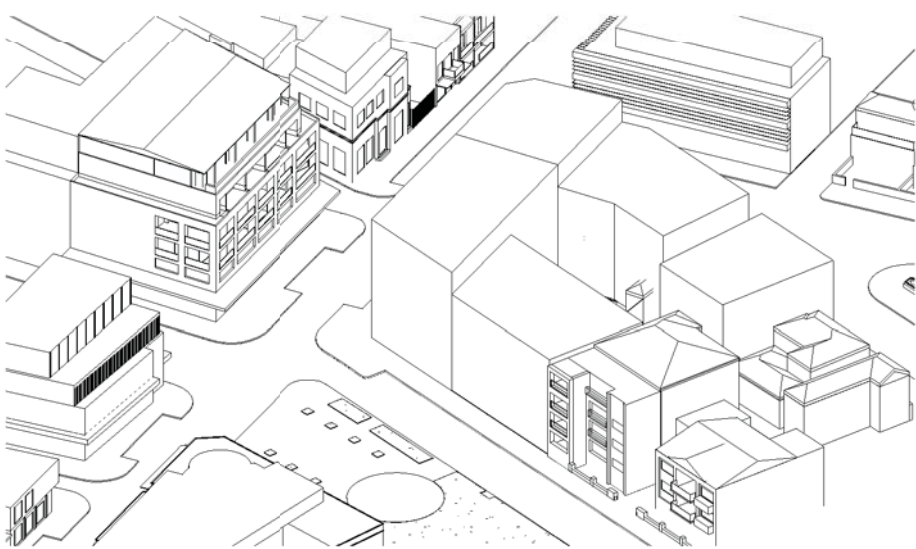


3 2 30 PM - EXISTING

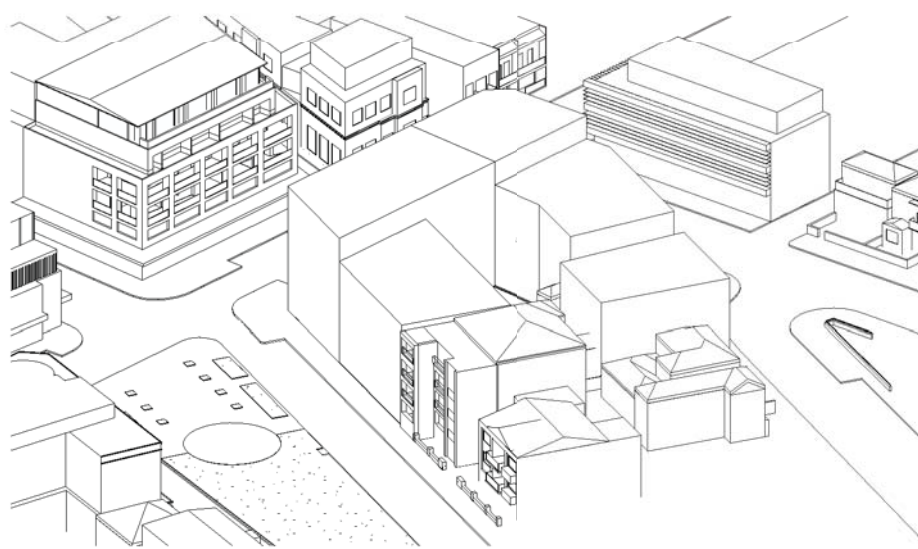


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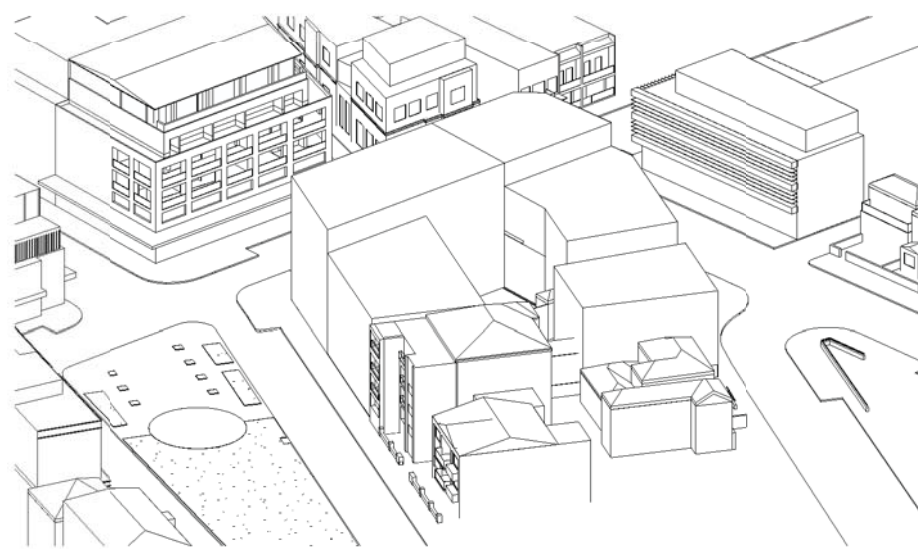
MASSING OF THE CURRENT ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



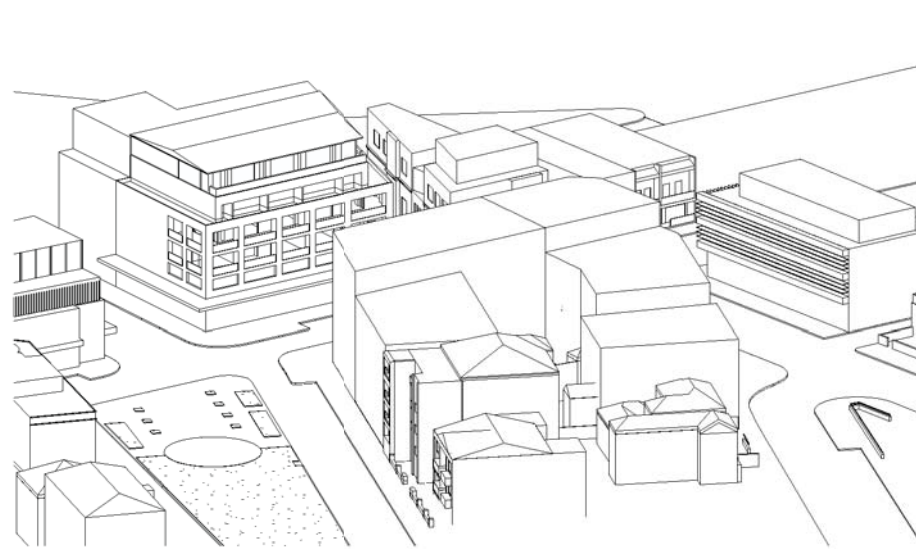
5 1PM - CURRENT CONTROL



6 2PM - CURRENT CONTROL

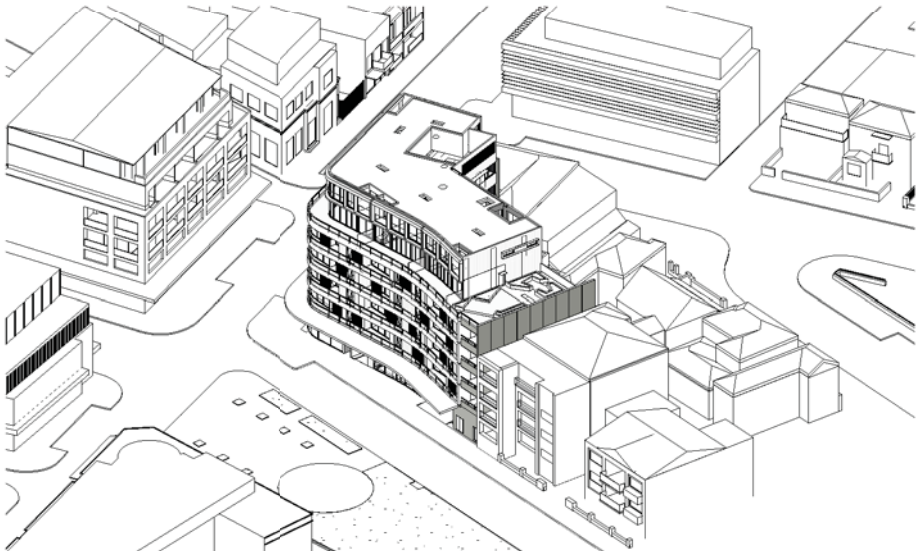


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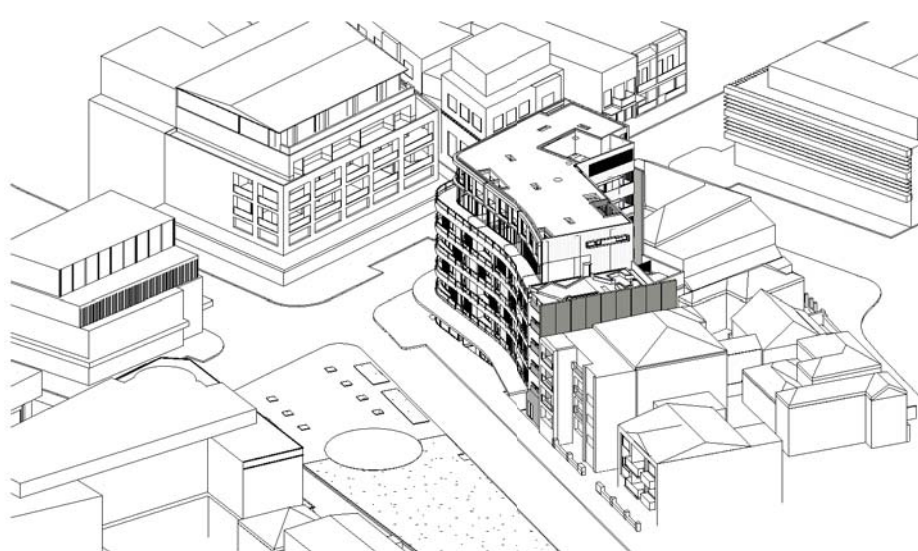


8 3PM - CURRENT CONTROL

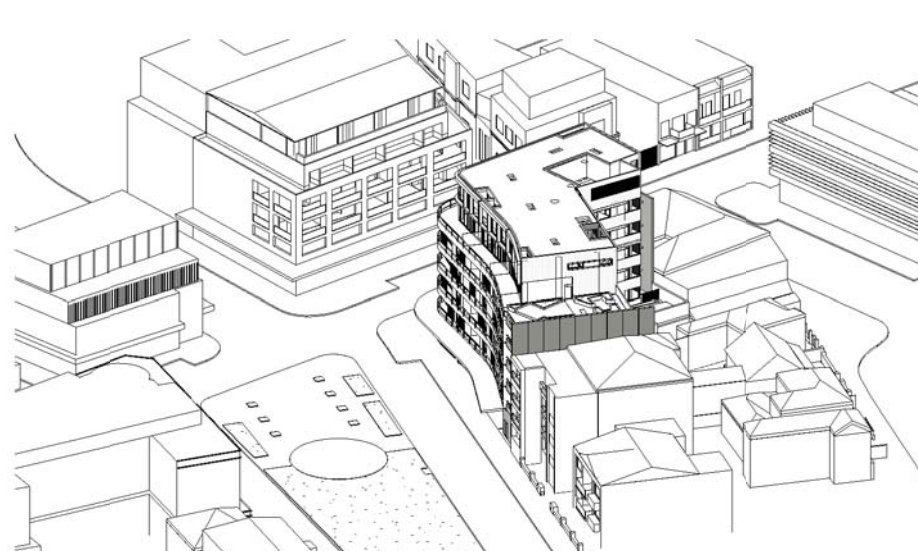
PROPOSED - WINTER SOLSTICE - 21 JUNE
EYE OF SUN



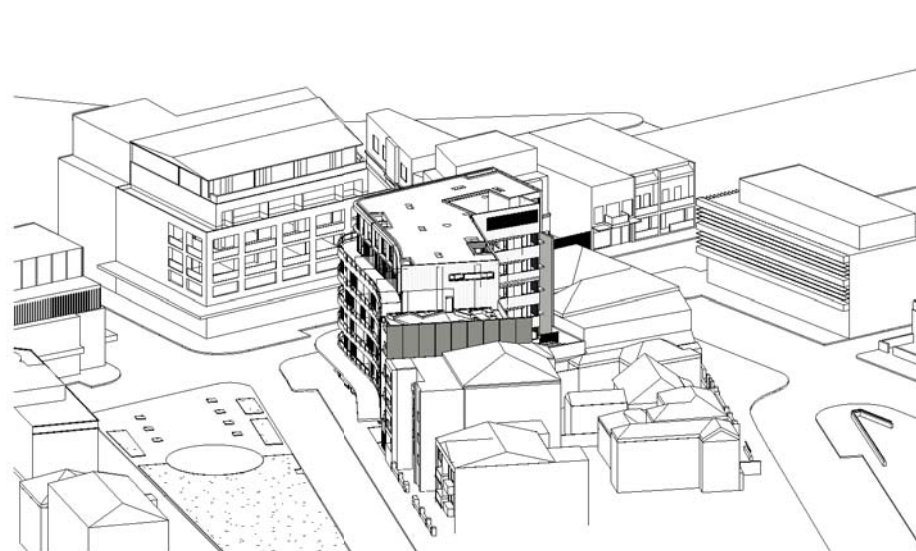
9 1PM - PROPOSED



10 2PM - PROPOSED



11 2 30 PM - PROPOSED



12 3PM - PROPOSED



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028
www.nathers.gov.au



Amendments		
Issue	Description	Date
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C	ISSUED FOR DA SUBMISSION	27/07/17

DA SUBMISSION

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The Mack Group 2 Short Street, Leichhardt NSW 2040 Ph: 612 9550 0566
Client
ANKA DOUBLE BAY Pty Ltd Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW 2027 Ph: 02 9302 3000



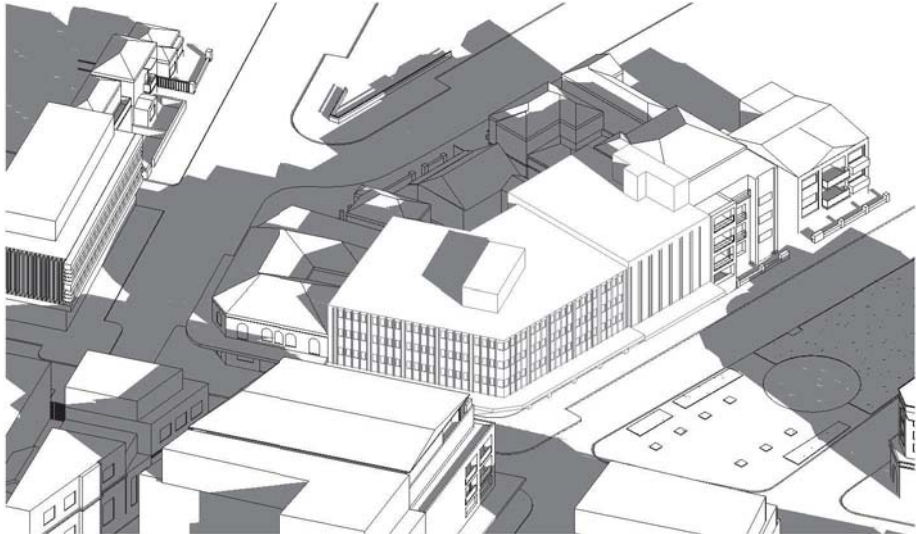
Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

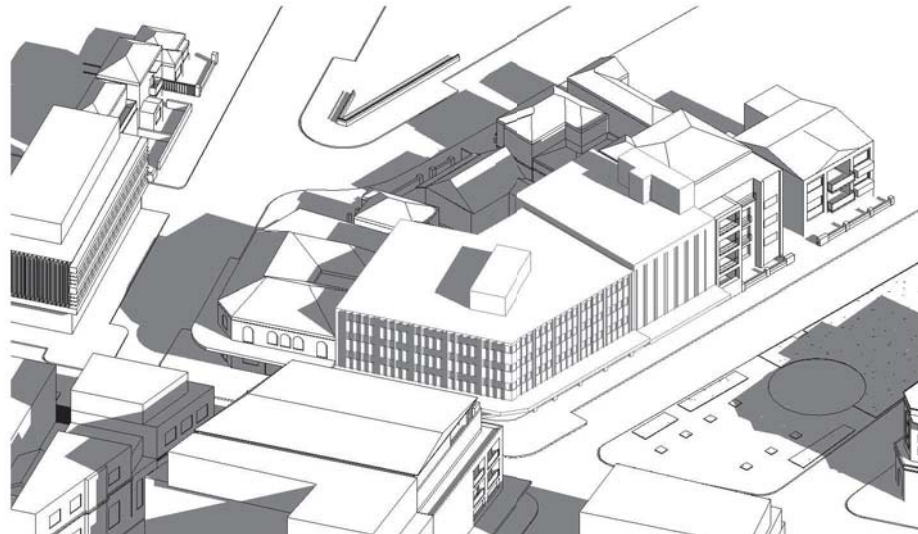
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SOLAR STUDY - EYE OF SUN - 1PM TO 3PM		
Scale		
Drawing Created (date)	09/30/16	
Drawing Created (by)	Group GSA	
Plotted and checked by	RT	
Verified	RU	
Approved	RU	
Project No	Drawing No	Issue
160279	DA1211	C

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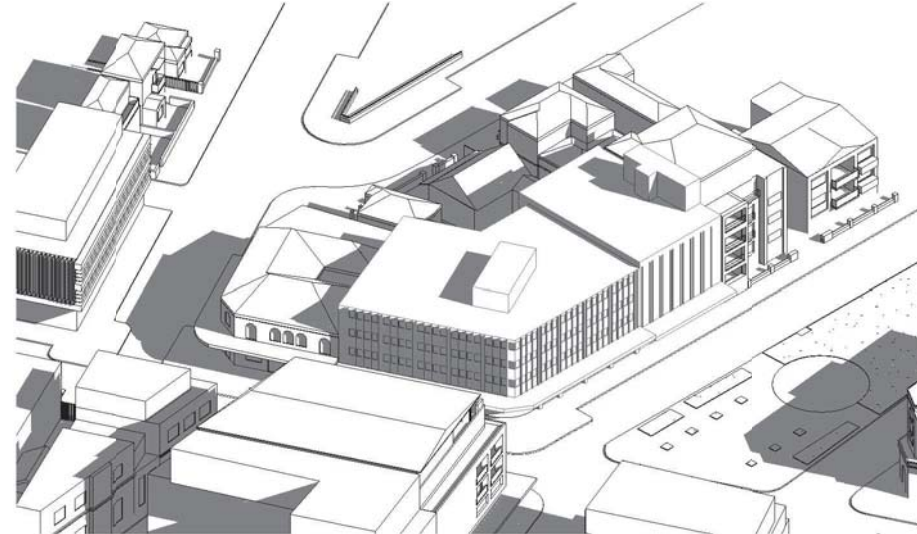
EXISTING - WINTER SOLSTICE - 21 JUNE



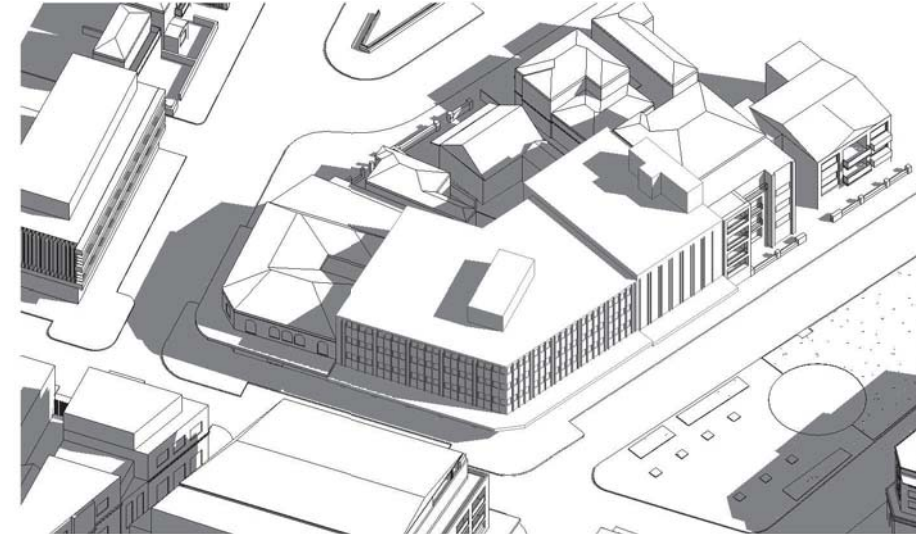
1 9AM - EXISTING



2 10AM - EXISTING

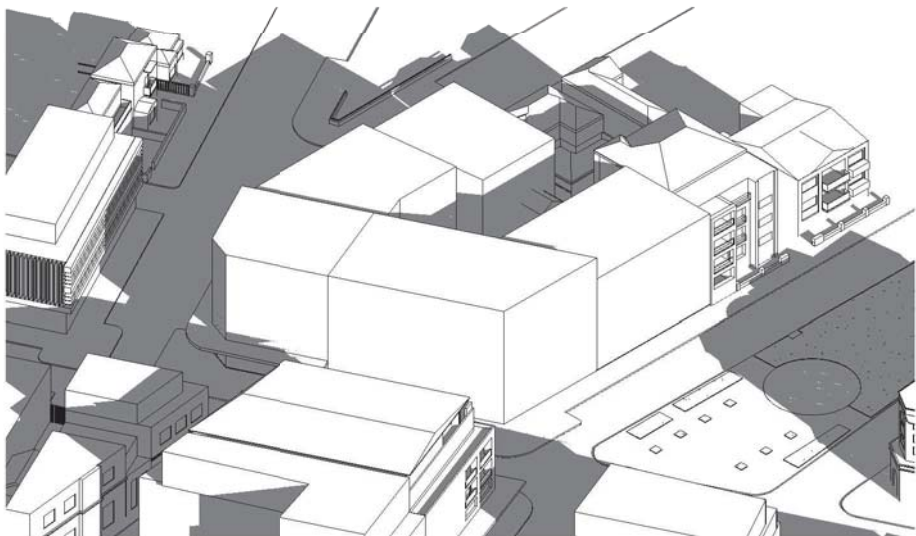


3 11AM - EXISTING

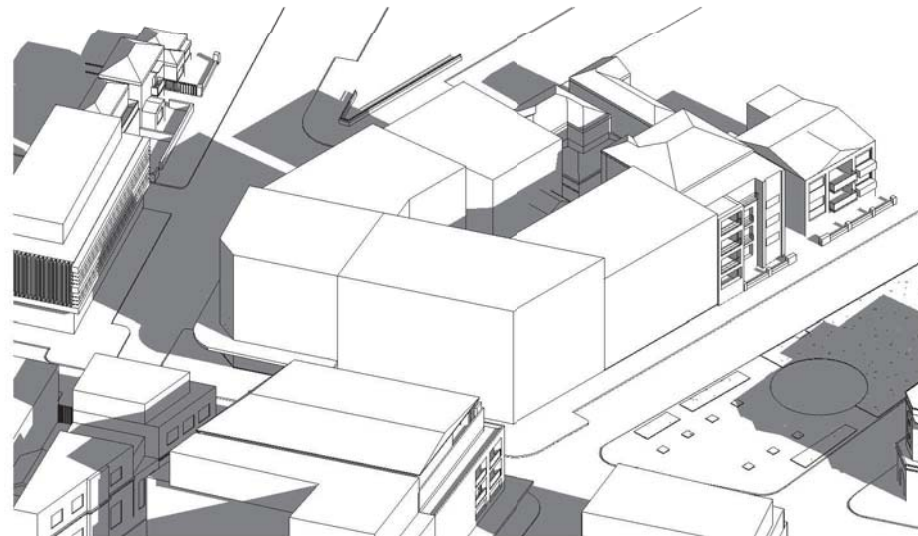


4 12 PM - EXISTING

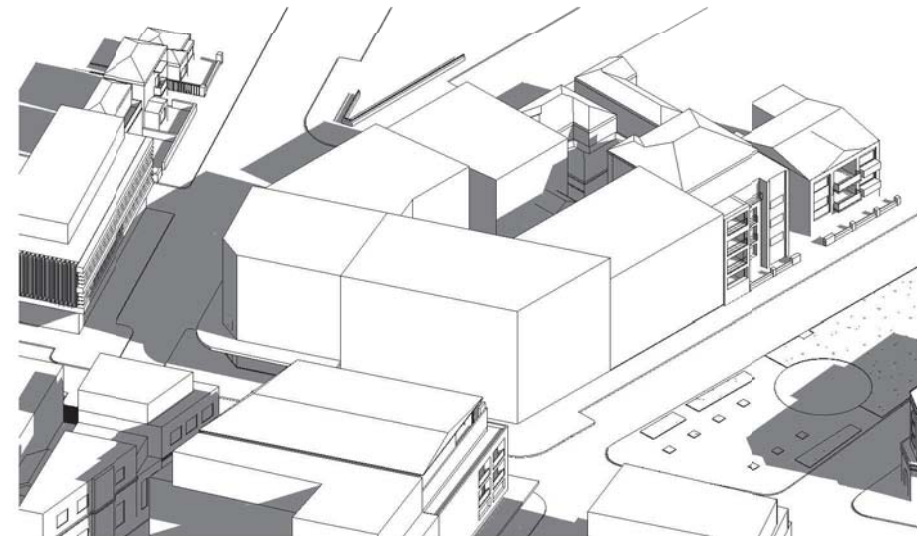
MASSING OF THE CURRENT ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE



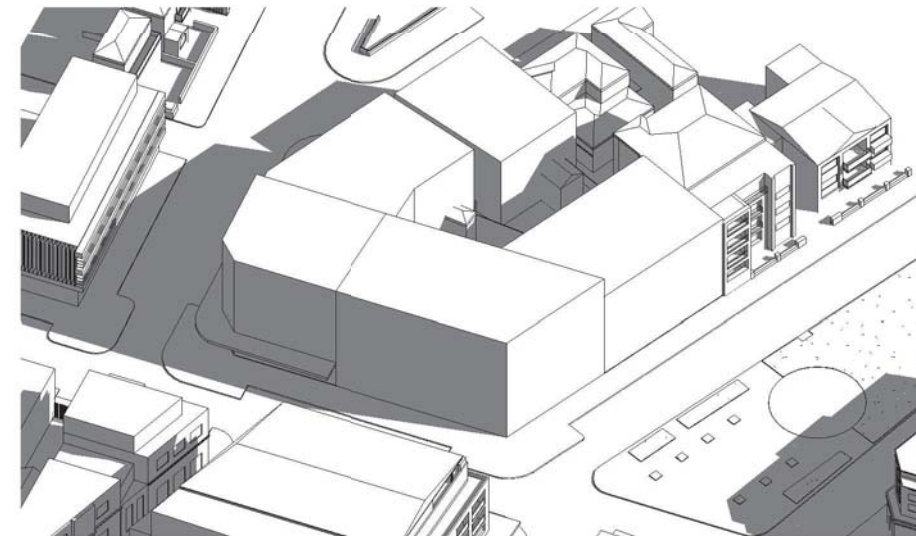
5 9AM - CURRENT CONTROL



6 10AM - CURRENT CONTROL



7 11AM - CURRENT CONTROL



8 12PM - CURRENT CONTROL

PROPOSED - WINTER SOLSTICE - 21 JUNE



9 9AM - PROPOSED



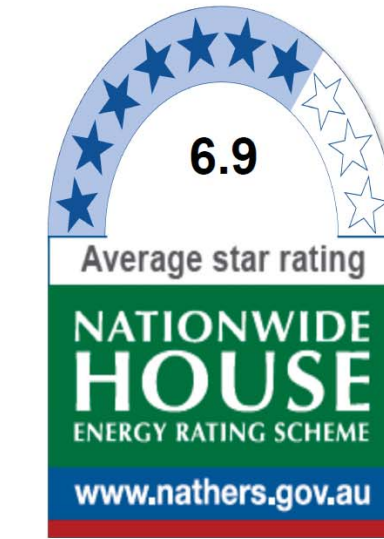
10 10AM - PROPOSED



11 11AM - PROPOSED



12 12PM - PROPOSED



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028
www.nathers.gov.au



Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	31/05/17
B	ISSUED FOR INFORMATION	13/06/17
C	ISSUED FOR INFORMATION	14/06/17
D	ISSUED FOR DA SUBMISSION	27/07/17

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH:02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH 61 2 9267 9312

Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

Thwaite Consulting Group
Suite 4, 137 Bathurst st, Sydney, NSW 2000
PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/303 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111

Waste Management

The Mack Group
2 Short Street, Leichhardt NSW 2040
Ph: 612 9550 0566

Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW
2027
Ph: 02 9302 3000

GROUP GSA

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Australia 2011
www.groupgsa.com
T +612 9361 4144 F +612 9332 3458
architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title

SOLAR STUDY - SHADOW
DIAGRAMS

Scale

Drawing Created (date)

08/23/16

Drawing Created (by)

Group GSA

Plotted and checked by

RT

Verified

RU

Approved

RU

Project No

Drawing No

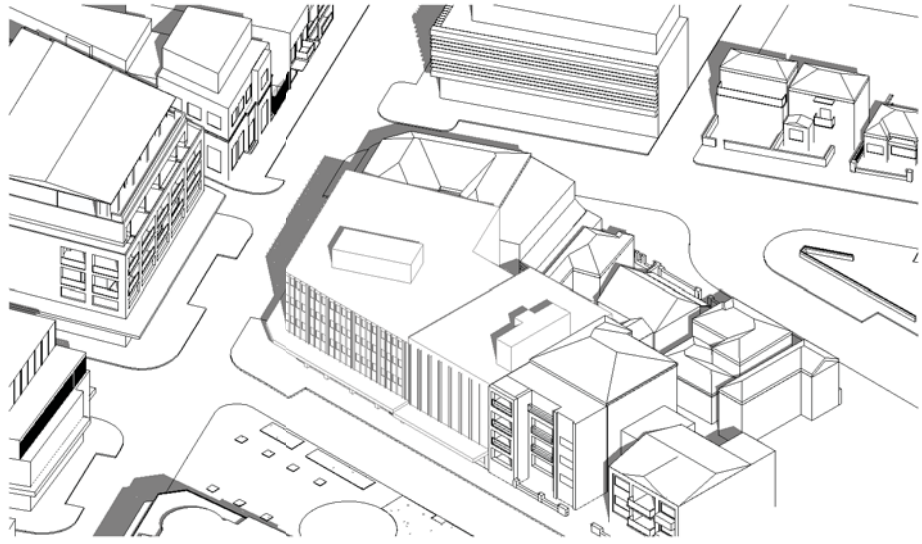
Issue

160279 DA1220 D

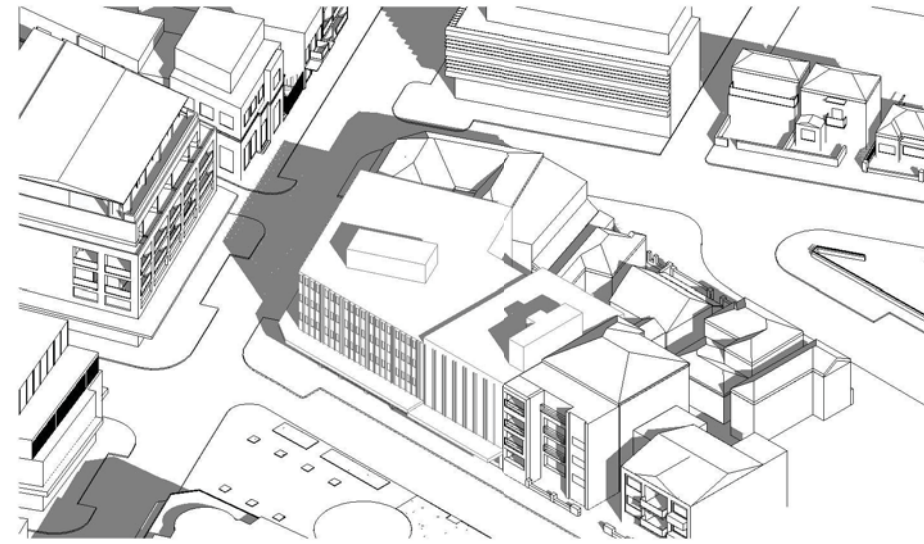
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27/07/2017 4:22:36 PM

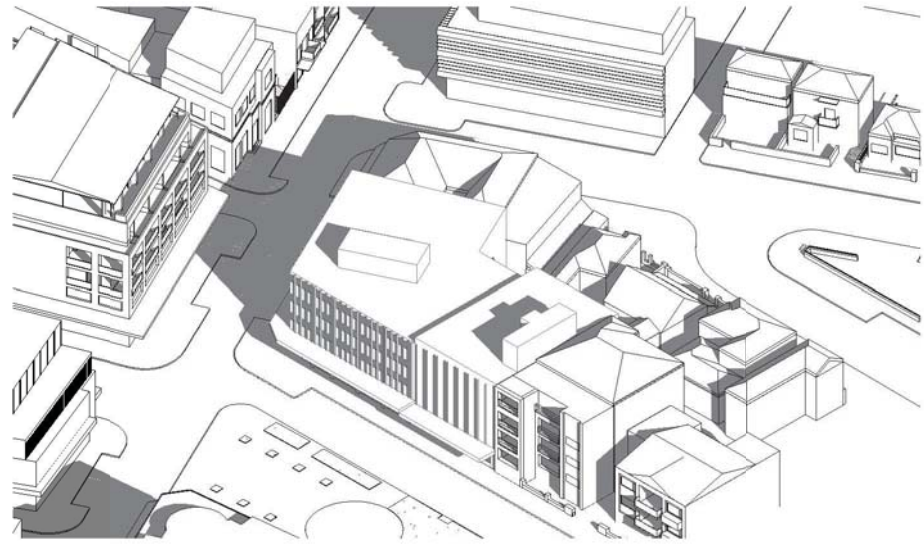
EXISTING - WINTER SOLSTICE - 21 JUNE



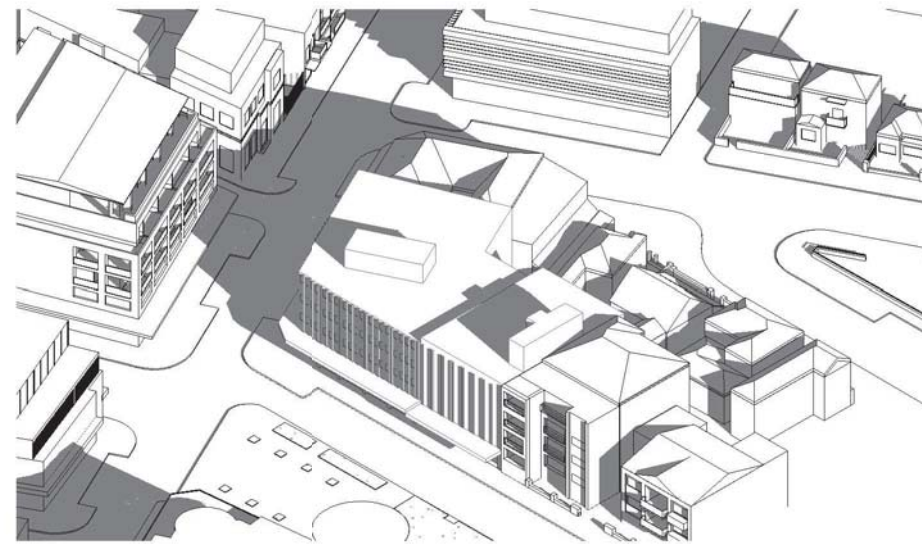
1 1PM - EXISTING



2 2PM - EXISTING

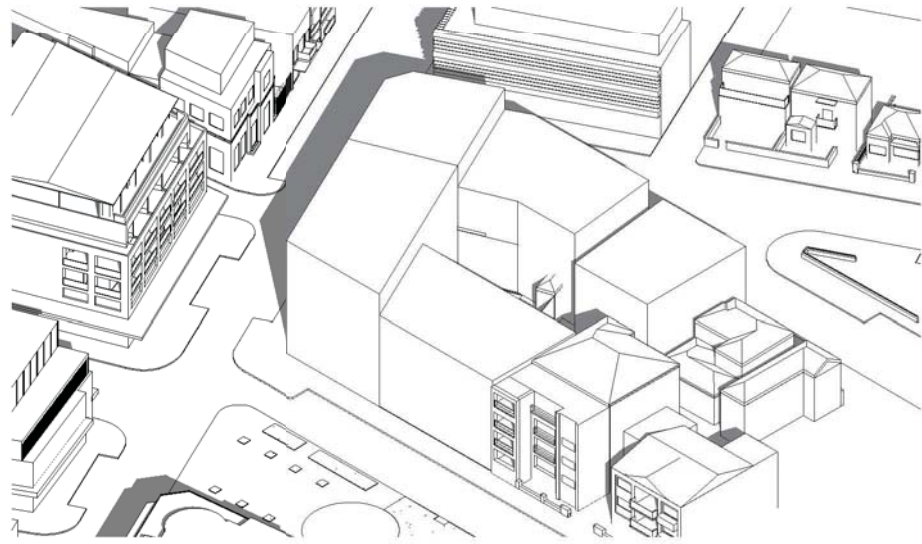


3 2 30PM - EXISTING

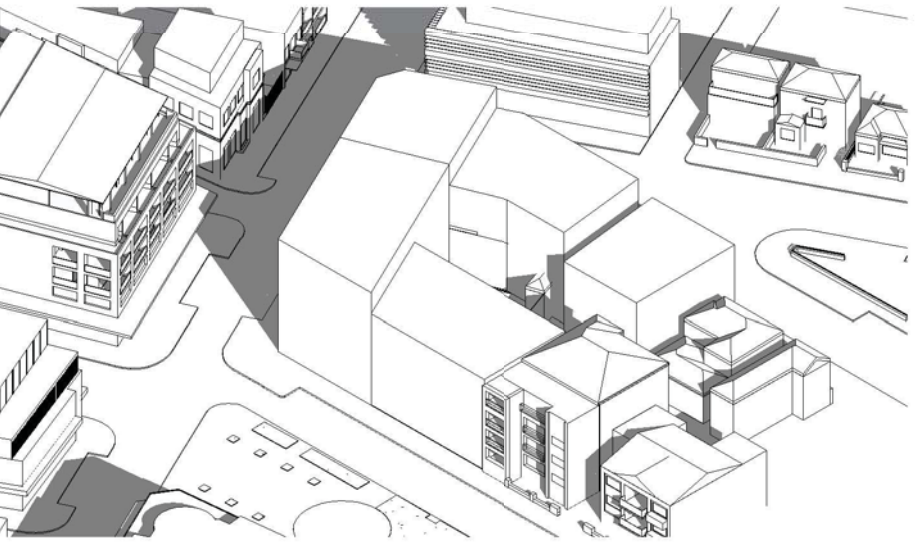


4 3PM - EXISTING

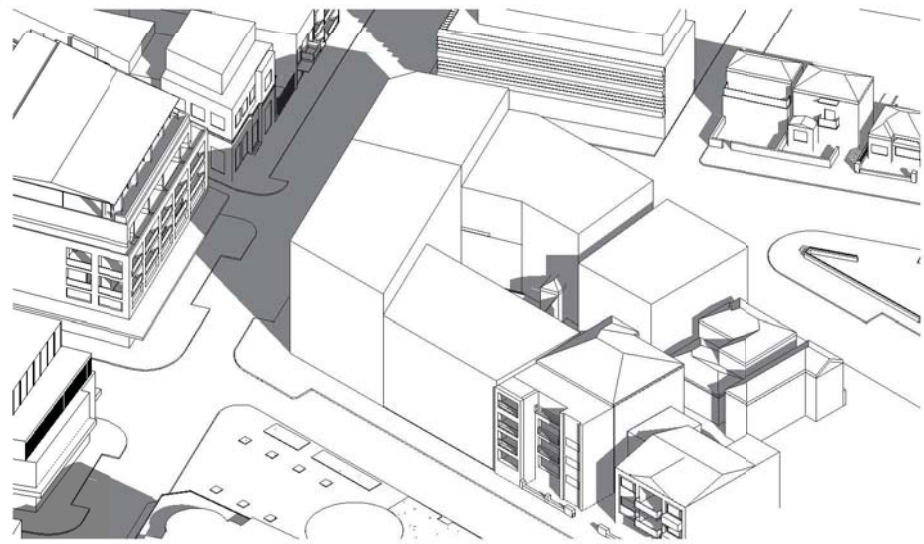
MASSING OF THE CURRENT ENVELOPE CONTROL - WINTER SOLSTICE - 21 JUNE



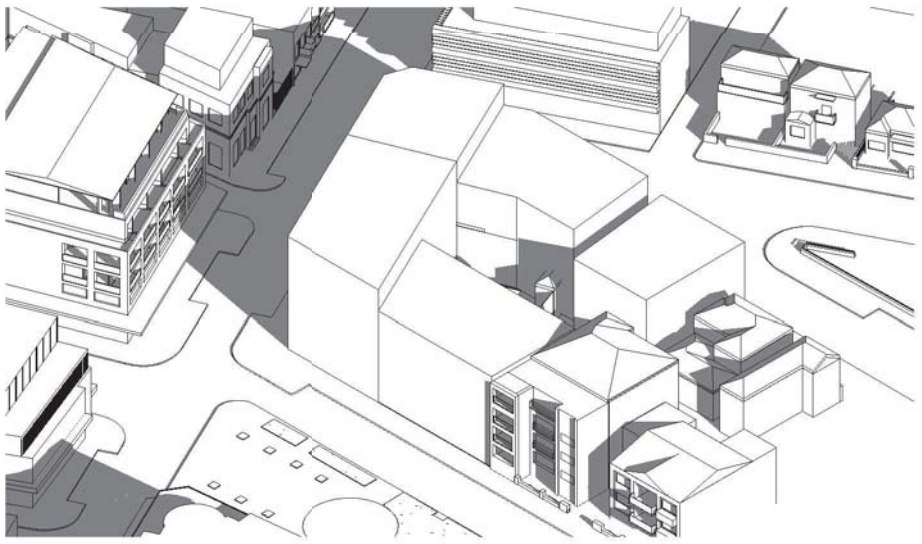
5 1PM - CURRENT CONTROL



6 2PM - CURRENT CONTROL



7 2 30PM - CURRENT CONTROL



8 3PM - CURRENT CONTROL

PROPOSED - WINTER SOLSTICE - 21 JUNE



9 1PM - PROPOSED



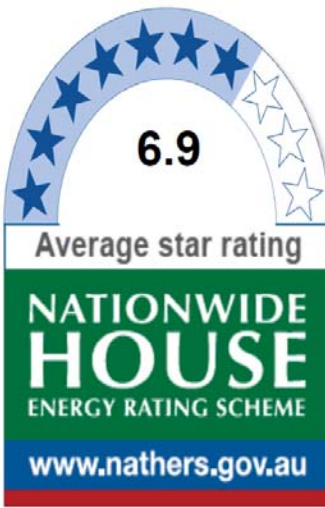
10 2PM - PROPOSED



11 2PM - PROPOSED



12 3PM - PROPOSED



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAV/12/1473
Certificate date: 02 August 2017

Dwelling Address:
Bay St Guilfoyle Av
Double Bay, NSW
2028

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Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	31/05/17
B	ISSUED FOR INFORMATION	13/06/17
C	ISSUED FOR DA SUBMISSION	27/07/17

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH: 61 2 9267 9312

Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH: 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

Thwaite Consulting Group
Suite 4, 137 Bathurst st, Sydney, NSW 2000
PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/303 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111

Waste Management

The Mack Group
2 Short Street, Leichhardt NSW 2040
Ph: 612 9550 0566

Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW
2027
Ph: 02 9302 3000

GROUP GSA

Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title

SOLAR STUDY - SHADOW
DIAGRAMS

Scale

Drawing Created (date) 03/23/17

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

Project No Drawing No Issue

160279 DA1221 C

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Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028



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Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	05/05/17
B	ISSUED FOR INFORMATION	08/05/17
C	ISSUED FOR INFORMATION	10/05/17
D	ISSUED FOR INFORMATION	18/05/17
E	ISSUED FOR INFORMATION	19/05/17
F	ISSUED FOR INFORMATION	25/05/17
G	ISSUED FOR INFORMATION	13/06/17
H	ISSUED FOR INFORMATION	14/06/17
I	ISSUED FOR INFORMATION	23/06/17
J	ISSUED FOR DA SUBMISSION	27/07/17



North Point

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 502, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH: 61 2 9267 9312

Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH: 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

Thwaite Consulting Group
Suite 4, 137 Bathurst st, Sydney, NSW 2000
PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/353 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111

Waste Management

The Mack Group
2 Short Street, Leichhardt NSW 2040
PH: 612 9550 0566

Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW
2027
Ph: 02 9302 3000



Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

**30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY**

Drawing Title

BASEMENT PLAN

Scale 1 : 100

Drawing Created (date) 10/05/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

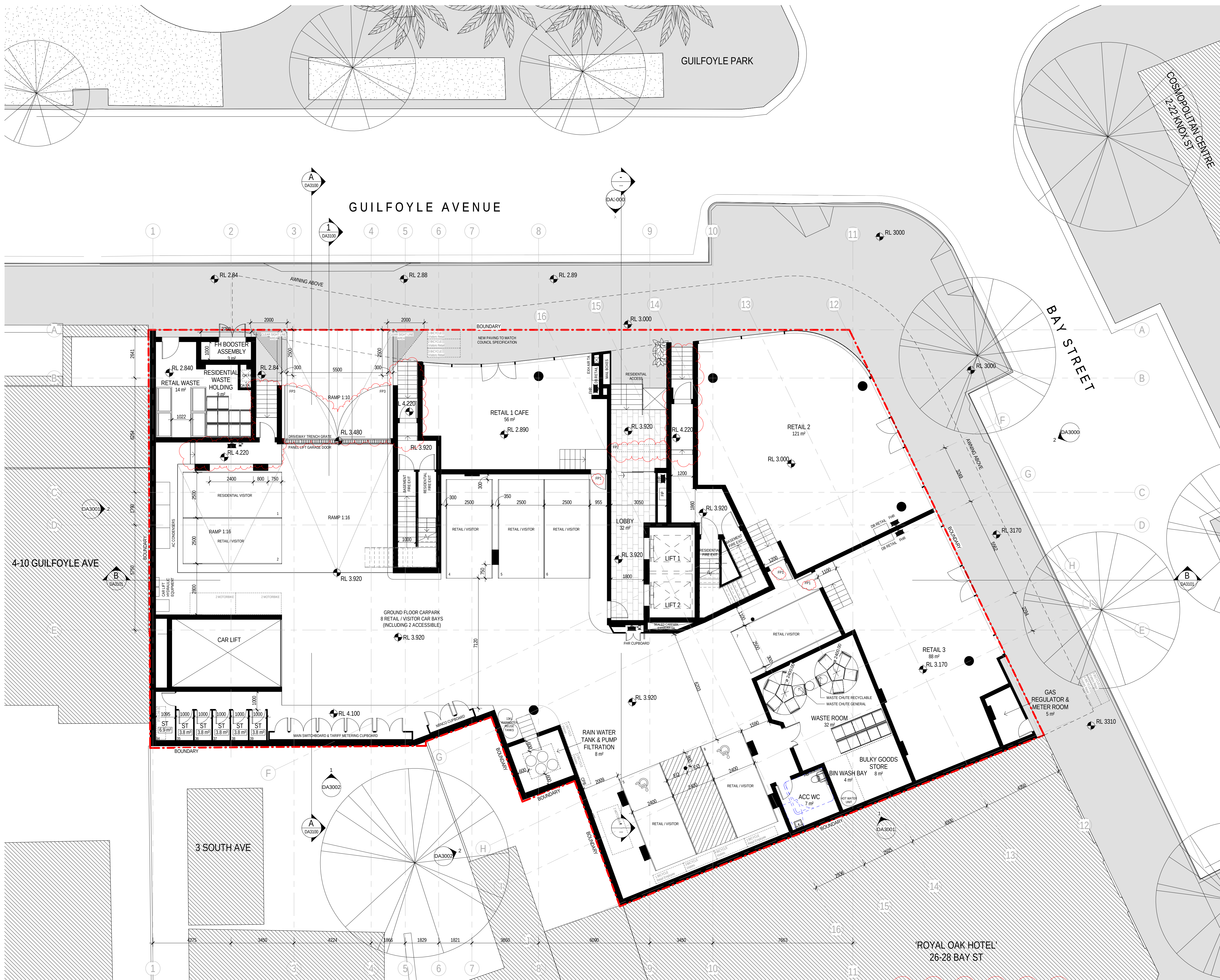
Project No Drawing No Issue

160279 DA2000

J

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27/07/2017 14:21:12 PM



Amendments		
Issue	Description	Date
A	ISSUED FOR INFORMATION	05/05/17
B	ISSUED FOR INFORMATION	08/05/17
C	ISSUED FOR INFORMATION	10/05/17
D	ISSUED FOR INFORMATION	19/05/17
E	ISSUED FOR INFORMATION	23/05/17
F	ISSUED FOR INFORMATION	25/05/17
G	ISSUED FOR INFORMATION	13/06/17
H	ISSUED FOR INFORMATION	14/06/17
I	ISSUED FOR INFORMATION	23/06/17
J	ISSUED FOR INFORMATION	17/07/17
K	ISSUED FOR DA SUBMISSION	27/07/17
L	ISSUED FOR DA SUBMISSION	27/09/17
M	ISSUED FOR DA SUBMISSION	28/09/17
N	ISSUED FOR DA SUBMISSION	29/09/17
O	ISSUED FOR DA SUBMISSION	06/10/17



DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW
2000
PH: 61 2 9267 9312

Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH: 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

Thwaite Consulting Group
Suite 4, 137 Bathurst st, Sydney, NSW 2000
PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/303 Pacific Hwy, Lindfield, NSW 2070
PH: 94169111

Waste Management

The Mack Group
2 Short Street, Leichhardt NSW 2040
Ph: 612 9550 0566

Client

ANKA DOUBLE BAY Pty Ltd
Level 3, 179 - New South Head Rd, Edgecliff, Sydney, NSW
2027
Ph: 02 9302 3000

GROUP GSA

Group GSA Pty Ltd ABN 76 002 113 779
Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

**30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY**

Drawing Title

GROUND LEVEL PLAN

Scale As indicated

Drawing Created (date) 10/05/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

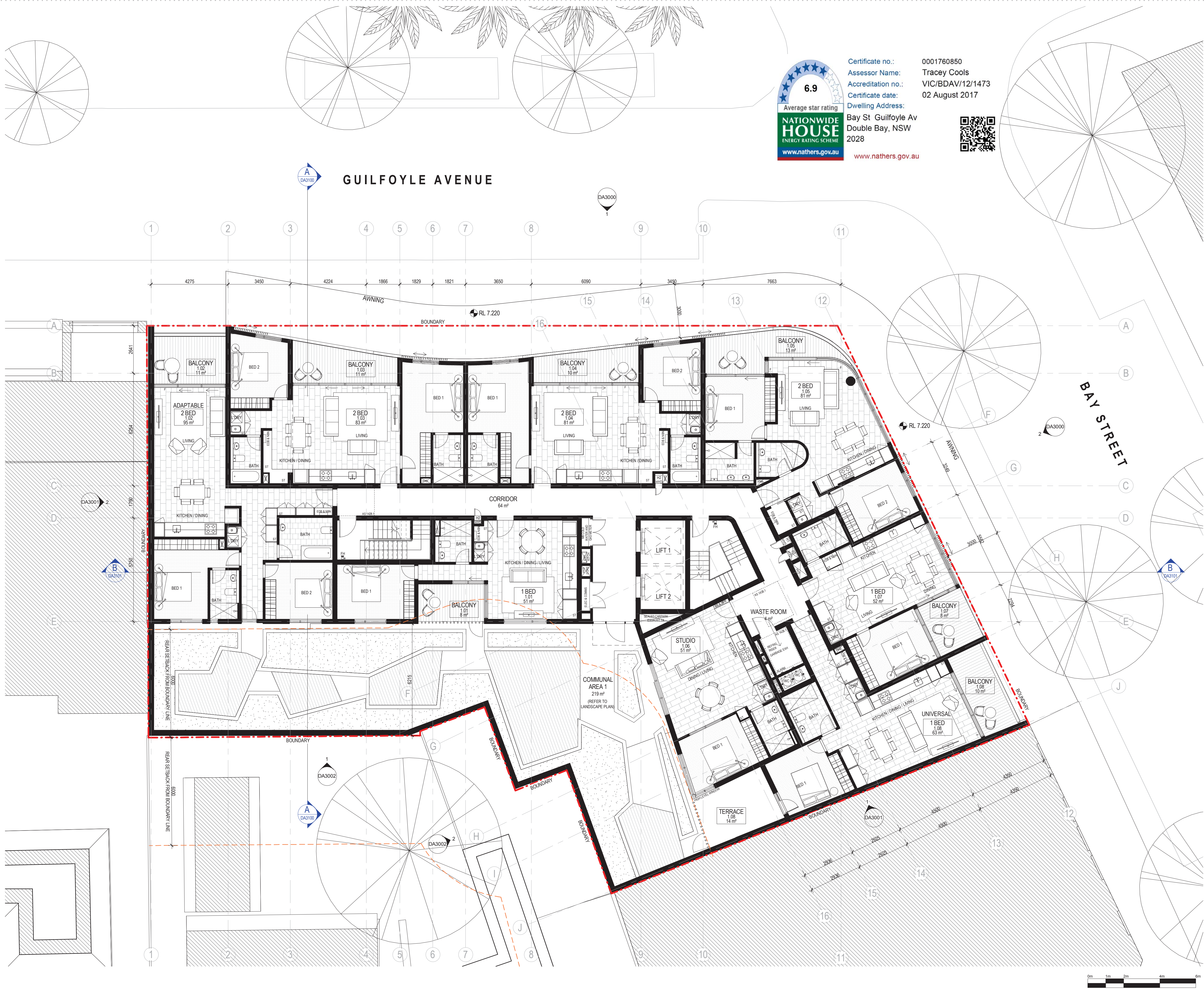
Project No Drawing No Issue

160279 DA2001

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06/10/2017 2:56:05 PM



Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDV/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW 2028



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Issue	Description	Date
A	ISSUED FOR INFORMATION	05/05/17
B	ISSUED FOR INFORMATION	08/05/17
C	ISSUED FOR INFORMATION	19/05/17
D	ISSUED FOR INFORMATION	25/05/17
E	ISSUED FOR INFORMATION	13/06/17
F	ISSUED FOR INFORMATION	17/07/17
G	ISSUED FOR DA SUBMISSION	27/07/17



North Point

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danchen House, 507 Kent Street, Sydney, NSW 2000
PH: 61 2 9267 9312

Electrical / Communications

Audio Systems Logic
5 Sarah St, Mascot, NSW 2020
PH: 2 9700 8669

Hydraulic

Insync Services Pty Ltd
Level 6, 89 York St, Sydney, NSW 2000
PH: 92623400

Lift Engineer

Elevated Consulting
353 Sussex St, Sydney, NSW 2000
PH: 2 7901 3242

Mechanical

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PH: 2 9283 0019

Planner

Ingham Planning Pty Ltd
19/303 Pacific Hwy, Lindfield, NSW 2070
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Waste Management

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2 Short Street, Leichhardt NSW 2040
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Client

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GROUP GSA

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Level 7, 80 William St East Sydney NSW
Australia 2011
www.groupgsa.com

T +612 9361 4144 F +612 9332 3458

architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

**30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY**

Drawing Title

LEVEL 1 FLOOR PLAN

Scale 1:100

Drawing Created (date) 10/05/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

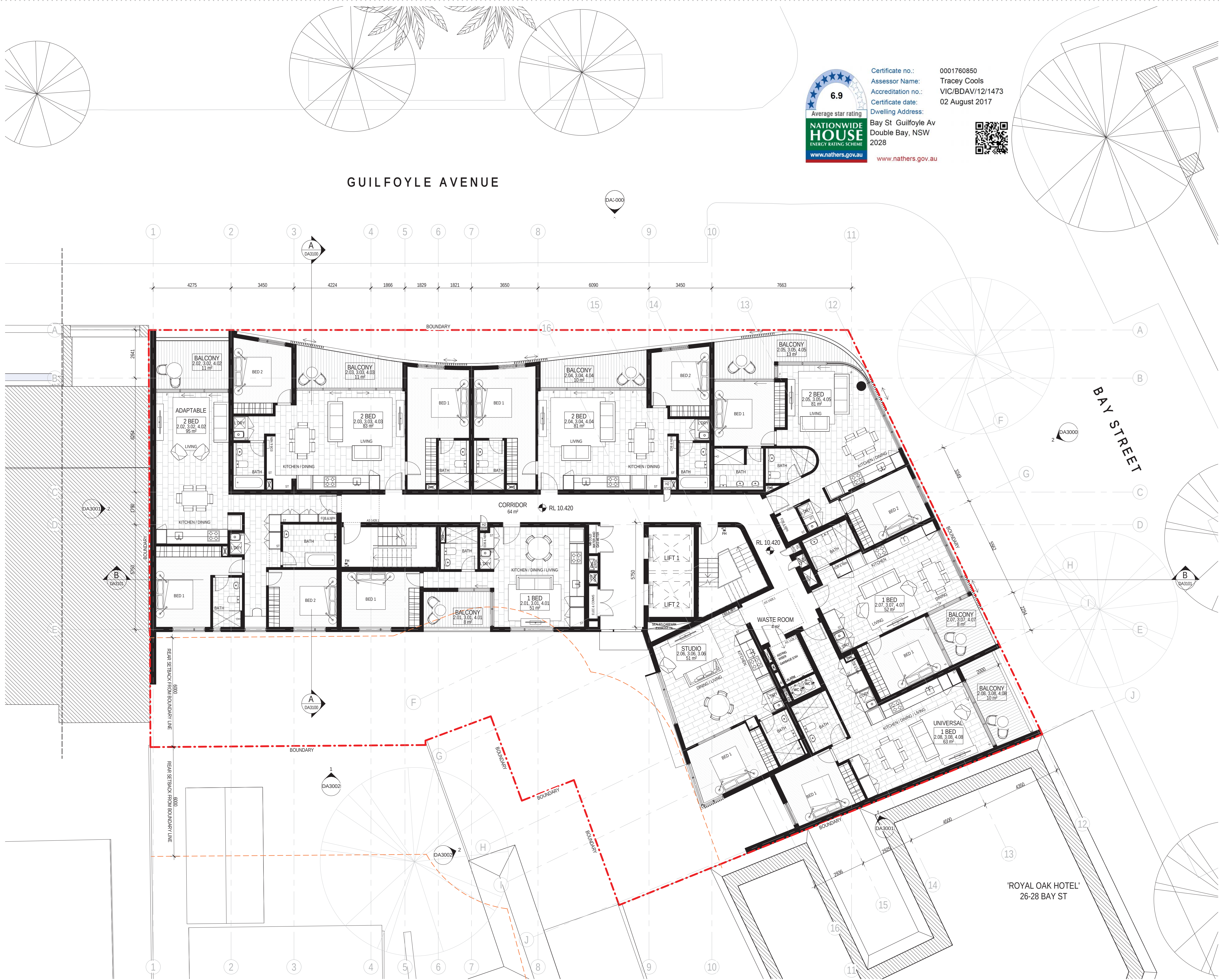
Project No Drawing No Issue

160279 DA2002 G

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Average star rating
6.9
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HOUSE
ENERGY RATING SCHEME
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Certificate no.: 0001760850
Assessor Name: Tracey Cools
Accreditation no.: VIC/BDAY/12/1473
Certificate date: 02 August 2017
Dwelling Address: Bay St Guilfoyle Av
Double Bay, NSW
2028
www.nathers.gov.au

Amendments

Issue	Description	Date
A	ISSUED FOR INFORMATION	05/05/17
B	ISSUED FOR INFORMATION	08/05/17
C	ISSUED FOR INFORMATION	19/05/17
D	ISSUED FOR INFORMATION	25/05/17
E	ISSUED FOR INFORMATION	13/07/17
F	ISSUED FOR INFORMATION	17/07/17
G	ISSUED FOR DA SUBMISSION	27/07/17

North Point

DA SUBMISSION

BCA - Access Consultant

Matt Shuter + Associates
Suite 602, 26-30 Spring Street, Bondi Junction, NSW 2022
PH: 02 9387 4441

Civil & Structural

SCP Consulting Pty Ltd
Level 2, Danden House, 507 Kent Street, Sydney, NSW 2000
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architecture interior design urban design landscape
nom architect M. Sheldon 3990
Project Title

30-36 BAY ST & 2 GUILFOYLE AV
DOUBLE BAY

Drawing Title

LEVEL 2 TO 4 FLOOR PLAN

Scale 1 : 100

Drawing Created (date) 10/05/16

Drawing Created (by) Group GSA

Plotted and checked by RT

Verified RU

Approved RU

Project No 160279 Drawing No DA2003 Issue G

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