







DEVELOPMENT ASSESSMENT REPORT

<b>Application No.</b>	DA201900328
<b>Address</b>	58 Thornley Street, Marrickville
<b>Proposal</b>	To demolish part of the premises and carry out ground and lower floor alterations and additions to a dwelling house and provide a new hard stand car parking space with associated driveway crossing
<b>Date of Lodgement</b>	9 October 2019
<b>Applicant</b>	Ms AG Jackson
<b>Owner</b>	Ms AG Jackson
<b>Number of Submissions</b>	Nil
<b>Value of works</b>	\$930,600.00
<b>Reason for determination at Planning Panel</b>	Works to a State Heritage Item
<b>Main Issues</b>	Heritage
<b>Recommendation</b>	Approval subject to conditions
<b>Attachment A</b>	Recommended conditions of consent
<b>Attachment B</b>	Plans of proposed development
<b>Attachment C</b>	Statement of Heritage Significance



LOCALITY MAP

Subject Site		Objectors (nil)		↑ N
Notified Area		Supporters (nil)		

## 1. Executive Summary

This report concerns an application to demolish part of the premises and carry out ground and lower floor alterations and additions to a dwelling house and provide a new hard stand car parking space with associated driveway crossing. The application was notified to surrounding properties and no submissions were received.

During the assessment process the proposal was amended to address a number of concerns raised by Council relating to heritage conservation. The amended proposal was not required to be notified in accordance with Council's Notification Policy.

The application was referred to Sydney Water and the Heritage Council of NSW and no concerns were raised subject to the imposition of appropriate conditions which are included in the recommendation. The conditions imposed by the Heritage Council include significant design changes.

The proposal generally complies with the aims, objectives and design parameters contained in Marrickville Local Environmental Plan 2011 (MLEP 2011) and Marrickville Development Control Plan 2011 (MDCP 2011). The potential impacts to the surrounding environment have been considered as part of the assessment process and are considered to be acceptable or addressed by the recommended conditions.

The application is suitable for approval subject to the imposition of appropriate conditions.

## 2. Proposal

Approval is sought to demolish part of the premises and carry out ground and lower floor alterations and additions to a dwelling house and provide a new hard stand car parking space with associated driveway crossing. The proposal includes the following works:

- Demolition of the rear portion of the existing dwelling on the ground and lower ground floor level;
- Internal demolition on the ground floor level and construction of a new bathroom and ensuite, demolition of existing kitchen and construction of a new reconfigured kitchen, provision of a new structure near the eastern boundary containing a new dining room and stairs and the construction of new openings in the living room to provide access to a new external terrace;
- Reconfiguration of existing lower ground level to accommodate a bedroom and new terrace, bath, laundry and stairs;
- Construction of a new vehicular crossing within the front setback; and
- Landscaping.

## 3. Site Description

The subject site is located on the south western side of Thornley Street, near the intersection with Mansion Street, Marrickville. The site is irregular in shape, having a frontage of 23.43 metres to Thornley Street and a depth ranging from 18.25 metres to 33.53 metres. The site has a total area of 509.6sqm and is legally described as Lot 2 in DP 1242534.

The site supports a 1 part 2 storey dwelling house. The land previously contained the Sydney Water Sewer Aqueduct and the subject dwelling, and was subdivided in 2017 to separate the two uses. The rear portion of the site is located on the Cooks River embankment and has a fall of 11 metres from north east to south.

The subject site is identified as a heritage item in MLEP 2011, namely Item I121 'Cooks River Sewage Aqueduct (Sydney Water Heritage Asset no 4570953)'.

The site falls within the statutory curtilage of the State Heritage Register listing for: Cooks River Sewage Aqueduct - Pine Street, Undercliffe; Listing No. 01322; Gazette: 18 November 1999. Consequently, the Cottage is included in the NSW State Heritage Register.

The site is adjoined by a 2 storey dwelling house to the south east at No. 60 Thornley Street and is adjoined by an access handle to the sewerage aqueduct to the north west.



Figure 1: The site



Figure 2: Zoning Map

## 4. Background

### 4(a) Site history

Determination No. 201700319, dated 30 November 2017, approved an application to Torrens Title subdivide the land known as 56 Thornley Street, Marrickville into 2 allotments. The site previously contained the Sydney Water Sewerage Aqueduct and the subject cottage on a single allotment. The land was subdivided to separate the State heritage-listed aqueduct and to allow the land known as 58 Thornley Street containing the cottage to be sold by Sydney Water.

As a result of the subdivision, the site is burdened by a Restriction on the Use of Land over a portion of the land measuring 10.29 metres wide and for the full depth of the lot along the north western portion of the site. This significantly reduces the developable area of the site.

### 4(b) Application history

The following table outlines the relevant history of the subject application.

Date	Discussion / Letter/ Additional Information
9 October 2019	Application lodged with Council
15 November 2019	Site inspection undertaken
9 December 2019	Additional information request sent to applicant (detailed below)
23 December 2019	Amended plans submitted to Council
10 March 2020	Concurrence received from Heritage Council of NSW

A request for additional information was sent to the applicant on 9 December 2019 which required the following, in summary:

- Amended plans and further detail on the retention of original fabric, including no new external openings to the existing building; further detail regarding fencing, internal walls, and materials and finishes.
- Shadow diagrams to show the effect in plan and elevation view of existing and proposed overshadowing for 21 June, and 21 March/September at hourly intervals between 9am and 3pm.

Amended plans and additional details were submitted to Council on 6 December 2019 satisfactorily addressing the above concerns and are the subject of this assessment.

## 5. Assessment

The following is a summary of the assessment of the application in accordance with Section 4.15 of the Environmental Planning and Assessment Act 1979.

### 5(a) Environmental Planning Instruments

The application has been assessed against the relevant Environmental Planning Instruments listed below:

- State Environmental Planning Policy No 55—Remediation of Land
- State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017
- State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004

- Marrickville Local Environment Plan 2011 (MLEP 2011)

The following provides further discussion of the relevant issues:

#### **5(a)(i) State Environmental Planning Policy No. 55 – Remediation of Land**

State Environmental Planning Policy No. 55 - Remediation of Land (SEPP 55) provides planning guidelines for remediation of contaminated land. Under the provisions of the SEPP, Council must not consent to the carrying out of any development on land unless:

- “(a) it has considered whether the land is contaminated, and*
- (b) if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
- (c) if the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose.”*

The application was supported by a Validation Report prepared by JBS and G which concludes the following:

*“It is concluded the known contamination encountered during remediation activities has been remediated and the areas validated as suitable for residential with gardens/accessible soil use without further management”*

Considering the above conclusion, the development is acceptable having regard to the provisions of SEPP 55 and the land is suitable to accommodate a residential use.

#### **5(a)(ii) State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017**

State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017 concerns the protection and removal of vegetation and gives statutory weight to the tree protection provisions contained in MDCP 2011. There are a number of trees located on the site protected under MDCP 2011 that will be impacted by the proposed development. The matter of tree management is discussed in more detail in Section 5(c)(v) of this report under the provisions of Part 2.20 of MDCP 2011.

#### **5(a)(iii) State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004**

A BASIX Certificate was submitted with the application indicating that the proposal achieves full compliance with the BASIX requirements. Appropriate conditions are included in the recommendation to ensure the BASIX Certificate commitments are implemented into the development.

#### **5(a)(iv) Marrickville Local Environment Plan 2011 (MLEP 2011)**

The application was assessed against the following relevant clauses of the Marrickville Local Environment Plan 2011:

- Clause 2.3 – Land Use Table and Zone Objectives;
- Clause 2.7 – Demolition;
- Clause 4.3 – Height of buildings;

- Clause 4.4 – Floor space ratio;
- Clause 5.10 – Heritage conservation;
- Clause 6.1 – Acid Sulfate Soils;
- Clause 6.4 - Terrestrial biodiversity;
- Clause 6.5 – Development in areas subject to aircraft noise; and
- Clause 6.7 - Foreshore Building Line

The following table provides an assessment of the application against the development standards:

Standard (maximum)	Proposal	% of variation	Compliance
<b>Floor Space Ratio</b> Required: 0.5:1	0.23:1 (119sqm)	Not applicable	Yes
<b>Height of Building</b> Required: 9.5 metres	78.4 metres	Not applicable	Yes

The following provides further discussion of the relevant issues:

(i) Clause 2.3 - Land Use Table and Zone Objectives

The property is zoned R2 – Low Density Residential under the provisions of MLEP 2011. Dwelling Houses are permissible with consent under the zoning provisions applying to the land. The development is considered acceptable having regard to the objectives of the R2 – Low Density Residential zone.

(ii) Demolition (Clause 2.7)

Clause 2.7 of MLEP 2011 states that the demolition of a building or work may be carried out only with development consent. The application seeks consent for demolition works. Council’s standard conditions relating to demolition works are included in the recommendation.

(iii) Height (Clause 4.3)

The site is located in an area where the maximum height of buildings is 9.5 metres as indicated on the Height of Buildings Map that accompanies MLEP 2011. The development has a height of approximately 8.4 metres, which complies with the height development standard.

(iv) Floor Space Ratio (Clause 4.4)

Clause 4.4(2A) of MLEP 2011 specifies a maximum floor space ratio for a dwelling house on land labelled “F” on the Floor Space Ratio Map that is based on site area as follows:

Site area	Maximum floor space ratio
> 400sqm	0.5:1

The property has a site area of 510sqm. The development has a gross floor area of 119sqm and an FSR of 0.23:1 which complies with the FSR development standard.

(v) Heritage Conservation (Clause 5.10)

The subject site is identified as a heritage item under Schedule 5 of MLEP 2011, namely Item I121 ‘Cooks River Sewage Aqueduct (Sydney Water Heritage Asset no 4570953)’.

The Cooks River Cottage falls within the statutory curtilage of the State Heritage Register listing for: Cooks River Sewage Aqueduct - Pine Street, Undercliffe; Listing No. 01322; Gazette: 18 November 1999. Consequently, the Cottage is included in the NSW State Heritage Register. A CMP was prepared for the cottage, including a statement of significance which is reproduced below:

*The Cooks River Cottage is locally significant as a residence associated with the Cooks River Sewage Aqueduct and the Western Main Sewage Carrier, part of the Southern and Western Suburbs Ocean Outfall Sewer (SWSOOS). The cottage is a relic of an earlier phase of sewerage technology, when the operational components required a much higher level of attention and maintenance than is typically required in the modern era. The cottage, in its size, appointments and location, is a representative example of a modest Federation-style dwelling built to house a low-level government employee at the end of the 19th Century.*

The Statement of Significance is attached to this report as Attachment C.

A Heritage Impact Statement was submitted with the application which satisfies the requirements of Clause 5.10(5) of MLEP 2011. Furthermore, a Conservation Management Plan previously prepared for the site was submitted for Council's assessment under Clause 5.10 (6) of MLEP 2011.

The application was referred to Council's Heritage Advisor who requested a number of modifications to the proposed development in order to maintain the significant fabric of the Heritage Item and minimise the impact of the proposed works on the heritage significance of the property. A request for additional information was sent to the applicant on 9 December 2019 which required the following:

- The entry porch and steps to be retained in their original configuration and unaltered.
- No additional windows or doors are to be provided on the NW elevation with the exception of those provided to the Living Room. The new window to the Living Room should be amended to a double hung sash window that matches the existing window on the NW elevation.
- The height of the new picket fence is to be provided on the drawings noting that its height should be no greater than 1.2m.
- An internal elevation is to be provided indicating how the new opening between the kitchen and the Living Room is to be treated noting that this fabric is identified as being of High Significance.
- Further details are to be provided in the Materials and Finishes Schedule including finish, colour and profile, noting that preference is for lightweight materials or lighter coloured bricks (either dry pressed or smooth) to the lateral projection. If the existing house is to be repainted, this is also to be noted on the drawings and the colours specified.

Amended plans were submitted to Council on 6 December 2019 satisfactorily addressing the above concerns.

The application was referred to the Heritage Council under Clause 5.10(9) who advised that the proposed works do not impact on the nearby State Heritage listed Items, being the Cooks River Sewerage Aqueduct and the Western Outfall Main Sewer (Rockdale to Homebush) and *did not* require concurrence.

The amended DA was subsequently referred to the Heritage Council for comment. Subsequently, the Heritage Council contacted Council requesting that concurrence be sought, and the matter was again referred the Heritage Council on 5 March 2020 as an

Integrated Development Application. Conditions of consent were provided by the Heritage Council on 10 March 2020 requesting a suite of additional information and a number of changes to the development, as outlined below:

### **DETAILS TO BE SUBMITTED FOR APPROVAL**

The following information is to be submitted with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate):

- i. Drawings detailing the new entry staircase with porch proposed to be built above the existing stair. The heritage impact statement report should include a methodology for the installation.
- ii. Drawings detailing the design, materials and size of proposed windows.
- iii. Drawings illustrating the size of the proposed opening between the kitchen and living room.
- iv. Drawings detailing the proposed size and materials of the skylights.
- v. Drawings detailing the proposed bathroom and ensuite installation. Each new bathroom must be self-contained and reversible.
- vi. Information explaining how the kitchen flooring is to be lowered and assessment of its impact on heritage fabric must be provided within the statement of heritage impact report and the architectural drawing set.
- vii. A detail drawing specifying the fence design. The new 1.2m high timber fence picket shall be simple in design (flat or of an inverted 'V' in form, typical of the Federation period).

### **DESIGN AMENDMENTS**

- The window proposed for removal in the rear bedroom is not approved. The new addition should be modified to allow the original window to remain in-situ. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- The proposed door in the west external wall is not approved. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- The proposed pergola to the western façade is not approved. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- The new partition wall forming the bathroom and ensuite should have a glazed panel along the top portion to allow the original spatial character of the room to be read. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).

Subject to compliance with the conditions recommended by the Heritage Council, the amended design would not result in detrimental impacts on the heritage significance of the heritage item, with the additions considered complimentary and sympathetic to the existing dwelling, and as such the proposal satisfies the provisions of Clause 5.10 of MLEP 2011 and the relevant provisions of Part 8 of MDCP 2011.

#### (vi) Acid Sulfate Soils (Clause 6.1)

The property is located in an area (Class 5) identified as being subject to acid sulfate soil risk under MLEP 2011. The development does not involve work at or below the ground water level and will not lower the ground water table. The development is reasonable having regard to acid sulfate soils.

#### (vii) Terrestrial biodiversity (Clause 6.4)



The site is located within land identified as “Biodiversity” on the Natural Resource – Biodiversity Map accompanying MLEP 2011.

Clause 6.4(3) states that before determining a development application for development on land to which this clause applies, the consent authority must consider whether or not the development:

2. *is likely to have any adverse impact on the condition, ecological value and significance of the fauna and flora on the land, and*
3. *is likely to have any adverse impact on the importance of the vegetation on the land to the habitat and survival of native fauna, and*
4. *has any potential to fragment, disturb or diminish the biodiversity structure, function and composition of the land, and*
5. *is likely to have any adverse impact on the habitat elements providing connectivity on the land.*

The development has been considered in accordance with the provisions of Clause 6.3(4) and the development is considered acceptable subject to the imposition of appropriate conditions. It is considered that the development is designed, sited and will be managed to avoid any significant adverse environmental impact. The matter of biodiversity is discussed in more detail later in this report under the provisions of Part 2.13 of MDCP 2011.

(viii) Foreshore Building Line (Clause 6.7)

A portion of the site is located below the Foreshore Building Line as detailed on the Foreshore Building Line Map accompanying MLEP 2011. Notwithstanding, the development does not include any works located on land below the Foreshore Building Line and as such the development is considered acceptable having regard to Clause 6.7 of MLEP 2011.

## 5(b) Draft Environmental Planning Instruments

The application has been assessed against the relevant Draft Environmental Planning Instrument below:

### **5(b)(i) Draft Inner West Local Environmental Plan 2020 (Draft IWLEP 2020)**

The Draft IWLEP 2020 was placed on public exhibition commencing on 16 March 2020 and accordingly is a matter for consideration in the assessment of the application under *Section 4.15(1)(a)(ii) of the Environmental Planning and Assessment Act 1979*.

Apart from the change listed below under Marrickville LEP amendment 4 (which is also incorporated into draft IWLEP) the provisions contained in the Draft IWLEP 2020 are not particularly relevant to the assessment of the application. Accordingly, the development is considered acceptable having regard to the provisions of the Draft IWLEP 2020.

### **5(b)(ii) Draft Marrickville Local Environment Plan 2011 (Amendment 4)**

Draft Marrickville Local Environment Plan 2011 (Amendment 4) was placed on public exhibition commencing on 3 April 2018 and accordingly is a relevant matter for consideration under *Section 4.15(1)(a)(ii) of the Environmental Planning and Assessment Act 1979*.

The amendments are primarily housekeeping matters that seek to address misdescriptions, errors, omissions, anomalies and inconsistencies in the written instrument and maps, ensure consistency in the application of controls, or improve communication in the Plan.

The following extract from the draft instrument is provided below to illustrate the proposed changes to Clause 4.4(2A) of MLEP 2011 which are of relevance to the proposal:

*“Under Clause 4.4 (2A) the maximum floor space ratio for various forms of residential accommodation (namely attached dwellings, bed and breakfast accommodation, dwelling houses and semi-detached dwellings) on land labelled “F” on the Floor Space Ratio Map with a site area greater than 400sqm is restricted to 0.5:1.*

*To ensure consistency in the FSR controls with the other forms of development permitted, it is recommended that the upper site area listing for sites greater than 400sqm for development for the purposes of attached dwellings, bed and breakfast accommodation, dwelling houses and semi-detached dwellings) on land labelled “F” on the Floor Space Ratio Map be deleted.*

*The deletion of the upper site area listing of “> 400 square metres” from the table to Clause 4.4 (2A) would mean that a maximum floor space ratio of 0.6:1 would apply to attached dwellings, bed and breakfast accommodation, dwelling houses and semi-detached dwellings on land labelled “F” on the Floor Space Ratio Map, on land with a site area greater than 350 square metres, the same maximum FSR that applies to other forms of development permitted on such land.*

**Recommendation L-4.4 (01):**

*That the Site area and Maximum floor space ratio table in Clause 4.4 (2A) of MLEP 2011 be amended by the deletion:*

<i>“&gt; 350 ≤ 400 square metres</i>	<i>0.6:1</i>
<i>&gt; 400 square metres</i>	<i>0.5:1”</i>

*and the insertion of:*

<i>“&gt; 350 square metres</i>	<i>0.6:1”</i>
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The amended provisions of the Draft LEP Amendment would make the maximum FSR on the site 0.6:1. The proposal complies with the draft maximum FSR development standard.

**5(c) Development Control Plans**

**5(c)(i) Marrickville Development Control Plan 2011 (MDCP 2011)**

The application has been assessed and the following provides a summary of the relevant provisions of Marrickville Development Control Plan 2011.

<b>Part</b>	<b>Compliance</b>
Part 2.1 – Urban Design	Yes
Part 2.3 – Site and Context Analysis	Yes
Part 2.6 – Acoustic and Visual Privacy	Yes
Part 2.7 – Solar Access and Overshadowing	Yes – see discussion
Part 2.9 – Community Safety	Yes
Part 2.10 – Parking	Yes
Part 2.11 - Fencing	Yes
Part 2.13 - Biodiversity	Yes – see discussion
Part 2.16 – Energy Efficiency	Yes

Part 2.18 – Landscaping and Open Spaces	Yes
Part 2.20 – Tree Management	Yes – see discussion
Part 2.21 – Site Facilities and Waste Management	Yes
Part 4.1 – Low Density Residential Development- setbacks	No– see discussion
Part 8 - Heritage	Yes
Part 9.30 – Strategic Context	Yes

The following provides discussion of the relevant issues:

### **PART 2 – GENERIC PROVISIONS**

#### ii. Solar Access and Overshadowing (Part 2.7)

##### **Overshadowing**

The subject development includes the construction of an extension on the eastern side of the existing building which includes a dining room on the ground floor level and a bathroom and laundry on the lower ground floor level, including stairs. The extension is set back 5.1 metres from the eastern boundary, has a length of 7.11 metres and a height ranging from 4.35 to 5.46 metres.

The applicant submitted shadow diagrams with the application. Additional shadow diagrams, showing the existing and proposed shadows cast between 9:00am and 3:00pm in mid-winter and March/September in plan and elevation were submitted to Council on 6 December 2019.

The shadow diagrams illustrate that two windows along the western elevation of the dwelling house located directly to the east of the site at No. 60 Thornley Street will be impacted on as a result of the development. The shadow diagrams are summarised as follows:

##### *Principal Living Area*

The two windows mentioned above are highlight windows and provide direct solar access to the ‘family room’ of No. 60. The two windows serve the same function and for the purpose of this assessment have been considered together as a source of light to that room.

Control C2(i) of Part 2.7.3 of MDCP 2011 prescribes that *direct solar access to windows of principal living areas... of nearby residential accommodation must not be reduced to less than two hours between 9.00am and 3.00pm on 21 June*. The shadow diagrams submitted with the application illustrate that direct solar access to at least 50% of the surface area of those windows is maintained between 10:00am and 12:00pm on 21 June thereby complying with the provisions of MDCP 2011. A minor (10%) increase in overshadowing is cast between 12:00pm and 1:00pm however 25% of the surface area maintains direct solar access at 1:00pm. At 2:00pm, 90% of the window is entirely overshadowed by shadows cast by the existing dwelling on the subject site.

Whilst the development achieves numerical compliance with Council’s controls, the unique site circumstances are further noted below to justify the additional overshadowing having consideration to the merit assessment prescribed by Control C2(ii) of Part 2.7.3:

- The site is burdened by a restrictive covenant requiring that a significant portion of the site not be developed. This restricts the developable area of the site and any lateral extension is restricted to the rear, south eastern portion of the site;
- The provision of a 900mm side boundary setback is considered onerous and would restrict the dining room extension to a width of 2 metres; and

- The existing cottage on the site is required to be substantially retained due to its heritage significance and therefore the new component of the development is restricted to the rear, south eastern portion of the site.

It is further noted that the principal living areas of No. 60 benefit from an additional east-facing window to the dining room, as well as two south-facing windows and a large south facing sliding door which provides additional natural and ambient light to the family, dining and kitchen area. That is, the windows overshadowed as a result of this proposal are not the only sources of light to the affected internal areas.

#### *Private Open Space*

The private open space of the dwelling at No. 60 does not currently receive 2 hours of direct solar access in mid-winter, and the additional shadows cast by the development are negligible. The private open space receives significant direct solar access in March/September and similarly, additional shadow cast by the development during this time is negligible, with some reduction in shadow due to the demolition of an existing outbuilding built to the eastern boundary.

Given the above the development is reasonable having regard to the objectives and controls relating to overshadowing as contained in MDCP 2011.

#### iii. Biodiversity (Part 2.13)

##### **2.13.4 Wildlife Corridors**

The land is located in the Habitat/ Wildlife Corridor as identified in the Biodiversity Map contained in Part 2.13 of MDCP 2011.

A Landscape Plan was submitted with the application. The Landscape Plan incorporates native vegetation as part of the landscaping works. The application was referred to Council's Urban Ecology Officer who advised that the development is acceptable subject to the imposition of conditions to ensure compliance with the controls, including the integration of sandstone into the landscape design and providing opportunity through landscaping to create habitat for fauna. Subject to compliance with those conditions (which are included in the recommendation of this report), the proposal is acceptable having regard to the objectives of Part 2.13.4 of MDCP 2011.

##### **2.13.5 Development near parks, bushland reserves and other public open spaces**

The land is located near a park, bushland reserve and/or other public open spaces. The development satisfies the controls outlined in Part 2.13.5 of MDCP 2011 in that:

- The proposal protects and preserves bushland adjoining parks, bushland reserves and other public open spaces;
- The proposal responds to its adjacent surroundings and helps preserve and enhance the natural qualities of the environment;
- The proposal encourages development that complements the landscape character and public use and enjoyment of the land adjacent to open spaces;
- The proposal is located to provide an outlook to public open space without appearing to privatise that space;
- The development provides a visual buffer between open space and the development;
- The development provides a similar landscaping design and plant species as the adjacent bushland and neighbouring site; and
- The development protects views to and from public open spaces.

iv. Unique Environmental Features (Part 2.14)

**2.14.3 Thornley Street scenic protection area**

A portion of the site is located within the Thornley Street scenic protection area. The development satisfies the controls outlined in Part 2.14 of MDCP 2011 in that:

- The development has been designed to address the distinctive environmental features of the site, including the existing sandstone outcrops at the rear which have been retained in situ and integrated into the design of new development;
- The development responds to these features by appropriately considering outlook, the location of structures, design and materials;
- The development is appropriately set back from the adjoining public open space and is of a height and scale appropriate to the unique environmental qualities of the area;
- The development is designed and located to minimise potential adverse environmental impact;
- The development is of a scale compatible with the character, landscape and scenic qualities of the area;
- The development is of minimal visual impact when viewed from any adjoining public open space;
- The proposed rear boundary fencing is of an open timber picket style providing 40% opening and provides a visual transition between open space and the rear of the site; and
- The proposed landscaping of the site incorporates local species endemic to the area.

v. Tree Management (Part 2.20)

The site contains a number of trees protected by Council’s tree management controls, including the following:

Tree No	Botanical/Common Name	Location
1	<i>Melaleuca</i> spp. (White Bottlebrush)	Street tree
2	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	Street tree
3	<i>Allocasuarina littoralis</i> (Black She Oak)	Rear
4	<i>Allocasuarina littoralis</i> (Black She Oak)	Rear

The application does not seek the removal of any trees on site. The application was referred to Council’s Tree Management Officer who raised no concern with the proposal subject to the imposition of appropriate conditions regarding tree protection.

Council’s Tree Management Officer also provided conditions requiring that additional canopy trees be provided on the site in accordance with the objectives of Part 2.20 of MDCP 2011 which seeks to maximise tree canopy across the Local Government Area. The following comments were provided in this regard:

*“The NSW Government’s Greater Sydney Commission (Objective 30) sets out a minimum of 40% tree canopy cover in suburban areas with a 25% canopy coverage for medium to high residential areas. It is considered that this target could be reasonably achieved on this site however, the current proposal/landscape plan does not allow for this.*

As such, a condition is included in the recommendation requiring that a minimum of two native trees be provided on site.

Subject to the above conditions, the development is acceptable having regard to Part 2.20 of MDCP 2011.

#### **PART 4 – RESIDENTIAL DEVELOPMENT**

##### **Part 4 – Low Density Residential Development**

###### **4.1.6.2 Building setbacks**

###### *Front Setback*

No change to the existing front setback is proposed. The development maintains the front setback formed by the existing cottage on the site which is acceptable.

###### *Side Setback*

The development provides a 10 metre western side boundary setback which is acceptable.

The development provides an eastern side boundary setback of 510mm on the ground and lower ground floor levels. MDCP 2011 prescribes a minimum side boundary setback of 1.5 metres for two storey dwellings with a frontage in excess of 8 metres. Notwithstanding the variation from the numerical standard, the eastern side boundary setback is acceptable for the following reasons:

- The site is burdened by a restrictive covenant requiring that a significant portion of the site not be developed. This significantly restricts the developable area of the site. This combined with the topography of the property which falls across the site restricts the developable area of the lot to an area with a frontage of 12.5 metres and a depth of 18 metres;
- The existing cottage on the site is required to be substantially retained due to its heritage significance and therefore the new component of the development is restricted to the rear, south eastern portion of the site;
- As discussed earlier in this report under the provisions of Part 2.7 of MDCP 2011, the development is acceptable having regard to Council's overshadowing controls;
- The non-compliant portion of the development is set back approximately 10 metres from the front boundary and is acceptable having regard to the streetscape context;
- The proposal integrates new development with the established setback character of the street and maintains established gardens, trees and vegetation networks;
- The proposal does not create an unreasonable impact upon adjoining properties in relation to visual bulk.

The boundary wall is constructed of face brick which is considered to be a low maintenance material. The wall has a length of 7.11 metres and a height ranging from 4.35 to 5.46 metres given the steep topography. Given the circumstances, no concern is raised with regard to visual bulk.

###### *Rear setback*

The rear boundary setback is reasonable for the following reasons:

- The proposal will not create adverse impacts on the amenity of adjoining properties in relation to overshadowing and visual bulk;
- The proposal maintains adequate open space;

- The proposal ensures adequate separation between buildings for visual and acoustic privacy, solar access and air circulation; and
- The proposal integrates new development with the established setback character of the street and maintains established gardens, trees and vegetation networks.

#### 5(d) The Likely Impacts

The assessment of the Development Application demonstrates that, subject to the recommended conditions, the proposal will have minimal impact in the locality.

#### 5(e) The suitability of the site for the development

The site is zoned R2 – Low Density Residential. Provided that any adverse effects on adjoining properties are minimised, this site is considered suitable to accommodate the proposed development, and this has been demonstrated in the assessment of the application.

#### 5(f) Any submissions

The application was notified in accordance with Council's Notification Policy for a period of 14 days to surrounding properties and no submissions were received.

#### 5(g) The Public Interest

The public interest is best served by the consistent application of the requirements of the relevant Environmental Planning Instruments, and by Council ensuring that any adverse effects on the surrounding area and the environment are appropriately managed.

The public interest is an overarching requirement, which includes the consideration of the matters discussed in this report. Implicit to the public interest is the achievement of future built outcomes adequately responding to and respecting the future desired outcomes expressed in environmental planning instruments and development control plans.

The application is considered to have satisfactorily addressed Council's and relevant agencies' criteria and would provide a development outcome that, on balance, would result in a positive impact for the community. Accordingly, it is considered that the approval of the proposed development would be in the public interest.

The proposal is not contrary to the public interest.

## 6 Referrals

### 6(a) Internal

The application was referred to the following internal referral officers:

- Heritage Advisor;
- Development Engineer;
- Tree Management Officer;
- Urban Ecology.

The issues raised in those referrals have been discussed in Section 5 of this report.

## 6(b) External

The application was referred to the following external referral bodies:

### **Sydney Water**

The application was referred to Sydney Water who raised no concern with the proposal and provided conditions of consent.

### **Heritage Council of NSW**

The application was referred to the Heritage Council who provided concurrence in accordance with Section 4.47 of the *Environmental Planning and Assessment Act 1979*. Conditions of consent are included in the recommendation.

## 7. Section 7.12 Levy

A Section 7.12 Levy of \$9306.00 would be required for the development under Marrickville Section 94A Contributions Plan 2014. A condition requiring that levy to be paid is included in the recommendation.

## 8. Conclusion

The proposal generally complies with the aims, objectives and design parameters contained in Marrickville Local Environmental Plan 2011 and Marrickville Development Control Plan 2011. The development will not result in any significant impacts on the amenity of adjoining premises and the streetscape. The application is considered suitable for approval subject to the imposition of appropriate conditions.

## 9. Recommendation

- A. That the Inner West Local Planning Panel, exercising the functions of the Council as the consent authority, pursuant to s4.16 of the Environmental Planning and Assessment Act 1979, grant consent to Development Application No. 201900328 to demolish part of the premises and carry out ground and lower floor alterations and additions to a dwelling house and provide a new hard stand car parking space with associated driveway crossing at 58 Thornley Street, Marrickville subject to the conditions listed in Attachment A below.



## Attachment A – Recommended conditions of consent

### Fees

#### 1. Section 7.12 (formerly section 94A) Development Contribution Payments

Prior to the issue of a Construction Certificate, written evidence must be provided to the Certifying Authority that a monetary contribution to the Inner West Council has been paid, towards the provision of infrastructure, required to address increased demand for local services generated by additional development within the Local Government Area (LGA). This condition is imposed in accordance with Section 7.12 of the Environmental Planning and Assessment Act and in accordance with the relevant current contributions plan:

#### **Former Marrickville LGA:**

*“Marrickville Section 94/94A Contributions Plan 2014”*

Note:

Copies of these contribution plans can be inspected at any of the Inner West Council Service Centres or viewed online at

<https://www.innerwest.nsw.gov.au/develop/planning-controls/section-94-contributions>

Payment amount\*:

**\$9,306**

\*Indexing of the Section 7.12 contribution payment:

**Former Ashfield LGA & Former Marrickville LGA:**

The contribution amount to be paid to the Council is to be adjusted at the time of the actual payment in accordance with the provisions of the relevant contributions plan. In this regard, you are recommended to make contact with Inner West Council *prior to arranging your payment method* to confirm the correct current payment amount (at the expected time of payment).

Payment methods:

The required contribution must be paid either in cash; by unendorsed bank cheque (from an Australian Bank only); via EFTPOS (Debit only); or credit card (to a maximum of \$10,000 - Note: A 1% credit card transaction fee applies to all credit card transactions). It should be noted that personal cheques or bank guarantees cannot be accepted for the payment of these contributions.

#### 2. Long Service Levy

Prior to the issue of a Construction Certificate, written evidence must be provided to the Certifying Authority that the long service levy in accordance with Section 34 of the *Building and Construction Industry Long Service Payments Act 1986* has been paid at the prescribed rate of 0.35% of the total cost of the work to either the Long Service Payments Corporation or Council for any work costing \$25,000 or more.

**3. Security Deposit - Custom**

Prior to the commencement of demolition works or prior to the issue of a Construction Certificate, the Certifying Authority must be provided with written evidence that a security deposit and inspection fee has been paid to Council to cover the cost of making good any damage caused to any Council property or the physical environment as a consequence of carrying out the works and as surety for the proper completion of any road, footpath and drainage works required by this consent.

Security Deposit:	\$8,056.50
Inspection Fee:	\$230.65

Payment will be accepted in the form of cash, bank cheque, EFTPOS/credit card (to a maximum of \$10,000) or bank guarantee. Bank Guarantees must not have an expiry date.

The inspection fee is required for the Council to determine the condition of the adjacent road reserve and footpath prior to and on completion of the works being carried out.

Should any of Council’s property and/or the physical environment sustain damage during the course of the demolition or construction works, or if the works put Council’s assets or the environment at risk, or if any road, footpath or drainage works required by this consent are not completed satisfactorily, Council may carry out any works necessary to repair the damage, remove the risk or complete the works. Council may utilise part or all of the security deposit to restore any damages, and Council may recover, in any court of competent jurisdiction, any costs to Council for such restorations.

A request for release of the security may be made to the Council after all construction work has been completed and a final Occupation Certificate issued.

The amount nominated is only current for the financial year in which the consent was issued and is revised each financial year. The amount payable must be consistent with Council’s Fees and Charges in force at the date of payment.

**General Conditions**

**4. Documents related to the consent**

The development must be carried out in accordance with plans and documents listed below:

Plan, Revision and Issue No.	Plan Name	Date Issued	Prepared by
1812-E-00, 01, 03 to 08 Rev A inclusive, 1812P-01, 1812-P-06 and 1812-X-04 Rev A	Architectural Plans	3-10-19	Benn + Penna
1812-E-02, 1812-P-00, 1812-P-02 to 1812-P-	Architectural Plans	20-12-19	Benn + Penna

05 inclusive and P-07 to P-08 Rev B			
L01-B to L05-B inclusive	Landscape Plan	3-10-19	Ally Jackson Garden Design
1812-X-01 Rev B	Schedule of Finishes	20-12-19	Benn + Penna

As amended by the conditions of consent.

### 5. Additional Information

The following information is to be submitted with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate):

- a) Drawings detailing the new entry staircase with porch proposed to be built above the existing stair. The heritage impact statement report should include a methodology for the installation.
- b) Drawings detailing the design, materials and size of proposed windows.
- c) Drawings illustrating the size of the proposed opening between the kitchen and living room.
- d) Drawings detailing the proposed size and materials of the skylights.
- e) Drawings detailing the proposed bathroom and ensuite installation. Each new bathroom must be self-contained and reversible.
- f) Information explaining how the kitchen flooring is to be lowered and assessment of its impact on heritage fabric must be provided within the statement of heritage impact report and the architectural drawing set.
- g) A detail drawing specifying the fence design. The new 1.2m high timber fence picket shall be simple in design (flat or of an inverted 'V' in form, typical of the Federation period).

### 6. Design Change

- a) The window proposed for removal in the rear bedroom is not approved. The new addition should be modified to allow the original window to remain in-situ. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- b) The proposed door in the west external wall is not approved. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- c) The proposed pergola to the western façade is not approved. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).
- d) The new partition wall forming the bathroom and ensuite should have a glazed panel along the top portion to allow the original spatial character of the room to be read. Amended drawings should be provided with the Section 60 application for approval by the Heritage Council of NSW (or its Delegate).

### 7. Service Upgrade Works

The installation of new services shall be carried out in such a manner as to minimise damage to or removal of historic fabric and shall not obscure historic features. Any new penetrations through heritage fabric shall be minimised. Where possible, existing service points shall be used.

New services are to be surface mounted rather than chased-in to significant wall fabric.

#### **8. Heritage Consultant**

A suitably qualified and experienced heritage consultant must be nominated for this project. The nominated heritage consultant must provide input into the detailed design, provide heritage information to be imparted to all tradespeople during site inductions, and oversee the works to minimise impacts to heritage values. The nominated heritage consultant must be involved in the selection of appropriate tradespersons and must be satisfied that all work has been carried out in accordance with the conditions of this consent.

#### **9. Specialist Tradesperson**

All work to, or affecting, significant fabric shall be carried out by suitably qualified tradespersons with practical experience in conservation and restoration of similar heritage structures, materials and construction methods.

#### **10. Site Protection**

Significant built and landscape elements are to be protected during site preparation and the works from potential damage. Protection systems must ensure significant fabric, including landscape elements, is not damaged or removed.

#### **11. Photographic Archival Recording**

A photographic archival recording of the residence and surrounding yard must be prepared prior to the commencement of works, during works and at the completion of works. This recording must be in accordance with the Heritage NSW publication 'Photographic Recording of Heritage Items using Film or Digital Capture' (2006). The digital copy of the archival record must be provided to Heritage NSW, Department of Premier and Cabinet.

#### **12. Unexpected Historical Archaeological Relics**

The applicant must ensure that if unexpected archaeological deposits or relics not identified and considered in the supporting documents for this approval are discovered, work must cease in the affected area(s) and the Heritage Council of NSW must be notified. Additional assessment and approval may be required prior to works continuing in the affected area(s) based on the nature of the discovery.

#### **13. Compliance with Heritage Council conditions**

If requested, the applicant and any nominated heritage consultant may be required to participate in audits of Heritage Council of NSW approvals to confirm compliance with conditions of consent.

#### **14. Section 60 Application**

An application under Section 60 of the *Heritage Act 1977* must be submitted to, and approved by, the Heritage Council of NSW (or delegate), prior to work commencing.

#### **15. Erosion and Sediment Control**

Prior to the issue of a commencement of any works (including any demolition works), the Certifying Authority must be provided with an erosion and sediment control plan and specification. Sediment control devices must be installed and maintained in proper working order to prevent sediment discharge from the construction site.

**16. Standard Street Tree Protection**

No trees on public property (footpaths, roads, reserves etc.) are to be removed or damaged during works unless specifically approved in this consent or marked on the approved plans for removal.

Prescribed trees protected by Council’s Management Controls on the subject property and/or any vegetation on surrounding properties must not be damaged or removed during works unless specific approval has been provided under this consent.

Any public tree within five (5) metres of the development must be protected in accordance with Council’s *Development Fact Sheet—Trees on Development Sites*.

No activities, storage or disposal of materials taking place beneath the canopy of any tree (including trees on neighbouring sites) protected under Council’s Tree Management Controls at any time.

The trees identified below are to be retained and protected in accordance with the conditions of consent or approved Tree Protection Plan throughout the development (note: tree numbers must correspond with approved Tree Protection Plan if conditioned)

Tree No	Botanical/Common Name	Location
1	<i>Melaleuca</i> spp. (White Bottlebrush)	Street tree
2	<i>Callistemon viminalis</i> (Weeping Bottlebrush)	Street tree
3	<i>Allocasuarina littoralis</i> (Black She Oak)	Rear
4	<i>Allocasuarina littoralis</i> (Black She Oak)	Rear

Details of the trees must be included on all Construction Certificate plans and shall be annotated in the following way:

- Green for trees to be retained,
- Red for trees to be removed

**17. Verification of Levels and Location**

Prior to the pouring of the ground floor slab or at dampcourse level, whichever is applicable or occurs first, the Principal Certifier must be provided with a survey levels certificate prepared by a Registered Surveyor indicating the level of the slab and the location of the building with respect to the boundaries of the site to AHD.

**18. Boundary Alignment Levels**

Alignment levels for the site at all pedestrian and vehicular access locations must match the existing back of footpath levels at the boundary.

**19. Works Outside the Property Boundary**

This development consent does not authorise works outside the property boundaries on adjoining lands.

**Prior to any Demolition****20. Dilapidation Report**

Prior to any works commencing (including demolition), the Certifying Authority and owners of identified properties, must be provided with a colour copy of a dilapidation report prepared by a suitably qualified person. The report is required to include colour photographs of all the adjoining properties to the Certifying Authority's satisfaction. In the event that the consent of the adjoining property owner cannot be obtained to undertake the report, copies of the letter/s that have been sent via registered mail and any responses received must be forwarded to the Certifying Authority before work commences.

**21. Advising Neighbors Prior to Excavation**

At least 7 days before excavating below the level of the base of the footings of a building on an adjoining allotment of land, give notice of intention to do so to the owner of the adjoining allotment of land and furnish particulars of the excavation to the owner of the building being erected or demolished.

**22. Hoardings**

The person acting on this consent must ensure the site is secured with temporary fencing prior to any works commencing.

If the work involves the erection or demolition of a building and is likely to cause pedestrian or vehicular traffic on public roads or Council controlled lands to be obstructed or rendered inconvenient, or building involves the enclosure of public property, a hoarding or fence must be erected between the work site and the public property. An awning is to be erected, sufficient to prevent any substance from, or in connection with, the work falling onto public property.

Separate approval is required from the Council under the Roads Act 1993 to erect a hoarding or temporary fence or awning on public property.

**23. Construction Fencing**

Prior to the commencement of any works (including demolition), the site must be enclosed with suitable fencing to prohibit unauthorised access. The fencing must be erected as a barrier between the public place and any neighbouring property.

**Prior to Construction Certificate****24. Structural Certificate for retained elements of the building**

Prior to the issue of a Construction Certificate, the Certifying Authority is required to be provided with a Structural Certificate prepared by a practising structural engineer, certifying the structural adequacy of the property and its ability to withstand the proposed additional, or altered structural loads during all stages of construction. The certificate must also include all details of the methodology to be employed in

construction phases to achieve the above requirements without result in demolition of elements marked on the approved plans for retention.

### 25. Diversity of local native plant species

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with an amended landscape plan certified, by a qualified landscape architect, demonstrating the following;

- a) a plant schedule consisting of 90% local native plants, including a dense grassy understorey with shrub layer and associated canopy that utilises a diverse and representative range of local native species as per the table below:

Lot size	Minimum number of different local native plant species required		
	Trees	Shrubs	Grasses, groundcovers, climbers
500 – 999m <sup>2</sup>	2	10	6

- b) plant species mixed throughout garden beds rather than distinct blocks of one species.

### 26. Integrate Sandstone in Landscaping

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with a landscape plan identifying how natural sandstone rock has been integrated within landscaping (e.g. paving, walling, feature boulders etc).

### 27. Creating Habitat for Native Fauna

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with a landscape plan showing how external spaces have been designed to protect and enhance urban biodiversity (Marrickville DCP Part 2.13) by creating habitat for a variety of fauna species by using at least one of the below:

- a) A grouping of timber logs (minimum 3 logs)
- b) A grouping of stone boulders (minimum 3 boulders)
- c) A bee and/or insect hotel
- d) A habitat box (e.g. bird box or bat box)

### 28. Sydney Water – Tap In

Prior to the issue of a Construction Certificate, the Certifying Authority is required to ensure approval has been granted through Sydney Water's online 'Tap In' program to determine whether the development will affect Sydney Water's sewer and water mains, stormwater drains and/or easements, and if further requirements need to be met.

*Note: Please refer to the web site <http://www.sydneywater.com.au/tapin/index.htm> for details on the process or telephone 132092.*

### 29. Acoustic Report – Aircraft Noise

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with amended plans detailing the recommendations of an acoustic report prepared by a suitably qualified Acoustic Engineer demonstrating compliance of the

development with the relevant provisions of Australian Standard AS 2021:2015 Acoustics – Aircraft noise intrusion – Building siting and construction.

**30. Underground services near trees**

Prior to the issue of a Construction Certificate, the Certifying Authority must verify that no proposed underground services are located beneath the canopy of any prescribed tree located on the subject site and adjoining sites (including trees located within the public domain).

**31. Dilapidation Report – Pre-Development – Minor**

Prior to the issue of a Construction Certificate or any demolition, the Certifying Authority must be provided with a dilapidation report including colour photos showing the existing condition of the footpath and roadway adjacent to the site.

**32. Stormwater Drainage System – Minor Developments (OSD is not required)**

Prior to the issue of a Construction Certificate, the Certifying Authority must be provided with stormwater drainage design plans certified by a suitably qualified Civil Engineer that the design of the site drainage system complies with the following specific requirements:

- a) The design must generally be in accordance with the Stormwater Drainage Concept plan on Drawing No. D01 to D04 (Rev B) prepared by NB Consulting Engineers and dated 6/9/19.
- b) The design shall be reviewed having regard to Geotech Investigation by Morrow dated 13/8/19 and the recommendation that new infiltration systems are not recommended for the site.
- c) The stormwater design be certified by a geotechnical engineer to ensure the stability of the cliff is not compromised.
- d) The design must make provision for the natural flow of stormwater runoff from uphill/upstream properties/lands.
- e) No nuisance or concentration of flows to other properties.
- f) Plans must specify that any components of the existing system to be retained must be certified during construction to be in good condition and of adequate capacity to convey the additional runoff generated by the development and be replaced or upgraded if required.

**During Demolition and Construction**

**33. Construction Hours – Class 1 and 10**

Unless otherwise approved by Council, excavation, demolition, construction or subdivision work are only permitted between the hours of 7:00am to 5.00pm, Mondays to Saturdays (inclusive) with no works permitted on, Sundays or Public Holidays.

**34. Tree Protection**

To protect the following tree/s, trunk protection must be installed prior to any works commencing in accordance with Council’s Development Fact Sheet—Trees on Development Sites:

Tree №	Botanical/Common Name/Location
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1	<i>Melaleuca</i> spp. (White Bottlebrush) Street tree
2	<i>Callistemon viminalis</i> (Weeping Bottlebrush) Street tree

**35. Tree Protection Zone**

To protect the following tree/s, no work must commence until its/their Protection Zone is fenced off at the specified radius from the trunk/s to prevent any activities, storage or the disposal of materials within the fenced area in accordance with Council’s *Development Fact Sheet—Trees on Development Sites*. The fence/s (including existing boundary fencing) must be maintained intact until the completion of all demolition/building work on site.

Tree No	Botanical/Common Name	Radius in metres
3, 4	<i>Allocasuarina littoralis</i> (Black She Oak)	1 m. western side of trunks

**36. Survey Prior to Footings**

Upon excavation of the footings and before the pouring of the concrete, the Certifying Authority must be provided with a certificate of survey from a registered land surveyor to verify that the structure will not encroach over the allotment boundaries.

**Prior to Occupation Certificate**

**37. Aircraft Noise –Alterations and Additions**

Prior to the issue of an Occupation Certificate (whether an interim or final Occupation Certificate), the Principal Certifier must be provided with a report from a suitably qualified person demonstrating that each of the commitments listed in Aircraft Noise Assessment Report required by this consent has been satisfied.

**38. Certification of Tree Planting**

Prior to the issue of any Occupation Certificate, the Principal Certifier is to be provided with evidence certified by a person holding a minimum qualification of AQF3 Certificate of Horticulture or Arboriculture that:

A minimum of two (2) x 75 litre size native tree/s, which will each attain a minimum mature height of seven (7) metres and a minimum mature canopy spread of six (6) metres, have been planted within the front of the property at a minimum of 1.5 metres from any boundary or structure and allowing for future tree growth. The trees are to conform to AS2303—*Tree stock for landscape use*. Trees listed as exempt species from Council’s Tree Management Controls, palms, fruit trees and species recognised to have a short life span will not be accepted as suitable replacements.

If the replacement trees are found to be faulty, damaged, dying or dead within twelve (12) months of planting then they must be replaced with the same species (up to 3 occurrences). If the trees are found dead before they reach a height where they are protected by Council’s Tree Management Controls, they must be replaced with the same species.

**39. Landscape Certification**

Prior to the issue of any Occupation Certificate, the Principal Certifier is to be provided with certification from the project arborist the requirements of the conditions of consent related to the landscape plan prepared by Ally Jackson, 3 November 2019, has been complied with.

#### **40. Smoke Alarms - Certification of upgrade to NCC requirements**

Prior to the issue of any Occupation Certificate, the Principal Certifier is required to be satisfied the existing building has been upgraded to comply with the provisions of the National Construction Code (Building Advisory notes

#### **41. Public Domain Works**

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority must be provided with written evidence from Council that the following works on the Road Reserve have been completed in accordance with the requirements of the approval under Section 138 of the *Roads Act 1993* including:

- a) Light duty concrete vehicle crossing(s) at the vehicular access location(s).
- b) The repair of any damage to the public domain resulting from the building works.
- c) Other works subject to the *Roads Act 1993* approval.

All works must be constructed in accordance with Council's standards and specifications and AUS-SPEC#2-"Roadworks Specifications".

#### **42. No Encroachments**

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority must ensure that any encroachments on to Council road or footpath resulting from the building works have been removed, including opening doors, gates and garage doors with the exception of any awnings or balconies approved by Council.

#### **43. Light Duty Vehicle Crossing**

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority must ensure that a light duty concrete vehicle crossing/s, in accordance with Council's Standard crossing and footpath specifications and AUS-SPEC#2-"Roadworks Specifications" have been constructed at the vehicular access locations.

#### **44. Works as Executed – Site Stormwater Drainage System**

Prior to the issue of an Occupation Certificate, the Principal Certifying Authority must be provided with Certification by a suitably qualified Civil Engineer that:

- a) The stormwater drainage system has been constructed in accordance with the approved design and relevant Australian Standards.
- b) Works-as-executed plans of the stormwater drainage system certified by a Registered Surveyor, to verify that the drainage system has been constructed, OSD/OSR system commissioned and stormwater quality improvement device(s) and any pump(s) installed in accordance with the approved design and relevant Australian Standards have been submitted to Council. The works-as-executed plan(s) must show the as built details in comparison to those shown on the drainage plans approved with the Construction Certificate. All relevant levels and details indicated must be marked in red on a copy of the Principal Certifying Authority stamped Construction Certificate plans.

## On-going

### **45. Tree Establishment**

The canopy trees required by this consent are to be maintained in a healthy and vigorous condition until they attain a height of 5 metres whereby they will be protected by Council's Tree Management Controls. If any of the trees are found to be faulty, damaged, dying or dead they shall be replaced with the same species within 1 month (up to 3 occurrences).

## **Advisory notes**

### ***Prescribed Conditions***

This consent is subject to the prescribed conditions of consent within clause 98-98E of the *Environmental Planning and Assessment Regulations 2000*.

### ***Notification of commencement of works***

At least 7 days before any demolition work commences:

- a) the Council must be notified of the following particulars:
  - i. the name, address, telephone contact details and licence number of the person responsible for carrying out the work; and
  - ii. the date the work is due to commence and the expected completion date; and
- b) a written notice must be placed in the letter box of each directly adjoining property identified advising of the date the work is due to commence.

### ***Storage of Materials on public property***

The placing of any materials on Council's footpath or roadway is prohibited, without the prior consent of Council.

### ***Toilet Facilities***

The following facilities must be provided on the site:

- a) toilet facilities in accordance with WorkCover NSW requirements, at a ratio of one toilet per every 20 employees, and
- b) a garbage receptacle for food scraps and papers, with a tight fitting lid.

Facilities must be located so that they will not cause a nuisance.

### ***Infrastructure***

The developer must liaise with the Sydney Water Corporation, Ausgrid, AGL and Telstra concerning the provision of water and sewerage, electricity, natural gas and telephones respectively to the property. Any adjustment or augmentation of any public utility services including Gas, Water, Sewer, Electricity, Street lighting and Telecommunications required as a result of the development must be undertaken before occupation of the site.

### ***Other Approvals may be needed***

Approvals under other acts and regulations may be required to carry out the development. It is the responsibility of property owners to ensure that they comply

with all relevant legislation. Council takes no responsibility for informing applicants of any separate approvals required.

#### **Failure to comply with conditions**

Failure to comply with the relevant provisions of the *Environmental Planning and Assessment Act 1979* and/or the conditions of this consent may result in the serving of penalty notices or legal action.

#### **Other works**

Works or activities other than those approved by this Development Consent will require the submission of a new Development Application or an application to modify the consent under Section 4.55 of the *Environmental Planning and Assessment Act 1979*.

#### **Obtaining Relevant Certification**

This development consent does not remove the need to obtain any other statutory consent or approval necessary under any other Act, such as (if necessary):

- a) Application for any activity under that Act, including any erection of a hoarding.
- b) Application for a Construction Certificate under the *Environmental Planning and Assessment Act 1979*.
- c) Application for an Occupation Certificate under the *Environmental Planning and Assessment Act 1979*.
- d) Application for a Subdivision Certificate under the *Environmental Planning and Assessment Act 1979* if land (including stratum) subdivision of the development site is proposed.
- e) Application for Strata Title Subdivision if strata title subdivision of the development is proposed.
- f) Development Application for demolition if demolition is not approved by this consent.
- g) Development Application for subdivision if consent for subdivision is not granted by this consent.

#### **Disability Discrimination Access to Premises Code**

The *Disability Discrimination Act 1992* (Commonwealth) and the *Anti-Discrimination Act 1977* (NSW) impose obligations on persons relating to disability discrimination. Council's determination of the application does not relieve persons who have obligations under those Acts of the necessity to comply with those Acts.

#### **National Construction Code (Building Code of Australia)**

A complete assessment of the application under the provisions of the National Construction Code (Building Code of Australia) has not been carried out. All building works approved by this consent must be carried out in accordance with the requirements of the National Construction Code.

#### **Notification of commencement of works**

Residential building work within the meaning of the Home Building Act 1989 must not be carried out unless the PCA (not being the council) has given the Council written notice of the following information:

- a) in the case of work for which a principal contractor is required to be appointed:

- i.the name and licence number of the principal contractor, and
  - ii.the name of the insurer by which the work is insured under Part 6 of that Act,
- b) in the case of work to be done by an owner-builder:
- i.the name of the owner-builder, and
  - ii.if the owner-builder is required to hold an owner-builder permit under that Act, the number of the owner-builder permit.

### **Dividing Fences Act**

The person acting on this consent must comply with the requirements of the *Dividing Fences Act 1991* in respect to the alterations and additions to the boundary fences.

### **Permits from Council under Other Acts**

Where it is proposed to occupy or carry out works on public roads or Council controlled lands, the person acting on this consent must obtain all applicable Permits from Council in accordance with Section 68 (Approvals) of the *Local Government Act 1993* and/or Section 138 of the *Roads Act 1993*. Permits are required for the following activities:

- a) Work zone (designated parking for construction vehicles). Note that a minimum of 2 months should be allowed for the processing of a Work Zone application.
- b) A concrete pump across the roadway/footpath
- c) Mobile crane or any standing plant
- d) Skip bins
- e) Scaffolding/Hoardings (fencing on public land)
- f) Public domain works including vehicle crossing, kerb & guttering, footpath, stormwater, etc.
- g) Awning or street verandah over footpath
- h) Partial or full road closure
- i) Installation or replacement of private stormwater drain, utility service or water supply

Contact Council's Road Access team to ensure the correct Permit applications are made for the various activities. A lease fee is payable for all occupations.

### **Noise**

Noise arising from the works must be controlled in accordance with the requirements of the *Protection of the Environment Operations Act 1997* and guidelines contained in the New South Wales Environment Protection Authority Environmental Noise Control Manual.

### **Amenity Impacts General**

The use of the premises must not give rise to an environmental health nuisance to the adjoining or nearby premises and environment. There are to be no emissions or discharges from the premises, which will give rise to a public nuisance or result in an offence under the *Protection of the Environment Operations Act 1997* and Regulations. The use of the premises and the operation of plant and equipment must not give rise to the transmission of a vibration nuisance or damage other premises.

### **Fire Safety Certificate**

The owner of the premises, as soon as practicable after the Final Fire Safety Certificate is issued, must:

- a) Forward a copy of the Final Safety Certificate and the current Fire Safety Schedule to the Commissioner of Fire and Rescue New South Wales and the Council; and
- b) Display a copy of the Final Safety Certificate and Fire Safety Schedule in a prominent position in the building (i.e. adjacent the entry or any fire indicator panel).

Every 12 months after the Final Fire Safety Certificate is issued the owner must obtain an Annual Fire Safety Certificate for each of the Fire Safety Measures listed in the Schedule. The Annual Fire Safety Certificate must be forwarded to the Commissioner and the Council and displayed in a prominent position in the building.

#### **Construction of Vehicular Crossing**

The vehicular crossing and/or footpath works are required to be constructed by your own contractor. You or your contractor must complete an application for 'Construction of a Vehicular Crossing & Civil Works' form, lodge a bond for the works, pay the appropriate fees and provide evidence of adequate public liability insurance, prior to commencement of works.

#### **Lead-based Paint**

Buildings built or painted prior to the 1970's may have surfaces coated with lead-based paints. Recent evidence indicates that lead is harmful to people at levels previously thought safe. Children particularly have been found to be susceptible to lead poisoning and cases of acute child lead poisonings in Sydney have been attributed to home renovation activities involving the removal of lead based paints. Precautions should therefore be taken if painted surfaces are to be removed or sanded as part of the proposed building alterations, particularly where children or pregnant women may be exposed, and work areas should be thoroughly cleaned prior to occupation of the room or building.

#### **Asbestos Removal**

A demolition or asbestos removal contractor licensed under the Work Health and Safety Regulations 2011 must undertake removal of more than 10m<sup>2</sup> of bonded asbestos (or otherwise specified by WorkCover or relevant legislation).

Removal of friable asbestos material must only be undertaken by a contractor that holds a current AS1 Friable Asbestos Removal Licence.

Demolition sites that involve the removal of asbestos must display a standard commercially manufactured sign containing the words 'DANGER ASBESTOS REMOVAL IN PROGRESS' measuring not less than 400mm x 300mm is to be erected in a prominent visible position on the site to the satisfaction of Council's officers. The sign is to be erected prior to demolition work commencing and is to remain in place until such time as all asbestos has been removed from the site to an approved waste facility.

All asbestos waste must be stored, transported and disposed of in compliance with the Protection of the Environment Operations (Waste) Regulation 2005. All receipts detailing method and location of disposal must be submitted to Council as evidence of correct disposal.

*Dial before you dig*

Contact "Dial Prior to You Dig" prior to commencing any building activity on the site.

*Useful Contacts*

BASIX Information	1300 650 908 weekdays 2:00pm - 5:00pm <a href="http://www.basix.nsw.gov.au">www.basix.nsw.gov.au</a>
Department of Fair Trading	13 32 20 <a href="http://www.fairtrading.nsw.gov.au">www.fairtrading.nsw.gov.au</a> Enquiries relating to Owner Builder Permits and Home Warranty Insurance.
Dial Prior to You Dig	1100 <a href="http://www.dialprior toyoudig.com.au">www.dialprior toyoudig.com.au</a>
Landcom	9841 8660 To purchase copies of Volume One of "Soils and Construction"
Long Service Payments Corporation	131441 <a href="http://www.lspc.nsw.gov.au">www.lspc.nsw.gov.au</a>
NSW Food Authority	1300 552 406 <a href="http://www.foodnotify.nsw.gov.au">www.foodnotify.nsw.gov.au</a>
NSW Government	<a href="http://www.nsw.gov.au/fibro">www.nsw.gov.au/fibro</a> <a href="http://www.diySAFE.nsw.gov.au">www.diySAFE.nsw.gov.au</a> Information on asbestos and safe work practices.
NSW Office of Environment and Heritage	131 555 <a href="http://www.environment.nsw.gov.au">www.environment.nsw.gov.au</a>
Sydney Water	13 20 92 <a href="http://www.sydneywater.com.au">www.sydneywater.com.au</a>
Waste Service - SITA Environmental Solutions	1300 651 116 <a href="http://www.wasteservice.nsw.gov.au">www.wasteservice.nsw.gov.au</a>
Water Efficiency Labelling and Standards (WELS)	<a href="http://www.waterrating.gov.au">www.waterrating.gov.au</a>
WorkCover Authority of NSW	13 10 50 <a href="http://www.workcover.nsw.gov.au">www.workcover.nsw.gov.au</a> Enquiries relating to work safety and asbestos removal and disposal.

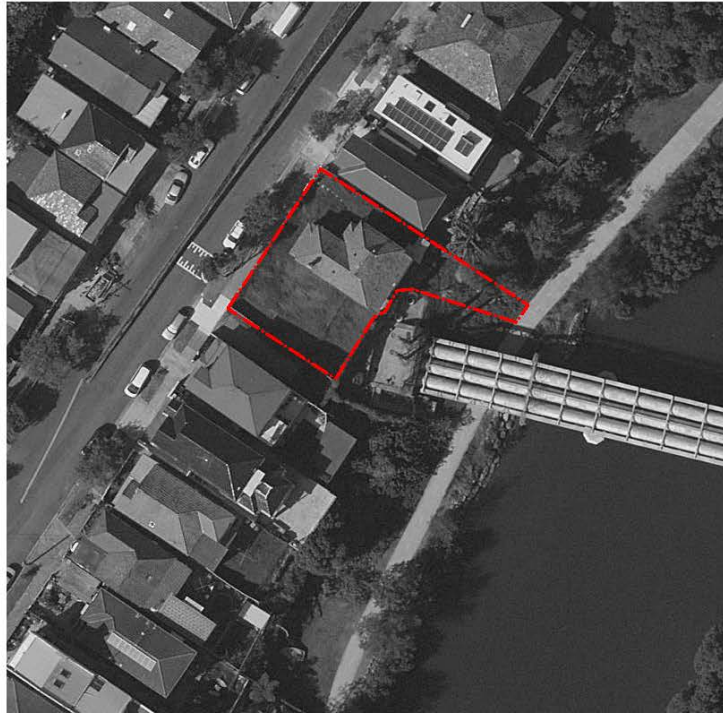
Attachment B – Plans of proposed development

LANDSCAPE PLAN PREPARED BY ALLY JACKSON GARDEN DESIGN  
 SITE SURVEY PREPARED BY C.M.S SURVEYORS  
 STORMWATER DRAINAGE CONCEPT PLAN BY ALB CONSULTING ENGINEERS

ARCHITECTURAL DOCUMENTS

EXISTING BUILDING	REVISION
1812-E-00	A
1812-E-01	A
1812-E-02	B
1812-E-03	A
1812-E-04	A
1812-E-05	A
1812-E-06	A
1812-E-07	A
1812-E-08	A

PROPOSED BUILDING	REVISION
1812-P-00	B
1812-P-01	A
1812-P-02	B
1812-P-03	B
1812-P-04	B
1812-P-05	B
1812-P-06	B
1812-P-07	B
1812-P-08	B
1812-P-09	B
1812-P-10	B
1812-S-01	A
1812-S-02	A
1812-S-03	A
1812-S-04	A
1812-S-05	A
1812-S-06	A
1812-S-07	A
1812-S-08	A
1812-S-09	A
1812-S-10	A
1812-S-11	A
1812-S-12	A
1812-S-13	A
1812-S-14	A
1812-S-15	A
1812-S-16	A
1812-S-17	A
1812-S-18	A
1812-S-19	A
1812-S-20	A
1812-S-21	A
1812-S-22	A
1812-S-23	A
1812-S-24	A
1812-S-25	A
1812-S-26	A
1812-S-27	A
1812-S-28	A
1812-S-29	A
1812-S-30	A
1812-S-31	A
1812-S-32	A
1812-S-33	A
1812-X-01	B
1812-X-02	A
1812-X-03	A
1812-X-04	A



<p><b>CONTROLS</b></p> <p>SITE AREA - 509.6 m<sup>2</sup></p> <p>ZONE R2 - LOW DENSITY RESIDENTIAL</p> <p>FSR, EXISTING - 0.21 (106 m<sup>2</sup>)</p> <p>FSR, PROPOSED - 0.23 (119 m<sup>2</sup>)</p> <p>FSR, LEF CONTROL - 0.50 (256 m<sup>2</sup>)</p> <p>LANDSCAPE, EXISTING - 70% (527 m<sup>2</sup>)</p> <p>LANDSCAPE, PROPOSED - 57% (292 m<sup>2</sup>)</p> <p>LANDSCAPE, DCP CONTROL - MIN. 20% (102 m<sup>2</sup>)</p> <p>SITE COVERAGE, EXISTING - 23% (118 m<sup>2</sup>)</p> <p>SITE COVERAGE, PROPOSED - 22% (161 m<sup>2</sup>)</p> <p>SITE COVERAGE, DCP CONTROL - MAX. 45% (229 m<sup>2</sup>)</p>	<p><b>BASIX A356431</b></p> <p><b>HOT WATER SYSTEM:</b> GAS INSTANTANEOUS</p> <p><b>INSULATION</b></p> <p>FLOOR: CONCRETE SLAB ON GROUND FLOOR WITH IN-SLAB HEATING SYSTEM; R1.00 (SLAB EDGE)</p> <p>FLOOR ABOVE EXISTING DWELLING OR BUILDING: NIL</p> <p>EXTERNAL WALL: CAVITY BRICK, NIL</p> <p>FLAT CEILING, FLAT ROOF: FRAMED</p> <p>CEILING: R2.50 (UF)</p> <p>ROOF: FOLDSARKING</p> <p>COLOUR: MEDIUM (SOLAR ABSORPTANCE 0.475 - 0.70)</p> <p>GLAZED DOORS &amp; WINDOWS:</p> <p>TIMBER OR UPVC SINGLE PYROLYTIC LOW-E. (U-VALUE: 3.99, SHGC: 0.4)</p> <p>STANDARD ALUMINIUM, SINGLE CLEAR</p> <p><b>SKYLIGHTS:</b></p> <p>TIMBER, DOUBLE CLEAR/AIR FILL. (U-VALUE: 4.3, SHGC: 0.5)</p> <p><b>NOTES:</b></p> <p>REFER TO THE BASIX CERTIFICATE FOR SPECIFIC REQUIREMENTS IN RELATION TO SHADING DEVICES FOR EACH WINDOW.</p>
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REVISIONS	A	06/10/19	DEVELOPMENT APPLICATION
B	20/12/19	DIA REVISIONS	
C			
D			
E			

DEVELOPMENT APPLICATION

CLIENT  
 ALLY JACKSON

PROJECT  
 53 THORNLEY ST.  
 MARRICKVILLE

1812-A-00

REVISION  
 B





**LEGEND**

- BOUNDARY LINE
- DEMOLISHED WORKS
- INDICATES PROPOSED
- INDICATES EXISTING

**1812-E-00**

**EXISTING SITE PLAN**

CLIENT: ALLY JACKSON

PROJECT: 55 THORNLEY ST, MARRIOVILLE

SCALE: 1:200 @ A3

REVISION: A

REVISIONS A: 03/10/19 DEVELOPMENT APPLICATION

B: \_\_\_\_\_

C: \_\_\_\_\_

D: \_\_\_\_\_

E: \_\_\_\_\_

**LEGEND**

- GLAZING (EXISTING)
- GLAZING (PROPOSED)
- MATERIALS (EXISTING)
- MATERIALS (PROPOSED)
- ROOF-TILE (TERRACOTTA)
- ROOF-TILE (TERRAZZO)
- SCREEN (EXISTING)
- SCREEN (PROPOSED)
- SCREEN (ADJUSTABLE)
- SCREEN (SLAT)
- TIMBER CLADDING

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**1812-E-01**

SCALE 1:100 @ A3

REVISION A

**EXISTING LOWER GROUND FLOOR PLAN**

PROJECT 55 THORNLEY ST. MARRICKVILLE

CLIENT ALLY JACKSON

REVISIONS A 03/10/18 DEVELOPMENT APPLICATION

B

C

D

E

GLAZING (PROPOSED) GS-2

METAL SHEET ROOF MF-2

ROOF TILE (TERRACOTTA) RT-1

SCREEN (PROPOSED) SR-1

SCREEN (EXISTING) SR-2

CONCRETE (PROPOSED) CP-1

CONCRETE (EXISTING) CP-2

FORMWORK (PROPOSED) FC-1

FORMWORK (EXISTING) FC-2

TIMBER CLADDING TC-1

BRICK (EXISTING) BK-1

BRICK (PROPOSED) BK-2

CONCRETE (PROPOSED) CON-1

CONCRETE (EXISTING) CON-2

FORMWORK (PROPOSED) FC-1

FORMWORK (EXISTING) FC-2

GLAZING (EXISTING) GS-1

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**1812-E-02**

SCALE 1:100 @ A3

REVISION **B**

**EXISTING GROUND FLOOR PLAN**

PROJECT 55 THORNLEY ST, MARRIVILLE

CLIENT ALLY JACKSON

REVISIONS

A	03.10.19	DEVELOPMENT APPLICATION
B	20.12.19	DA REVISIONS
C		
D		
E		

LEGEND

GS-2	GLAZING (EXISTING)
MS-2	METAL SHEET ROOF
RT-1	ROOF-TILE (TERRACOTTA)
SP-1	SCREEN (ADJUSTABLE)
SP-2	SCREEN (FIXED)
PF-1	POWERSHED ANT SHEET
GC-1	GLAZING (CLEAR)
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
TC-1	TIMBER CLADDING

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**LEGEND**

	BOUNDARY LINE
	DEMOLISHED WORKS
	INDICATES PROPOSED
	INDICATES EXISTING

**1812-E-03**

SCALE  
1:100 @ A3

REVISION  
**A**

PROJECT  
55 THORNLEY ST,  
MARRICKVILLE

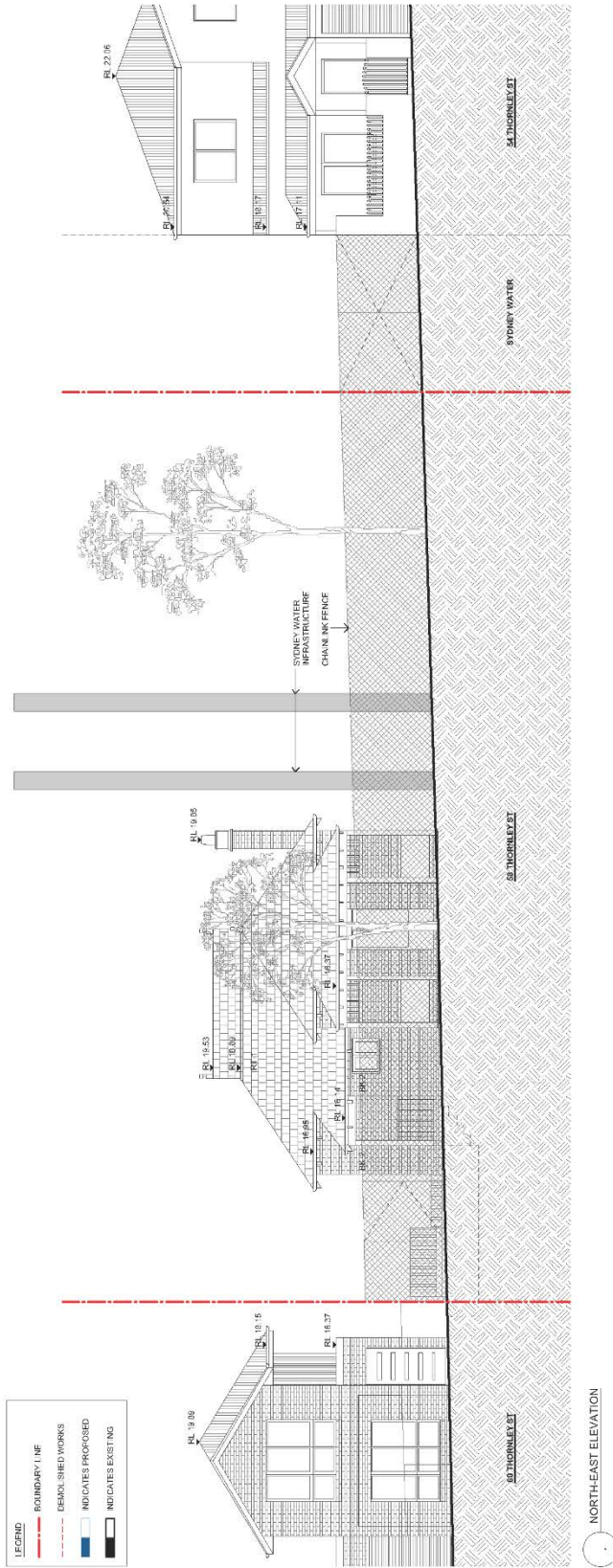
CLIENT  
ALLY JACKSON

REVISIONS  
A 03.10.19 DEVELOPMENT APPLICATION  
B  
C  
D  
E

LEGEND  
GZ-2 GLAZING (GLAZED)  
MS-2 METAL SHEET ROOF  
RT-1 ROOF-TILE (TERRACOTTA)  
SP-1 SCREEN (WOOD)  
SP-2 SCREEN (ALUMINIUM)  
TC-1 TIMBER CLADDING

LEGEND  
BK-1 BRICK (PAINTED)  
BK-2 BRICK (PAINTED)  
CON-1 CONCRETE  
FP-1 FORMER PLASTER SHEET  
GZ-1 GLAZING (CLEAR)

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**1812-E-04**

SCALE 1:100 @ A3

REVISION **A**

PROJECT 55 THORNLEY ST, MARRICVILLE

CLIENT ALLY JACKSON

REVISIONS A 03/10/19 DEVELOPMENT APPLICATION

EXISTING ELEVATIONS (NORTH-EAST)

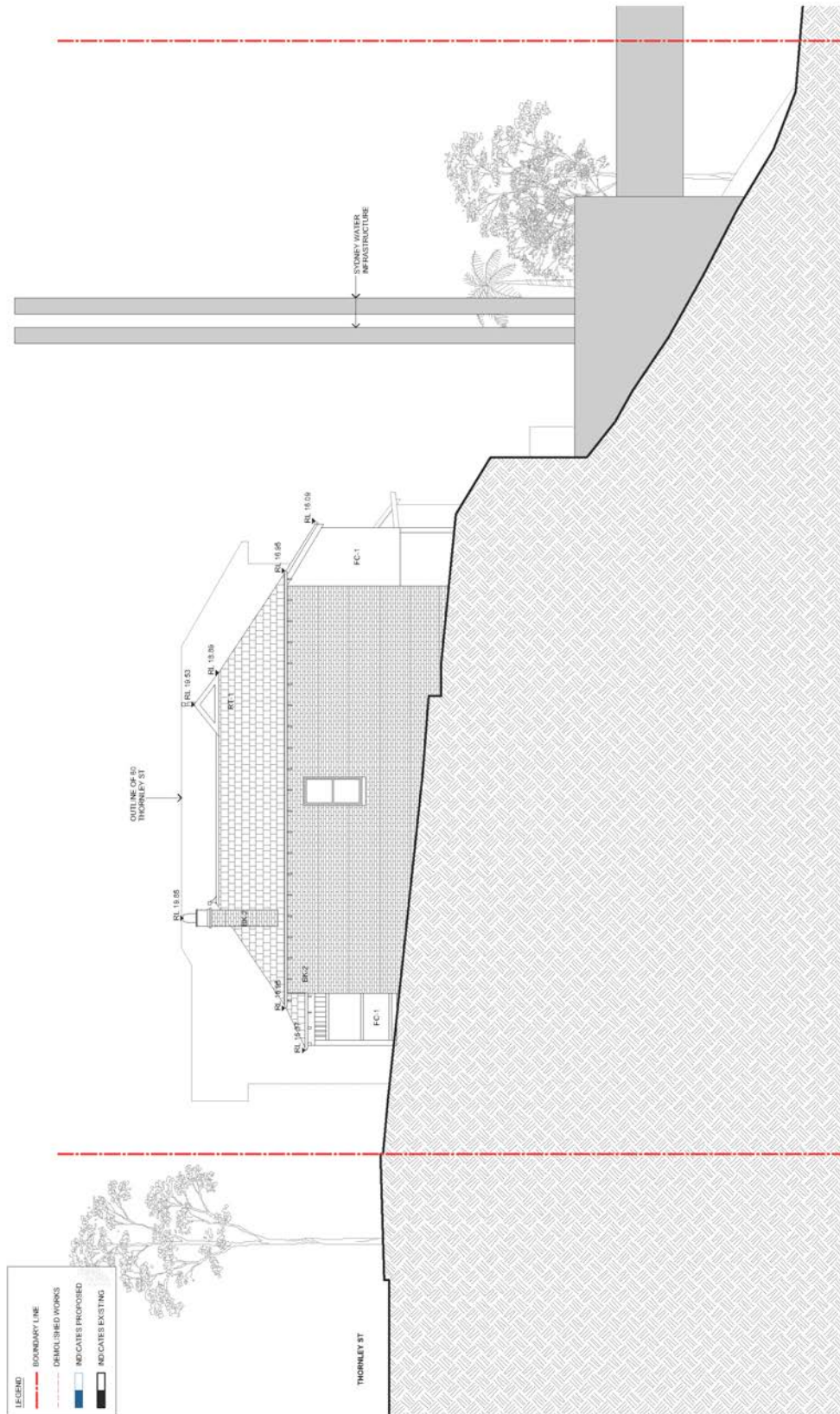
CS-2	GLAZING (EXISTING)
MS-1	METAL SHEET ROOF
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (WOOD)
SP-2	SCREEN (ALUMINIUM VEELE)
TC-1	TIMBER CLADDING

LEGEND

BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FLOORING (TIMBER SHIPET)
GL-1	GLAZING (CLEAR)

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**LEGEND**

- BOUNDARY LINE
- DEMOLISHED WORKS
- INDICATES PROPOSED
- INDICATES EXISTING

NORTHWEST ELEVATION

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**EXISTING ELEVATIONS (NORTH-WEST)**

PROJECT: 58 THORNLEY ST, MARRICKVILLE  
 CLIENT: ALLY JACKSON  
 SCALE: 1:100 @ A3  
 REVISION: A

**1812-E-05**

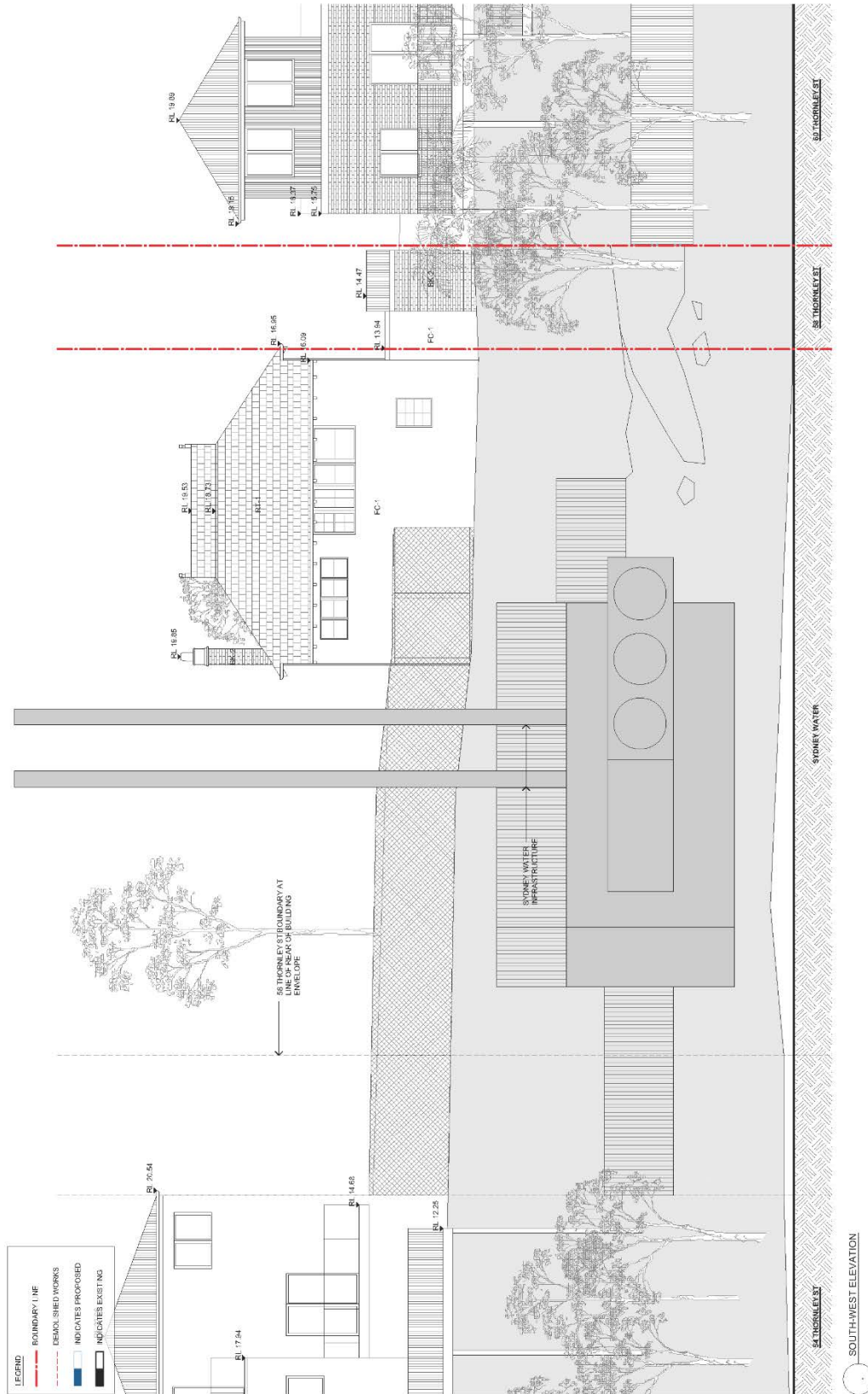
REVISION	A	B	C	D	E
DESCRIPTION	03.10.18	DEVELOPMENT APPLICATION			
DESCRIPTION					
DESCRIPTION					
DESCRIPTION					
DESCRIPTION					

**LEGEND**

- GLASS (GLAZING)
- METAL SHEET ROOF
- ROOF TILE (TERRACOTTA)
- SCHEEN (P-30)
- SCHEEN (ADJUSTABLE)
- TIMBER CLADDING

**LEGEND**

- BRICK (PAINTED)
- BRICK (POLISHED)
- CONCRETE
- FORMERLY METAL SHEET
- GLAZING (CLEAR)



**1812-E-06**

SCALE 1:100 @ A3

REVISION **A**

PROJECT 55 THORNLEY ST, MARRICOTTLE

CLIENT ALLY JACKSON

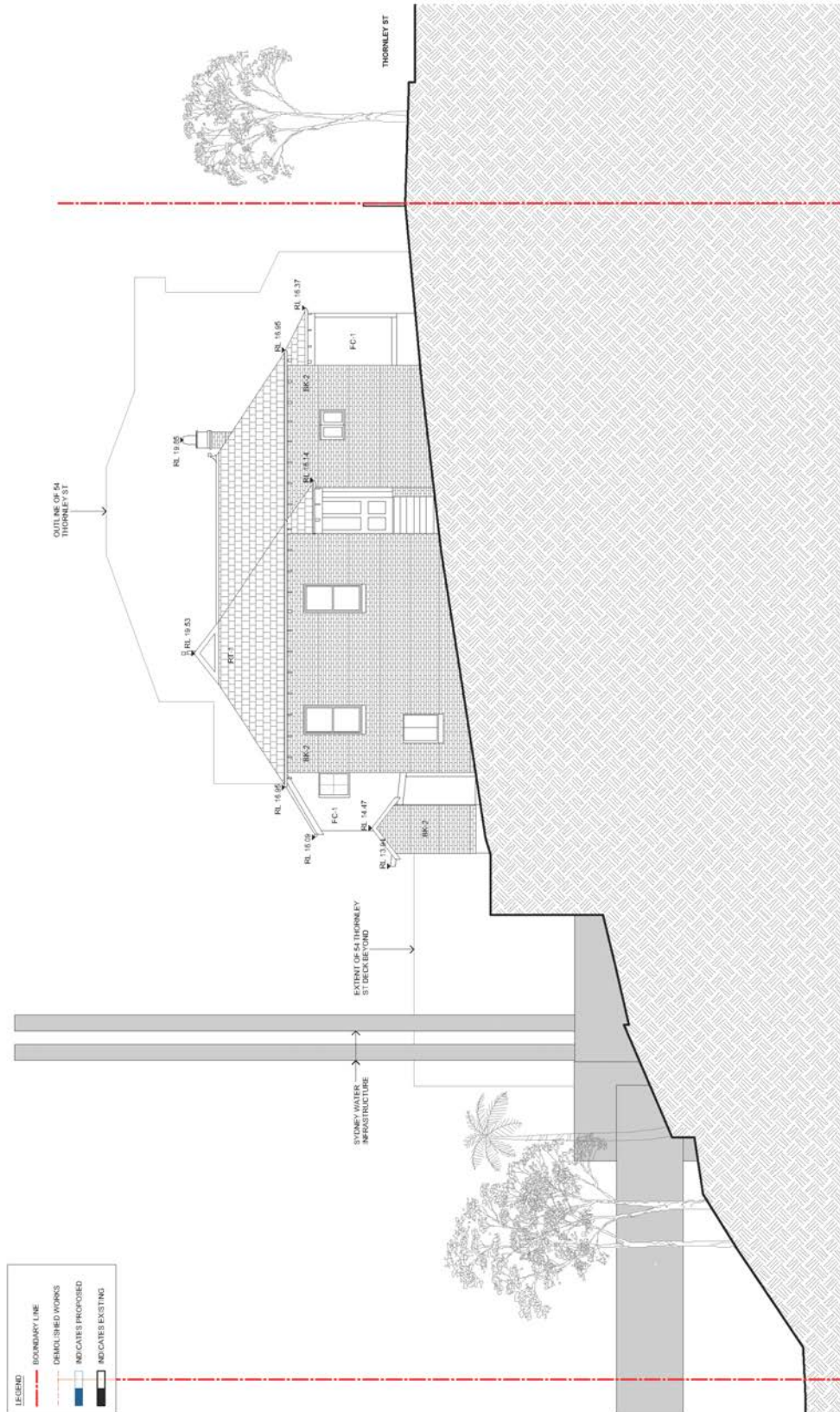
EXISTING ELEVATIONS (SOUTH-WEST)

REVISION	A	B	C	D	E
03/10/19	DEVELOPMENT APPLICATION				

LEGEND	DESCRIPTION
GS-2	GLAZING (GLAZED)
MS-2	METAL SLATED ROOF
MS-1	METAL SHED ROOF
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (WOOD)
SP-2	SCREEN (ADJUSTABLE)
PF-1	POWDER COATED SHEET
GC-1	GLAZING (CLEAR)
TC-1	TIMBER CLADDING

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**LEGEND**

	BOUNDARY LINE
	DEMOLISHED WORKS
	INDICATES PROPOSED
	INDICATES EXISTING

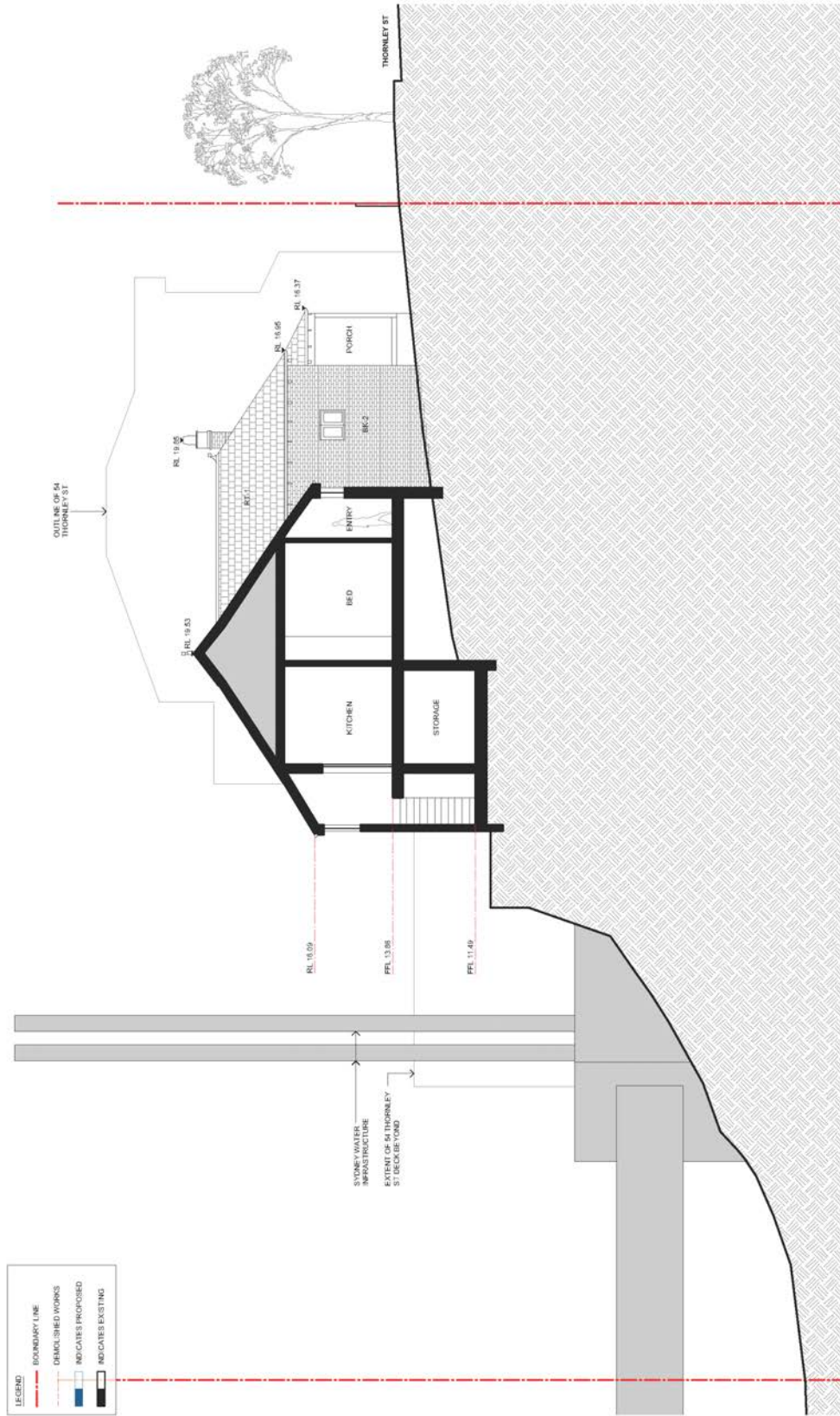
SOUTH-EAST ELEVATION

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**EXISTING ELEVATIONS (SOUTH-EAST)**  
 PROJECT: 58 THORNEY ST, MARRICKVILLE  
 CLIENT: ALLY JACKSON  
 SCALE: 1:100 @ A3  
 REVISION: A

REVISION	A	B	C	D	E
03.10.18	DEVELOPMENT APPLICATION				
	GLAZING (RECALCULATED)				
	METAL SHEET ROOF				
	ROOF TILE (TERRACOTTA)				
	CONCRETE				
	SCOPEN (P-30)				
	SCOPEN (ADJUSTABLE)				
	TIMBER CLADDING				





**LEGEND**

- BOUNDARY LINE
- - - - - DEMOLISHED WORKS
- ▭ INDICATES PROPOSED
- ▭ INDICATES EXISTING

SECTION A

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**EXISTING SECTION (A)**

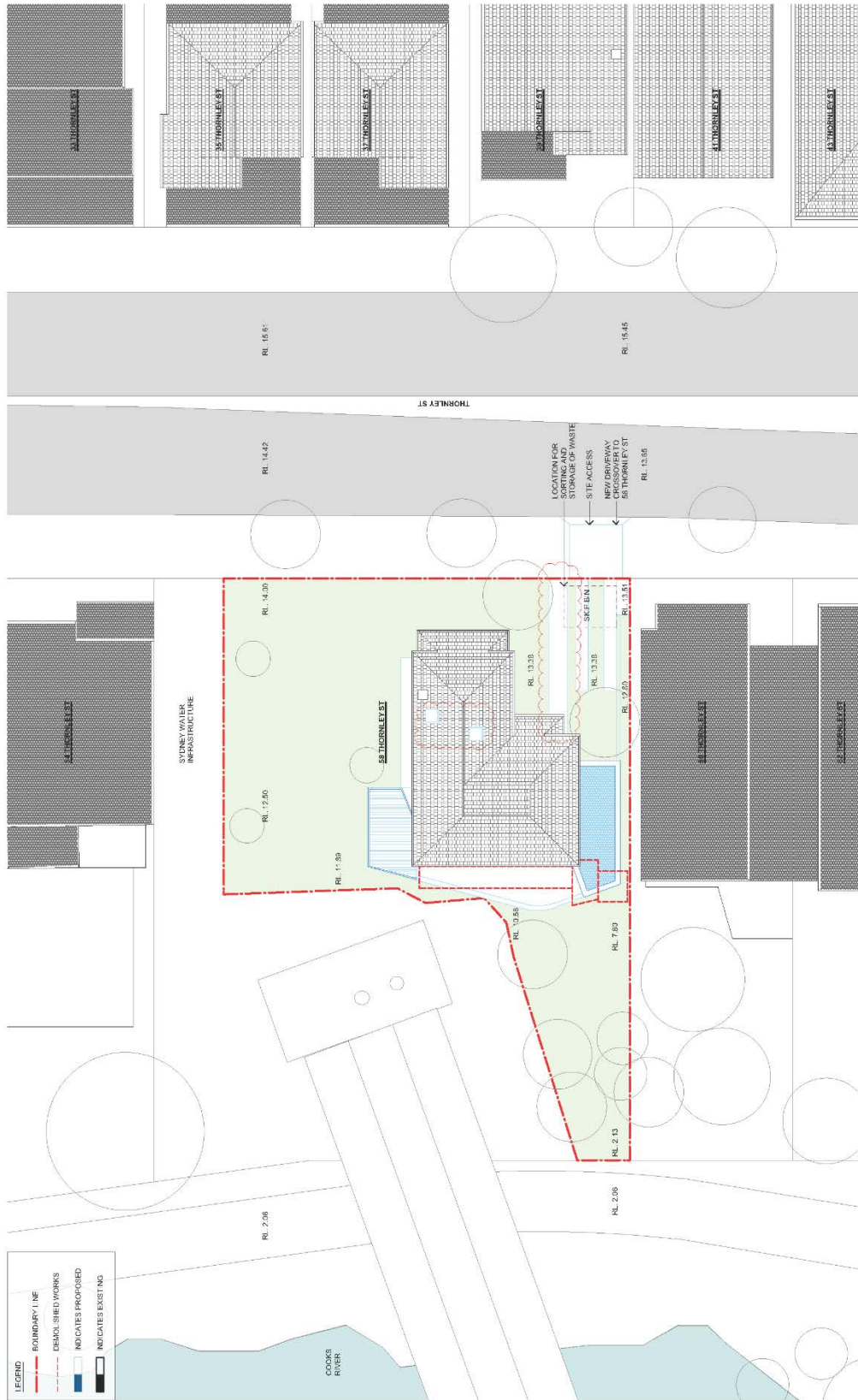
CLIENT: ALLY JACKSON  
 PROJECT: 58 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:100 @ A3  
 REVISION: A

1812-E-08

REVISION	A	B	C	D	E
DESCRIPTION	03.10.18 DEVELOPMENT APPLICATION				

**LEGEND**

- MS-2 GLAZING (GLAZED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SR-1 SCREEN (ADJUSTABLE)
- SR-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING
- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- DP-1 FORMERLY METAL SHEET
- GL-2-1 GLAZING (CLEAR)



**1812-P-00**

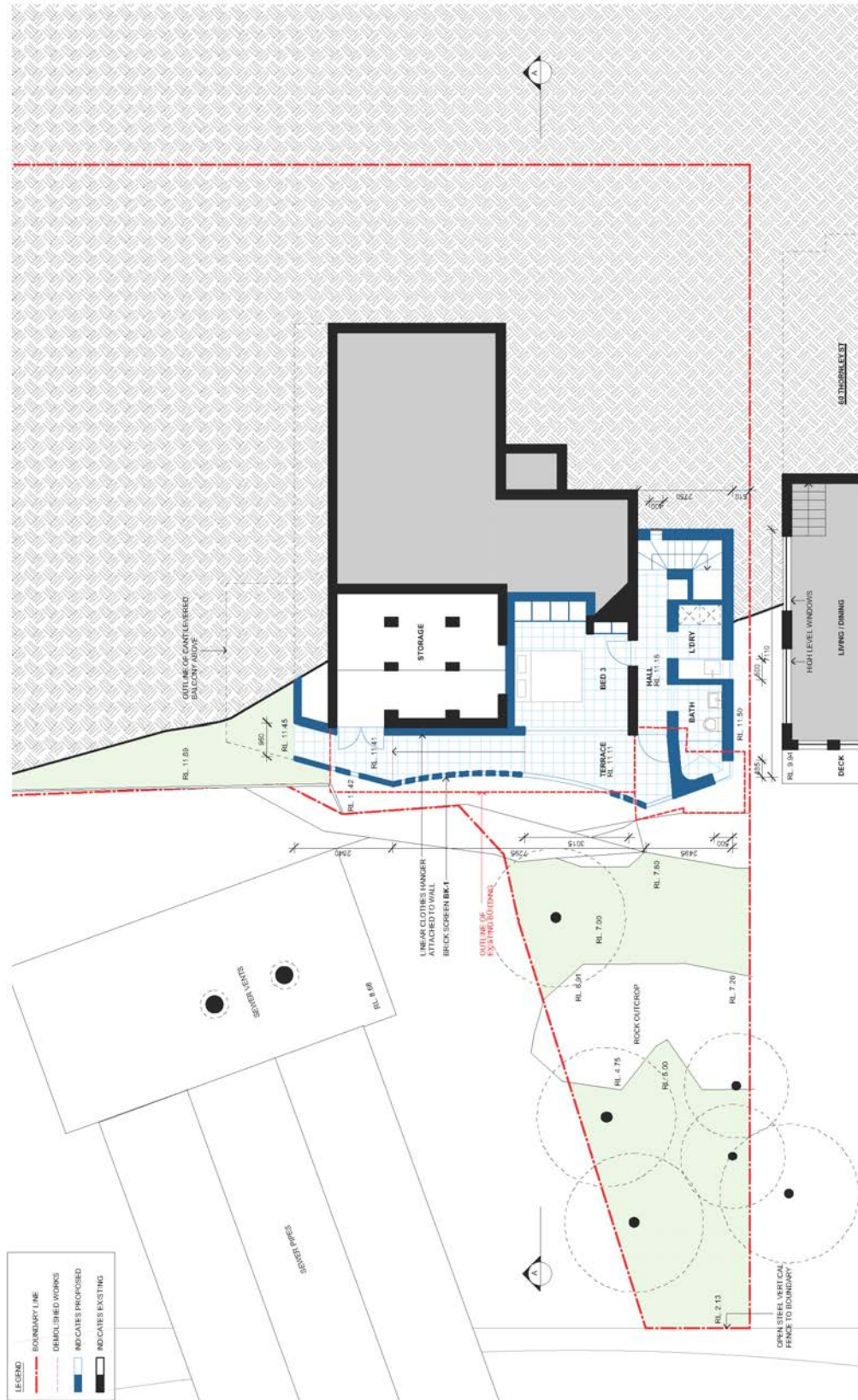
**PROPOSED SITE PLAN**

CLIENT: ALLY JACKSON  
 PROJECT: 58 THORNLEY ST, MARRICOTTLE  
 SCALE: 1:200 @ A3  
 NORTH  
 REVISION: B

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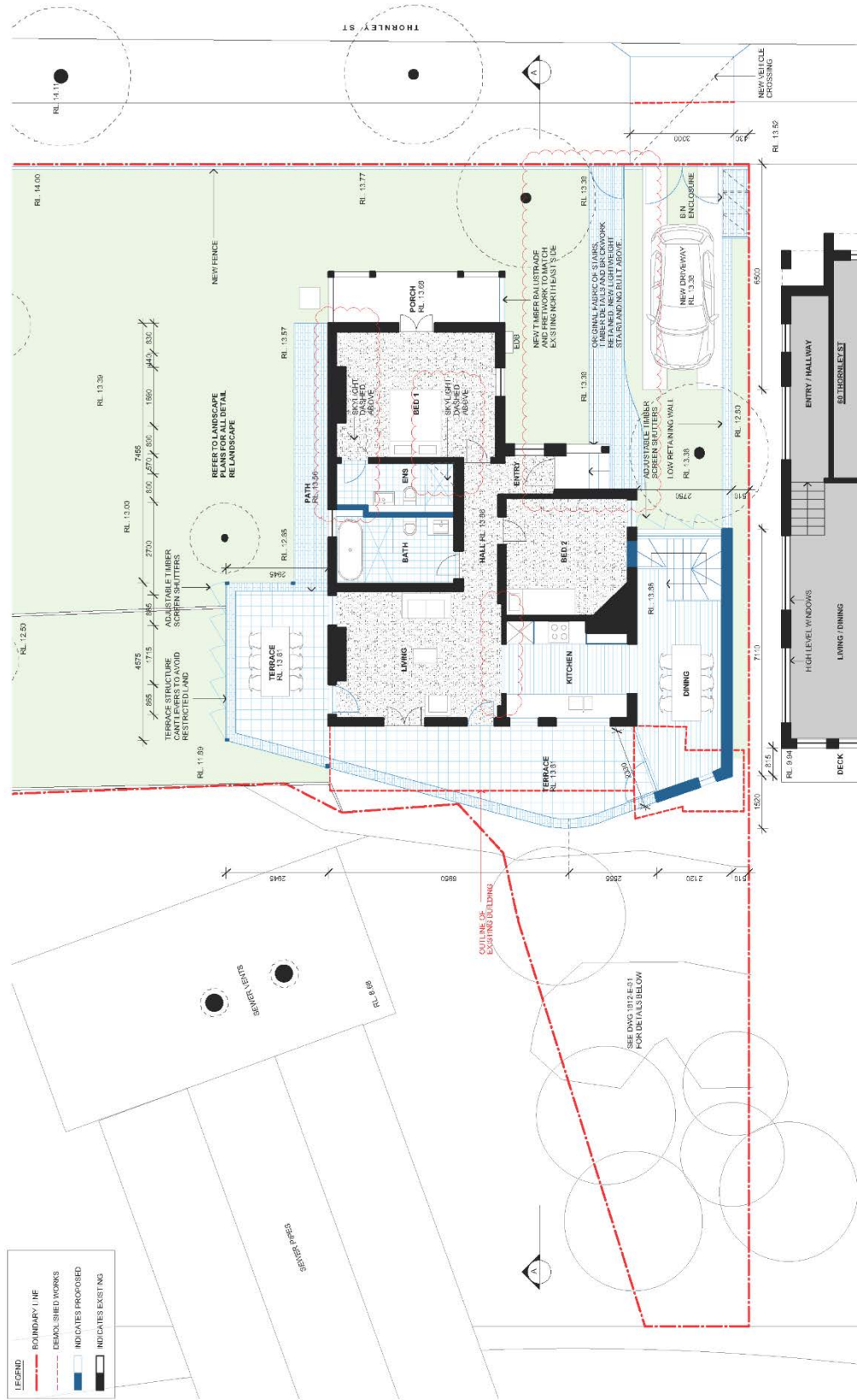
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**1812-P-02**

REVISION **B**

SCALE 1:100 @ A3

PROJECT 55 THORNLEY ST, MARRIOVILE

CLIENT ALLY JACKSON

PROPOSED GROUND FLOOR PLAN

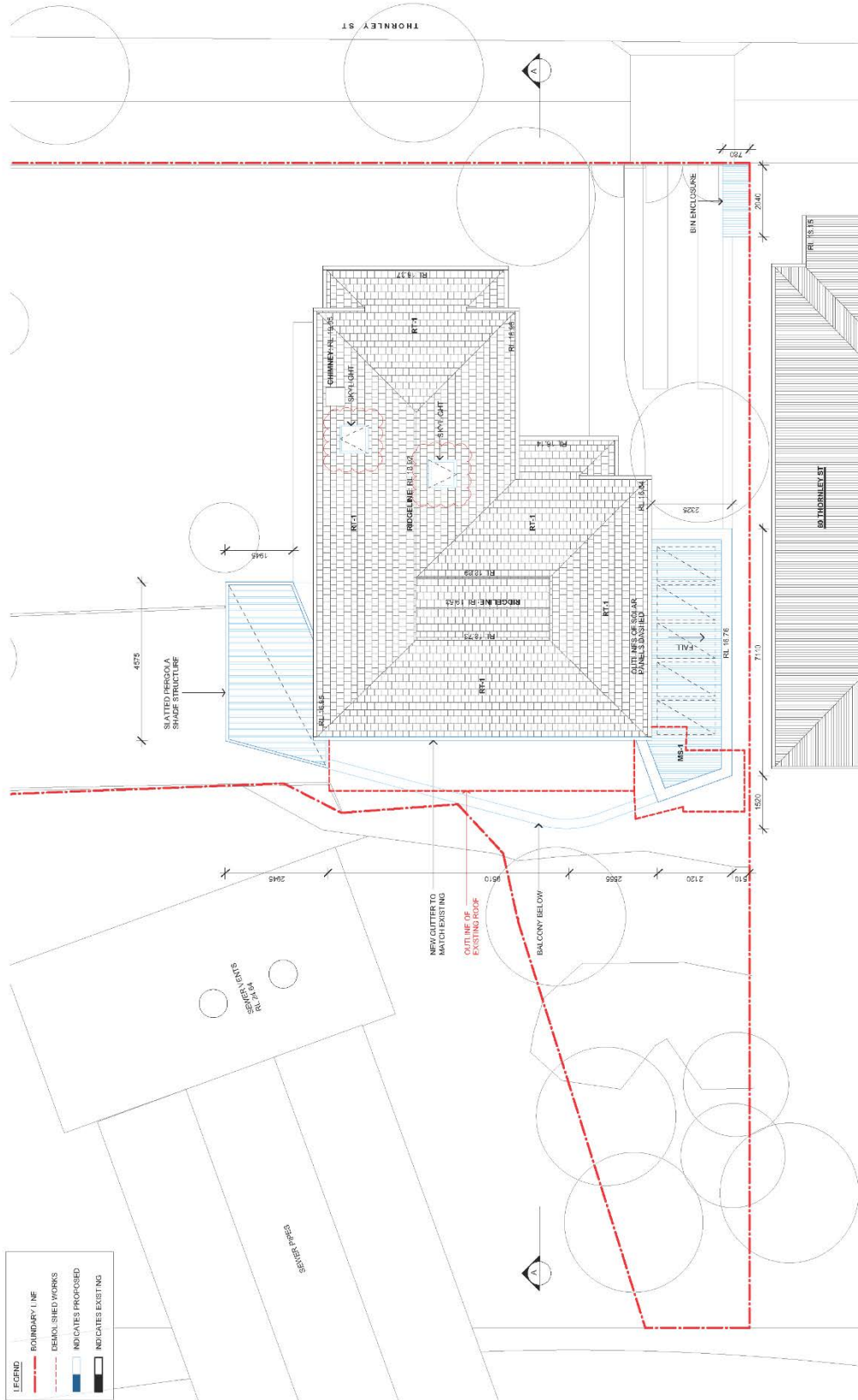
REVISIONS

A	03.10.19	DEVELOPMENT APPLICATION
B	20.10.19	DA REVISIONS
C		
D		
E		

- LEGEND**
- BK-1 BRICK (PAINTED)
  - BK-2 BRICK (PAINTED)
  - CON-1 CONCRETE
  - PF-1 FORMER PAINT SHEET
  - GLZ-1 GLAZING (CLEAR)
  - CS-2 GLAZING (GLAZED)
  - MS-2 METAL SHEET ROOF
  - RT-1 ROOF TILE (TERRACOTTA)
  - SP-1 SCREEN (WOOD)
  - SP-2 SCREEN (ADJUSTABLE)
  - TC-1 TIMBER CLADDING

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**1812-P-03**

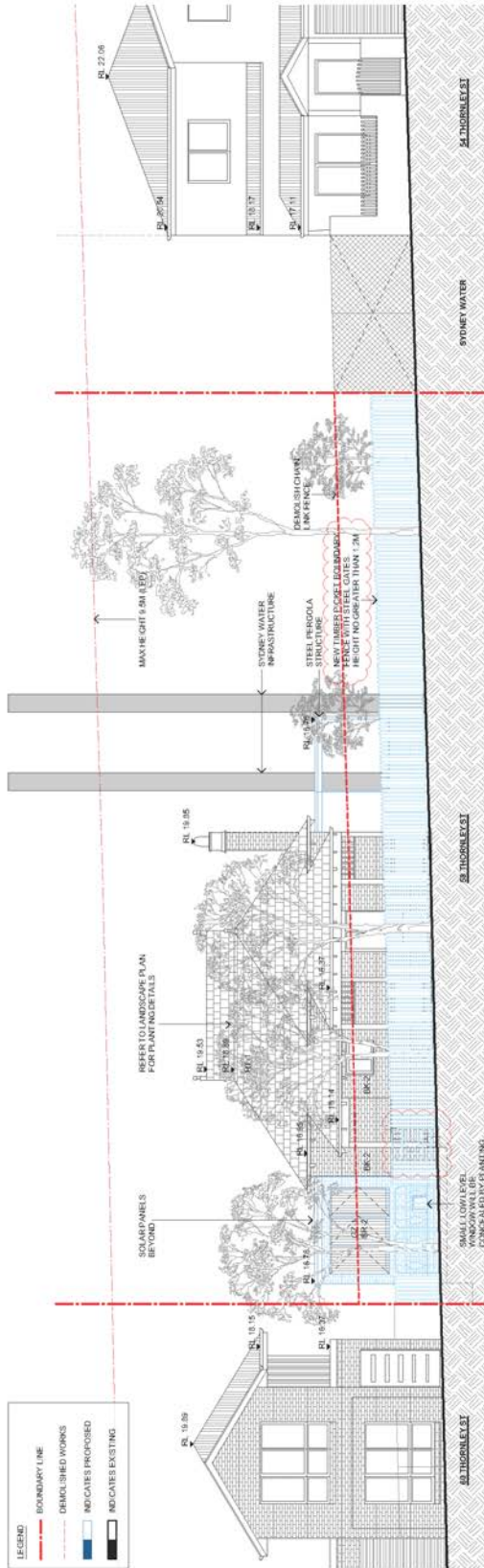
**PROPOSED ROOF PLAN**

REVISIONS A 03.10.19 DEVELOPMENT APPLICATION  
 B 20.12.19 DA REVISIONS  
 C  
 D  
 E

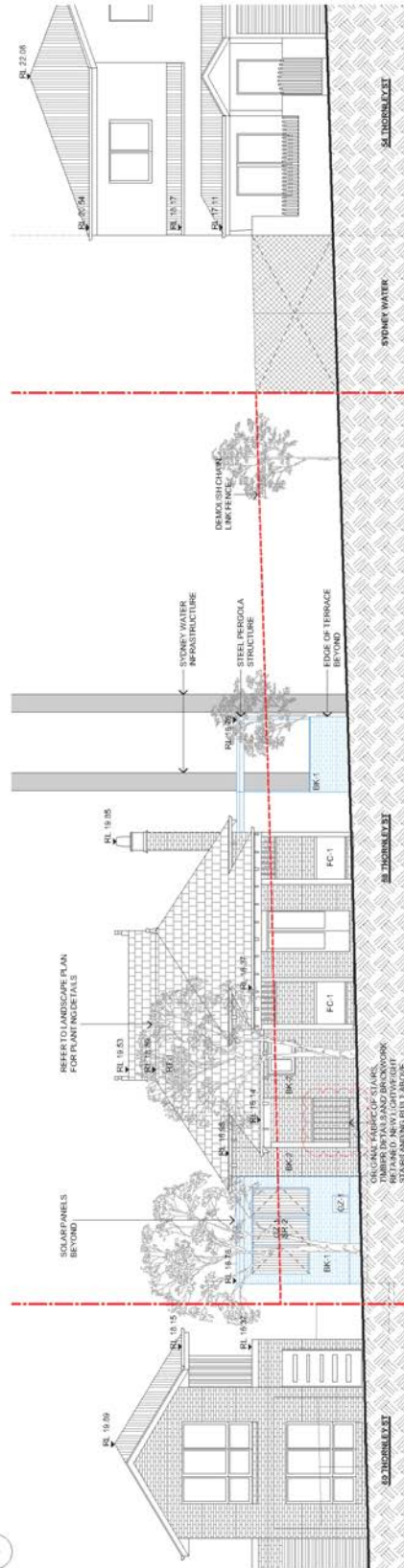
**LEGEND**  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 GS-1 GLAZING (CLEAR)  
 GS-2 GLAZING (PAINTED)  
 MS-1 METAL SLATE (ROOF)  
 RT-1 ROOF TILE (TERRACOTTA)  
 SF-1 SCREEN (WOOD)  
 SF-2 SCREEN (ADJUSTABLE)  
 TC-1 TAMBER CLADDING

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CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICVILLE  
 SCALE: 1:100 (B A3)  
 REVISION: B



NORTH-EAST ELEVATION - STREET



NORTH-EAST ELEVATION - HOUSE

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**LEGEND**  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 DP-1 DOWNPipes  
 GL-1 GLAZING (CLEAR)  
 GS-2 GLAZING (GLAZED)  
 MC-1 METAL SHEET ROOF  
 RT-1 ROOF TILE (TERRACOTTA)  
 SR-1 SCREEN (3-30)  
 SR-2 SCREEN (ADJUSTABLE)  
 TC-1 TIMBER CLADDING

**REVISIONS**

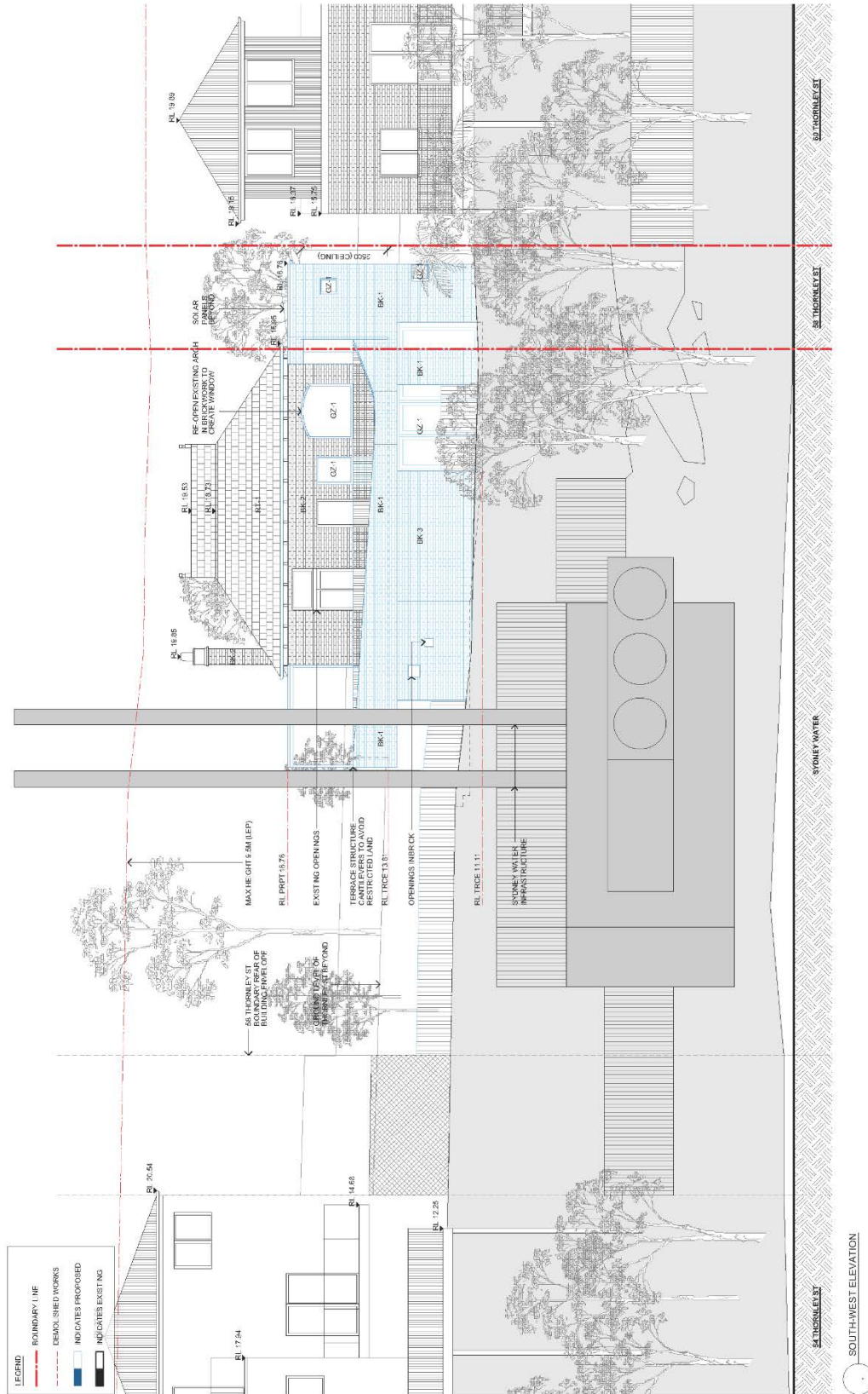
REVISIONS	A	03.10.18	DEVELOPMENT APPLICATION
B	20.12.18	DA REVISIONS	
C			
D			
E			

**PROPOSED ELEVATIONS (NORTH-EAST)**

CLIENT: ALLY JACKSON  
 PROJECT: 58 THORNLEY ST. MARRICKVILLE  
 SCALE: 1:100 @ A3  
 REVISION: B

1812-P-04





SOUTH-WEST ELEVATION

**1812-P-06**

REVISION A

SCALE 1:100 @ A3

PROJECT 55 THORNLEY ST, MARRICOTTLE

CLIENT ALLY JACKSON

NORTH

PROPOSED ELEVATIONS (SOUTH-WEST)

REVISIONS A 03.10.19 DEVELOPMENT APPLICATION

B

C

D

E

LEGEND

ALL NEW CONSTRUCTION

BK-1 BRICK (PAINTED)

BK-2 BRICK (PAINTED)

CON-1 CONCRETE

PF-1 FORMER PINE SHIPET

GZ-1 GLAZING (CLEAR)

GZ-2 GLAZING (TINTED)

MS-1 METAL SLAT BLINDS

RT-1 ROOF TILE (TERRACOTTA)

SP-1 SCREEN (WOOD)

SP-2 SCREEN (ADJUSTABLE)

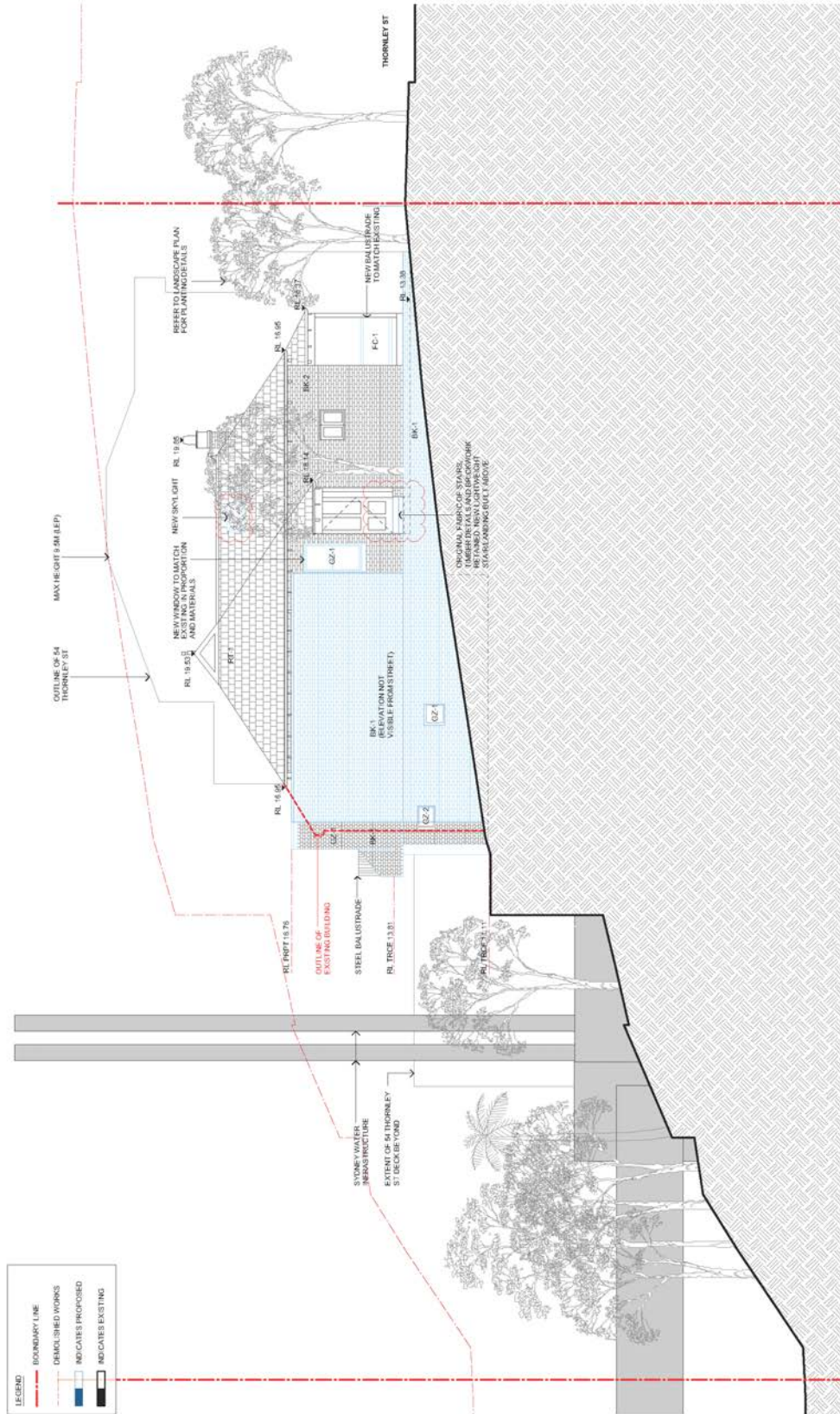
TC-1 TIMBER CLADDING

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SOUTHEAST ELEVATION

**1812-P-07**

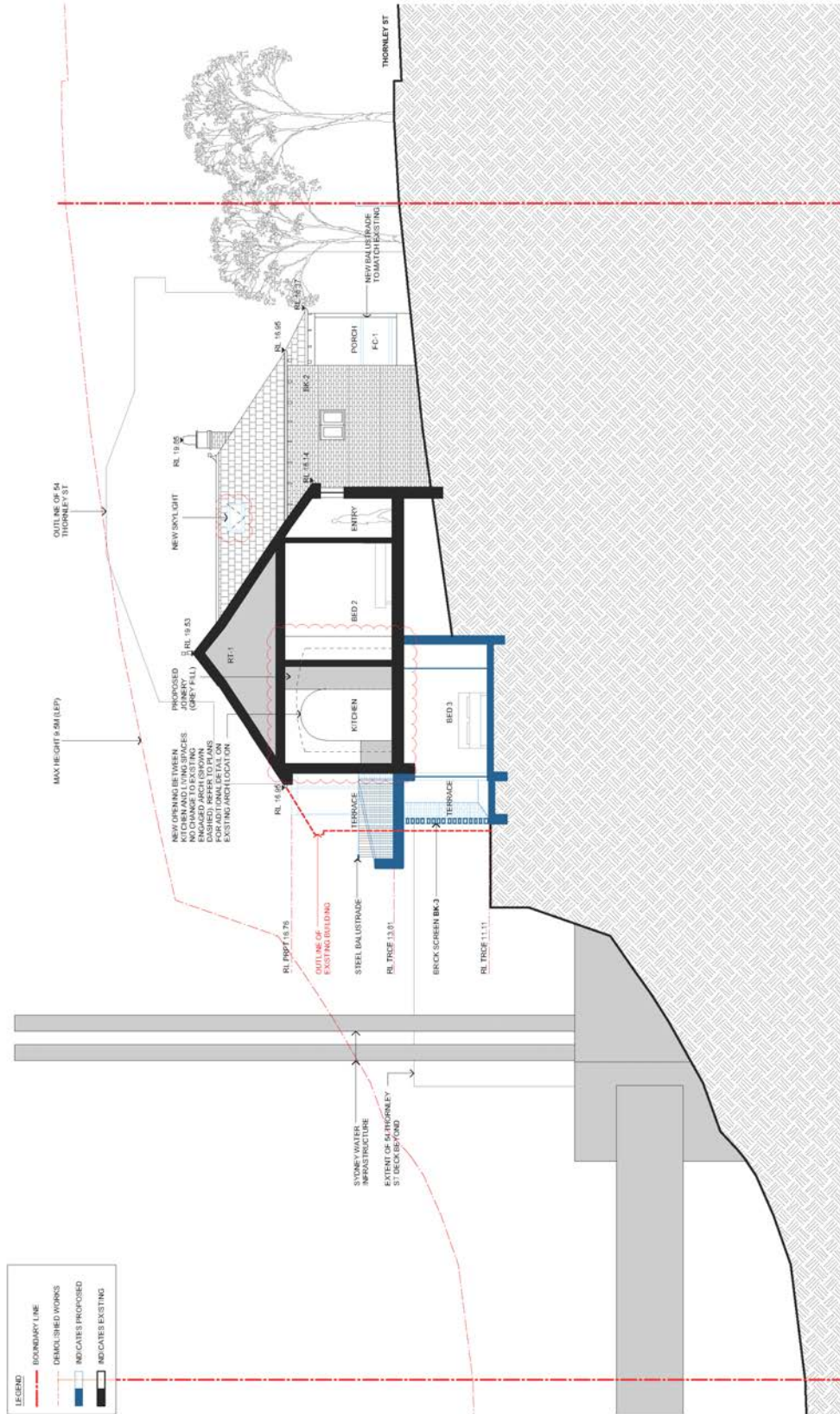
**PROPOSED ELEVATIONS (SOUTH-EAST)**

REVISIONS	A	03.10.18	DA REVISIONS
B	20.12.18	DA REVISIONS	
C			
D			
E			

LEGEND	DESCRIPTION
GL-2	GLAZING (CLEAR)
GL-1	GLAZING (TINTED)
MC-2	METAL SHEET ROOF
MC-1	CONCRETE ROOF
RF-1	ROOF TILE (TERRACOTTA)
RF-2	ROOF TILE (SLATE)
SR-1	SCREEN (ADJUSTABLE)
SR-2	SCREEN (FIXED)
TC-1	TIMBER CLADDING
BR-1	BRICK (PAINTED)
BR-2	BRICK (UNPAINTED)
CON-1	CONCRETE
DP-1	DOWNPIPE (TYPICAL)
DP-2	DOWNPIPE (CUSTOM)
GLZ-1	GLAZING (CLEAR)

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CLIENT: ALLY JACKSON  
 PROJECT: 58 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:100 @ A3  
 REVISION: B



SECTION A

**1812-P-08**

PROPOSED SECTION (A)

PROJECT: 58 THORNLEY ST, MARRICKVILLE

CLIENT: ALLY JACKSON

SCALE: 1:100 @ A3

REVISION: B

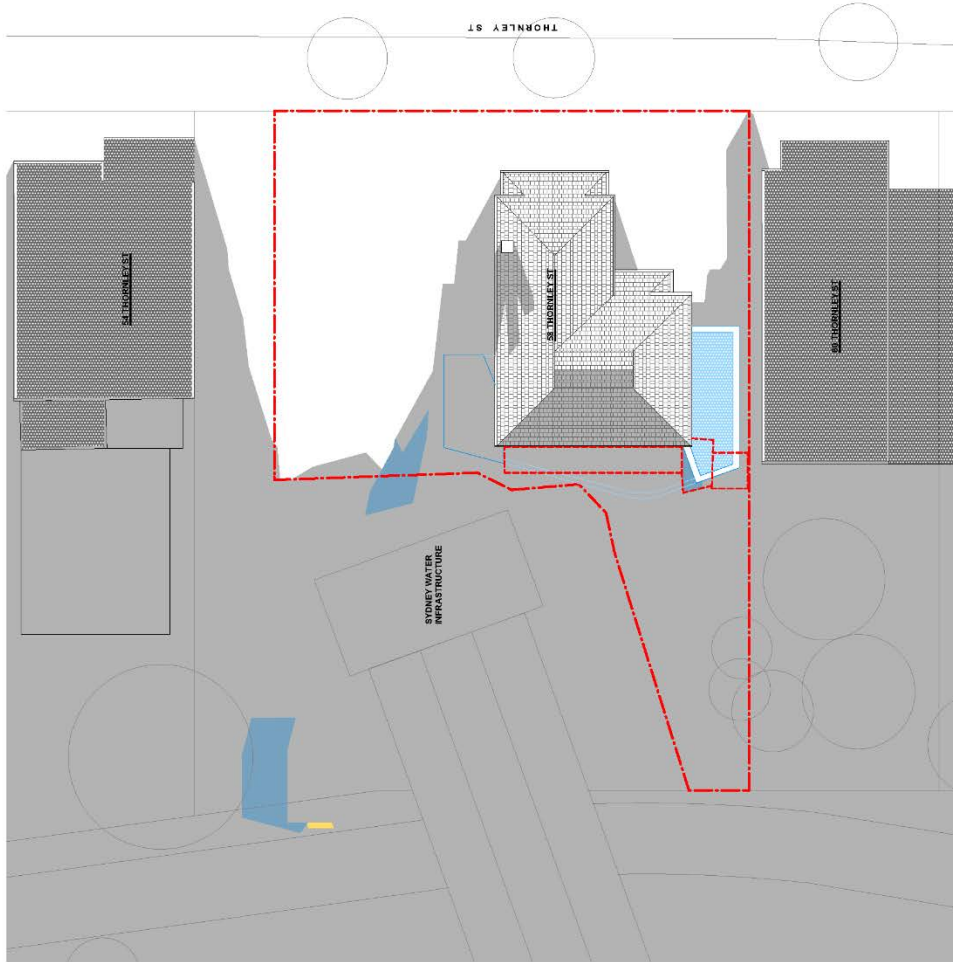
REVISIONS	A	03.10.18	DA REVISIONS
B	20.12.18	DA REVISIONS	
C			
D			
E			

LEGEND	DESCRIPTION
BK-1	BRICK (PAINTED)
BK-2	BRICK (PAINTED)
CON-1	CONCRETE
DP-1	DOWNPIPE (METAL SHEET)
GL-1	GLASS (CLEAR)
GL-2	GLASS (FRAMED)
MA-2	METAL SHEET ROOF
RT-1	ROOF TILE (TERRACOTTA)
SR-1	SCREEN (ADJUSTABLE)
SR-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING

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\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 9:00AM

**1812-S-01**  
SCALE 1:200 @ A3  
REVISION **A**

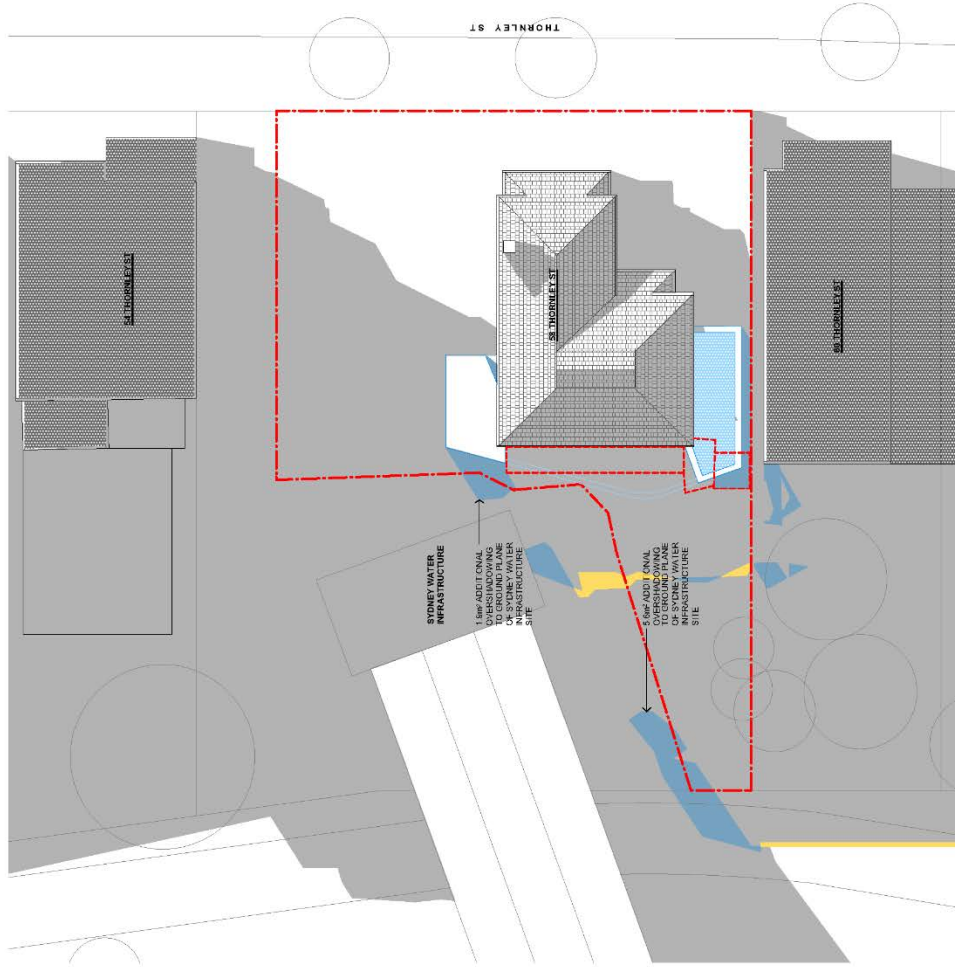
SHADOW DIAGRAMS, 21ST JUNE 9:00AM  
PROJECT 85 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

REVISION	A	B	C	D	E
	03.10.19 DEVELOPMENT APPLICATION				

- GS-2 GLAZING (GLASS)
- MS-2 METAL SHEET ROOF
- RT-1 ROOF-TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)

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**1812-S-02**

SHADOW DIAGRAMS, 21ST JUNE 12.00PM

SCALE 1:200 @ A3

CLIENT ALLY JACKSON

PROJECT 55 THORNEY ST, MARRICVILLE

REVISION A 03.10.19 DEVELOPMENT APPLICATION

REVISION B

REVISION C

REVISION D

REVISION E

LEGEND

GLAZING (EXISTING)

GLAZING (PROPOSAL)

ROOF TILE (TERRACOTTA)

SCREEN (ALUMINIUM)

SCREEN (ALUMINIUM)

SCREEN (ALUMINIUM)

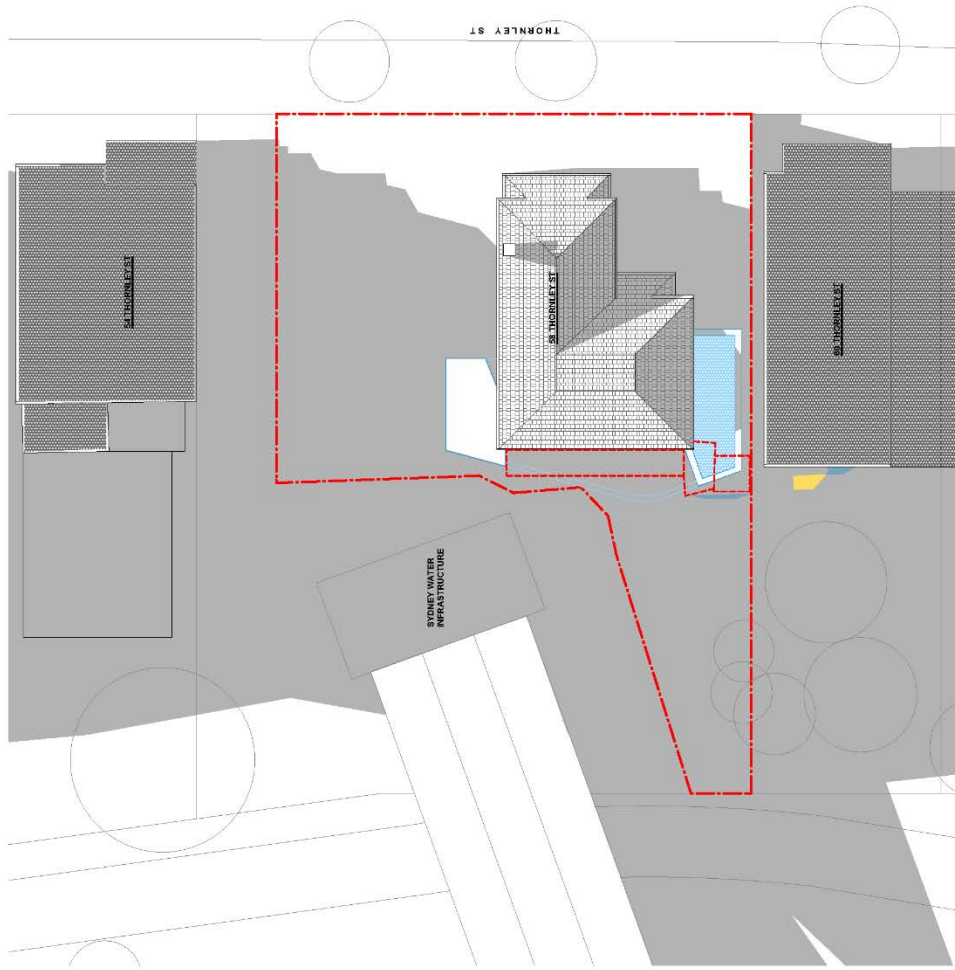
SCREEN (ALUMINIUM)

SCREEN (ALUMINIUM)

SCREEN (ALUMINIUM)

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**LEGEND**

- ADDITIONAL SHADOW FROM PROPOSAL
- REDUCTION OF SHADOW FROM PROPOSAL
- EXISTING SHADOW
- BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 3:00PM

**1812-S-03**

SHADOW DIAGRAMS, 21ST JUNE 3:00PM

SCALE  
1:200 @ A3

REVISION  
**A**

NORTH

PROJECT  
88 THORNEY ST,  
MARRICOTTIE

CLIENT  
ALLY JACKSON

REVISIONS A 03.10.19 DEVELOPMENT APPLICATION

B	
C	
D	
E	

- GS-2 GLAZING (REGLAZED)
- MS-2 METAL SLATE ROOF
- RT-1 ROOF-TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

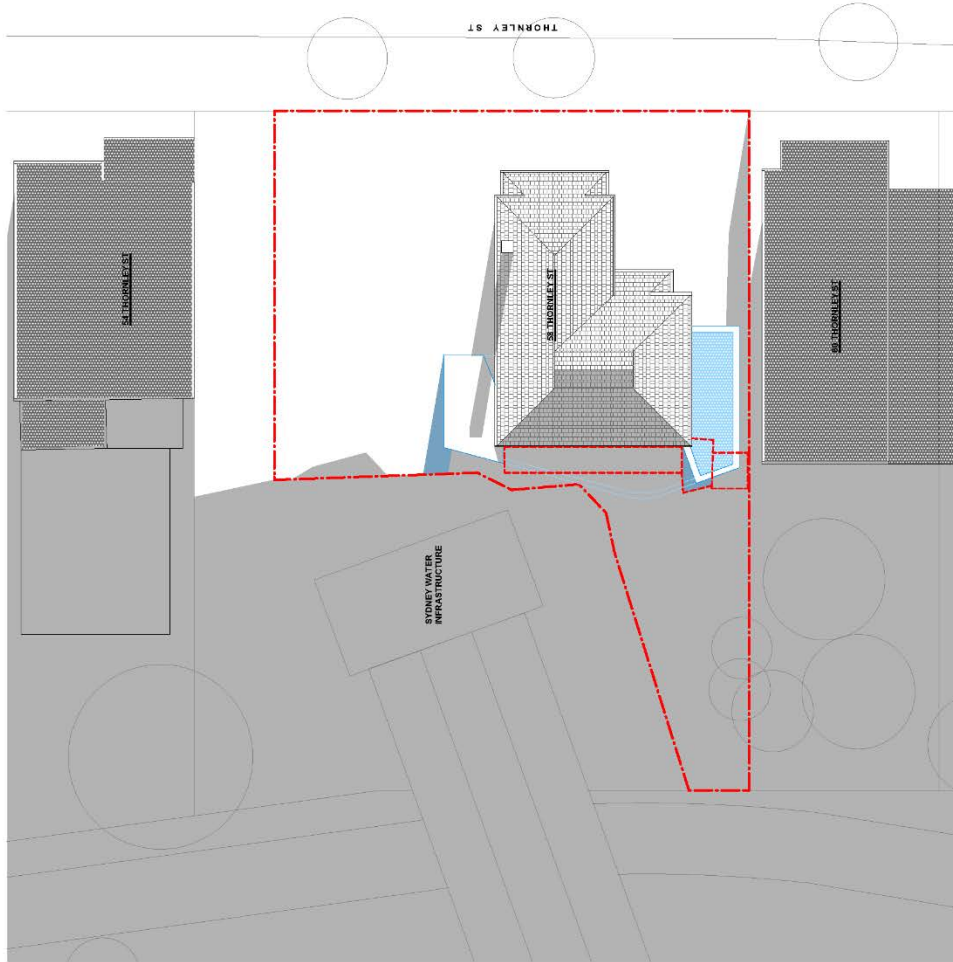
**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GS-1 GLAZING (CLEAR)

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**LEGEND**

- ADDITIONAL SHADOW FROM PROPOSAL
- REDUCTION OF SHADOW FROM PROPOSAL
- EXISTING SHADOW
- BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 9:00AM

**1812-S-04**

**SHADOW DIAGRAMS - PLAN**  
**9:00AM, 21ST JUNE**

REVISIONS

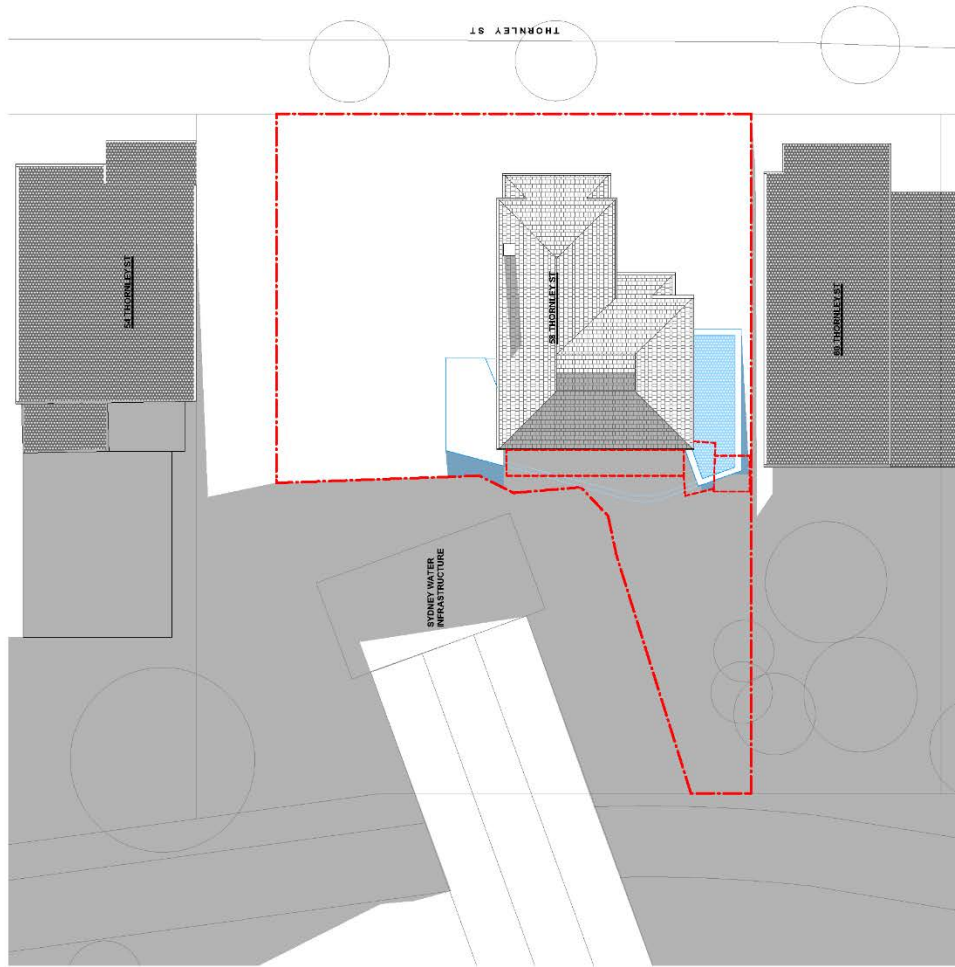
A	20.12.19	DA REVISIONS
B		
C		
D		
E		

**LEGEND**

BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER PLASTER SHEET
FP-2	FORMER PLASTER SHEET
GLZ-1	GLAZING (CLEAR)
GLZ-2	GLAZING (TINTED)
MS-1	METAL SHEET (ZINC)
MS-2	METAL SHEET (ZINC)
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (ADJUSTABLE)
SP-2	SCREEN (ADJUSTABLE)
SP-3	SCREEN (FIXED)
TC-1	TIMBER CLADDING

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CLIENT: ALLY JACKSON  
 PROJECT: 88 THORNLEY ST, MARRICVILLE  
 SCALE: 1:200 @ A3  
 REVISION: A



\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 10:00AM

**1812-S-05**  
SCALE 1:200 @ A3

**SHADOW DIAGRAMS - PLAN**  
10:00AM, 21ST JUNE

PROJECT 55 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

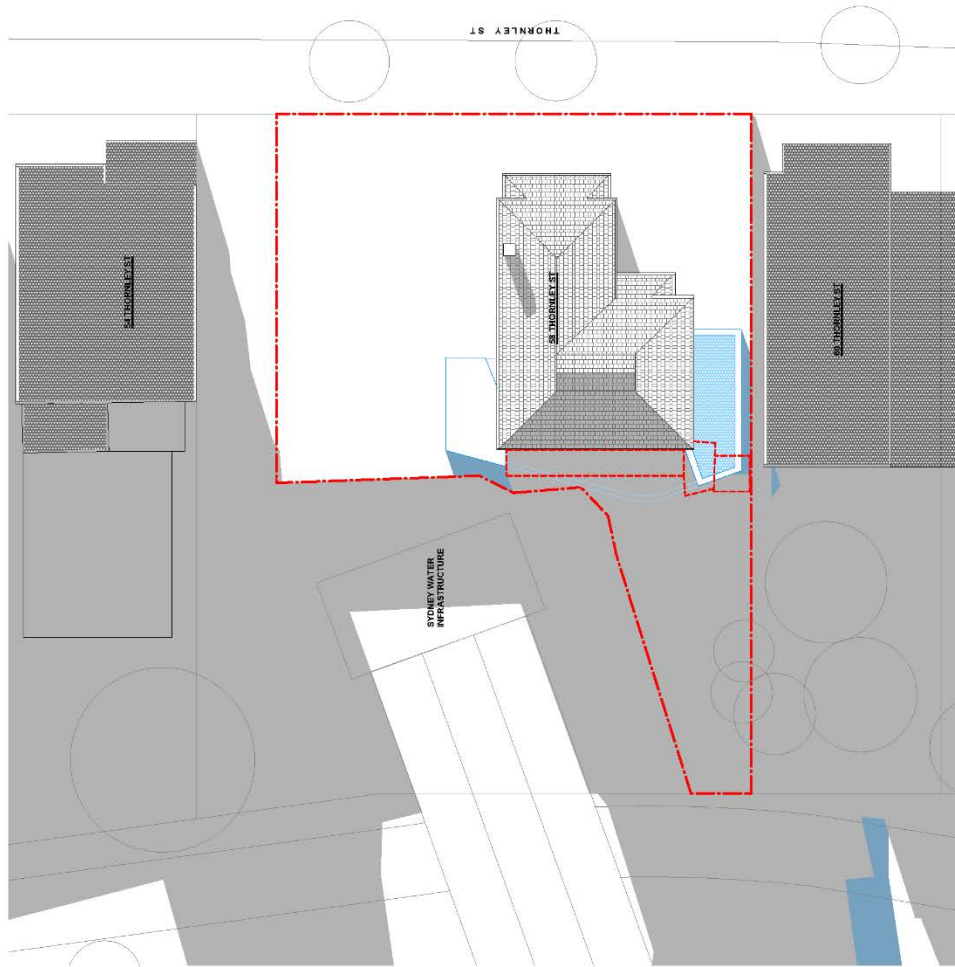
REVISION A	20.12.19	DA REVISIONS
B		
C		
D		
E		

GS-2	GLAZING (RETRACTED)
MS-2	METAL SLAT SCREEN
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (WOOD)
SP-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING

BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER PLASTER SHEET
GL-1	GLAZING (CLEAR)

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REVISION A 20.12.19 DA REVISIONS  
B  
C  
D  
E



**1812-S-06**  
SCALE 1:200 @ A3

**SHADOW DIAGRAMS - PLAN**  
11:00AM, 21ST JUNE

PROJECT 88 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

REVISION A	20.12.19	DA REVISIONS
B		
C		
D		
E		

- GS-2 GLAZING (GLASS)
- MS-2 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER FINISH SHEET
- GL-1 GLAZING (CLEAR)

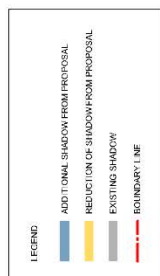
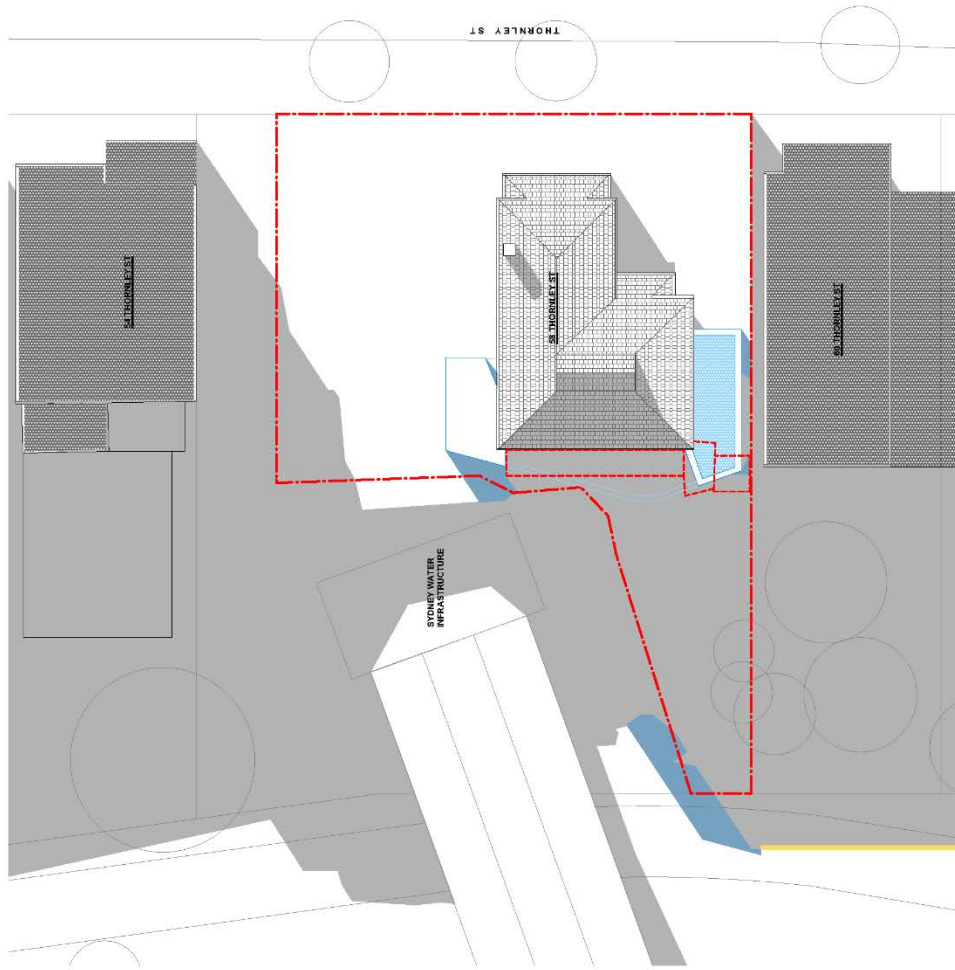
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REVISION A 20.12.19 DA REVISIONS  
B  
C  
D  
E

GS-2 GLAZING (GLASS)  
MS-2 METAL SHEET ROOF  
RT-1 ROOF TILE (TERRACOTTA)  
SP-1 SCREEN (WOOD)  
SP-2 SCREEN (ADJUSTABLE)  
TC-1 TIMBER CLADDING

BR-1 BRICK (PAINTED)  
BR-2 BRICK (PAINTED)  
CON-1 CONCRETE  
FP-1 FORMER FINISH SHEET  
GL-1 GLAZING (CLEAR)





**1812-S-07**  
SCALE 1:200 @ A3  
REVISION **A**

**NORTH**

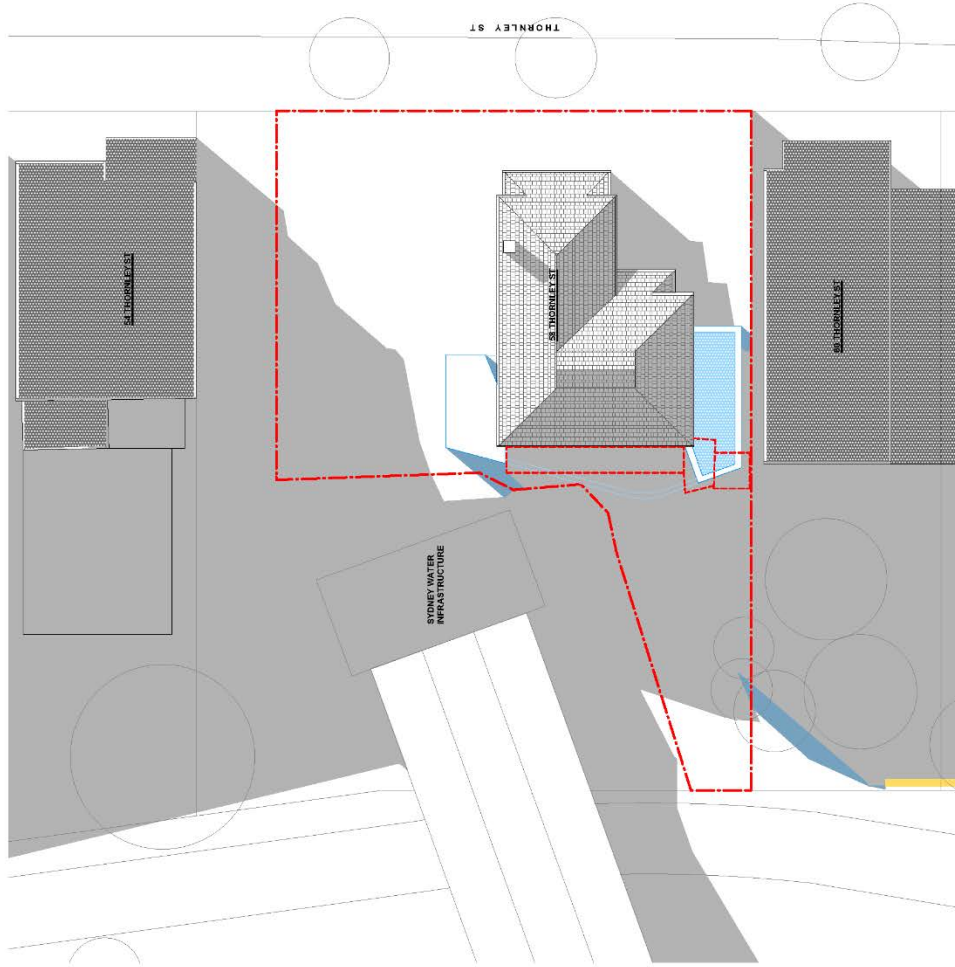
**SHADOW DIAGRAMS - PLAN**  
12:00PM, 21ST JUNE  
PROJECT 55 THORNLEY ST, MARRSVILLE  
CLIENT ALLY JACKSON

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

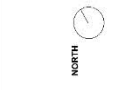
GS-2	GLAZING (EXTERIOR)
MS-1	METAL SHEET ROOF
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (WOOD)
SP-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING

LEGEND	
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER PLASTER SHEET
GL-1	GLAZING (CLEAR)

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**1812-S-08**  
SCALE 1:200 @ A3  
REVISION **A**



**SHADOW DIAGRAMS - PLAN**  
**1:00PM, 21ST JUNE**  
PROJECT 88 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

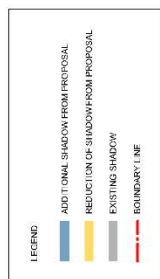
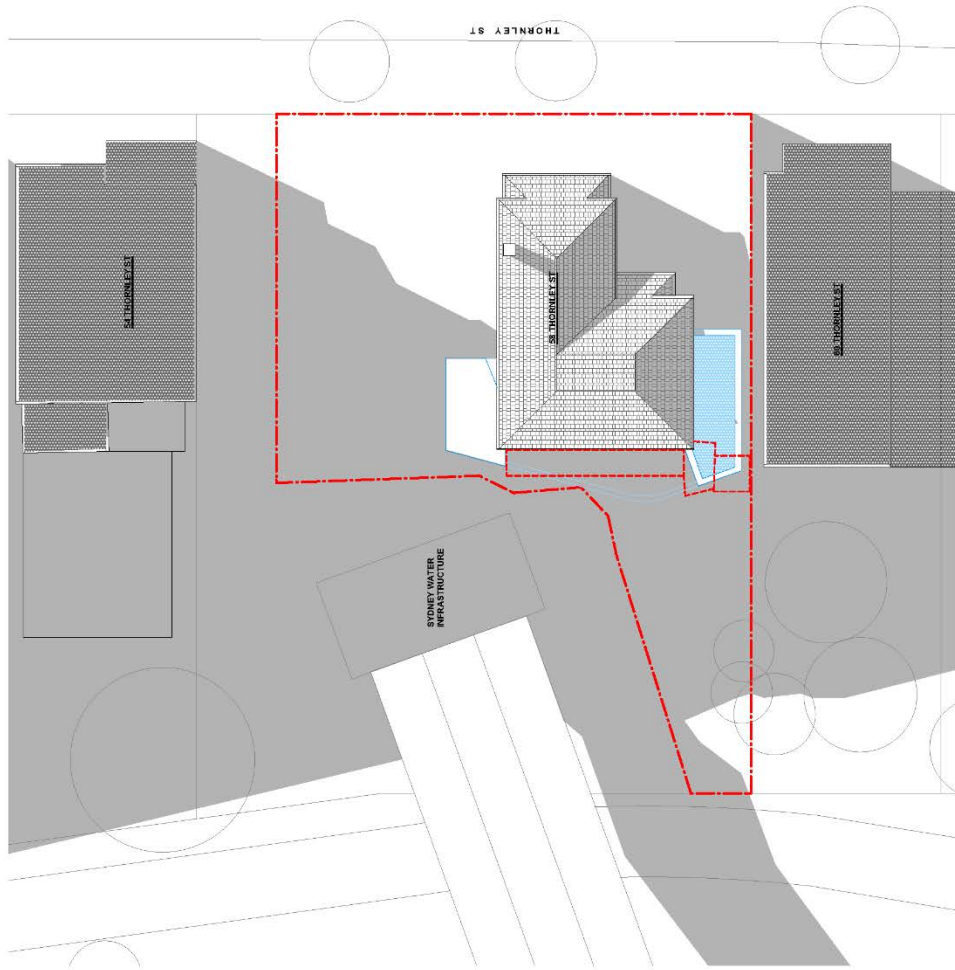
REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

- GS-2 GLAZING (RETRACTED)
- MS-2 METAL SLAT SCREEN
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GS-1 GLAZING (CLEAR)

**LEGEND**  
 BR-1 BRICK (PAINTED)  
 BR-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 FP-1 FORMER PLASTER SHEET  
 GS-1 GLAZING (CLEAR)

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\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 2:00PM

**1812-S-09**  
SCALE 1:200 @ A3  
REVISION **A**

**NORTH**

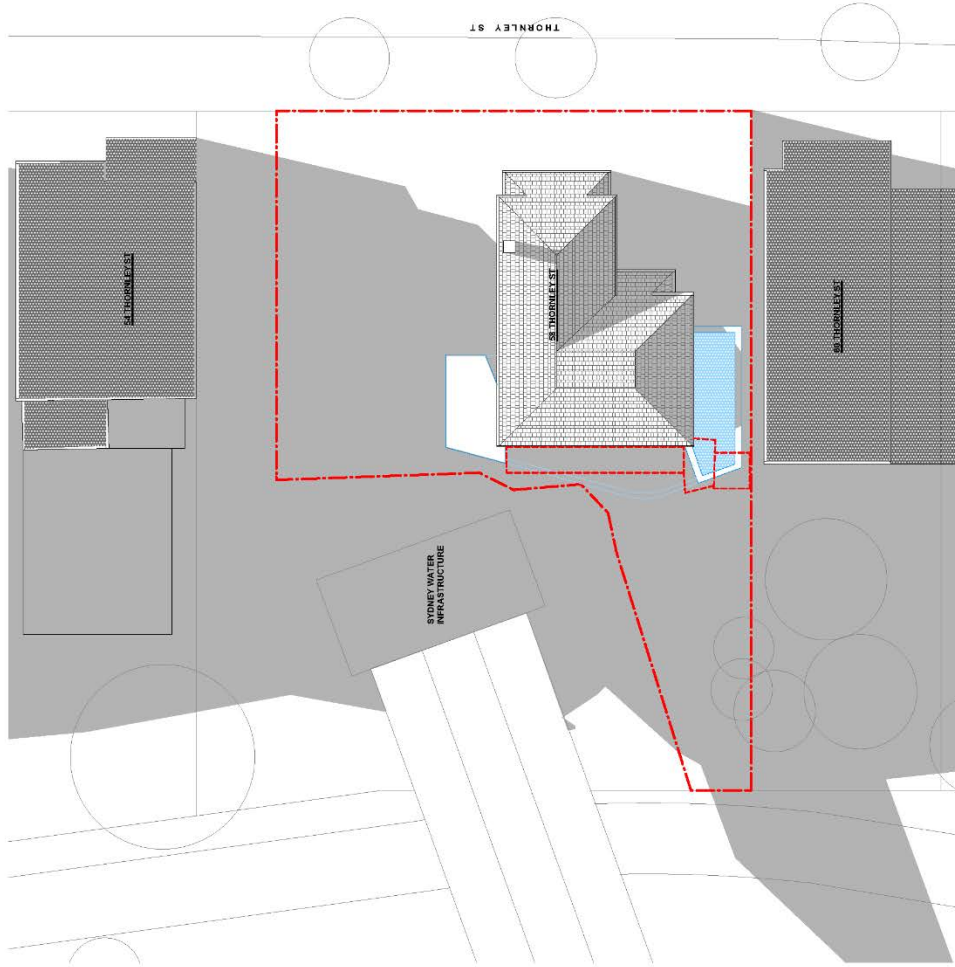
**SHADOW DIAGRAMS - PLAN**  
**2:00PM, 21ST JUNE**  
PROJECT 88 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

- GS-2 GLAZING (GLAZING)
- MS-2 METAL SLATE (MS-2)
- RT-1 ROOF-TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ALUMINIUM)
- TC-1 TIMBER CLADDING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)

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\* NO ADDITIONAL OVERSHADOWING TO GROUND PLANE OF NEIGHBOURING PROPERTIES AT 3:00PM

**1812-S-10**  
SCALE 1:200 @ A3

NORTH

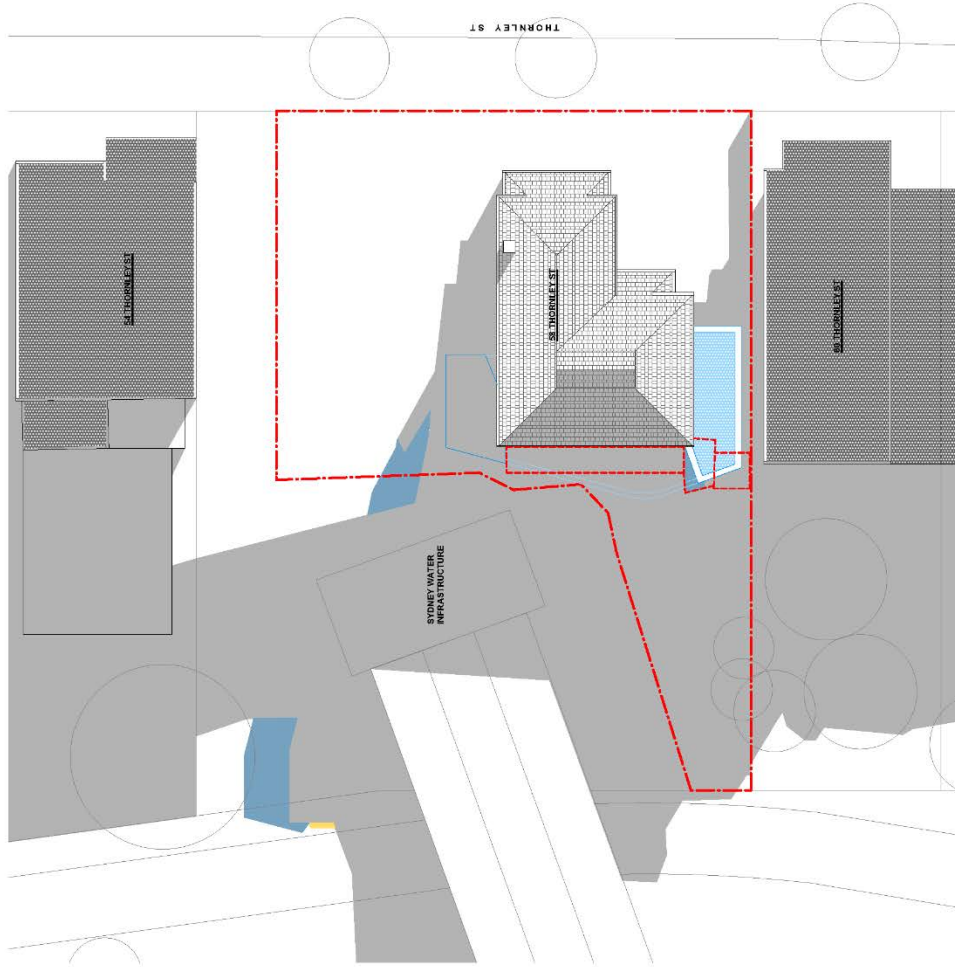
**SHADOW DIAGRAMS - PLAN**  
3:00PM, 21ST JUNE  
CLIENT ALLY JACKSON  
PROJECT 88 THORNLEY ST, MARRICVILLE

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

GS-2	GLAZING (REAR)
MS-2	METAL SLATE ROOF
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (WOOD)
SP-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING

LEGEND	
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
PF-1	POWDER COATED SHEET
GL-1	GLAZING (CLEAR)

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**1812-S-11**

**SHADOW DIAGRAMS - PLAN**  
**9:00AM, 21ST MARCH/SEPTEMBER**

REVISIONS A 20.12.19 DA REVISIONS

CLIENT ALLY JACKSON  
 PROJECT 88 THORNLEY ST, MARRIOVILLE  
 SCALE 1:200 @ A3

REVISIONS  
 B  
 C  
 D  
 E

LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)

LEGEND  
 GS-2 GLAZING (GLAZED)  
 MS-2 METAL SHEET ROOF  
 RT-1 ROOF TILE (TERRACOTTA)  
 SP-1 SCREEN (WOOD)  
 SP-2 SCREEN (ALUMINIUM)  
 TC-1 TIMBER CLADDING

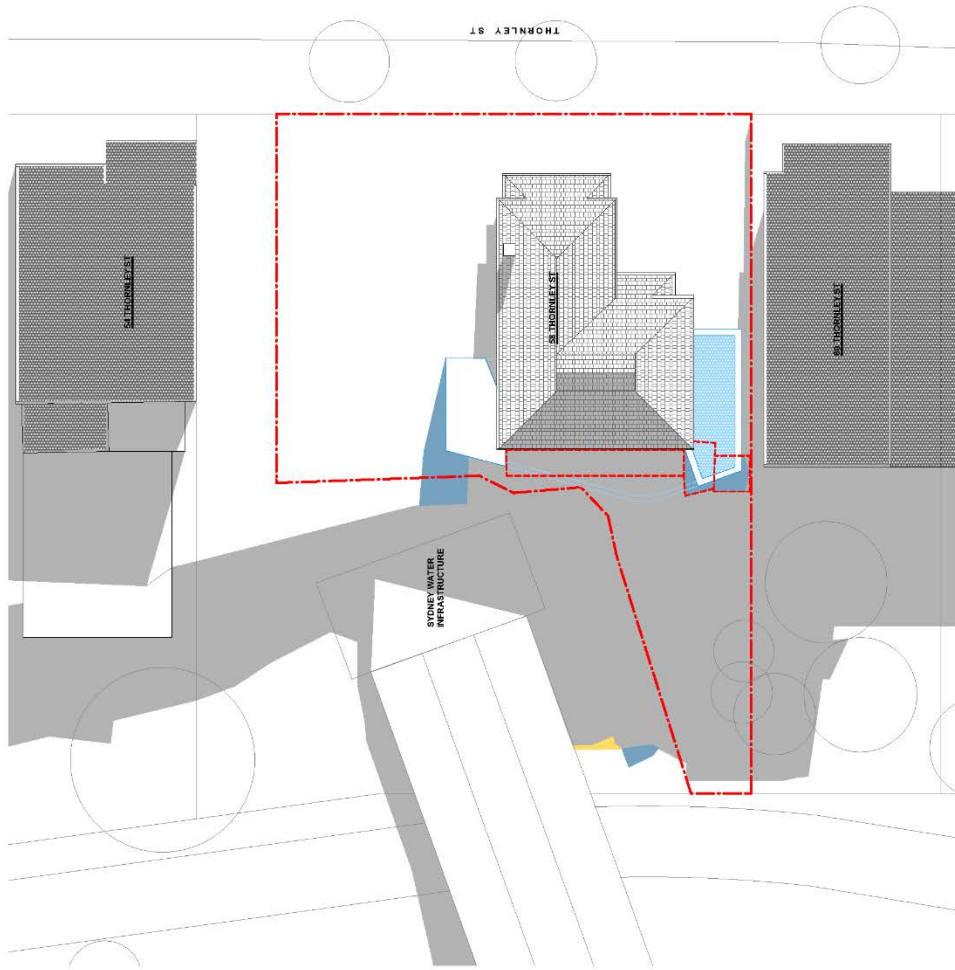
LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)

LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)

LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)

LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)

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**LEGEND**

- ADDITIONAL SHADOW FROM PROPOSAL
- REDUCTION OF SHADOW FROM PROPOSAL
- EXISTING SHADOW
- BOUNDARY LINE

**1812-S-12**

**SHADOW DIAGRAMS - PLAN**  
 10:00AM, 21ST MARCH/SEPTEMBER

CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICVILLE

REVISIONS

A	20.12.19	DA REVISIONS
B		
C		
D		
E		

LEGEND

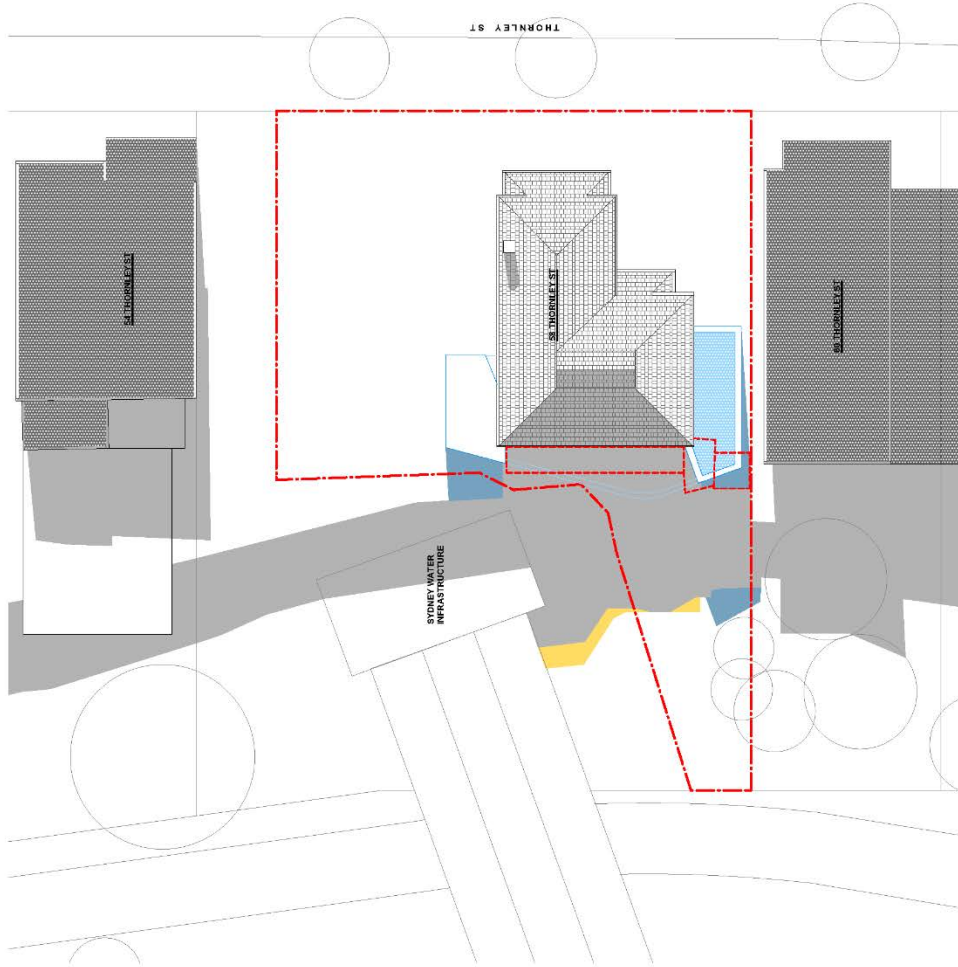
GL-1	GLAZING (CLEAR)
GL-2	GLAZING (TINTED)
MS-1	METAL SHEET ROOF
MS-2	METAL TILE ROOF
RT-1	ROOF-TILE (TERRACOTTA)
SP-1	SCREEN (ADJUSTABLE)
SP-2	SCREEN (FIXED)
SC-1	SCREEN (ADJUSTABLE)
SC-2	SCREEN (FIXED)
TC-1	TIMBER CLADDING

LEGEND

BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER FINISH SHIPLAP
FP-2	FORMER FINISH SHIPLAP
GL-1	GLAZING (CLEAR)

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SCALE: 1:200 @ A3  
 REVISION: A



**1812-S-13**  
SCALE 1:200 @ A3

**SHADOW DIAGRAMS - PLAN**  
11:00AM, 21ST MARCH/SEPTEMBER

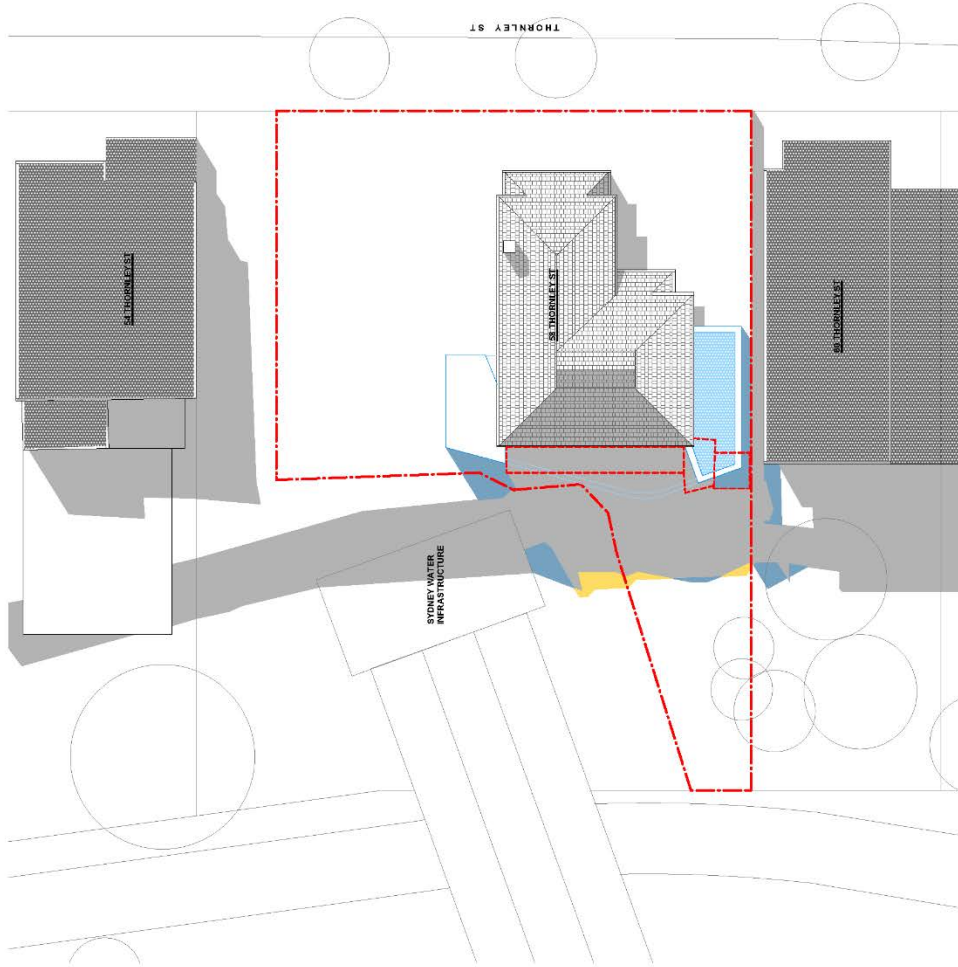
PROJECT 55 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

- GS-2 GLAZING (CLEAR)
- MS-2 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ALUMINIUM)
- TC-1 TIMBER CLADDING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GS-1 GLAZING (CLEAR)

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**1812-S-14**

**SHADOW DIAGRAMS - PLAN**  
**12:00PM, 21ST MARCH/SEPTEMBER**

CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRIOVILLE  
 SCALE: 1:200 @ A3  
 REVISION: A

REVISIONS

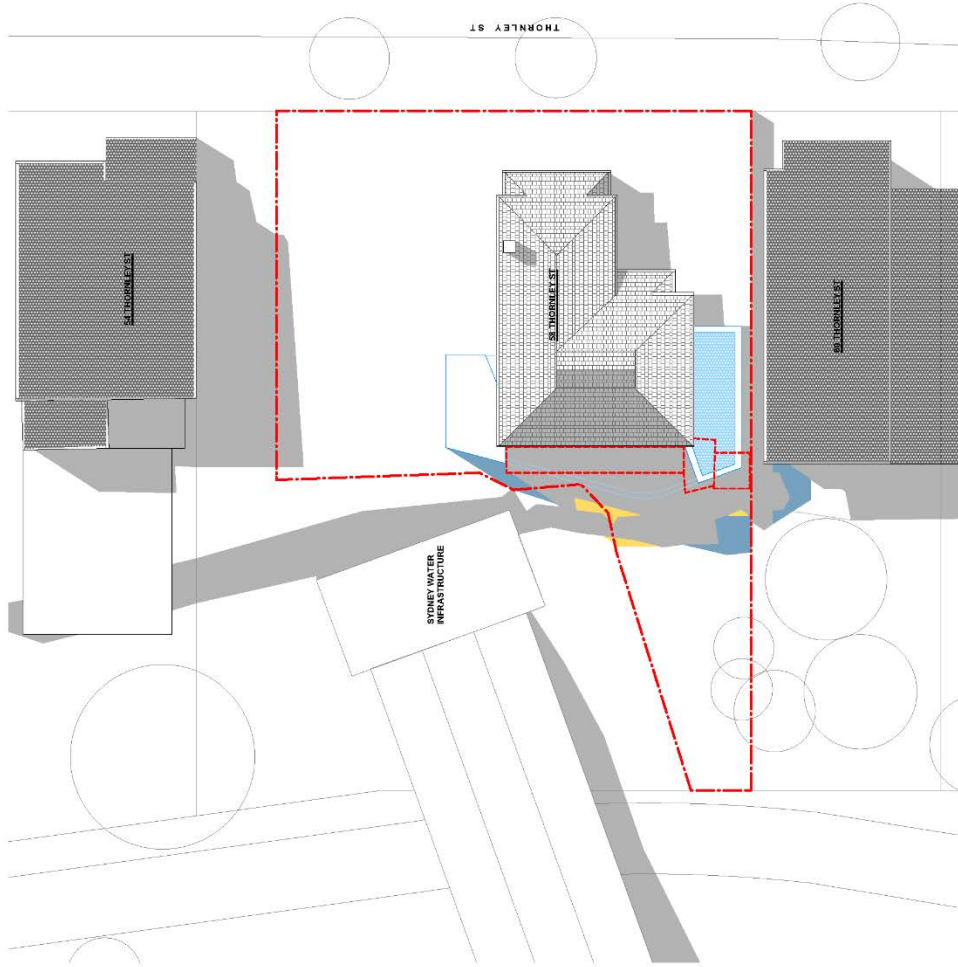
A	20.12.19	DA REVISIONS
B		
C		
D		
E		

LEGEND

BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
FP-1	FORMER PLASTER SHEET
FP-2	FORMER PLASTER SHEET
GL-1	GLAZING (CLEAR)
GL-2	GLAZING (TINTED)
MS-1	METAL SHEET (ROOF)
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (ADJUSTABLE)
SP-2	SCREEN (FIXED)
TC-1	TIMBER CLADDING

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**1812-S-15**

**SHADOW DIAGRAMS - PLAN**  
**1:00PM, 21ST MARCH/SEPTEMBER**

CLIENT: ALLY JACKSON  
 PROJECT: 88 THORNLEY ST, MARRICVILLE

REVISIONS: A, B, C, D, E

DATE: 20.12.19  
 DRAWN BY: DA REVISONS

LEGEND:  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMERLY PAINT SHEET  
 CZ-1 GLAZING (CLEAR)

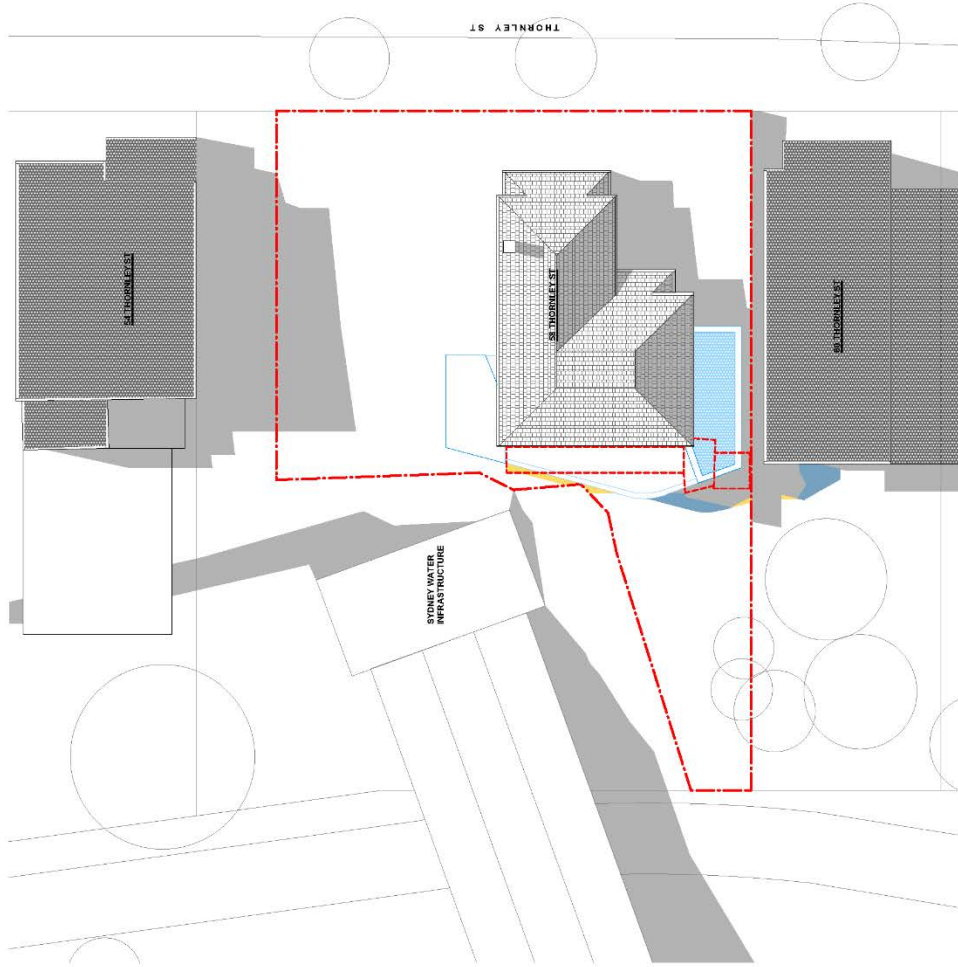
LEGEND:  
 CZ-2 GLAZING (PAINTED)  
 MS-2 METAL SHEET (ROOF)  
 RT-1 ROOF TILE (TERRACOTTA)  
 SP-1 SCREEN (PAINTED)  
 SP-2 SCREEN (ADJUSTABLE)  
 TC-1 TIMBER CLADDING

SCALE: 1:200 @ A3  
 NORTH: [North Arrow]

REVISION: A

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**1812-S-16**

**SHADOW DIAGRAMS - PLAN**  
**2:00PM, 21ST MARCH/SEPTEMBER**

REVISIONS  
 A 20.12.19 DA REVISIONS  
 B  
 C  
 D  
 E

LEGEND  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)  
 GS-2 GLAZING (GLAZED)  
 MS-2 METAL SHEET ROOF  
 RT-1 ROOF-TILE (TERRACOTTA)  
 SP-1 SCREEN (W/VEED)  
 SP-2 SCREEN (ADJUSTABLE)  
 TC-1 TIMBER CLADDING

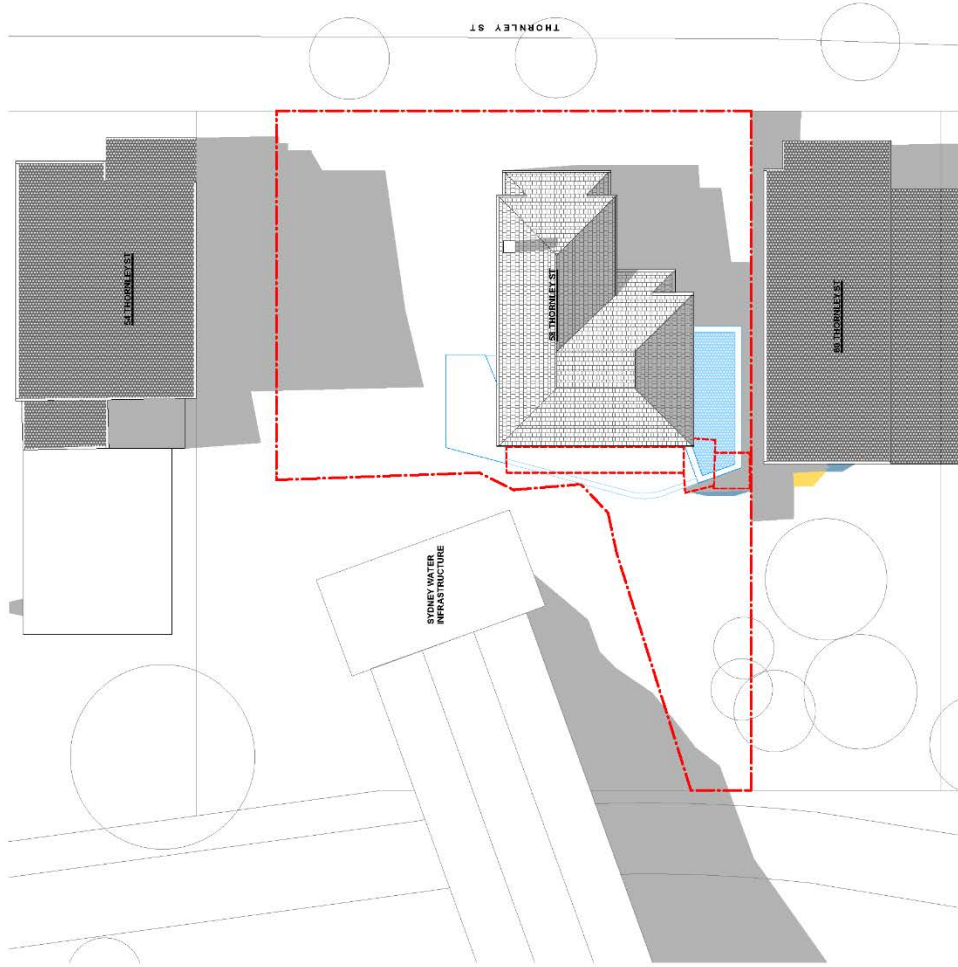
CLIENT  
 ALLY JACKSON  
 PROJECT  
 55 THORNLEY ST,  
 MARRICVILLE

SCALE  
 1:200 @ A3

REVISION  
**A**

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1812-S-17  
SCALE 1:200 @ A3

PROJECT 55 THORNLEY ST, MARRICVILLE  
CLIENT ALLY JACKSON

SHADOW DIAGRAMS - PLAN  
3:00PM, 21ST MARCH/SEPTEMBER

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

- GS-2 GLAZING (RETRACTED)
- MS-2 METAL SLAT SCREEN
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (WOOD)
- SP-2 SCREEN (ALUMINIUM)
- TC-1 TIMBER CLADDING

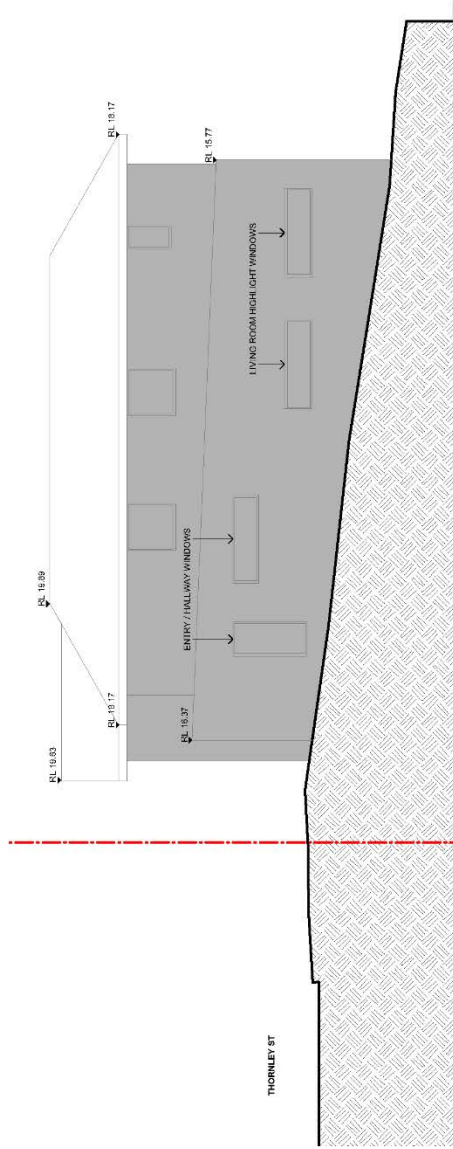
- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GS-1 GLAZING (CLEAR)

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LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 9:00AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- CON-2 CONCRETE
- FP-1 FORMER PLASTER SHEET
- FP-2 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (PAINTED)
- MS-1 METAL SHEET (ROOF)
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (PAINTED)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

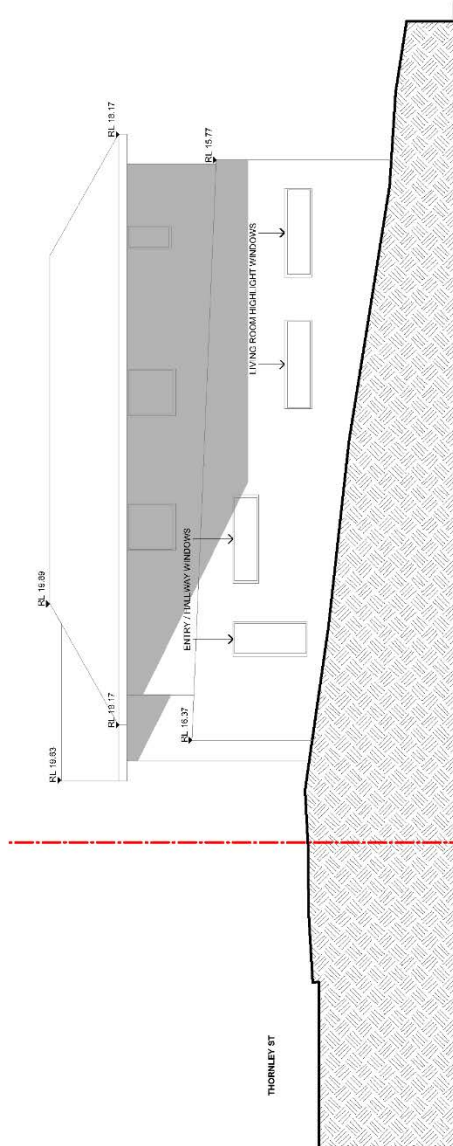
REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 9:00AM, 21ST JUNE  
 PROJECT 55 THORNLEY ST, MARRICVILLE  
 CLIENT ALLY JACKSON  
 SCALE 1:100 @ A3  
 REVISION A

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 10:00AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- CON-2 CONCRETE
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (TINTED)
- GL-3 GLAZING (TINTED)
- GL-4 GLAZING (TINTED)
- GL-5 GLAZING (TINTED)
- GL-6 GLAZING (TINTED)
- GL-7 GLAZING (TINTED)
- GL-8 GLAZING (TINTED)
- GL-9 GLAZING (TINTED)
- GL-10 GLAZING (TINTED)
- GL-11 GLAZING (TINTED)
- GL-12 GLAZING (TINTED)
- GL-13 GLAZING (TINTED)
- GL-14 GLAZING (TINTED)
- GL-15 GLAZING (TINTED)
- GL-16 GLAZING (TINTED)
- GL-17 GLAZING (TINTED)
- GL-18 GLAZING (TINTED)
- GL-19 GLAZING (TINTED)
- GL-20 GLAZING (TINTED)
- GL-21 GLAZING (TINTED)
- GL-22 GLAZING (TINTED)
- GL-23 GLAZING (TINTED)
- GL-24 GLAZING (TINTED)
- GL-25 GLAZING (TINTED)
- GL-26 GLAZING (TINTED)
- GL-27 GLAZING (TINTED)
- GL-28 GLAZING (TINTED)
- GL-29 GLAZING (TINTED)
- GL-30 GLAZING (TINTED)
- GL-31 GLAZING (TINTED)
- GL-32 GLAZING (TINTED)
- GL-33 GLAZING (TINTED)
- GL-34 GLAZING (TINTED)
- GL-35 GLAZING (TINTED)
- GL-36 GLAZING (TINTED)
- GL-37 GLAZING (TINTED)
- GL-38 GLAZING (TINTED)
- GL-39 GLAZING (TINTED)
- GL-40 GLAZING (TINTED)
- GL-41 GLAZING (TINTED)
- GL-42 GLAZING (TINTED)
- GL-43 GLAZING (TINTED)
- GL-44 GLAZING (TINTED)
- GL-45 GLAZING (TINTED)
- GL-46 GLAZING (TINTED)
- GL-47 GLAZING (TINTED)
- GL-48 GLAZING (TINTED)
- GL-49 GLAZING (TINTED)
- GL-50 GLAZING (TINTED)
- GL-51 GLAZING (TINTED)
- GL-52 GLAZING (TINTED)
- GL-53 GLAZING (TINTED)
- GL-54 GLAZING (TINTED)
- GL-55 GLAZING (TINTED)
- GL-56 GLAZING (TINTED)
- GL-57 GLAZING (TINTED)
- GL-58 GLAZING (TINTED)
- GL-59 GLAZING (TINTED)
- GL-60 GLAZING (TINTED)
- GL-61 GLAZING (TINTED)
- GL-62 GLAZING (TINTED)
- GL-63 GLAZING (TINTED)
- GL-64 GLAZING (TINTED)
- GL-65 GLAZING (TINTED)
- GL-66 GLAZING (TINTED)
- GL-67 GLAZING (TINTED)
- GL-68 GLAZING (TINTED)
- GL-69 GLAZING (TINTED)
- GL-70 GLAZING (TINTED)
- GL-71 GLAZING (TINTED)
- GL-72 GLAZING (TINTED)
- GL-73 GLAZING (TINTED)
- GL-74 GLAZING (TINTED)
- GL-75 GLAZING (TINTED)
- GL-76 GLAZING (TINTED)
- GL-77 GLAZING (TINTED)
- GL-78 GLAZING (TINTED)
- GL-79 GLAZING (TINTED)
- GL-80 GLAZING (TINTED)
- GL-81 GLAZING (TINTED)
- GL-82 GLAZING (TINTED)
- GL-83 GLAZING (TINTED)
- GL-84 GLAZING (TINTED)
- GL-85 GLAZING (TINTED)
- GL-86 GLAZING (TINTED)
- GL-87 GLAZING (TINTED)
- GL-88 GLAZING (TINTED)
- GL-89 GLAZING (TINTED)
- GL-90 GLAZING (TINTED)
- GL-91 GLAZING (TINTED)
- GL-92 GLAZING (TINTED)
- GL-93 GLAZING (TINTED)
- GL-94 GLAZING (TINTED)
- GL-95 GLAZING (TINTED)
- GL-96 GLAZING (TINTED)
- GL-97 GLAZING (TINTED)
- GL-98 GLAZING (TINTED)
- GL-99 GLAZING (TINTED)
- GL-100 GLAZING (TINTED)

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

CLIENT: ALLY JACKSON  
 PROJECT: 60 THORNLEY ST, MARRICKVILLE

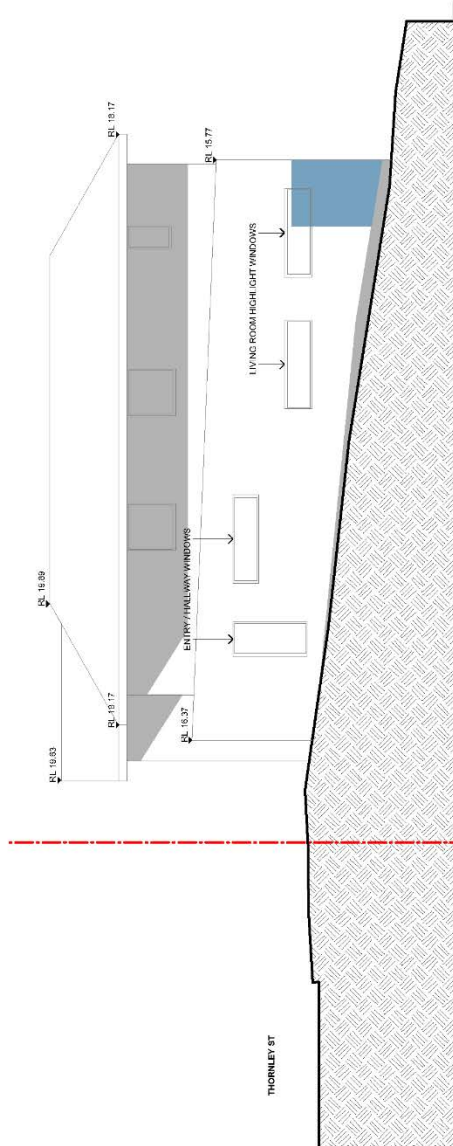
SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 10:00AM, 21ST JUNE  
 SCALE: 1:100 @ A3

1812-S-19  
 REVISION: A



\* ADDITIONAL OVERSHADOWING OF 17% TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 12:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)

- GS-2 GLAZING (GLAZED)
- MS-2 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SR-1 SCREEN (WOOD)
- SR-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

REVISIONS	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**

11:00AM, 21ST JUNE

CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICVILLE  
 SCALE: 1:100 @ A3

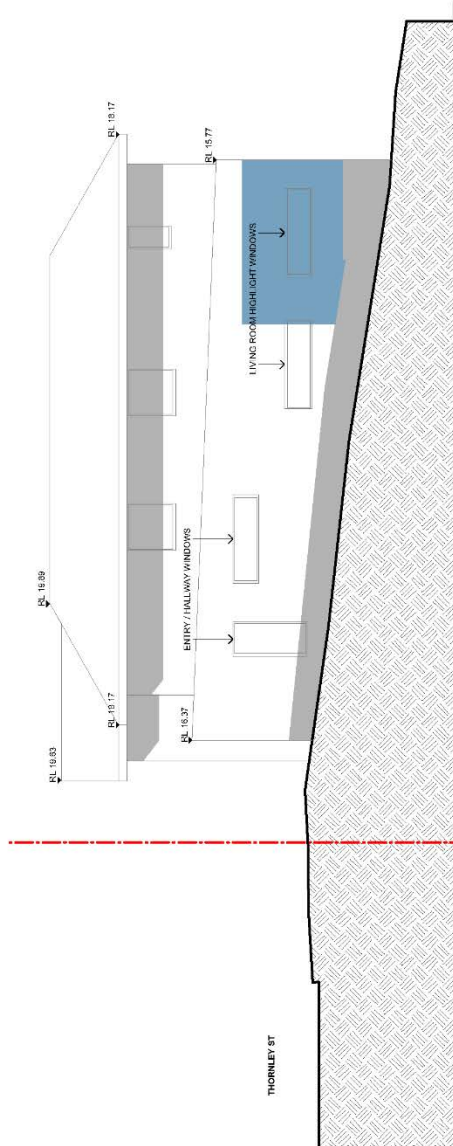
1812-S-20

REVISION: A

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* ADDITIONAL OVERSHADOWING OF 51% TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 12:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GF-1 GLAZING (CLEAR)
- GL-1 GLAZING (GLAZED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SR-1 SCREEN (PAINTED)
- SR-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

REVISIONS	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
 12:00PM, 21ST JUNE

CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICVILLE  
 SCALE: 1:100 @ A3

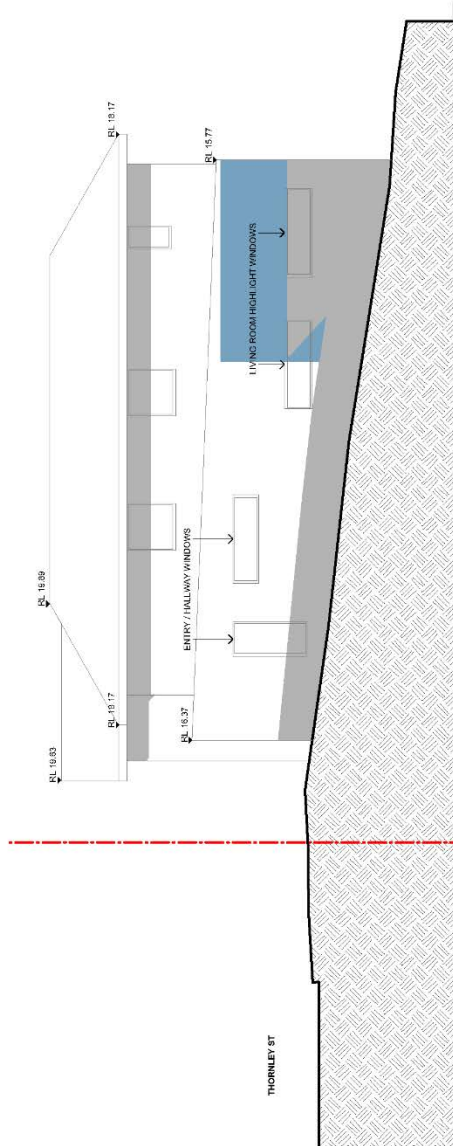
**1812-S-21**

REVISION: **A**

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* ADDITIONAL OVERSHADOWING OF 9% TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 1:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**1812-S-22**

1:00PM, 21ST JUNE

CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRIOVILLE  
 SCALE: 1:100 @ A3  
 REVISION: A

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

GS-2	GLAZING (REPLACED)
MS-2	METAL SHEET ROOF
RT-1	ROOF TILE (TERRACOTTA)
SR-1	SCREEN (WOOD)
SR-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING

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**LEGEND**

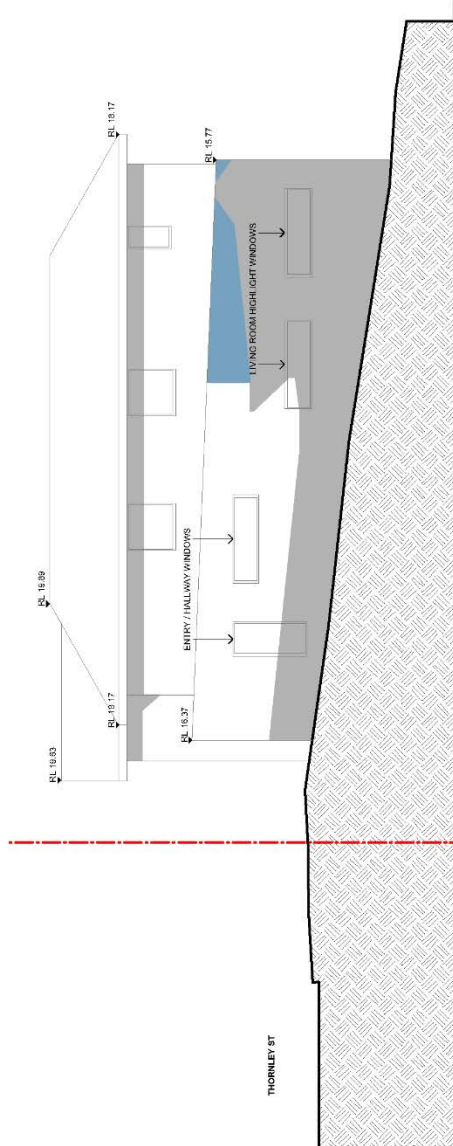
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER PLASTER SHEET
GL-1	GLAZING (CLEAR)



LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 2:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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LEGEND	
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FP-1	FORMER FIRE FIGHT SHED
GL-1	GLAZING (CLEAR)
GL-2	GLAZING (TINTED)
MS-1	METAL SHEET ROOF
RT-1	ROOF TILE (TERRACOTTA)
SP-1	SCREEN (ADJUSTABLE)
SP-2	SCREEN (FIXED)
TC-1	TIMBER CLADDING

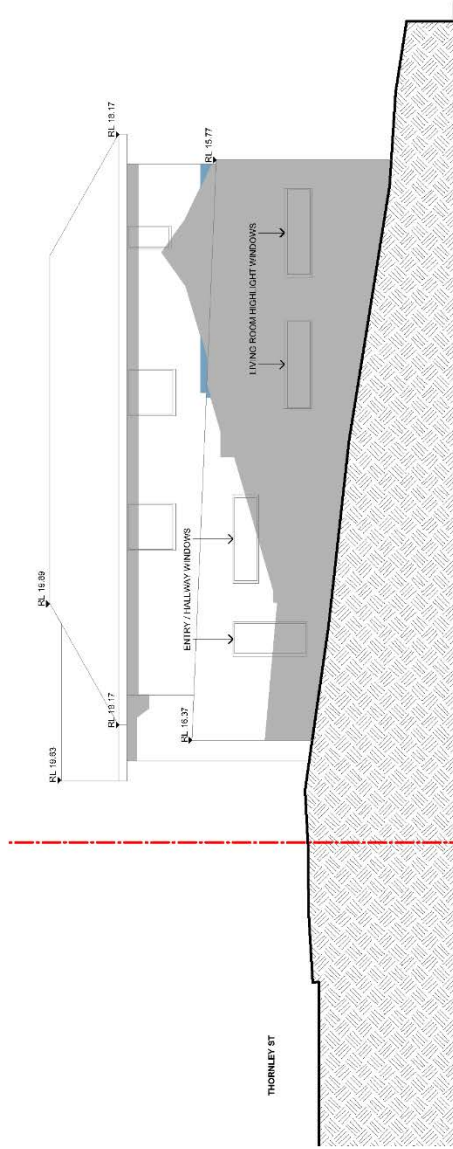
REVISIONS	
A	20.12.19 DA REVISIONS
B	
C	
D	
E	

SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 2:00PM, 21ST JUNE  
 1812-S-23  
 SCALE 1:100 @ A3  
 PROJECT 55 THORNLEY ST, MARRICKVILLE  
 CLIENT ALLY JACKSON  
 NORTH  
 REVISION A

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 3:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- CON-2 CONCRETE
- FP-1 FORMER PLASTER SHEET
- FP-2 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (PAINTED)
- MS-1 METAL SHEET (ROOF)
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (PAINTED)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

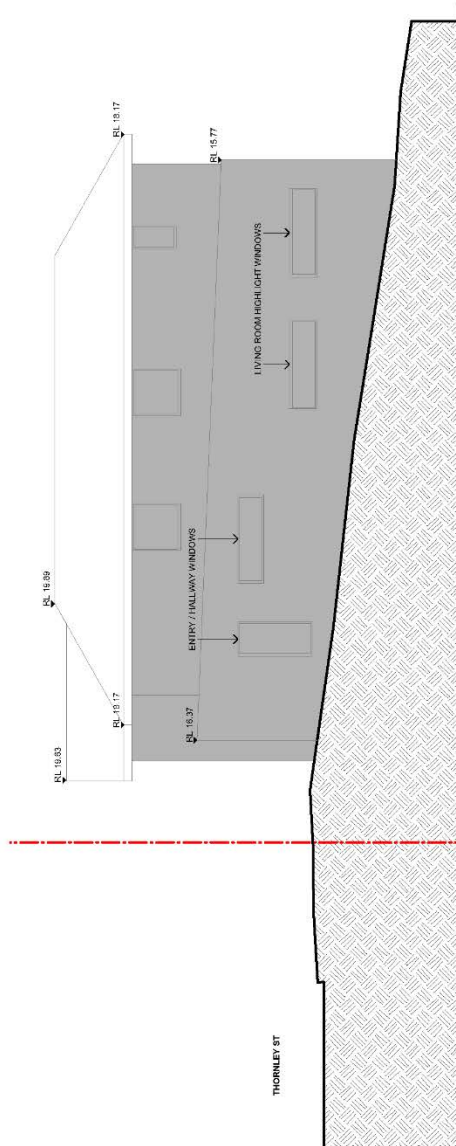
**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**3:00PM, 21ST JUNE**

**1812-S-24**  
 SCALE 1:100 @ A3  
 PROJECT 60 THORNLEY ST, MARRICVILLE  
 CLIENT ALLY JACKSON  
 REVISION **A**

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 9:00AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GF-1 GLAZING (CLEAR)
- GF-2 GLAZING (PAINTED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SFR-1 SCREEN (W/VEED)
- SFR-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

A	20.12.19	DA REVISIONS
B		
C		
D		
E		

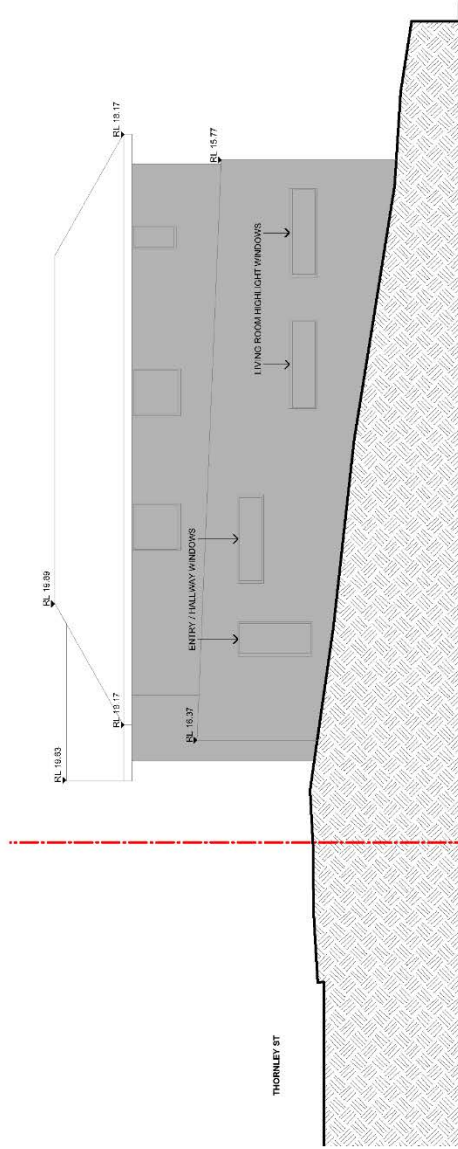
**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**9:00AM, 21ST MARCH/SEPTEMBER**

PROJECT 55 THORNLEY ST, MARRICVILLE  
 CLIENT ALLY JACKSON  
 SCALE 1:100 @ A3  
 REVISION **A**

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 10:00AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GZ-1 GLAZING (CLEAR)
- GL-1 GLAZING (GLAZED)
- MS-1 METAL SHEET (ROOF)
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (W/VE)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

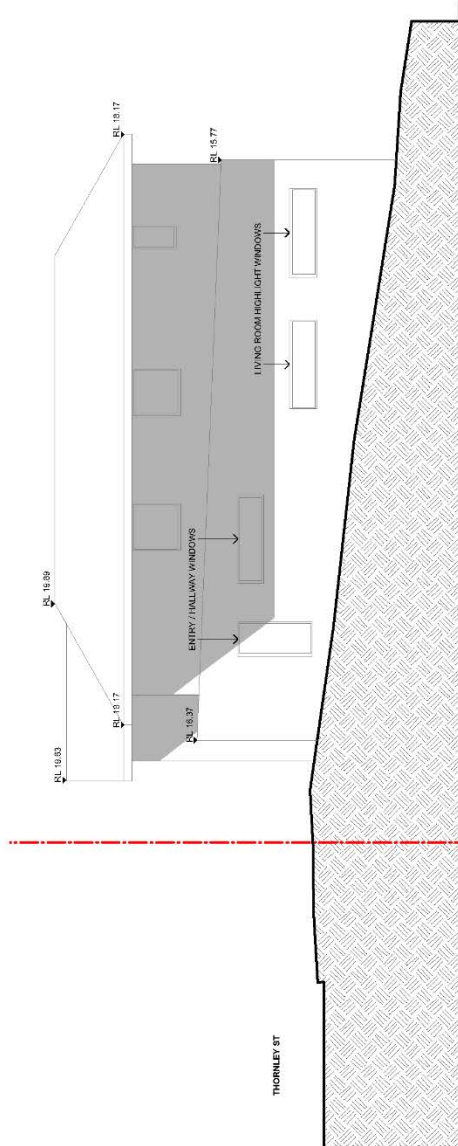
REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
 10:00AM, 21ST MARCH/SEPTEMBER  
**1812-S-26**  
 CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:100 @ A3  
 REVISION: **A**

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 11:00AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER FIRE FIGHT SHED
- GZ-1 GLAZING (CLEAR)

- GZ-2 GLAZING (TINTED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (W/VE)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

A	20.12.19	DA REVISIONS
B		
C		
D		
E		

SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 11:00AM, 21ST MARCH/SEPTEMBER

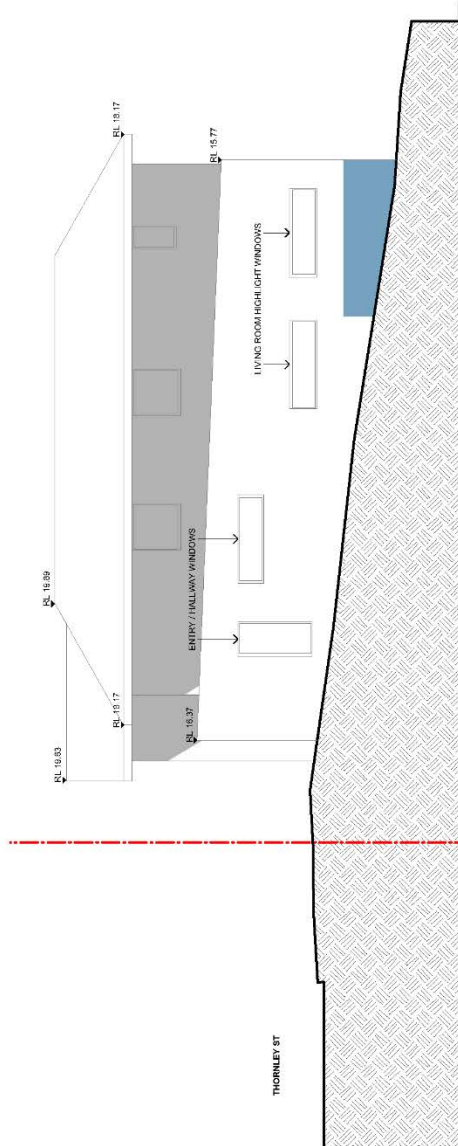
CLIENT: ALLY JACKSON  
 PROJECT: 55 THORNLEY ST, MARRICVILLE  
 SCALE: 1:100 @ A3

1812-S-27  
 REVISION: A

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 12:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



**Benn + Penna**

Level 1, 123 Harris St.  
 Pyrmont NSW 2169  
 161 2 95 18 9920  
 info@bennandpenna.com  
 www.bennandpenna.com

**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- FP-1 FORMER PLASTER SHEET
- GL-1 GLAZING (CLEAR)

- GS-1 GLAZING (PAINTED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (PAINTED)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

REVISIONS	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 12:00PM, 21ST MARCH/SEPTEMBER**

CLIENT: ALLY JACKSON  
 PROJECT: 60 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:100 @ A3

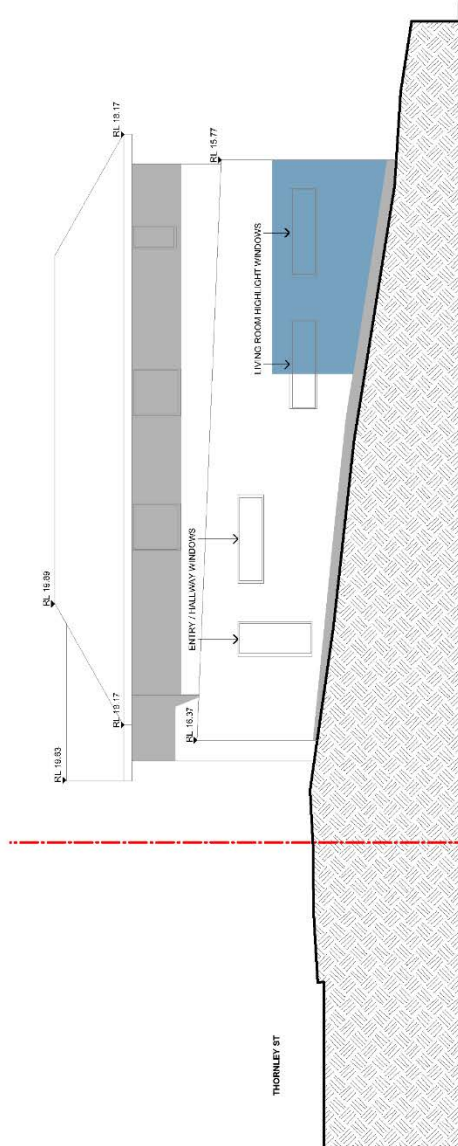
**1812-S-28**

REVISION: **A**



\* ADDITIONAL OVERSHADOWING OF 8.1% TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 1.00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**1812-S-29**

1:00PM, 21ST MARCH/SEPTEMBER

SCALE 1:100 @ A3

CLIENT ALLY JACKSON

PROJECT 60 THORNLEY ST, MARRICVILLE

REVISION **A**

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**LEGEND**

BRICK CONDITIONING

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- PF-1 FORMER PLASTER SHEET
- GF-1 GLAZING (CLEAR)

GLAZING (PAINTED)

- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (PAINTED)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

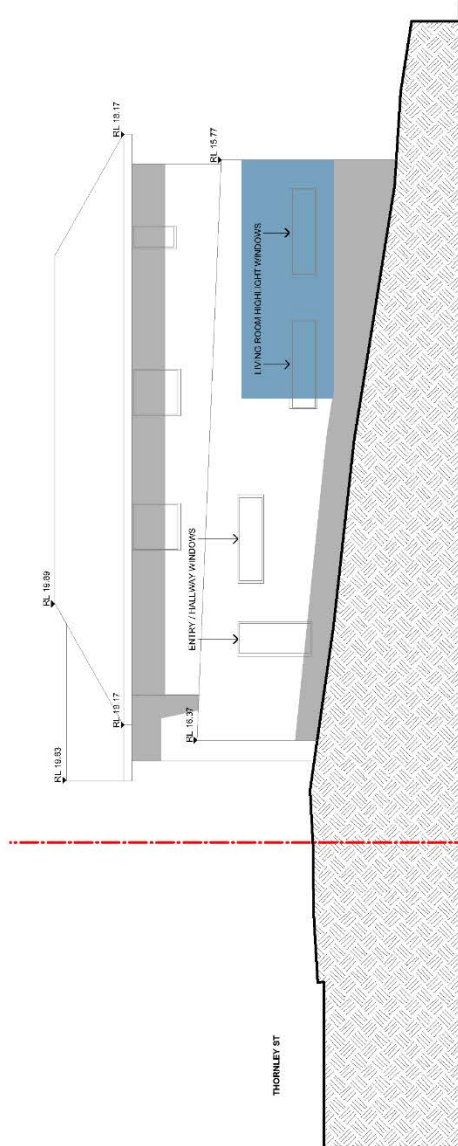
**Benn + Penna**

Level 1, 123 Harris St,  
 Pyrmont NSW 2169  
 161 2 95 18 9920  
 info@bennandpenna.com  
 www.bennandpenna.com

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* ADDITIONAL OVERSHADOWING OF 98% TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 2:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**1812-S-30**  
 2:00PM, 21ST MARCH/SEPTEMBER

SCALE 1:100 @ A3

CLIENT ALLY JACKSON  
 PROJECT 55 THORNLEY ST, MARRIOVILLE

REVISION A

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**LEGEND**

BR-1	BRICK (PAINTED)	GS-1	GLAZING (CLEAR)
BR-2	BRICK (PAINTED)	MS-1	METAL SHEET ROOF
CON-1	CONCRETE	RT-1	ROOF TILE (TERRACOTTA)
PF-1	POWDER COATED STEEL	SR-1	SCREEN (ADJUSTABLE)
GS-1	GLAZING (CLEAR)	SR-2	SCREEN (FIXED)
		TC-1	TIMBER CLADDING

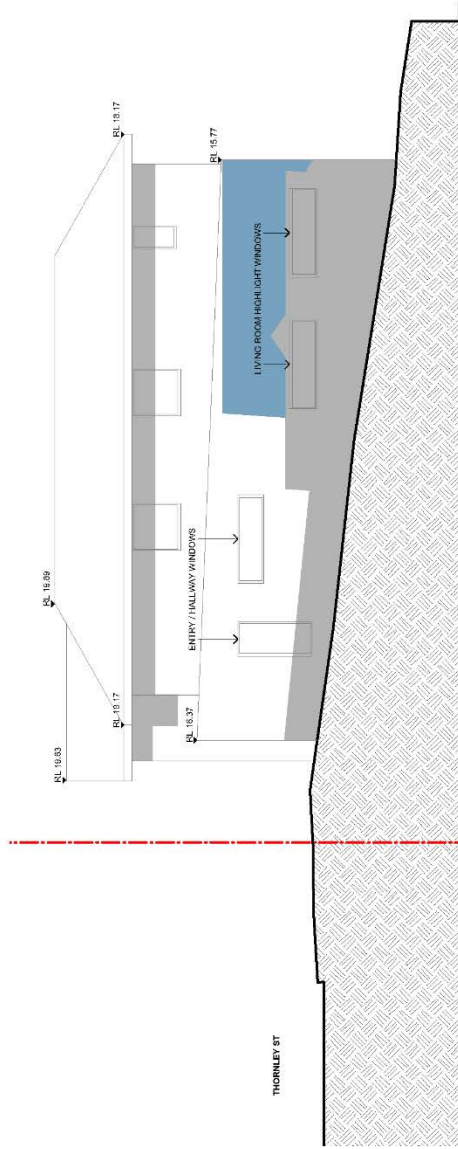
Level 1, 123 Harris St.  
 Pyrmont NSW 2169  
 141 2 95 18 9920  
 info@benn+penna.com  
 www.benn+penna.com



LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 3:00PM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**  
**1812-S-31**  
 3:00PM, 21ST MARCH/SEPTEMBER  
 SCALE 1:100 @ A3  
 PROJECT 60 THORNLEY ST, MARRICVILLE  
 CLIENT ALLY JACKSON  
 REVISION A

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

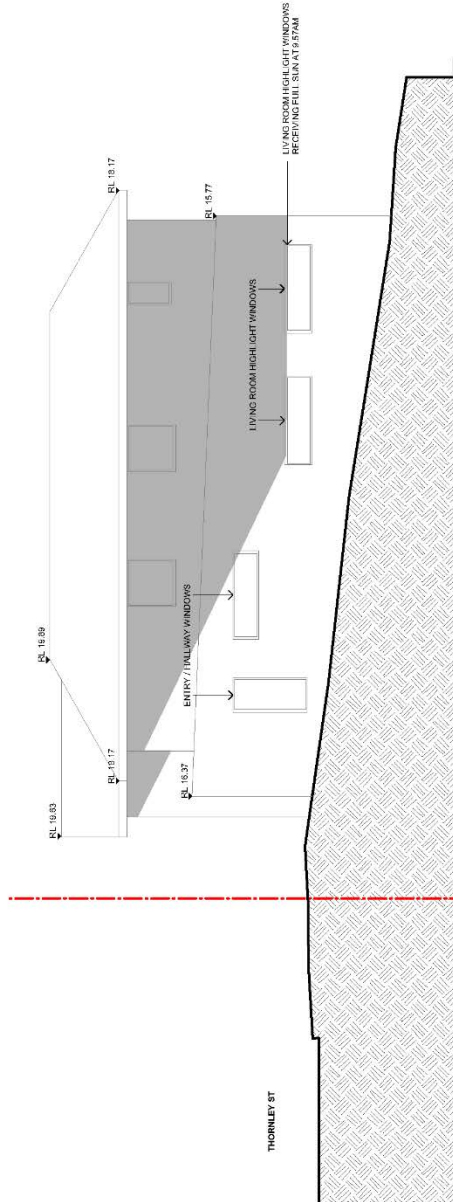
**LEGEND**  
 BK-1 BRICK (PAINTED)  
 BK-2 BRICK (PAINTED)  
 CON-1 CONCRETE  
 PF-1 FORMER PLASTER SHEET  
 CZ-1 GLAZING (CLEAR)  
 CZ-2 GLAZING (TINTED)  
 MS-1 METAL SHEET ROOF  
 RT-1 ROOF TILE (TERRACOTTA)  
 SR-1 SCREEN (W/VEED)  
 SR-2 SCREEN (ADJUSTABLE)  
 TC-1 TIMBER CLADDING

**Benn + Penna**  
 Level 1, 123 Harris St,  
 Pyrmont NSW 2169  
 161 2 95 18 9920  
 info@bennandpenna.com  
 www.bennandpenna.com

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 9:57AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- CON-2 CONCRETE
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (TINTED)
- MS-1 METAL SHEET ROOF
- RT-1 ROOF TILE (TERRACOTTA)
- SP-1 SCREEN (W/VE)
- SP-2 SCREEN (ADJUSTABLE)
- TC-1 TIMBER CLADDING

**REVISIONS**

REVISION	A	20.12.19	DA REVISIONS
B			
C			
D			
E			

**SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION**

**9:57AM, 21ST JUNE**

CLIENT: ALLY JACKSON  
 PROJECT: 60 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:100 @ A3

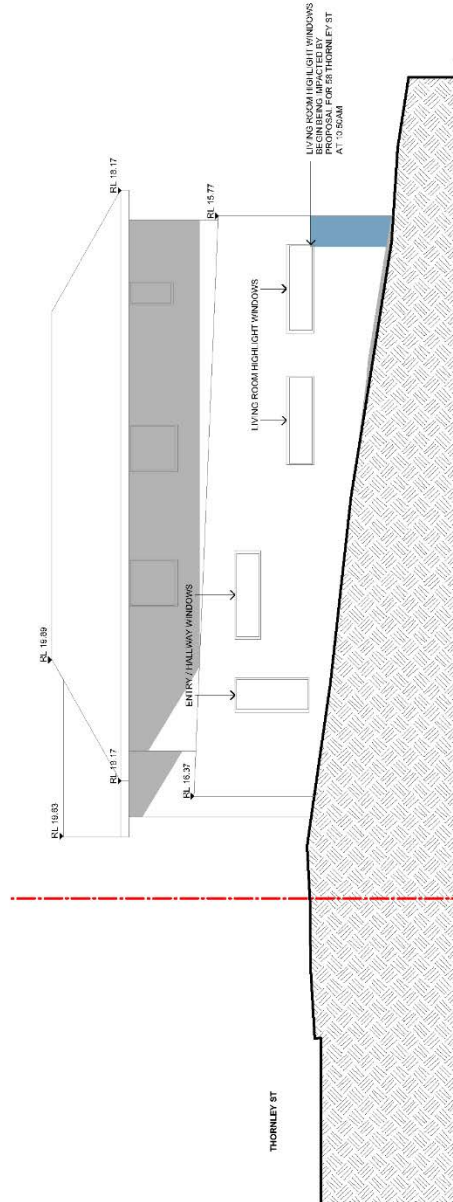
**1812-S-32**

REVISION **A**

LEGEND	
	ADDITIONAL SHADOW FROM PROPOSAL
	REDUCTION OF SHADOW FROM PROPOSAL
	EXISTING SHADOW
	BOUNDARY LINE

\* NO ADDITIONAL OVERSHADOWING TO LIVING ROOM WINDOWS OF 60 THORNLEY STREET AT 10.50AM

\* OVER 2 HOURS DIRECT SUNLIGHT TO ALL LIVING ROOM WINDOWS ACHIEVED (AS PER DCP CLAUSE 2.7.3.2)



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 Pyrmont NSW 2169  
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 info@bennandpenna.com  
 www.bennandpenna.com

**LEGEND**

- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- CON-2 CONCRETE
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (CLEAR)
- GL-3 GLAZING (CLEAR)
- GL-4 GLAZING (CLEAR)
- GL-5 GLAZING (CLEAR)
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- GL-98 GLAZING (CLEAR)
- GL-99 GLAZING (CLEAR)
- GL-100 GLAZING (CLEAR)

- GS-1 GRASS (REVEALED)
- GS-2 GRASS (REVEALED)
- GS-3 GRASS (REVEALED)
- GS-4 GRASS (REVEALED)
- GS-5 GRASS (REVEALED)
- GS-6 GRASS (REVEALED)
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- GS-98 GRASS (REVEALED)
- GS-99 GRASS (REVEALED)
- GS-100 GRASS (REVEALED)

- DA REVISIONS
- A
- B
- C
- D
- E

CLIENT ALLY JACKSON

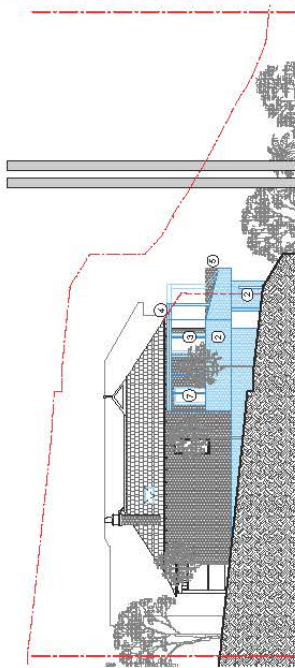
PROJECT 55 THORNLEY ST, MARRICVILLE

SCALE 1:100 @ A3

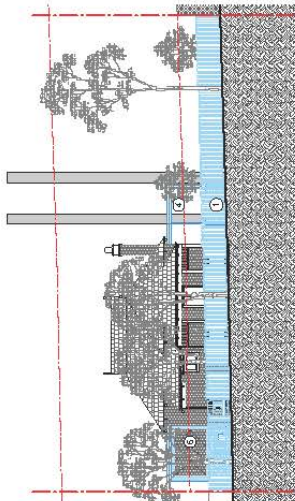
REVISION A

SHADOW DIAGRAMS - 60 THORNLEY ST ELEVATION  
 1812-S-33  
 10:50AM, 21ST JUNE

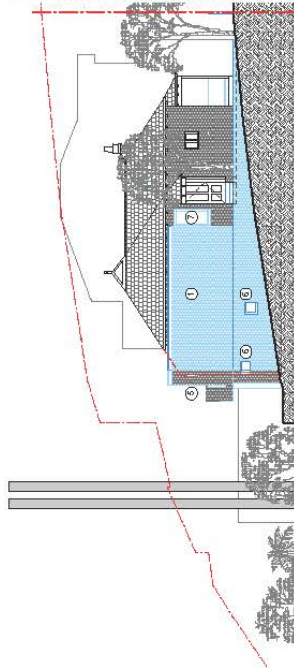
PAINT SCHEDULE	COLOUR
AREA OF APPLICATION	WARM SAND/TERRACOTTA TONE
TIMBER DETAIL 1	DARK SANDBROWN TONE
TIMBER DETAIL 2	LIGHTER VERSION OF ABOVE
WINDOWS (EXTERNALLY)	DARK SANDBROWN TONE
GUTTERS/DOWNPIPES	DARKER SANDBROWN TONE



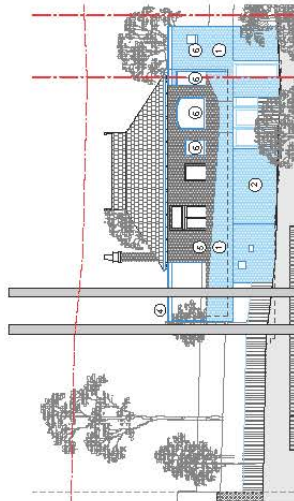
2 NORTH-WEST ELEVATION



1 NORTH-EAST ELEVATION



4 SOUTH-EAST ELEVATION



3 SOUTH-WEST ELEVATION

1 BRICKWORK  
BOWPAL DRY PRESSED  
COLOUR: SIMMENTAL SLIVER

2 GRAY SCREEN  
BOWPAL DRY PRESSED  
COLOUR: SIMMENTAL SLIVER

3 TIMBER SCREENS (JOISTABLE)  
WEATHERED/PAINTED FINISH  
FINE MATT SIZE AND SPACING

4 STEEL STRUCTURE PROFILE  
PROFILE TO SUPPLIER'S ENGINEERS INPUT

5 STEEL BALUSTRADE  
PROFILE TO SUPPLIER'S ENGINEERS INPUT

6 STEEL WINDOWS  
PROFILE TO SUPPLIER'S ENGINEERS INPUT

7 TRADITIONAL TIMBER WINDOWS  
(TO MATCH EXISTING)

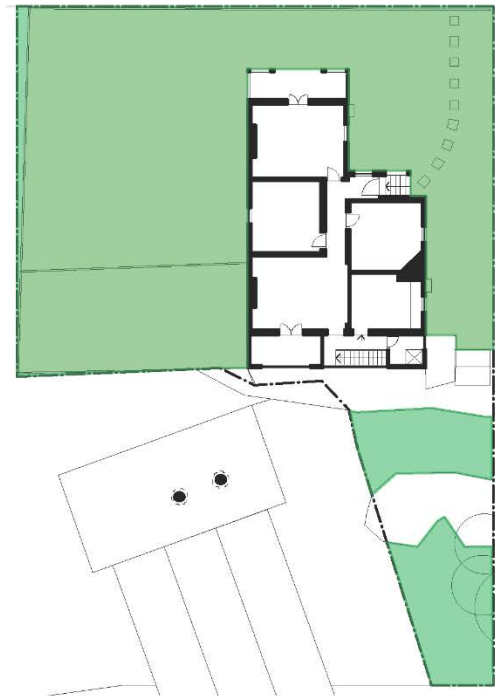
**Benn + Penna**  
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**MATERIALS & FINISHES SCHEDULE**  
 1812-X-01  
 SCALE: 1:200 @ A3  
 PROJECT: 58 THORNLEY ST., MARRICKVILLE  
 CLIENT: ALLY JACKSON  
 REVISION: B

REVISION	A	03.10.19	DEVELOPMENT APPLICATION
B	6	20.12.19	DA REVISIONS
A	C		
	D		
	E		

LEGEND

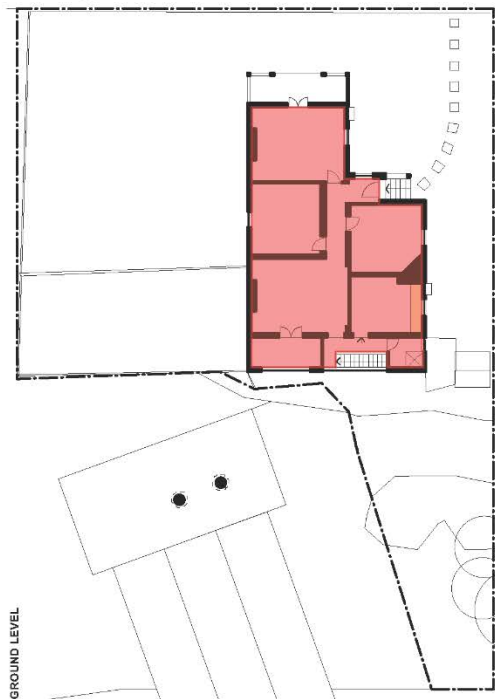
- BR: CONCRETE
- BR-1: BRICK (PAINTED)
- BR-2: BRICK (PAINTED)
- CON: CONCRETE
- DF: DOWNPIPE
- DF-1: DOWNPIPE
- GE: GLAZING
- GE-1: GLAZING (CL-19)
- MS: METAL SHEET (TERRACOTTA)
- RT: ROOF TILE (TERRACOTTA)
- SFL: SCREEN (FIBRE)
- SFL-1: SCREEN (FIBRE)
- SFL-2: SCREEN (FIBRE)
- TC: TIMBER CLADDING
- TC-1: TIMBER CLADDING



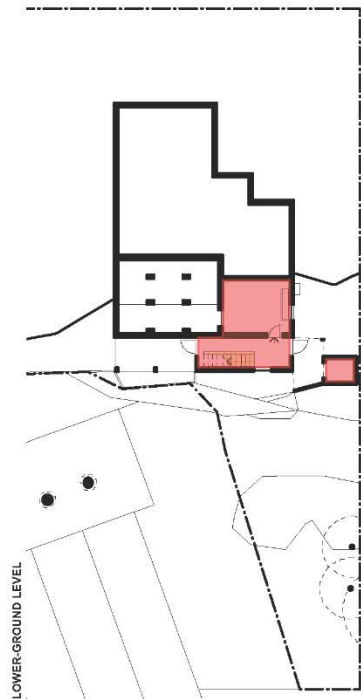
**LANDSCAPE AREA CALCULATIONS: COMPLIES**  
**SITE COVERAGE = 357.0m<sup>2</sup> + 509.6m<sup>2</sup> = 70.1%**



**SITE COVERAGE CALCULATIONS: COMPLIES**  
**SITE COVERAGE = 117.8m<sup>2</sup> + 509.6m<sup>2</sup> = 23.1%**



**FSR CALCULATIONS: COMPLIES**  
**FSR = (90.1m<sup>2</sup> + 15.5m<sup>2</sup>) + 509.6m<sup>2</sup> = 21% OR 0.21:1**



**1812-X-02**

SCALE  
1:200 @ A3

REVISION  
A

PROJECT  
55 THORNLEY ST,  
MARRICKVILLE

CLIENT  
ALLY JACKSON

DEVELOPMENT/APPLICATION  
03/10/19

REVISIONS  
A  
B  
C  
D  
E

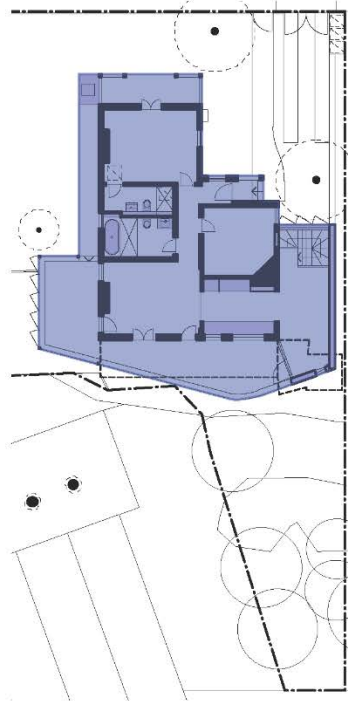
LEGEND  
 GS-2 GLAZING (GLAZED)  
 MS-2 METAL SHEETING  
 RT-1 ROOF-TILE (TERRACOTTA)  
 SR-1 SCREEN (WOOD)  
 SR-2 SCREEN (ADJUSTABLE)  
 TC-1 TIMBER CLADDING

LEGEND  
 BR-1 BRICK (PAINTED)  
 BR-2 BRICK (PAINTED)  
 CO-1 CONCRETE  
 DP-1 FLOOR TILE  
 GP-1 GLAZING (CLEAR)

Benn + Penna  
 Level 1, 123 Harris St,  
 Pyrmont NSW 2159  
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 info@benn+penna.com  
 www.benn+penna.com



**LANDSCAPE AREA CALCULATIONS: COMPLIES**  
**SITE COVERAGE = 290.5m<sup>2</sup> + 509.6m<sup>2</sup> = 57.0%**



**SITE COVERAGE CALCULATIONS: COMPLIES**  
**SITE COVERAGE = 160.6m<sup>2</sup> + 509.6m<sup>2</sup> = 31.5%**



GROUND LEVEL

**FSR CALCULATIONS: COMPLIES**  
**FSR = (92.0m<sup>2</sup> + 27.5m<sup>2</sup>) + 509.6m<sup>2</sup> = 23.4% OR 0.23:1**



LOWER-GROUND LEVEL

**Benn + Penna**  
 Level 1, 123 Harris St,  
 Pyrmont NSW 2159  
 161 235 18 9920  
 info@bennandpenna.com  
 www.bennandpenna.com

**LEGEND**

- GC-1 AIR CONDITIONING
- BR-1 BRICK (PAINTED)
- BR-2 BRICK (PAINTED)
- CON-1 CONCRETE
- DP-1 FLOORING (TIMBER)
- DP-2 FLOORING (TIMBER)
- GL-1 GLAZING (CLEAR)
- GL-2 GLAZING (TINTED)
- MS-1 METAL SHEETING
- MS-2 METAL SHEETING
- RT-1 ROOF TILE (TERRACOTTA)
- SR-1 SCREEN (WOOD)
- SR-2 SCREEN (ALUMINIUM)
- TC-1 TIMBER CLADDING

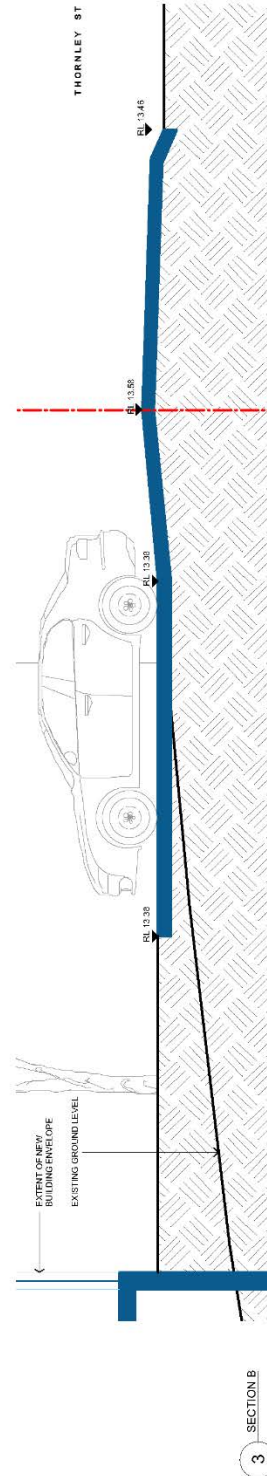
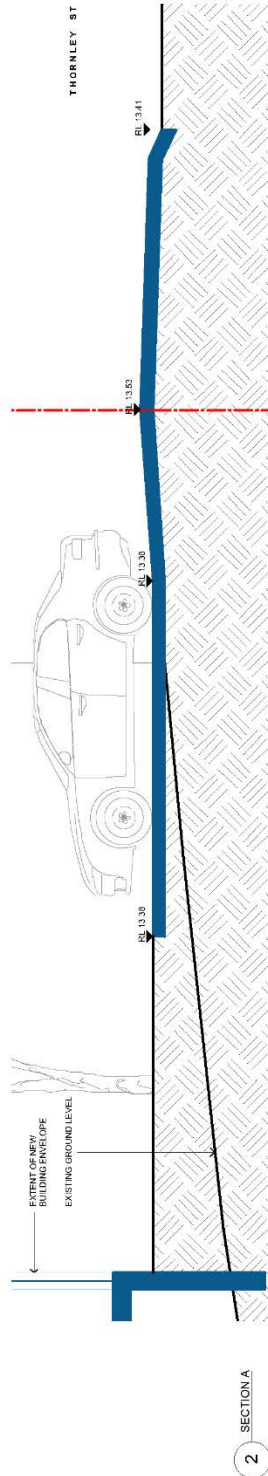
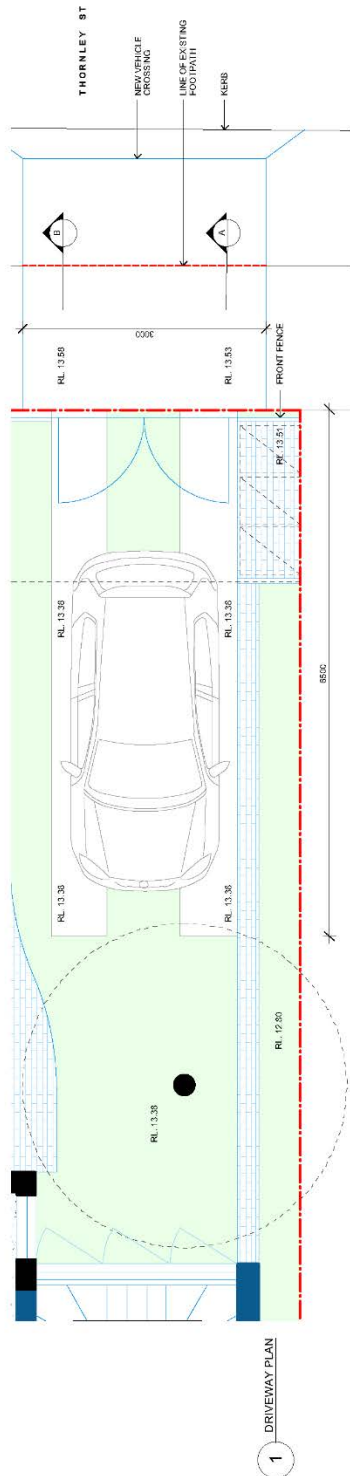
**REVISIONS**

REVISIONS	A	B	C	D	E
	03.10.19	DEVELOPMENT APPLICATION			

**PROPOSED LEP & DCP CONTROL DIAGRAMS**

**1812-X-03**

CLIENT: ALLY JACKSON  
 PROJECT: 65 THORNLEY ST, MARRICKVILLE  
 SCALE: 1:300 @ A3  
 REVISION: A



**1812-X-04**

REVISION A

SCALE 1:300 @ A3

NORTH

PROJECT 55 THORNLEY ST, MARRICKVILLE

CLIENT ALLY JACKSON

DRIVEWAY SECTIONS

REVISION	A	B	C	D	E
DESCRIPTION	03.10.19 DEVELOPMENT APPLICATION				

LEGEND

GL-1	GLAZING (GLAZED)
MS-1	METAL SHEETING
RT-1	ROOF TILE (TERRACOTTA)
SR-1	SCREEN (ALUMINUM)
SR-2	SCREEN (ADJUSTABLE)
TC-1	TIMBER CLADDING
BR-1	BRICK (PAINTED)
BR-2	BRICK (PAINTED)
CON-1	CONCRETE
FO-1	FOOTPATH LIGHT SHEET
GL-1	GLAZING (CLEAR)

**Benn + Perna**

Level 1, 123 Harris St,  
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## Attachment C – Statement of Heritage Significance

# Cooks River Sewage Aqueduct

## Item details

Name of item: Cooks River Sewage Aqueduct

Type of item: Built

Group/Collection: Utilities - Sewerage

Category: Sewage Aqueduct

Location: Lat: -33.9224676255 Long: 151.1479282650

Primary address: Pine Street, Undercliffe, NSW 2204

Local govt. area: Canterbury

Local Aboriginal Metropolitan  
Land Council:

### Property description

Lot/Volume Code	Lot/Volume Number	Section Number	Plan/Folio Code	Plan/Folio Number
LOT	38	10	DP	1142
LOT	39	10	DP	1142
LOT	40	10	DP	1142
LOT	1		DP	745578

The curtilage includes the whole aqueduct structure inclusive of supporting structure in embankment. Includes 1929 pipe. Refer to Heritage Council Plan 2012.

### Boundary:

#### All addresses

Street Address	Suburb/town	LGA	Parish	County	Type
Pine Street	Undercliffe	Canterbury			Primary Address
Thornley Street (off)	Marrickville	Marrickville			Alternate Address

### Owner/s

Organisation Name	Owner Category	Date Ownership Updated
Sydney Water	State Government	27 Nov 98



## Statement of significance:

The Cooks River Valley sewage aqueduct, completed in 1895, is an integral and highly visible component of the original Main Western Carrier (now part of Southern and Western Suburbs Ocean Outfall Sewer System), which was one the Board's major early sewerage schemes. The aqueduct being a combination of brick arches and steel bridges is an excellent and rare example of a late-nineteenth steel truss bridge (in non railway construction), and decorative face brick work in NSW. The two original sewer carriers are likely to be rare examples of large diameter, long run wrought iron pipes used for such a purpose. Elements of significance are past and ongoing use, construction technologies and setting with the Cooks River valley (inclusive of views).

Date significance updated: 21 Apr 05

*Note: The State Heritage Inventory provides information about heritage items listed by local and State government agencies. The State Heritage Inventory is continually being updated by local and State agencies as new information becomes available. Read the OEH [copyright and disclaimer](#).*

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## Description

Designer/Maker: Sewerage Construction Branch, Department of Public Works

Builder/Maker: J.F. Carson, contractor

Construction years: 1895-1895

Physical description: Aqueduct:  
The aqueduct comprises the sewer carrier of three 1.8 m. diameter wrought iron and steel pipes supported on a series of brick arches, and steel bridges. The brick arches are particularly decorative, being white glazed face bricks laid in English bond with decorative motifs picked out in red coloured brick. The springing points of the arch and cornice are constructed of dressed sandstone. The sewer carrier emerges from the brick faced northern abutment below Thornley Street, Marrickville crossing the river by the steel trusses and then continuing further across the river and Wanstead Reserve by brick arches to embankment at the end of Wanstead Avenue, Undercliffe. The northern most terrestrial arch is used as a public path. The original contract drawings indicate that the original river crossing entailed only the two 80ft. steel bridges, today it also requires 2 1/2 spans of the brick arches. The aqueduct is a major built item in the Cooks River valley basin.

Cottages:

58 Thornley Street:

Grounds:

The residence at 56-58 Thornley Street is set back somewhat deeper than the alignment of neighbouring properties. Within this setback is a

moderately vegetated, landscaped setting with mature trees and low-level plantings. The landscaping is enhanced with profiled garden beds. An unusual and possibly unique feature of the landscaping is the use of glazed ceramic electrical "Edison caps" set in concrete to form the garden bed retaining wall. On the western side of the property, more brick garden beds are in place (ibid, 2018, 12).

The house occupies the eastern half of the site. The western half of the site is generally undeveloped. A rendered brick wall divides the eastern and western halves of the property (ibid).

The property slopes gently down from Thornley Street to the middle of the residence. The gradient then drops steeply southward to the riverbank which is inaccessible and overgrown. Access to the aqueduct is via the western half of the property, down the end of the driveway to the far west of the building, separated by a chain link fence (ibid).

Federation cottage with simplistic design elements typical of late 19th Century Federation workers cottages common throughout Marrickville and Sydney's inner west, which housed workers from the booming local industry in the area Extent Heritage, 2018, 9). Painted face brick with external timber and tile detailing, set into a natural embankment of the Cooks River (ibid, 2018, v).

The split-level dwelling is built into the steep embankment of the river. The residence consists of a typical Federation cottage, dated to 1899. The dwelling was originally face brick, however, it has been painted. The hipped roof is clad with terracotta Marseilles tiles, terracotta ridge tiles and rams-horn finials. The roof also features two chimneys of painted brick with brick corbels and terracotta chimney pots (ibid, 2018, 12).

The front facade (facing Thornley Street) is modest in design. It is a single-fronted facade, symmetrical with a French door in the centre. Unusually, there are no windows on this front facade. There is a small verandah supported by ornamental timber brackets and turned timber posts with capitals. The verandah has exposed rafter ends. The verandah floor is a concrete slab, lined to give the appearance of tiles, and painted. This element shows some signs of disrepair, with cracks in the flooring (ibid).

Although the front facade has a French door opening, this appears to be an access between the verandah and the formal lounge. The main entrance is actually at the northeast corner of the building. Around the house are timber double-hung sash windows, as well as hinged casement windows (ibid).

#### Interior:

The original 1899 Federation interiors remain largely intact, with typical decorative features like ornate plaster ceiling roses, decorative moulded cornices, skirtings, arches and corbels still extant throughout most rooms. All original fireplaces, with timber and marble surrounds and original iron grilles are still in place. These internal features appear to be in an overall good condition (ibid, 2018, 15).

Based on original MBWS drawings of the building, the original internal floor plan is largely intact (see Figure 25). Some modern refurbishments have been applied including a bathroom and kitchen refurbishment (ibid).

**Modifications** 1935: renovations to 58 Thornley Street cottage:

and dates:

1981 - 1984:

The barrels were overhauled and the surface of the cast iron pipes was coated with a modern fibre-glass lining. The steelwork on the two bridge spans has been replaced where necessary. Fencing at either end of the carrier to prevent trespass.

Current use: Sewage aqueduct

Former use: Aboriginal land, farm, Sewage aqueduct

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## History

**Historical notes:** In the first decades after European arrival in the Sydney region, the area of Marrickville was primarily known as a source of timber for boatbuilding. Thomas Moore was granted land in the district in 1799 that he named Douglas Farm. Moore's advertisements in the Sydney Gazette in 1803 indicate that he was actively cutting and selling timber on his grant and he warned those 'intent on cutting timber' that they would be prosecuted (Extent Heritage, 2018, 6).

Moore was followed by Dr Robert Wardell, a wealthy barrister, who purchased more than 2,000 acres (800 hectares), including the former estate of Thomas Moore, circa 1830. The area remained semirural, particularly in the low-lying areas to the south near the Cooks River, till the arrival of the suburban railway in the 1890s brought closer settlement and subdivision of the larger estates. Marrickville also saw the establishment of some significant industrial enterprises, with stone quarries, brick and tile works, woollen mills, steel and metal foundries and fabricators and automotive and various service industries (ibid, 2018, 6).

South of the Cooks River, timber cutting was also a key local industry, until the land was sufficiently clear for it to be used for cattle grazing, allowing a small local dairy industry to develop. Today's Earlwood, originally known as Undercliffe, grew eastwards from Canterbury in the early twentieth century, when the arrival of the electric tram encouraged subdivision of land for residential housing (ibid, 2018, 6).

With the rise of industry north of the Cooks River, the area developed rapidly and the various road crossings over the River, notably at Undercliffe Street, Wardell Road and Canterbury Road, became as important as pedestrian routes as they were for vehicles. From the 1890s, there were calls for the construction of separate pedestrian walkways on these road bridges, as the numbers of pedestrians and vehicles using the bridges were too high for safety (ibid, 2018, 6).

The Cooks River itself was, from the 1830s, notably affected by the erection of the dam near the mouth of the river at Tempe. A second dam, built at Canterbury at the site of the Canterbury Sugar Factory in the 1850s, exacerbated the pollution problems and, by the 1880s, low flow, siltation

and pollution from tanneries and wool-washing plants had led to a notable degradation of the local environment. From the 1890s, there were calls to remove the dams but it wasn't until the formation of the Cooks River Improvement League in 1925 that things began to change (ibid, 2018, 6).

In 1928, in response to the Cooks River Improvement League and in keeping with its program of stormwater channel construction, which was already significantly improving public health in Sydney, the NSW government allocated funding to remove the two dams and to dredge the Cooks River from its mouth as far as Burwood Road, Campsie. This work included the reclamation of the river banks behind stone and concrete walls and the creation of riverside reserves.

In the twentieth century, the Cooks River continued to be a problem for its water quality and degraded riparian environment (ibid, 2018, 6).

In 1946, the Cooks River Improvement Act was passed, giving control of the Cooks River from Tempe to Canterbury Road to the Department of Public Works. The river was dredged further, mangroves and swamps were reclaimed and the banks were strengthened with iron sheet piling. Despite these efforts, there was little improvement in the water quality, owing to industrial wastes and urban stormwater runoff. From 1975, the State Pollution Control Commission has classified the Cooks River to be a restricted waterway, meaning that it is unsuitable for domestic uses or for swimming but adequate to maintain aquatic life and associated wildlife (ibid, 2018, 6).

#### Cooks River Sewage Aqueduct

Completed in 1859, Sydney's first sewerage system consisted of five outfall sewers in the central city area that drained to Sydney Harbour. The outfalls were located at Blackwattle Bay, Darling Harbour, Sydney Cove, Bennelong Point and Woolloomooloo Bay. As a result, by the 1870s, the Harbour had become grossly polluted and, following continuing complaints, the Government created the Sydney City and Suburban Health Board to investigate an alternative means of disposing of the city's sewage. As Sydney grew in size (its population doubled in the two decades between 1871 and 1891), sanitation issues became increasingly important. By the 1880s, repeated outbreaks of typhoid, diphtheria, phthisis (tuberculosis) and gastroenteritis in Sydney spurred the construction of sewers and stormwater drains throughout the city, in an ultimately successful attempt to remove foul and contaminated water from the streets (ibid, 2018, 7).

Two gravitation sewers were constructed in the 1880s by the Public Works Department (PWD): a northern sewer discharging to the ocean at north Bondi and a southern sewer draining to a sewage farm at Rockdale. In 1888, the new Board of Water Supply and Sewerage was created and, in 1889, it took over the old harbour outfall sewers and the recent works completed by the PWD. (The Board of Water Supply and Sewerage became the Metropolitan Board of Water Supply and Sewerage in 1892, the Metropolitan Water, Sewerage and Drainage Board in 1924, the Water Board in 1987 and Sydney Water Corporation in 1994. It was colloquially referred to as 'the Water Board' throughout the 20th century)(ibid, 2018, 7).

The Southern Outfall Sewer, constructed between 1880 and 1889, ran in a southerly direction through Surry Hills, Waterloo and Redfern and reached the Rockdale sewage farm by means of an inverted syphon passing under the Cooks River. This sewerage farm was expanded when it was joined to the Western Main Sewer in 1898. Designed to serve the western suburbs of

Sydney, the sewer line ran between the Rockdale/Arncliffe Sewage farm and an underground penstock chamber at Premier Street, Marrickville. This penstock chamber took the discharge from three main branch sewers, serving suburbs such as Strathfield, Burwood, Ashfield, Drummoyne, Leichhardt and Newtown (the Premier Street vent shaft was built in 1899-1900 to ventilate the penstock chamber). From the penstock chamber, the sewer ran across Wolli Creek and the Cooks River on aqueducts to the sewerage farm (ibid, 2018, 7).

The aqueduct was designed by the Engineer-in-Chief and government-appointed nominee to the Board of Water Supply and Sewerage, Robert Hickson, and construction was contracted to J. F. Carson. The aqueduct consists of two parts, a two-span metal lattice truss crossing the Cooks River and a series of seventeen brick arches crossing the floodplain on the southern side, with the three sewer carrier pipes carried on steel saddles (ibid, 2018, 7).

It is contemporary with and virtually identical to the sewerage aqueduct across Wolli Creek, approximately 450 metres south. The Cooks River Sewerage Aqueduct was one of six aqueducts built between 1895 and 1901 by the Sewerage Branch of the Public Works Department, the others being the reinforced concrete 'Monier' arches at Whites Creek and Johnstons Creek (1897), the mass concrete/brick arches and iron pipe at Wolli Creek (1895), the Mosman Bay steel arch (1901) and the stone/concrete and steel pipe at Lewisham (1900)(ibid, 2018, 7).

The sewage farm occupied 125 hectares (309 acres) when first established in 1890 and, with the addition of the Western Main Sewer in 1898, the area of the farm was more-than-doubled to 251 hectares (620 acres). The farm rapidly became saturated, however, and it was decided to extend these sewers to the coast to discharge into the ocean. Between 1908 and 1918, the Southern and Western Suburbs Ocean Outfall Sewer (SWSOOS) was constructed from the Rockdale/Arncliffe Sewage Farm to the coast at Long Bay and, when opened, the sewage farm was then closed. Much of the land was later incorporated into the Sydney Airport site (ibid, 2018, 7).

In the late 1930s, owing to increases in population throughout its service area and the construction of the North Georges River Submain serving the southern suburbs, the SWSOOS was duplicated from Kyeemagh (the site of the former Sewage farm) to Little Bay. North of the Harbour, a number of local systems were consolidated with the construction of the Northern Suburbs Ocean Outfall Sewer (NSOOS) between 1914 and the 1930s (ibid, 2018, 7-8)

#### Cooks River Sewage Aqueduct:

The Cooks River sewage aqueduct was completed in 1895. The aqueduct was constructed as the Main Western Carrier, later part of the Southern and Western Suburbs Ocean Outfall Sewer System (SWSOOS). The aqueduct was designed and built by the Sewerage Branch of the Public Works Department (Contract No. 64), the design work being completed by 1893. The engineer-in-chief of this department at the time was Robert Hickson, who was also a Water Board member.

The Main Western Carrier was designed to serve the western suburbs of Sydney. The line extended from the Rockdale end of the Arncliffe sewerage farm (which was enlarged for the scheme) to the sewer penstock at Premier Street, Marrickville. The contract necessitated the construction of

aqueducts over the Cooks River, Wolli Creek and at Arncliffe between Rocky Point Road (Princess Highway) and Illawarra Road (Arncliffe Street) and extensive tunnelling. The work was undertaken in two contracts relating to the different construction types. The contract for the aqueducts was let to J. F. Carson.

The original design of the aqueduct provided for a triplicate 6-ft. (1.8 m.) diameter wrought iron sewer carrier (although only two pipes were initially laid) supported on 560-ft. (171 m.) of segmental 17 brick arches of approximately 32-ft. (10m.) span, two 80-ft. (24 m.) by 25ft. (7.6 m.) steel lattice girder bridge spans, and 80-ft. (24 m.) of a series of mass concrete arches within embankment. The total length of the aqueduct is approximately 720-ft. (220m.).

The bridge spans are of mild steel riveted construction, the sewer carrier pipes being carried on cross beams on two simple lattice girders (on trusses), with a series of small cross lattice girders for wind bracing. The bridge spans are supported on two metal circular piers. The piers of the brick arches are constructed from mass concrete, faced in decorative brick and seated on mass concrete foundations founded on a raft of timber piles. The arches are a combination of brick and sandstone and mass concrete construction. The two original sewer carrier pipes were fabricated from wrought iron and riveted. Expansion joints of 6ft. sections were installed at the junction of the brick arches and the steel lattice bridge and above the ninth arch south of the bridge.

The third (western) sewer pipe of welded mild steel was laid in 1929. The original pipes have been maintained over the years to the present, with selective replacement of defective sections.

The Cooks River is one of six sewage aqueducts in Sydney completed in the period 1895-1901. Others include the reinforced concrete 'Monier' arches at Whites Creek and Johnstons Creek (1897), the mass concrete/brick arches and iron pipe at Wolli Creek (1895), the Mosman Bay steel arch (1901), and the stone/concrete and steel pipe at Lewisham (1900).

58 Thornley Street, Marrickville

Control of Lots 38-40 occupied by the dwelling were transferred to the MBWS & S in 1898 along with Lots 17 & 18 on nearby Premier Street.<sup>1</sup> This land was acquired by the Board as part of ongoing works for the Western Suburbs Sewerage scheme (ibid, 2018, 9).

In 1899, the MBWS & S accepted tenders for the construction of a brick cottage at 58 Thornley Street, Marrickville. The two-bedroom residence was built at the northern end of the Cooks River Aqueduct on the same block of land that the aqueduct abutment occupied. The dwelling is a Federation cottage with simplistic design elements typical of late 19th Century Federation workers cottages common throughout Marrickville and Sydney's inner west, which housed workers from the booming local industry in the area (ibid, 2018, 9).

An excerpt from the Minutes of the MBWS & S Board meeting conducted on the 8 May 1899 states the cottage was built to house a maintenance man, at the recommendation of an engineer, with an estimated construction cost of (Pounds)400.2 Marrickville Council records further document that the house was occupied by a MBWS & S maintenance employee in 1904

and 1926. In 1935, the MWS & DB accepted E. Hammonds' tender for repairs and renovations to the Board's brick cottage at 58 Thornley Street and described the dwelling as a 'residence for sewerage maintenance-man...'. 3 (ibid, 2018, 9).

The role of the employee was to ensure the original pipes were internally maintained through successive coats of tar or bitumen. Treatments, such as the necessary patching of corroded barrels, were undertaken periodically until, in 1943, it became evident that the condition of the original barrels meant that they needed to be renewed or extensively repaired (ibid, 2018, 9).

In order to preserve the pipe's steel shell, the internal cavities were 'gunited'. The Guniting process consists of mixing cement and sand with water under pneumatic pressure to create a hard, dense mortar that possesses high strength and elastic properties. The mixture is then applied as a base coat, then steel reinforcement is added and a second coat applied. This process was isolated to one barrel at a time and took two years to complete.<sup>4</sup> (ibid, 2018, 10).

The use of guniting was estimated to preserve the longevity of the aqueduct by at least 20 years. It was these technological developments of the 1940s that made redundant the need for continuous inspection and repair with regular applications of cement, tar and bitumen. With constant upkeep no longer required, the aqueduct also no longer required a permanent maintenance employee (ibid, 2018, 10).

56-58 Thornley Street continued to be occupied by Water Board employees for some time on an unspecified basis but, since the 1980s, the property has been leased to the public until recently (ibid, 2018, 10).